UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Amendment No. 1

to

Form S-4

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

SIGNAL GENETICS, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

8071
(Primary Standard Industrial Classification Code Number)

47-1187261
(I.R.S. Employer Identification Number)

5740 Fleet Street
Carlsbad, California 92008
(760) 537-4100
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Samuel D. Riccitelli
President and Chief Executive Officer
Signal Genetics, Inc.
5740 Fleet Street
Carlsbad, California 92008
(760) 537-4100
(Name, address, including zip code, and telephone number, including area code, of agent for service)
Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement and the satisfaction or waiver of all other conditions under the merger agreement described herein.

If the securities being registered on this Form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, check the following box: ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Large accelerated filer ☐ Accelerated filer ☐
Non-accelerated filer ☐ (Do not check if a smaller reporting company) Smaller reporting company ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of “large accelerated filer,” “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act.

If applicable, place an X in the box to designate the appropriate rule provision relied upon in conducting this transaction:

Exchange Act Rule 13e-4(i) (Cross-Border Issuer Tender Offer) ☐
Exchange Act Rule 14d-1(d) (Cross-Border Third-Party Tender Offer) ☐

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.
The purpose of this Amendment No. 1 to the Registration Statement on Form S-4 (No. 333-214893) of Signal Genetics, Inc. is solely to file Exhibits 10.41, 10.42, 10.44, 10.45, 10.45.1, 10.45.2, 10.46, 10.47.1 and 10.51 as set forth below in the section of Part II captioned “Exhibit Index.” Accordingly, this Amendment No. 1 consists only of the facing page, this explanatory note, Part II to the Registration Statement, the Exhibit Index and Exhibits 10.41, 10.42, 10.44, 10.45, 10.45.1, 10.45.2, 10.46, 10.47.1 and 10.51. No other changes have been made to the Form S-4.
Item 20. Indemnification of Directors and Officers

Subsection (a) of Section 145 of the Delaware General Corporation Law, or the DGCL, empowers a corporation to indemnify any person who was or is a party or who is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person’s conduct was unlawful.

Subsection (b) of Section 145 empowers a corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that the person acted in any of the capacities set forth above, against expenses (including attorneys’ fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 145 further provides that to the extent a director or officer of a corporation has been successful on the merits or otherwise in the defense of any action, suit or proceeding referred to in subsections (a) and (b) of Section 145, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys’ fees) actually and reasonably incurred by such person in connection therewith; that indemnification provided for by Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and the indemnification provided for by Section 145 shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of such person’s heirs, executors and administrators. Section 145 also empowers the corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify such person against such liabilities under Section 145.

Section 102(b)(7) of the DGCL provides that a corporation’s certificate of incorporation may contain a provision eliminating or limiting the personal liability of a director to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, provided that such provision shall not eliminate or limit the liability of a director (i) for any breach of the director’s duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, or (iv) for any transaction from which the director derived an improper personal benefit.

The certificate of incorporation of Signal Genetics, Inc., or Signal, contains provisions that eliminate, to the maximum extent permitted by the DGCL, the personal liability of directors and executive officers for monetary damages for breach of their fiduciary duties as a director or officer. Signal’s certificate of incorporation and bylaws provide that Signal shall indemnify its directors and executive officers and may indemnify its employees and other agents to the fullest extent permitted by the DGCL.

Signal entered into indemnification agreements with its directors and executive officers, in addition to the indemnification provided for in its certificate of incorporation and bylaws, and intends to enter into indemnification agreements with any new directors and executive officers in the future.
Signal has purchased and intends to maintain insurance on behalf of any person who is or was a director or officer of Signal against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

Under the terms of the Agreement and Plan of Merger and Reorganization between Signal, Miragen Therapeutics, Inc., or Miragen, and Signal Merger Sub, Inc., dated October 31, 2016, or the Merger Agreement, from the closing of the merger contemplated under the Merger Agreement, or the Merger, through the sixth anniversary of the closing, Signal and the surviving corporation agree that all rights to indemnification, exculpation or advancement of expenses now existing in favor of, and all limitations on the personal liability of, each present and former director or officer, of Signal or Miragen provided for in the respective organizational documents of Miragen and Signal in effect as of October 31, 2016, shall continue to be honored and in full force and effect.

Under the Merger Agreement, the certificate of incorporation and bylaws of Signal and the surviving corporation in the Merger, will contain provisions no less favorable with respect to indemnification, advancement of expenses and exculpation of present and former directors and officers of each of Signal and Miragen than are presently set forth in the certificate of incorporation and bylaws of Signal and Miragen, as applicable, which provisions shall not be amended, modified or repealed for a period of six years’ time from the closing of the Merger in a manner that would materially and adversely affect the rights hereunder of individuals who, at or prior to the closing, were officers or directors of Signal and Miragen.

The Merger Agreement also provides that Signal shall purchase an insurance policy in effect for six years from the closing, providing at least the same coverage as the current directors’ and officers’ liability insurance policies maintained by Miragen and Signal and containing terms and conditions that are not materially less favorable to current and former officers and directors of Miragen and Signal.

**Item 21. Exhibits and Financial Statement Schedules**

(a) Exhibit Index

A list of exhibits filed with this registration statement on Form S-4 is set forth on the Exhibit Index and is incorporated herein by reference.

(b) Financial Statements

The financial statements filed with this registration statement on Form S-4 are set forth on the Financial Statement Index and is incorporated herein by reference.

**Item 22. Undertakings**

(a) The undersigned registrant hereby undertakes as follows:

(1) That prior to any public reoffering of the securities registered hereunder through use of a prospectus which is a part of this registration statement, by any person or party who is deemed to be an underwriter within the meaning of Rule 145(c), the issuer undertakes that such reoffering prospectus will contain the information called for by the applicable registration form with respect to reofferings by persons who may be deemed underwriters, in addition to the information called for by the other items of the applicable form.

(2) That every prospectus (i) that is filed pursuant to paragraph (a)(1) immediately preceding, or (ii) that purports to meet the requirements of Section 10(a)(3) of the Securities Act of 1933, as amended, or the Securities Act, and is used in connection with an offering of securities subject to Rule 415, will be filed as a part of an amendment to the registration statement and will not be used until such amendment is effective, and that, for purposes of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To respond to requests for information that is incorporated by reference into this proxy statement/prospectus/information statement pursuant to Item 4 10(b), 11, or 13 of Form S-4, within one business day of receipt of such request, and to send the incorporated documents by first class mail or other equally prompt means. This includes information contained in documents filed subsequent to the effective date of the registration statement through the date of responding to the request.
(4) To supply by means of a post-effective amendment all information concerning a transaction, and the company being acquired involved therein, that was not the subject of and included in the registration statement when it became effective.

(b) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

II-3
Pursuant to the requirements of the Securities Act, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the city of Carlsbad, State of California, on the 4th day of January, 2017.

**Signal Genetics, Inc.**

By: /s/ Samuel D. Riccitelli  
Samuel D. Riccitelli  
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act, this report has been signed by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

<table>
<thead>
<tr>
<th>Signature</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>/s/ Samuel D. Riccitelli</td>
<td>President, Chief Executive Officer and a Director</td>
<td>January 4, 2017</td>
</tr>
<tr>
<td></td>
<td>(Principal Executive Officer)</td>
<td></td>
</tr>
<tr>
<td>/s/ Tamara A. Seymour</td>
<td>Chief Financial Officer</td>
<td>January 4, 2017</td>
</tr>
<tr>
<td></td>
<td>(Principal Financial Officer and Principal Accounting Officer)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chairman of the Board of Directors</td>
<td>January 4, 2017</td>
</tr>
<tr>
<td>Bennett S. LeBow</td>
<td>Director</td>
<td>January 4, 2017</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>David A. Gonyer, R. Ph.</td>
<td>January 4, 2017</td>
</tr>
<tr>
<td></td>
<td>Director</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Douglas A. Schuling</td>
<td>January 4, 2017</td>
</tr>
<tr>
<td></td>
<td>Director</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dr. Robin L. Smith</td>
<td>January 4, 2017</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*By: /s/ Samuel D. Riccitelli</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Samuel D. Riccitelli</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attorney-in-fact</td>
<td></td>
</tr>
</tbody>
</table>

*By: /s/ Samuel D. Riccitelli  
Samuel D. Riccitelli  
Attorney-in-fact

II-4
<table>
<thead>
<tr>
<th>Exhibit Number</th>
<th>Description of Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1^</td>
<td>Agreement and Plan of Merger, dated as of October 31, 2016, by and among Signal Genetics, Inc., Signal Merger Sub, Inc. and Miragen Therapeutics, Inc. (incorporated by reference to Exhibit 2.1 to Signal’s Current Report on Form 8-K (File No. 001-36483), as filed with the SEC on November 1, 2016, and included as Annex A to the proxy statement/prospectus/information statement).</td>
</tr>
<tr>
<td>2.2^</td>
<td>Form of Support Agreement, by and between Signal Genetics, Inc. and certain directors, officers and stockholders of Miragen Therapeutics, Inc. (incorporated by reference to Exhibit 2.2 to Signal’s Current Report on Form 8-K (File No. 001-36483), as filed with the SEC on November 1, 2016).</td>
</tr>
<tr>
<td>2.3^</td>
<td>Form of Support Agreement, by and between Miragen Therapeutics, Inc. and certain directors, officers and stockholders of Signal Genetics, Inc. (incorporated by reference to Exhibit 2.3 to Signal’s Current Report on Form 8-K (File No. 001-36483), as filed with the SEC on November 1, 2016).</td>
</tr>
<tr>
<td>2.4^*</td>
<td>Subscription Agreement, dated as of October 31, 2016, by and among Miragen Therapeutics, Inc. and each purchaser listed on Annex A thereto.</td>
</tr>
<tr>
<td>2.5^</td>
<td>Intellectual Property Purchase Agreement, dated as of November 29, 2016 by and between Signal Genetics, Inc. and Quest Diagnostics Investments LLC (incorporated by reference to Exhibit 2.1 to Signal’s Current Report on Form 8-K (File No. 001-36483), as filed with the SEC on December 1, 2016, and included as Annex G to the proxy statement/prospectus/information statement).</td>
</tr>
<tr>
<td>3.1</td>
<td>Certificate of Incorporation of Signal Genetics, Inc. (incorporated by reference to Exhibit 3.1 to Signal’s Quarterly Report on Form 10-Q (File No. 001-36483) filed with the SEC on August 14, 2014).</td>
</tr>
<tr>
<td>3.2</td>
<td>Amended and Restated Bylaws of Signal Genetics, Inc., as amended and restated on June 21, 2016 (incorporated by reference to Exhibit 3.1 to Signal’s Quarterly Report on Form 10-Q (File No. 001-36483), as filed with the SEC on August 15, 2016).</td>
</tr>
<tr>
<td>3.3*</td>
<td>Certificate of Amendment of Certificate of Incorporation of Signal Genetics, Inc.</td>
</tr>
<tr>
<td>4.1</td>
<td>Specimen Common Stock Certificate of Signal Genetics, Inc. (incorporated by reference to Exhibit 4.1 to Signal’s Registration Statement on Form S-1 (File. No. 333-194668) filed with the SEC on March 19, 2014).</td>
</tr>
<tr>
<td>4.2</td>
<td>Form of Representative’s Warrant (incorporated by reference to Exhibit 4.2 to Signal’s Registration Statement on Form S-1/A (File No. 333-201533) filed with the SEC on January 29, 2015).</td>
</tr>
<tr>
<td>4.3</td>
<td>Form of Representative’s Warrant (incorporated by reference to Exhibit 10.24 to Signal’s Registration Statement on Form S-1/A (File No. 333-194668) filed with the SEC on June 6, 2014).</td>
</tr>
<tr>
<td>5.1*</td>
<td>Legal Opinion of Pillsbury Winthrop Shaw Pittman LLP.</td>
</tr>
<tr>
<td>8.1*</td>
<td>Legal Opinion of Pillsbury Winthrop Shaw Pittman LLP regarding tax matters.</td>
</tr>
<tr>
<td>8.2*</td>
<td>Legal Opinion of Cooley LLP regarding tax matters.</td>
</tr>
<tr>
<td>10.1</td>
<td>Assignment of Membership Interests between LeBow Alpha LLLP and Signal Genetics LLC, dated January 1, 2011 (incorporated by reference to Exhibit 10.1 to Signal’s Registration Statement on Form S-1 (File No. 333-194668) filed with the SEC on March 19, 2014).</td>
</tr>
<tr>
<td>10.2†</td>
<td>License Agreement, dated April 1, 2010, by and between The Board of Trustees of the University of Arkansas on behalf of the University of Arkansas for Medical Sciences and Myeloma Health LLC (the “UAMS License Agreement”) (incorporated by reference to Exhibit 10.2 to Signal’s Registration Statement on Form S-1 (File No. 333-194668) filed with the SEC on April 9, 2014).</td>
</tr>
<tr>
<td>Exhibit Number</td>
<td>Description of Document</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>10.2.1</td>
<td>Letter Agreement, dated April 1, 2010, of Signal Genetics LLC (f/k/a Myeloma Health, LLC) (as referenced in the UAMS License Agreement) (incorporated by reference to Exhibit 10.2.1 to Signal’s Registration Statement on Form S-1 (File No. 333-194668) filed with the SEC on March 19, 2014).</td>
</tr>
<tr>
<td>10.3</td>
<td>First Amendment to License Agreement, dated September 1, 2010, by and between The Board of Trustees of the University of Arkansas on behalf of the University of Arkansas for Medical Sciences and Myeloma Health LLC (the “First Amendment to UAMS License Agreement”) (incorporated by reference to Exhibit 10.3 to Signal’s Registration Statement on Form S-1 (File No. 333-194668) filed with the SEC on March 19, 2014).</td>
</tr>
<tr>
<td>10.3.1</td>
<td>Letter Agreement, dated February 25, 2014, of Signal Genetics LLC (f/k/a Myeloma Health, LLC) (as referenced in the First Amendment to UAMS License Agreement) (incorporated by reference to Exhibit 10.3.1 to Signal’s Registration Statement on Form S-1 (File No. 333-194668) filed with the SEC on March 19, 2014).</td>
</tr>
<tr>
<td>10.4†</td>
<td>Second Amendment to License Agreement, dated September 14, 2010, by and between The Board of Trustees of the University of Arkansas on behalf of the University of Arkansas for Medical Sciences and Myeloma Health LLC (incorporated by reference to Exhibit 10.4 to Signal’s Registration Statement on Form S-1 (File No. 333-194668) filed with the SEC on March 19, 2014).</td>
</tr>
<tr>
<td>10.5</td>
<td>Third Amendment to License Agreement, dated October 2011, by and between The Board of Trustees of the University of Arkansas on behalf of the University of Arkansas for Medical Sciences and Myeloma Health LLC (incorporated by reference to Exhibit 10.5 to Signal’s Registration Statement on Form S-1 (File No. 333-194668) filed with the SEC on March 19, 2014).</td>
</tr>
<tr>
<td>10.6</td>
<td>Fourth Amendment to License Agreement, dated December 1, 2011, by and between The Board of Trustees of the University of Arkansas on behalf of the University of Arkansas for Medical Sciences and Myeloma Health LLC (incorporated by reference to Exhibit 10.6 to Signal’s Registration Statement on Form S-1 (File No. 333-194668) filed with the SEC on March 19, 2014).</td>
</tr>
<tr>
<td>10.7†</td>
<td>Reference Laboratory Services Agreement, dated March 21, 2011, by and between The Board of Trustees of the University of Arkansas on behalf of the University of Arkansas for Medical Sciences’ Clinical Laboratory and Signal Genetics LLC (incorporated by reference to Exhibit 10.7 to Signal’s Registration Statement on Form S-1 (File No. 333-194668) filed with the SEC on March 19, 2014).</td>
</tr>
<tr>
<td>10.8†</td>
<td>Reference Laboratory Services Agreement, dated September 20, 2014, by and between The Board of Trustees of the University of Arkansas on behalf of the University of Arkansas for Medical Sciences and Signal Genetics, Inc. (incorporated by reference to Exhibit 10.2 to Signal’s Quarterly Report on Form 10-Q (File No. 001-36483) filed with the SEC on November 11, 2014).</td>
</tr>
<tr>
<td>10.9†</td>
<td>Reference Laboratory Services Agreement for Research Specimens, dated March 21, 2011, by and between The Board of Trustees of the University of Arkansas on behalf of the University of Arkansas for Medical Sciences’ Myeloma Institute for Research Therapy and Signal Genetics LLC (incorporated by reference to Exhibit 10.8 to Signal’s Registration Statement on Form S-1 (File No. 333-194668) filed with the SEC on March 19, 2014).</td>
</tr>
<tr>
<td>10.10†</td>
<td>Reference Laboratory Services Agreement for Research Specimens, dated September 20, 2014, by and between The Board of Trustees of the University of Arkansas on behalf of the University of Arkansas for Medical Sciences and Signal Genetics, Inc. (incorporated by reference to Exhibit 10.3 to Signal’s Quarterly Report on Form 10-Q (File No. 001-36483) filed with the SEC on November 11, 2014).</td>
</tr>
<tr>
<td>10.11</td>
<td>Form of Indemnification Agreement between Signal Genetics, Inc. and each of its directors and executive officers (incorporated by reference to Exhibit 10.14 to Signal’s Registration Statement on Form S-1 (File No. 333-194668) filed with the SEC on March 19, 2014).</td>
</tr>
<tr>
<td>Exhibit Number</td>
<td>Description of Document</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>10.12+</td>
<td>2014 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to Signal’s Quarterly Report on Form 10-Q (File No. 000-36483) filed with the SEC on August 14, 2014).</td>
</tr>
<tr>
<td>10.13+</td>
<td>First Amendment to the Signal Genetics, Inc. 2014 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to Signal’s Current Report on Form 8-K (File No. 001-36483) filed with the SEC on June 23, 2015).</td>
</tr>
<tr>
<td>10.15+</td>
<td>Amended and Restated Employment Agreement, dated June 17, 2014, by and between Signal Genetics, Inc. and Samuel D. Riccitelli (incorporated by reference to Exhibit 10.4 to Signal’s Quarterly Report on Form 10-Q (File No. 001-36483) filed with the SEC on August 14, 2014).</td>
</tr>
<tr>
<td>10.16+</td>
<td>Restricted Stock Unit Agreement, dated June 17, 2014, by and between Signal Genetics, Inc. and Samuel D. Riccitelli.</td>
</tr>
<tr>
<td>10.17</td>
<td>Letter Agreement, dated March 18, 2014, by and between The Board of Trustees of the University of Arkansas on behalf of the University of Arkansas for Medical Sciences and Signal Genetics, Inc. (incorporated by reference to Exhibit 10.19 to Signal’s Registration Statement on Form S-1/A (File No. 333-194668) filed with the SEC on April 9, 2014).</td>
</tr>
<tr>
<td>10.18</td>
<td>UAMS Bioventures Lease Agreement, dated March 31, 2014, by and between The Board of Trustees of the University of Arkansas for Medical Sciences and Myeloma Health LLC (incorporated by reference to Exhibit 10.20 to Signal’s Registration Statement on Form S-1/A (File No. 333-194668) filed with the SEC on April 9, 2014).</td>
</tr>
<tr>
<td>10.19</td>
<td>UAMS Bioventures Lease Agreement, effective as of April 1, 2016, by and between the Board of Trustees of the University of Arkansas for Medical Sciences and Signal Genetics, Inc. (incorporated by reference to Exhibit 10.31 to the Annual Report on Form 10-K (File No. 001-36483) filed with the SEC on March 21, 2016).</td>
</tr>
<tr>
<td>10.20</td>
<td>Agreement for Termination of Lease and Voluntary Surrender of Premises, dated March 14, 2014, by and between ARE-Acquisitions, LLC and Signal Genetics LLC (incorporated by reference to Exhibit 10.22 to Signal’s Registration Statement on Form S-1/A (File No. 333-194668) filed with the SEC on May 15, 2014).</td>
</tr>
<tr>
<td>10.21</td>
<td>Letter Agreement, dated May 16, 2014, by and between The Board of Trustees of the University of Arkansas on behalf of the University of Arkansas for Medical Sciences and Signal Genetics, Inc. (incorporated by reference to Exhibit 10.23 to Signal’s Registration Statement on Form S-1/A (No. 333-194668) filed with the SEC on May 27, 2014).</td>
</tr>
<tr>
<td>10.24</td>
<td>Office Building Lease Agreement, dated August 18, 2014, by and between OT9 Owner, LLC and Signal Genetics, Inc. (incorporated by reference to Exhibit 10.1 to Signal’s Quarterly Report on Form 10-Q (File No. 001-36483) filed with the SEC on November 11, 2014).</td>
</tr>
<tr>
<td>10.25*</td>
<td>Form of Stock Option Grant Agreement under the 2014 Stock Incentive Plan.</td>
</tr>
<tr>
<td>10.26*</td>
<td>Form of Restricted Stock Unit Grant Agreement under the 2014 Stock Incentive Plan.</td>
</tr>
<tr>
<td>10.27+</td>
<td>Letter Agreement, dated March 25, 2015, regarding Signal Genetics, Inc. Restricted Stock Unit Grant Agreement dated June 17, 2014, by and between Signal Genetics, Inc. and Samuel D. Riccitelli (incorporated by reference to Exhibit 10.28 to Signal’s Annual Report on Form 10-K (File No. 001-36483) filed with the SEC on March 27, 2015).</td>
</tr>
<tr>
<td>Exhibit Number</td>
<td>Description of Document</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>10.28</td>
<td>Unsecured Demand Promissory Note by and between Signal Genetics, Inc. and Bennett LeBow, dated March 6, 2015 (incorporated by reference to Exhibit 10.29 to Signal’s Annual Report on Form 10-K (File No. 001-36483) filed with the SEC on March 27, 2015).</td>
</tr>
<tr>
<td>10.29</td>
<td>Controlled Equity OfferingSM Sales Agreement, dated July 10, 2015, by and between Signal Genetics, Inc. and Cantor Fitzgerald &amp; Co. (incorporated by reference to Exhibit 1.2 to Signal’s Registration Statement on Form S-3 (File No. 333-205620) filed with the SEC on July 10, 2015).</td>
</tr>
<tr>
<td>10.30+</td>
<td>Second Amendment to the Signal Genetics, Inc. 2014 Stock Incentive Plan ((incorporated by reference to Exhibit 10.1 to Signal’s Quarterly Report on Form 10-Q (File No. 001-36483) filed with the SEC on August 15, 2016).</td>
</tr>
<tr>
<td>10.31</td>
<td>Amendment to Unsecured Demand Promissory Note, dated as of October 31, 2016, by and between Signal Genetics, Inc. and Bennett LeBow (incorporated by reference to Exhibit 10.1 to Signal’s Current Report on Form 8-K (File No. 001-36483), as filed with the SEC on November 1, 2016).</td>
</tr>
<tr>
<td>10.32+</td>
<td>Form of Indemnity Agreement between Miragen Therapeutics, Inc. and each of its directors and executive officers.</td>
</tr>
<tr>
<td>10.34+</td>
<td>Employment Agreement by and between Miragen Therapeutics, Inc. and Jason A. Leverone, dated as of December 2, 2016.</td>
</tr>
<tr>
<td>10.35+</td>
<td>Employment Agreement by and between Miragen Therapeutics, Inc. and Adam S. Levy, dated as of December 2, 2016.</td>
</tr>
<tr>
<td>10.36+</td>
<td>Employment Agreement by and between Miragen Therapeutics, Inc. and Paul D. Rubin, M.D., dated as of December 2, 2016.</td>
</tr>
<tr>
<td>10.37+</td>
<td>Form of 2016 Equity Incentive Plan (included as Annex B to the proxy statement/prospectus/information statement).</td>
</tr>
<tr>
<td>10.38+</td>
<td>Form of Stock Option Grant Notice and Stock Option Agreement under 2016 Equity Incentive Plan.</td>
</tr>
<tr>
<td>10.40*</td>
<td>Lease by and between Miragen Therapeutics, Inc. and Crestview, LLC, dated as of December 16, 2010.</td>
</tr>
<tr>
<td>10.40.1*</td>
<td>First Addendum to Lease by and between Miragen Therapeutics, Inc. and Crestview, LLC, dated as of February 18, 2015.</td>
</tr>
<tr>
<td>10.40.2*</td>
<td>Second Addendum to Lease by and between Miragen Therapeutics, Inc. and Crestview, LLC, dated as of October 23, 2015.</td>
</tr>
<tr>
<td>10.41◆</td>
<td>Exclusive Patent License Agreement, dated as of April 21, 2008, by and between Miragen Therapeutics, Inc. and Board of Regents Of The University of Texas System.</td>
</tr>
<tr>
<td>10.42◆</td>
<td>Exclusive Patent License Agreement, dated as of April 21, 2008, by and between Miragen Therapeutics, Inc. and Board of Regents Of The University of Texas System.</td>
</tr>
<tr>
<td>10.43◆</td>
<td>License and Collaboration Agreement, dated as of October 20, 2010, by and between Miragen Therapeutics, Inc. and T2Cure GmbH.</td>
</tr>
<tr>
<td>10.43.1*</td>
<td>Amendment No. 1 to License and Collaboration Agreement, dated as of July 8, 2014, by and between Miragen Therapeutics, Inc. and T2Cure GmbH.</td>
</tr>
<tr>
<td>10.44◆</td>
<td>Amended and Restated License Agreement, dated as of December 31, 2012, by and between Miragen Therapeutics, Inc. and Santaris Pharma A/S.</td>
</tr>
<tr>
<td>Exhibit Number</td>
<td>Description of Document</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>10.45◆</td>
<td>License and Collaboration Agreement, dated as of October 12, 2011, by and between Miragen Therapeutics, Inc. and Les Laboratoires Servier, on the first part, and Institut de Recherches Servier, on the second part.</td>
</tr>
<tr>
<td>10.45.1◆</td>
<td>First Amendment of the License and Collaboration Agreement, effective as of May 13, 2013, by and between Miragen Therapeutics, Inc. and Les Laboratoires Servier, on the first part, and Institut de Recherches Servier, on the second part.</td>
</tr>
<tr>
<td>10.45.2◆</td>
<td>Second Amendment of the License and Collaboration Agreement, effective as of April 10, 2014, by and between Miragen Therapeutics, Inc. and Les Laboratoires Servier, on the first part, and Institut de Recherches Servier, on the second part.</td>
</tr>
<tr>
<td>10.45.3◆*</td>
<td>Third Amendment of the License and Collaboration Agreement, effective as of May 28, 2015, by and between Miragen Therapeutics, Inc. and Les Laboratoires Servier, on the first part, and Institut de Recherches Servier, on the second part.</td>
</tr>
<tr>
<td>10.45.4*</td>
<td>Fourth Amendment of the License and Collaboration Agreement, effective as of September 22, 2016, by and between Miragen Therapeutics, Inc. and Les Laboratoires Servier, on the first part, and Institut de Recherches Servier, on the second part.</td>
</tr>
<tr>
<td>10.46◆</td>
<td>Exclusive Patent License Agreement, dated as of May 10, 2016, by and between Miragen Therapeutics, Inc. and The Brigham and Women’s Hospital, Inc.</td>
</tr>
<tr>
<td>10.47*</td>
<td>Loan and Security Agreement, dated as of April 30, 2015, by and between Miragen Therapeutics, Inc. and Silicon Valley Bank.</td>
</tr>
<tr>
<td>10.47.1</td>
<td>First Loan Modification Agreement, dated as of December 22, 2016, by and between Miragen Therapeutics, Inc. and Silicon Valley Bank.</td>
</tr>
<tr>
<td>10.48+*</td>
<td>Miragen Therapeutics, Inc. 2008 Equity Incentive Plan.</td>
</tr>
<tr>
<td>10.49+*</td>
<td>Form of Stock Option Grant Notice and Stock Option Agreement under the Miragen Therapeutics, Inc. 2008 Equity Incentive Plan.</td>
</tr>
<tr>
<td>10.50+*</td>
<td>Non-Employee Director Compensation Policy to be effective upon the completion of the Merger.</td>
</tr>
<tr>
<td>10.51◆</td>
<td>Research Subaward Agreement, dated as of October 1, 2014, by and between Miragen Therapeutics, Inc. and Yale University, as amended.</td>
</tr>
<tr>
<td>21.1*</td>
<td>List of Signal’s Subsidiaries.</td>
</tr>
<tr>
<td>23.1*</td>
<td>Consent of BDO USA, LLP, Independent Registered Public Accounting Firm to Signal Genetics, Inc.</td>
</tr>
<tr>
<td>23.2*</td>
<td>Consent of KPMG LLP, Independent Registered Public Accounting Firm to Miragen Therapeutics, Inc.</td>
</tr>
<tr>
<td>23.3*</td>
<td>Consent of Pillsbury Winthrop Shaw Pittman LLP (included in Exhibit 5.1 hereto).</td>
</tr>
<tr>
<td>23.4*</td>
<td>Consent of Pillsbury Winthrop Shaw Pittman LLP (included in Exhibit 8.1 hereto).</td>
</tr>
<tr>
<td>23.5*</td>
<td>Consent of Cooley LLP (included in Exhibit 8.2 hereto).</td>
</tr>
<tr>
<td>24.1*</td>
<td>Powers of Attorney (included on the signature page to this Registration Statement on Form S-4).</td>
</tr>
<tr>
<td>99.1*</td>
<td>Form of Signal Genetics, Inc. Proxy Card.</td>
</tr>
<tr>
<td>99.3*</td>
<td>Proposed form of Certificate of Amendment of Certificate of Incorporation of Signal Genetics, Inc. (included as Annex E to the proxy statement/prospectus/information statement).</td>
</tr>
<tr>
<td>99.5*</td>
<td>Proposed form of Certificate of Amendment of Certificate of Incorporation of Signal Genetics, Inc. (included as Annex H to the proxy statement/prospectus/information statement).</td>
</tr>
<tr>
<td>Exhibit Number</td>
<td>Description of Document</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>99.7*</td>
<td>Consent of Cantor Fitzgerald &amp; Co.</td>
</tr>
<tr>
<td>99.8*</td>
<td>Consent of Bruce L. Booth, Ph.D. to serve as a director of Signal Genetics, Inc.</td>
</tr>
<tr>
<td>99.9*</td>
<td>Consent of John W. Creecy to serve as a director of Signal Genetics, Inc.</td>
</tr>
<tr>
<td>99.10*</td>
<td>Consent of Thomas E. Hughes, Ph.D. to serve as a director of Signal Genetics, Inc.</td>
</tr>
<tr>
<td>99.11*</td>
<td>Consent of Kyle A. Lefkoff to serve as a director of Signal Genetics, Inc.</td>
</tr>
<tr>
<td>99.12*</td>
<td>Consent of Kevin Koch, Ph.D. to serve as a director of Signal Genetics, Inc.</td>
</tr>
<tr>
<td>99.13*</td>
<td>Consent of William S. Marshall, Ph.D. to serve as a director of Signal Genetics, Inc.</td>
</tr>
<tr>
<td>99.14*</td>
<td>Consent of Joseph L. Turner to serve as a director of Signal Genetics, Inc.</td>
</tr>
<tr>
<td>101.INS*</td>
<td>XBRL Instance Document.</td>
</tr>
<tr>
<td>101.CAL*</td>
<td>XBRL Taxonomy Extension Calculation Linkbase.</td>
</tr>
<tr>
<td>101.DEF*</td>
<td>XBRL Taxonomy Extension Definition Linkbase.</td>
</tr>
<tr>
<td>101.LAB*</td>
<td>XBRL Taxonomy Extension Label Linkbase.</td>
</tr>
<tr>
<td>101.PRE*</td>
<td>XBRL Taxonomy Extension Presentation Linkbase.</td>
</tr>
</tbody>
</table>

◆ Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment and have been separately filed with the SEC.

† Confidential treatment granted as to portions of the exhibit. Confidential materials omitted and filed separately with the SEC.

* Previously filed.

^ The schedules and exhibits to this exhibit have been omitted pursuant to Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request.
EXCLUSIVE PATENT LICENSE AGREEMENT

BETWEEN

THE UNIVERSITY OF TEXAS SYSTEM

AND

MIRAGEN THERAPEUTICS, INC.
<table>
<thead>
<tr>
<th>RECITALS</th>
<th>PAGE 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. EFFECTIVE DATE</td>
<td>PAGE 1</td>
</tr>
<tr>
<td>2. DEFINITIONS</td>
<td>PAGE 2</td>
</tr>
<tr>
<td>3. WARRANTY: SUPERIOR-RIGHTS</td>
<td>PAGE 4</td>
</tr>
<tr>
<td>4. LICENSE</td>
<td>PAGE 5</td>
</tr>
<tr>
<td>5. PAYMENTS AND REPORTS</td>
<td>PAGE 6</td>
</tr>
<tr>
<td>6. TERM AND TERMINATION</td>
<td>PAGE 9</td>
</tr>
<tr>
<td>7. INFRINGEMENT BY THIRD PARTIES</td>
<td>PAGE 10</td>
</tr>
<tr>
<td>8. ASSIGNMENT</td>
<td>PAGE 11</td>
</tr>
<tr>
<td>9. PATENT MARKING</td>
<td>PAGE 11</td>
</tr>
<tr>
<td>10. INDEMNIFICATION AND INSURANCE</td>
<td>PAGE 11</td>
</tr>
<tr>
<td>11. USE OF NAME</td>
<td>PAGE 12</td>
</tr>
<tr>
<td>12. CONFIDENTIAL INFORMATION</td>
<td>PAGE 12</td>
</tr>
<tr>
<td>13. PATENTS AND INVENTIONS</td>
<td>PAGE 13</td>
</tr>
<tr>
<td>14. EXPORT CONTROL</td>
<td>PAGE 15</td>
</tr>
<tr>
<td>15. GENERAL</td>
<td>PAGE 15</td>
</tr>
<tr>
<td>SIGNATURES</td>
<td>PAGE 17</td>
</tr>
</tbody>
</table>

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
THIS EXCLUSIVE PATENT LICENSE AGREEMENT ("AGREEMENT") is between the Board of Regents ("BOARD") of The University of Texas System ("SYSTEM"), an agency of the State of Texas, on behalf of The University of Texas Southwestern Medical Center at Dallas, whose address is 5323 Harry Hines Boulevard, Dallas, Texas 75390-9094 ("UT SOUTHWESTERN"), a component institution of SYSTEM, and Miragen Therapeutics, Inc. ("LICENSEE"), a Delaware corporation having a principal place of business located at 1900 Ninth Street, Suite 200, Boulder, Colorado 80302.

RECITALS

A. BOARD owns certain PATENT RIGHTS (as defined below) and TECHNOLOGY RIGHTS (as defined below) related to LICENSED SUBJECT MATTER (as defined below), which were developed at UT SOUTHWESTERN.

B. BOARD desires to have the LICENSED SUBJECT MATTER developed and used for the benefit of LICENSEE, INVENTOR (as defined below), UT SOUTHWESTERN, BOARD, and the public as outlined in BOARD’S Intellectual Property Policy.

C. LICENSEE wishes to obtain a license from BOARD to practice LICENSED SUBJECT MATTER.

D. LICENSEE intends to sponsor research relating to LICENSED SUBJECT MATTER at UT SOUTHWESTERN to further develop LICENSED SUBJECT MATTER and to identify related technologies and the parties will execute a sponsored research agreement ("SRA") concurrently with the execution of this AGREEMENT and the OTHER LICENSE AGREEMENTS (as defined below).

E. LICENSEE and BOARD intend to enter into 10 additional license agreements concurrently with this AGREEMENT under which BOARD will license certain other patent rights and know-how rights owned or otherwise controlled by BOARD (collectively, the “OTHER LICENSE AGREEMENTS”).

F. LICENSEE and BOARD also intend to enter into a stock purchase agreement concurrently with this AGREEMENT. Pursuant to such stock purchase agreement, LICENSEE will issue Series A common stock to BOARD in consideration of the rights granted to LICENSEE by BOARD hereunder and pursuant to the OTHER LICENSE AGREEMENTS and for other good and valuable consideration.

NOW, THEREFORE, in consideration of the mutual covenants and premises herein contained, the parties agree as follows:

1. EFFECTIVE DATE

This AGREEMENT is effective as of April 21, 2008 (the “EFFECTIVE DATE”).

[•] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
2. DEFINITIONS

As used in this AGREEMENT, the following terms have the meanings indicated:

2.1 **AFFILIATE** means any entity directly or indirectly controlling, controlled by or under common control with LICENSEE. For purposes of this Section 2.1, "control" means the direct or indirect ownership of 50% or more of the outstanding voting securities of any entity, or the right to receive 50% or more of the profits or earnings of such entity, or the ability to control the policy decisions of an entity.

2.2 **EMEA** means the European Medicines Agency.

2.3 **FDA** means United States Food and Drug Administration.

2.4 **INVENTOR(S)** means Eric N. Olson and Eva Van Rooij.

2.5 **LICENSED PRODUCT** means any product (including, but not limited to, clinical evaluation candidates, diagnostic and pharmaceutical products) or service, the manufacture, use, practice or sale of which is covered by a VALID CLAIM.

2.6 **LICENSED SUBJECT MATTER** means inventions, discoveries and processes claimed or covered by PATENT RIGHTS and/or TECHNOLOGY RIGHTS.

2.7 **LICENSEE PRODUCT** means any LICENSED PRODUCT that is identified, researched or developed by or on behalf of LICENSEE or as part of a bona fide collaboration between LICENSEE and a THIRD PARTY.

2.8 **MHLW** means the Japanese Ministry of Health, Labor, and Welfare.

2.9 **NAKED SUBLICENSE** means a sublicense pursuant to Section 4.4 below in which (a) the sublicensee receives a sublicense of the LICENSED SUBJECT MATTER and (b) such sublicensee does not receive any rights to pursue any LICENSEE PRODUCTS.

2.10 **NET SALES** means the gross revenues received by LICENSEE, AFFILIATE and/or any sublicensee pursuant to Section 4.4 from the SALE of LICENSED PRODUCTS less: (a) cash, trade or quantity discounts, credits or allowances actually granted; (b) sales and/or use taxes actually paid; (c) import and/or export duties actually paid; (d) outbound transportation (including insurance) prepaid or allowed; (e) amounts allowed, credited, refunded or rebated due to returns, rejections or recalls (not to exceed the original billing or invoice amount); (f) retroactive price reductions that are actually allowed or granted; (g) payments or rebates allowed in connection with SALES of LICENSED PRODUCTS to any governmental or regulatory authority in respect of any state or federal Medicare, Medicaid or similar programs; and (h) amounts written off as uncollectible bad debt specifically on the SALE of LICENSED PRODUCTS.

If LICENSED PRODUCTS are SOLD in the form of a combination product containing one or more active ingredients which are themselves not LICENSED PRODUCTS (such combination, a "COMBINATION PRODUCT"), then NET SALES attributable to such COMBINATION PRODUCT shall be calculated on a country-by-country basis by multiplying NET SALES of the COMBINATION PRODUCT (i.e., NET SALES calculated assuming that the entire COMBINATION PRODUCT is LICENSED PRODUCT) by the fraction A/(A+B) where: A is the LICENSEE’S (or its AFFILIATE’S or
 sublicensee’s, as applicable) average invoice price during the applicable reporting period for each LICENSED PRODUCT in such
COMBINATION PRODUCT if sold separately in such country (or the sum of such average invoice prices if more than one LICENSED
PRODUCT is in such COMBINATION PRODUCT), and B is the sum of LICENSEE’S (or its AFFILIATES or sublicensees, as applicable)
average invoice price during the applicable reporting period for each active ingredient in such COMBINATION PRODUCT (other than the
LICENSED PRODUCT) if sold separately in such country. If, on a country-by-country basis, LICENSEE (or its AFFILIATES or sublicensees,
as applicable) does not separately sell the active ingredients in such COMBINATION PRODUCT (other than the LICENSED PRODUCT)
during the reporting period when it separately sells the LICENSED PRODUCT in such COMBINATION PRODUCT, then NET SALES
attributable to such COMBINATION PRODUCT shall be calculated by multiplying the NET SALES of such COMBINATION PRODUCT
(i.e., NET SALES calculated assuming that the entire COMBINATION PRODUCT is a LICENSED PRODUCT) by the fraction A/C where: A
is as set forth above and C is LICENSEE’S (or its AFFILIATE’S or sublicensee’s, as applicable) average invoice price during the applicable
reporting period for the COMBINATION PRODUCT in such country. If, on a country-by-country basis, LICENSEE (or its AFFILIATES or
sublicensees, as applicable) does not separately SELL each LICENSED PRODUCT during the reporting period when it sells such
COMBINATION PRODUCT, then NET SALES attributable to such COMBINATION PRODUCT shall be calculated by multiplying the NET
SALES of such COMBINATION PRODUCT (i.e., NET SALES calculated assuming that the entire COMBINATION PRODUCT is a
LICENSED PRODUCT) by the fraction D/(D+E) where: D is the fair market value of the portion of the COMBINATION PRODUCT that
contains the LICENSED PRODUCT and E is the fair market value of the portion of the COMBINATION PRODUCT containing the other
active ingredient(s) included in such COMBINATION PRODUCT, as such fair market values are determined by mutual agreement of the
parties. In no event will the resulting calculated value of NET SALES of COMBINATION PRODUCTS be less than 50% of the value of NET
SALES of LICENSED PRODUCTS had they been SOLD separately.

2.11  PATENT RIGHTS means BOARD’S rights in (a) patents and/or patent applications listed in the attached Exhibit 1; (b) all patent
applications claiming priority to any of the foregoing, including divisionals, continuations and continuations-in-part of any of the foregoing;
(c) all letters patent that issue on any of the foregoing; (d) all reissues, additions, substitutions, reexaminations or extensions of any of the
foregoing; and (e) all foreign counterparts of any of the foregoing.

2.12  PHASE 1 CLINICAL STUDY means that portion of the drug development and review process which provides for the initial
introduction of an investigational new drug into humans that would satisfy the requirements specifically defined by the rules and regulations of
the FDA under 21 § C.F.R. 312.21(a), or similar rules and regulations in other countries or jurisdictions.

2.13  PHASE 2 CLINICAL STUDY means that portion of the drug development and review process which provides for early controlled
clinical studies conducted to obtain preliminary data on the effectiveness of an investigational new drug for a particular indication that would
satisfy the requirements specifically defined by the rules and regulations of the FDA under 21 § C.F.R. 312.21(b), or similar rules and
regulations in other countries or jurisdictions.

2.14  PHASE 3 CLINICAL STUDY means that portion of the drug development and review process in which expanded clinical studies are
conducted to gather the additional information about the effectiveness and safety that is needed to evaluate the overall benefit-risk
relationship of an investigational new drug that would satisfy the requirements specifically defined by the rules and regulations of the FDA
under 21 § C.F.R. 312.21(c), or similar rules and regulations in other countries or jurisdictions.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to
Rule 406 of the Securities Act of 1933, as amended.
2.15 **SALE, SELL or SOLD** means the transfer or disposition of a LICENSED PRODUCT for value excluding any transfer or disposition to an AFFILIATE or sublicensee unless such AFFILIATE or sublicense is an end user; provided, however, that transfers or dispositions of LICENSED PRODUCTS at or below cost for use in research, development, charitable or clinical trial purposes shall not be considered a SALE.

2.16 **TECHNOLOGY RIGHTS** means BOARD’S rights in technical information, know-how, processes, procedures, compositions, devices, methods, formulas, protocols and techniques developed: (i) by Eric N. Olson at UT SOUTHWESTERN before the EFFECTIVE DATE; (ii) in Eric N. Olson’s laboratory at UT SOUTHWESTERN before the EFFECTIVE DATE; or (iii) during the term of and directly resulting from the research conducted under the SRA; in each case, which are not covered by PATENT RIGHTS but which are necessary for practicing the PATENT RIGHTS.

2.17 **THIRD PARTY** means any person or entity other than BOARD, LICENSEE or an AFFILIATE.

2.18 **VALID CLAIM** means any claim of: (a) a patent application included in PATENT RIGHTS that has been neither abandoned nor pending for more than [*] years; or (b) an issued, unexpired patent included in PATENT RIGHTS that has not been withdrawn, canceled or disclaimed or held invalid by a court or governmental authority of competent jurisdiction in an unappealed or unappealable decision no longer subject to review.

3. **WARRANTY: SUPERIOR-RIGHTS**

3.1 Except for the rights, if any, of the government of the United States of America ("GOVERNMENT"), as set forth below, BOARD represents and warrants (i) that it is the sole owner of the entire right, title, and interest in and to PATENT RIGHTS and TECHNOLOGY RIGHTS, (ii) that it has the sole right to grant licenses thereunder, and (iii) that it has not knowingly granted licenses under the LICENSED SUBJECT MATTER to any other person or entity that would conflict with, or otherwise restrict BOARD’S ability to grant the license rights granted to LICENSEE under this AGREEMENT.

3.2 LICENSEE understands that the LICENSED SUBJECT MATTER may have been developed under a funding agreement with the GOVERNMENT and, if so, that the GOVERNMENT may have certain rights relative thereto. This AGREEMENT is explicitly made subject to the GOVERNMENT’S rights under any agreement and any applicable law or regulation. If there is a conflict between any agreement, applicable law or regulation and this AGREEMENT, the terms of the GOVERNMENT agreement, applicable law or regulation shall prevail. LICENSEE agrees that LICENSED PRODUCTS used or SOLD in the United States to the extent covered by LICENSED SUBJECT MATTER developed under a funding agreement with the GOVERNMENT will be manufactured substantially in the United States, unless a written waiver is obtained in advance from the GOVERNMENT.

3.3 LICENSEE understands and acknowledges that BOARD, by this AGREEMENT, makes no representation as to the operability or fitness for any use, safety, efficacy, approvability by regulatory authorities, time and cost of development, patentability, and/or breadth of the LICENSED SUBJECT MATTER. BOARD, by this AGREEMENT, also makes no representation as to whether there are any patents now held, or which will be held, by others or by BOARD which may be dominant or subordinate to PATENT RIGHTS, nor does BOARD make any representation that the inventions contained in PATENT RIGHTS do not infringe any other patents now held or that will be held by others or by BOARD.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
3.4 LICENSEE, by execution hereof, acknowledges, covenants and agrees that it has not been induced in any way by BOARD, SYSTEM, UT SOUTHWESTERN or its employees to enter into this AGREEMENT.

4. LICENSE

4.1 BOARD hereby grants to LICENSEE: (i) a worldwide, royalty-bearing, exclusive license under PATENT RIGHTS to discover, research, develop, make, have made, use, offer for SALE, SELL and/or import LICENSED PRODUCTS; and (ii) a worldwide, non-exclusive license under TECHNOLOGY RIGHTS to discover, research, develop, make, have made, use, offer for SALE, SELL and/or import LICENSED PRODUCTS. The licenses granted under this Section 4.1 are subject to the payment by LICENSEE to BOARD of all consideration as provided herein, and are further subject to the rights retained by BOARD to:

a. publish the general scientific findings from research related to LICENSED SUBJECT MATTER subject to the terms of Article 12, Confidential Information of this AGREEMENT and Article 7 of the SRA;

b. use LICENSED SUBJECT MATTER for SYSTEM research, teaching and other educationally-related, non-commercial purposes; and

c. transfer LICENSED SUBJECT MATTER to other non-profit academic or research institutions for non-commercial research use only, which research use shall exclude research for which a commercial entity receives a license or an option to resulting intellectual property.

4.2 Except for the rights retained by BOARD as set forth in Section 4.1, BOARD hereby agrees that it shall not grant to any THIRD PARTY any license under the TECHNOLOGY RIGHTS to discover, research, develop, make, have made, use, offer for SALE, SELL and/or import LICENSED PRODUCTS.

4.3 LICENSEE may extend the license granted herein to any AFFILIATE if the AFFILIATE consents in writing to be bound by this AGREEMENT to the same extent as LICENSEE. LICENSEE must deliver to BOARD a true and accurate copy of such written agreement, and any modification or termination thereof, within 30 days after execution, modification or termination; provided however that such copy may be redacted to delete information that is not relevant to determining LICENSEE’S compliance with its obligations under this AGREEMENT.

4.4 LICENSEE may grant sublicenses consistent with this AGREEMENT to THIRD PARTIES if LICENSEE is responsible to BOARD for the activities of its sublicensees relevant to this AGREEMENT as if the activities were carried out by LICENSEE, including the payment of royalties owed to BOARD whether or not such royalties are paid to LICENSEE by a sublicensee. LICENSEE must furnish to BOARD a true and correct copy of each sublicense granted by LICENSEE, and any modification or termination thereof, within 30 days after execution, modification, or termination; provided however that such copy may be redacted to delete information that not relevant to determining LICENSEE’S compliance with its obligations under this AGREEMENT. When this AGREEMENT is terminated, BOARD and UT SOUTHWESTERN agree to accept as successors to LICENSEE existing sublicensees in good standing at the date of termination, provided that the sublicensees consent in writing to be bound by all applicable terms and conditions of this AGREEMENT.

4.5 BOARD shall use its best efforts to disclose to LICENSEE (a) all TECHNOLOGY RIGHTS that are in existence as of the EFFECTIVE DATE within thirty (30) days after the EFFECTIVE DATE and (b) all other TECHNOLOGY RIGHTS within a reasonable time after their creation or development.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
4.6 In the event that either party identifies other patents and/or patent applications that such party reasonably believes are necessary to practice the inventions licensed under this AGREEMENT and such patents and/or patent applications (a) disclose or claim inventions that were developed at UT SOUTHWESTERN prior to the EFFECTIVE DATE, (b) were assigned, or should have been assigned, to BOARD, and (c) are not (i) exclusively licensed to a THIRD PARTY, (ii) co-exclusively licensed to one or more THIRD PARTIES with no additional co-exclusive licenses available, (iii) the subject of an option for a THIRD PARTY to obtain an exclusive license, or (iv) the subject of an option for one or more THIRD PARTIES to obtain a co-exclusive license with no additional options for co-exclusive licenses available, then the party making such identification shall promptly notify the other party and upon LICENSEE’S request, BOARD shall negotiate in good faith with LICENSEE to grant a license to LICENSEE under such patents and/or patent applications on commercially reasonable terms.

5. PAYMENTS AND REPORTS

5.1 In consideration of rights granted by BOARD to LICENSEE under this AGREEMENT, LICENSEE will pay BOARD the following:

a. a one time, non-refundable license documentation fee in the amount of $10,000, due and payable within [*] days of the earlier of: (i) [*] or (ii) [*];

b. an annual license maintenance fee in the amount of $10,000, due and payable on each anniversary of the EFFECTIVE DATE beginning on the first anniversary and creditable against royalties, milestone fees or sublicense fees due under Sections 5.1c, 5.1d or 5.1f for that year;

c. a running royalty equal to [*]% of NET SALES. LICENSEE’S obligation to pay royalties under this Section 5.1c will commence upon the first commercial sale of the applicable LICENSED PRODUCT and will expire, on a LICENSED PRODUCT-by-LICENSED PRODUCT and country-by-country basis upon the date of expiration of the last to expire VALID CLAIM that covers such LICENSED PRODUCT in such country. If LICENSEE, its AFFILIATES or sublicensees are required to obtain a license or other similar right under any intellectual property rights of a THIRD PARTY that claim or cover the composition, method of making, or method of using a LICENSED PRODUCT, LICENSEE may reduce the royalty payment owed to BOARD on the same LICENSED PRODUCT under this Section 5.1c by an amount equal to [*], but in no event will such reduction result in a royalty of less than [*]% of NET SALES; provided, however that if LICENSEE has adjusted NET SALES for a COMBINATION PRODUCT as set forth in Paragraph 2.10, then the royalties creditable under this Section 5.1c are limited to an amount such that the royalty payable to BOARD is no less than [*]% of NET SALES unadjusted for a COMBINATION PRODUCT. For clarity, royalties payable under this Section 5.1c are noncumulative and will be payable with respect to a particular LICENSED PRODUCT only once, even if such LICENSED PRODUCT is covered or claimed by multiple VALID CLAIMS within the PATENT RIGHTS;

d. one time milestone fees according to the table below:

<table>
<thead>
<tr>
<th>Milestone Event</th>
<th>Milestone Fee</th>
<th>Due and Payable</th>
</tr>
</thead>
<tbody>
<tr>
<td>[*] for a LICENSEE PRODUCT</td>
<td>[*]</td>
<td>Within [*] days of Milestone Event</td>
</tr>
<tr>
<td>[*] for a LICENSEE PRODUCT</td>
<td>[*]</td>
<td>Within [*] days of Milestone Event</td>
</tr>
<tr>
<td>[*] for a LICENSEE PRODUCT</td>
<td>[*]</td>
<td>Within [*] days of Milestone Event</td>
</tr>
</tbody>
</table>

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
For avoidance of doubt, each milestone payment is payable only once regardless of the number of times the milestone event occurs and regardless of the number of LICENSEE PRODUCTS developed. For the purpose of this Section 5.1d, “[*]” means [*] by or on behalf of LICENSEE or its AFFILIATE(S) or sublicensee(s);

e. an amount equal to the sum of (i) $[*] (to reimburse UT SOUTHWESTERN for all out-of-pocket expenses paid by UT SOUTHWESTERN prior to the EFFECTIVE DATE in filing, prosecuting, enforcing and maintaining PATENT RIGHTS) and (ii) those additional out-of-pocket expenses incurred on UT SOUTHWESTERN’S behalf prior to the EFFECTIVE DATE in filing, enasisting, enforcing and maintaining PATENT RIGHTS but not paid by UT SOUTHWESTERN prior to the EFFECTIVE DATE, provided that such additional out-of-pocket expenses shall not exceed $[*]. Payment of such amount will be made in two equal installments. The first installment is due and payable [*], and the second installment is due and payable [*]; and

f. a sublicense fee of [*]% of all consideration that is received by LICENSEE from a sublicensee in consideration for the grant of a NAKED SUBLICENSE except for any consideration paid to LICENSEE by a sublicensee: (i) that constitute royalties or other payments based on SALES of LICENSED PRODUCTS, (ii) with respect to research, development and sales and marketing or promotional activities performed by or on behalf of LICENSEE, (iii) that constitute reimbursement of patent prosecution or enforcement expenses for PATENT RIGHTS, (iv) that constitute private or non-publicly traded equity securities of a THIRD PARTY, (v) in exchange for equity securities of LICENSEE, (vi) as loans, credit lines, or other amounts subject to repayment, or (vii) with respect to the supply of goods and/or services by or on behalf of LICENSEE (collectively, the “SUBLICENSEE REVENUES”). Such sublicense fee will be payable within [*] days of LICENSEE’S receipt of any such SUBLICENSEE REVENUES. For purposes of this Section 5.1f, the value of any equity securities will be calculated as the average market value of the class of stock involved for 5 consecutive days preceding the transfer to LICENSEE. In cases where the applicable sublicense agreement calls for payment to LICENSEE of a premium over the market value of LICENSEE’S equity securities, BOARD will also share [*]% of the premium paid to LICENSEE. If LICENSEE is required to pay BOARD a payment under this Section 5.1f and a sublicense fee payment is also due with respect to the same NAKED SUBLICENSE under the terms of one or more RELATED LICENSE AGREEMENTS (as defined in Section 5.2 below), then LICENSEE may credit, against any payments due hereunder, the full amount of all sublicense fee payments made under such RELATED LICENSE AGREEMENT(S). Notwithstanding anything to the contrary set forth herein, if LICENSEE grants a NAKED SUBLICENSE to a sublicensee where the underlying intellectual property licensed to the sublicensee is the LICENSED SUBJECT MATTER and other intellectual property, then LICENSEE shall only be required to pay BOARD a sublicense fee under this subsection (f) based on the consideration received by LICENSEE that is allocable solely to the grant of the NAKED SUBLICENSE under the LICENSED SUBJECT MATTER.

Page 7 of 17

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
5.2 If LICENSEE is required to pay BOARD a royalty under Section 5.1c and a royalty payment is also due with respect to the same LICENSED PRODUCT under the terms of another license agreement between LICENSEE and BOARD and such other license agreement covers intellectual property: (a) developed at UT SOUTHWESTERN; (b) naming Eric Olson or a member of his laboratory as an inventor or a person who was a member of his laboratory at the time the applicable invention was developed (for clarity and the avoidance of doubt, a member of Eric Olson’s laboratory does not include other independent faculty members in his department or center, or their subordinates); and (c) pertaining to microRNA in the areas of cardiovascular and muscle disorders and diseases (such license agreement a “RELATED LICENSE AGREEMENT”), then the royalty payment due BOARD for such LICENSED PRODUCT under such RELATED LICENSE AGREEMENT shall be creditable against the royalty payment due BOARD under Section 5.1c above, up to a credit of [*]. In no event however will the amount creditable under this Section 5.2 reduce the royalty payment due BOARD to less than [*]% of NET SALES.

5.3 Amounts that are not paid when due under Article 5 will accrue interest from the due date until paid, at a rate equal to [*], or the maximum allowed by law, if less; provided however that BOARD shall notify LICENSEE of payment obligations and LICENSEE shall have at least 10 business days to pay any amounts due before interest is assessed.

5.4 During the term of this AGREEMENT and for [*] thereafter, LICENSEE agrees to keep complete and accurate records of its and its sublicensees’ SALES and NET SALES under the licenses granted in this AGREEMENT in sufficient detail to enable the royalties payable hereunder to be determined. LICENSEE agrees to permit an independent accounting firm selected by BOARD and reasonably acceptable to LICENSEE, at BOARD’S expense and with 14 days prior written notice to LICENSEE, to periodically examine LICENSEE’S books, ledgers, and records during LICENSEE’S regular business hours no more than [*] every calendar year, solely for the purpose of and to the extent necessary to verify any report required under this AGREEMENT. If the amounts due to BOARD are determined by such independent accounting firm to have been underpaid by an amount equal to or greater than [*]% of the total amount payable, LICENSEE will pay the cost of the examination and all overdue amounts with accrued interest at the prime rate in effect on the date such payment is due (as quoted in the Wall Street Journal (“WSJ”)) plus [*], unless such interest rate is greater than the highest allowable rate by law, in which case the interest rate shall be the highest allowable rate by law, and no interest payment shall be owed pursuant to Section 5.3 with respect thereto.

5.5 Within 30 days after March 31, June 30, September 30, and December 31 of each year of the term of this AGREEMENT, beginning immediately after the first commercial SALE, LICENSEE shall deliver to BOARD a true and accurate written report, even if no payments are due BOARD, giving the particulars of the business conducted by LICENSEE and its sublicensee(s), if any exist, during the preceding 3 calendar months under this AGREEMENT as are pertinent to calculating payments hereunder. Such reports will be on a per-country and per-LICENSED PRODUCT basis and presented substantially in the form as shown in Exhibit 2. Simultaneously with the delivery of each report, LICENSEE must pay to BOARD the amount due and unpaid, if any, for the period covered by such report.

5.6 Once per calendar year, on or before each anniversary of the EFFECTIVE DATE, irrespective of having a first SALE or offer for SALE, LICENSEE shall deliver to BOARD a written progress report as to LICENSEE’S (and any sublicensee’s) efforts and accomplishments during the preceding year in diligently commercializing LICENSED SUBJECT MATTER and LICENSEE’S (and sublicensee’s) commercialization plans for the upcoming year.

5.7 All amounts payable hereunder by LICENSEE shall be paid in United States dollars without deductions for taxes, assessments, fees, or charges of any kind. Royalties accruing on SALES in

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
countries other than the United States shall be paid in United States dollars in amounts based on the rate of exchange as quoted in the WSJ as of the last business day of the reporting period. If the WSJ does not publish any such rate, a comparable rate publication will be agreed upon from time to time by the parties, and with respect to each country for which such rate is not published by the WSJ or in a comparable publication, the parties will use the prevailing rate for bank cable transfers for such date, as quoted by leading United States banks in New York City dealing in the foreign exchange market.

5.8 All payments must be payable to UT SOUTHWESTERN and sent to the address listed in Section 15.2.

6. TERM AND TERMINATION

6.1 The term of this AGREEMENT shall commence upon the EFFECTIVE DATE and, unless earlier terminated in accordance with this Article 6, shall continue in full force and effect, on a country-by-country and LICENSED PRODUCT-by-LICENSED PRODUCT basis, until the date on which LICENSEE’S obligations to pay royalties on NET SALES of the applicable LICENSED PRODUCT in the applicable country expires according to the provisions of Section 5.1c. Upon expiration of such royalty payment obligation, LICENSEE shall have a fully paid up license to practice TECHNOLOGY RIGHTS in such country.

6.2 At any time after [], BOARD shall have the right to terminate this license if LICENSEE, within [*] days after receiving written notice from UT SOUTHWESTERN of the intended termination, fails to provide written evidence reasonably satisfactory to UT SOUTHWESTERN that LICENSEE, its AFFILIATE(S) or sublicensee(s) has:

a. SALES; or

b. an effective, ongoing and active research, development, manufacturing, marketing or sales program as appropriate, directed toward obtaining regulatory approval, and/or production and/or SALES in accordance with LICENSEE’S business, legal, medical and scientific judgment and LICENSEE’S normal practices and procedures for products having similar technical and commercial potential.

6.3 This AGREEMENT will earlier terminate:

a. automatically if LICENSEE becomes bankrupt and/or if the business of LICENSEE is placed in the hands of a receiver, assignee, or trustee, whether by voluntary act of LICENSEE or otherwise; or

b. upon [*] days written notice from BOARD if LICENSEE becomes insolvent unless, before the end of the [*] day period, LICENSEE provides BOARD with evidence of its solvency; or

c. upon [*] days written notice from BOARD if LICENSEE breaches or defaults on its obligation to make payments (if any are due) or reports, in accordance with the terms of Article 5 hereunder, unless, before the end of the [*] day period, LICENSEE has cured the breach or default and so notifies BOARD, stating the manner of the cure; or

d. upon [*] days written notice if either party materially breaches or defaults on any other obligation under this AGREEMENT, unless, before the end of the [*] day period, the breaching

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
or defaulting party has cured the breach or default and so notifies the other party, stating the manner of the cure; or

e. at any time by mutual written agreement of LICENSEE, BOARD and UT SOUTHWESTERN and subject to any terms herein which survive termination; or

f. at any time by LICENSEE upon [*] days written notice and subject to any terms herein which survive termination; or

g. under the provisions of Section 6.2 if invoked.

6.4 If this AGREEMENT is terminated for any cause:

a. nothing herein will be construed to release either party of any obligation that accrued prior to the effective date of the termination; and

b. after the effective date of the termination, LICENSEE (and its AFFILIATES) will provide BOARD with a written inventory of all LICENSED PRODUCTS in process of manufacture, in use or in stock. LICENSEE (and its AFFILIATES) may SELL any such LICENSED PRODUCTS within the [*] day period following such termination if it pays earned royalties thereon, and any other amount due pursuant to the terms of Article 5; and

c. Articles 10 (Indemnification And Insurance), 11 (Use Of Name), 12 (Confidential Information) and 15 (General) and this Section 6.4 shall survive termination of this AGREEMENT.

7. INFRINGEMENT BY THIRD PARTIES

7.1 LICENSEE and BOARD shall each promptly provide the other party written notice of any alleged infringement of the PATENT RIGHTS.

7.2 LICENSEE shall have the first right (but not the obligation), at its expense, to enforce PATENT RIGHTS against infringement by third parties and is entitled to retain recovery from such enforcement. After reimbursement of LICENSEE’S reasonable attorneys’ fees and court costs in connection with such enforcement, the balance of any recovery for damages and/or a reasonable royalty in lieu thereof will be considered NET SALES and subject to royalty payments pursuant to Section 5.1c and applied in the calendar quarter in which the recovery is obtained. If LICENSEE does not file suit against a substantial infringer of PATENT RIGHTS within [*] of knowledge thereof and has not entered into good faith negotiations with respect to the relevant PATENT RIGHTS (without affecting LICENSEE’S other rights hereunder, including without limitation the right to grant sublicenses) and to grant a non-exclusive, non-transferable, non-sublicensable license under the applicable PATENT RIGHTS solely to such infringer and solely with respect to the infringing product or method.

7.3 In any infringement suit or dispute, the parties agree to cooperate fully with each other. At the request and expense of the party bringing suit, the other party will permit access to all relevant personnel, records, papers, information, samples, specimens, etc., during regular business hours and with reasonable advance written notice.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
8. ASSIGNMENT

LICENSEE may not assign this AGREEMENT without the prior written consent of BOARD, which will not be unreasonably withheld, except in connection with the sale of all or substantially all of LICENSEE’S assets, as it relates to this AGREEMENT, to a THIRD PARTY with written notice to UT SOUTHWESTERN or assignment to an AFFILIATE with written notice to UT SOUTHWESTERN.

9. PATENT MARKING

LICENSEE must permanently and legibly mark all products, packaging and documentation manufactured or SOLD by it in the United States under this AGREEMENT with such patent notice as may be permitted or required under Title 35, United States Code.

10. INDEMNIFICATION AND INSURANCE

10.1 LICENSEE agrees to hold harmless and indemnify BOARD, INVENTOR, SYSTEM, UT SOUTHWESTERN, its Regents, officers, employees and agents from and against any THIRD PARTY claims, demands, or causes of action whatsoever (including, without limitation, those arising on account of any injury or death of persons or damage to property) caused by, or arising out of, or resulting from, the exercise or practice of the license granted hereunder by LICENSEE, its AFFILIATES or their officers, employees, agents or representatives, except for such claims, demands or causes of action whatsoever that result from the negligence or willful misconduct of BOARD, INVENTOR, SYSTEM, UT SOUTHWESTERN, its Regents, officers, employees or agents.

10.2 In no event will any party to this AGREEMENT be liable for any indirect, special, consequential or punitive damages (including, without limitation, damages for loss of profits or expected savings or other economic losses, or for injury to persons or property) arising out of or in connection with this AGREEMENT or its subject matter, regardless of whether such party knows or should know of the possibility of such damages; provided however that this Section 10.2 shall not be construed to limit LICENSEE’S indemnification obligations under Section 10.1.

10.3 Beginning at the time when any LICENSED PRODUCT is being distributed or SOLD (including for the purpose of obtaining regulatory approvals) by LICENSEE or by a sublicensee, LICENSEE will, at its sole cost and expense, procure and maintain commercial general liability insurance in amounts not less than $1,000,000 per incident and $2,000,000 annual aggregate, and LICENSEE will use reasonable efforts to have the BOARD, SYSTEM and UT SOUTHWESTERN named as additional insureds. Such commercial general liability insurance will provide (i) product liability coverage; (ii) broad form contractual liability coverage for LICENSEE’S indemnification under this AGREEMENT; and (iii) coverage for litigation costs. The minimum amounts of insurance coverage required will not be construed to create a limit of LICENSEE’S liability with respect to its indemnification under this AGREEMENT.

10.4 LICENSEE will provide BOARD with written evidence of such insurance upon BOARD’S request. LICENSEE will use reasonable efforts to provide BOARD with written notice of at least 15 days prior to the cancellation, non-renewal or material change in such insurance.

10.5 LICENSEE will maintain such commercial general liability insurance beyond the expiration or termination of this AGREEMENT during (i) the period that any LICENSED PRODUCT developed pursuant to this AGREEMENT is being commercially distributed or SOLD by LICENSEE or by a sublicensee or agent of LICENSEE; and (ii) the 5-year period immediately after such period.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
11. USE OF NAME

LICENSEE may not use the name of UT SOUTHWESTERN, SYSTEM, INVENTOR or BOARD without express written consent from UT SOUTHWESTERN, SYSTEM, INVENTOR and/or BOARD, as applicable, except as required by governmental law, rule or regulation. Consent should be requested in writing at least 5 business days in advance and sent to:

Leah A. Hurley  
Vice President for Legal Affairs  
The University of Texas Southwestern Medical Center at Dallas  
5323 Harry Hines Blvd.  
Dallas, TX 75390-9008  
Phone: 214-648-7986  
Fax: 214-648-8805  
Email: Leah.Hurley@UTSouthwestern.edu

12. CONFIDENTIAL INFORMATION

12.1 The parties each agree that all information contained in documents identified as “confidential” and forwarded or otherwise disclosed to one by the other for the purposes of this AGREEMENT (the “Confidential Information”) (i) are to be received in strict confidence, (ii) are to be used only for the purposes of this AGREEMENT, and (iii) are not to be disclosed by the recipient party, its agents or employees without the prior written consent of the other party, except to the extent that the recipient party can establish competent written evidence that such Confidential Information:

a. was in the public domain at the time of disclosure;

b. later became part of the public domain through no act or omission of the recipient party, its employees, agents, successors or assigns;

c. was lawfully disclosed to the recipient party by a THIRD PARTY having the right to disclose it;

d. was already known by the recipient party at the time of disclosure; or

e. was independently developed by the recipient party.

In addition, notwithstanding the foregoing, each party may disclose the other party’s Confidential Information to the extent required by law or regulation to be disclosed; provided however, that the party required to disclose such Confidential Information shall give reasonable advance written notice to the other party of such disclosure requirement and shall fully cooperate (at the other party’s request and expense) with the other party’s efforts to secure, (i) a protective order requiring that the Confidential Information so disclosed by used only for the purposes for which the order was issued or the law or regulation required or (ii) confidential treatment of such Confidential Information required to be disclosed. In addition, notwithstanding anything to the contrary set forth in this Article 12, LICENSEE may disclose BOARD’S Confidential Information to its AFFILIATES and sublicensees provided that such party agrees to confidentiality provisions at least as restrictive as those contained in this Article 12.

12.2 Confidential Information shall not be deemed to be available to the public or to be in the recipient’s possession merely because it:

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
12.3 Each party’s obligation of confidence hereunder shall be fulfilled by using at least the same degree of care with the other party’s confidential information as it uses to protect its own confidential information but in no event less than reasonable care. These obligations shall exist while this AGREEMENT is in force and shall continue for a period of [*] years thereafter.

13. PATENTS AND INVENTIONS

13.1 LICENSEE, in its discretion, shall assume responsibility for and direct the filing, prosecution, and maintenance of the patent applications and patents within the PATENT RIGHTS (“PATENT RESPONSIBILITY”) using the patent attorney and/or law firm of its choice; provided that such patent attorney and/or law firm (“COUNSEL”) has entered into an outside counsel contract with UT SOUTHWESTERN.

13.2 If LICENSEE notifies BOARD in writing that LICENSEE is assuming PATENT RESPONSIBILITY then the following provisions shall apply:

a. LICENSEE shall be responsible for payment of all fees and costs arising from filing, prosecution, and maintenance of the patent applications and patents within the PATENT RIGHTS and will directly pay COUNSEL for all such fees and costs;

b. LICENSEE will provide BOARD, in a timely manner, copies of any and all patent applications included in PATENT RIGHTS, as well as copies of any patent prosecution related documents received or filed during the prosecution thereof including, but not limited to, office actions and responses. BOARD shall have the right to review and comment upon patent applications, responses to office actions and other substantive patent documents prior to filing and the right to have such documents revised prior to filing to reflect such comments provided such comments do not conflict with recommendation of COUNSEL; and

c. if LICENSEE does not intend to file, prosecute or maintain any patent application or patent within the PATENT RIGHTS in a particular country, LICENSEE shall notify BOARD in writing at least 30 days before the time limit, if any, set forth in the applicable laws and regulations for the taking of an action required or permitted with respect to the filing, prosecution, or maintenance of the applicable patent application or patent, then BOARD may elect, at its sole discretion and expense, to undertake the preparation, filing, prosecution, or maintenance of such patent application or patent in such country at its own expense, and such patent application or patent shall no longer be included in the PATENT RIGHTS licensed to LICENSEE under this AGREEMENT.

13.3 Until such time as LICENSEE notifies BOARD that LICENSEE is assuming PATENT RESPONSIBILITY as provided in Section 13.2 or if LICENSEE notifies BOARD in writing that it wishes BOARD to assume PATENT RESPONSIBILITY, the following provisions shall apply:

a. BOARD will work closely with LICENSEE to develop a suitable strategy for the prosecution and maintenance of all PATENT RIGHTS. BOARD will confer with LICENSEE

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
regarding the choice of patent counsel and will identify to LICENSEE the patent counsel selected by BOARD to prosecute the
PATENT RIGHTS; provided, that such patent counsel shall be reasonably acceptable to LICENSEE.

b. it is intended that LICENSEE will interact directly with the selected patent counsel in all phases of patent prosecution, such as
preparation, office action responses, filing strategies for continuation or divisional applications, and other related activities.
LICENSEE will receive, in a timely manner, copies of all documents received, prepared or filed during the prosecution of the patents
and patent applications within the PATENT RIGHTS by the selected patent counsel. LICENSEE shall have the right to review and
comment on all patent applications, responses to office actions and other substantive patent documents prior to filing and the right
to have such documents revised prior to filing to reflect such comments, except to the extent impracticable.

c. BOARD will consult with LICENSEE as provided herein, but shall maintain final authority in all decisions regarding the
prosecution and maintenance of the PATENT RIGHTS. In its discretion, BOARD may delegate specific authority to LICENSEE with
respect to the prosecution and maintenance of the PATENT RIGHTS; provided, that (1) BOARD is provided with copies of patent
applications and related documents as set forth in Section 13.2b, (2) BOARD may revoke the delegation at any time, and (3) counsel
that is prosecuting the patent remains counsel to the BOARD unless BOARD agrees otherwise in writing.

d. if LICENSEE requests in writing, that additional foreign and/or domestic patent applications covering LICENSED SUBJECT
MATTER be filed, then BOARD will prepare and file the appropriate application(s) in the United States and foreign countries.

e. LICENSEE will reimburse UT SOUTHWESTERN for costs actually incurred by UT SOUTHWESTERN in connection with
filing, prosecuting and maintaining PATENT RIGHTS provided such costs have not been reimbursed pursuant to Section 5.1e. UT
SOUTHWESTERN will invoice LICENSEE on a quarterly basis for patent expenses paid by UT SOUTHWESTERN. The invoiced
amounts will be due and payable by LICENSEE within 30 days of receipt.

f. if BOARD elects not to file, prosecute, or maintain a patent application or patent included in the PATENT RIGHTS, it shall so
notify LICENSEE at least 30 days in advance of any such filing or payment deadline and LICENSEE may elect to assume
responsibility for such patent or patent application, in which event, BOARD shall assign to LICENSEE its right, title in and to such
patent application or patent and BOARD shall have no further right, title or interest therein.

13.4 Each party shall fully cooperate with the other party to execute all lawful papers and instruments, make all rightful oaths and
declarations, and provide original patent documents to the party prosecuting or maintaining such patents and patent applications as may be
necessary in the preparation and prosecution of all such patents and other applications and protections referred to in this Article 13. The Rules
and Regulations of the BOARD, Series 90000, Intellectual Property (http://www.utsystem.edu/bor/rules/RRRas1.pdf) sets forth the BOARD’S
policy regarding intellectual property. All individuals subject to this policy (persons employed by SYSTEM or any of its institutions including,
but not limited to, full and part-time faculty and staff and visiting faculty members and researchers, and anyone using the facilities or resources
of the SYSTEM or any of its institutions, including, but not limited to, students enrolled at a SYSTEM institution whether undergraduate or
master’s and doctoral degrees, and postdoctoral and predoctoral fellows) must assign their rights in intellectual property to the BOARD in
accordance with the provisions of the policy.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to
Rule 406 of the Securities Act of 1933, as amended.
14. EXPORT CONTROL

LICENSEE acknowledges that it is subject to and agrees to abide by the United States laws and regulations (including the Export Administration Act of 1979 and Arms Export Control Act) controlling the export of technical data, computer software, laboratory prototypes, biological material and other commodities. The transfer of such items may require a license from the cognizant agency of the U.S. Government or written assurances by LICENSEE that it shall not export such items to certain foreign countries without prior approval of such agency. BOARD neither represents that a license is or is not required or that, if required, it shall be issued.

15. GENERAL

15.1 This AGREEMENT constitutes the entire and only agreement between the parties for LICENSED SUBJECT MATTER and all other prior negotiations, representations, agreements, and understandings are hereby superseded. For clarity and the avoidance of doubt, the SRA and any OTHER LICENSE AGREEMENTS entered into by the parties shall remain in full force and effect in accordance with their terms. No agreements altering or supplementing these terms may be made except by a written document signed by both parties.

15.2 Any payments required by this AGREEMENT must be payable to UT SOUTHWESTERN and sent to:

    UT Southwestern Medical Center at Dallas
    Office for Technology Development
    5323 Harry Hines Boulevard
    Mail Code 9094
    Dallas, Texas 75390-9094
    ATTENTION: Director for Technology Transfer

15.3 Any notice required by this AGREEMENT must be given by email or facsimile transmission confirmed by personal delivery (including delivery by reputable messenger services such as Federal Express) or by prepaid, first class, certified mail, return receipt requested, addressed in the case of BOARD and UT SOUTHWESTERN to:

    UT Southwestern Medical Center at Dallas
    Office for Technology Development
    5323 Harry Hines Boulevard
    Mail Code 9094
    Dallas, Texas 75390-9094
    ATTENTION: Director for Technology Transfer
    Email: TechnologyDevelopment@UTSouthwestern.edu
    Phone: (214) 648-1888
    Fax: (214) 648-1889

or in the case of LICENSEE to:

    Miragen Therapeutics, Inc.
    1900 Ninth Street
    Suite 200
    Boulder, CO 80302
    ATTENTION: William S. Marshall, Ph.D., Chief Executive Officer

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
15.4 LICENSEE must comply with all applicable national, state and local laws and regulations in connection with its activities pursuant to this AGREEMENT.

15.5 This AGREEMENT will be construed and enforced in accordance with the laws of the United States of America and of the State of Texas. The Texas state courts of Dallas County, Texas (or, if there is exclusive federal jurisdiction, the United States District Court for the Northern District of Texas) shall have exclusive jurisdiction and venue over any dispute arising out of this AGREEMENT, and LICENSEE hereby consents to the jurisdiction of such courts.

15.6 Failure of a party to enforce a right under this AGREEMENT will not act as a waiver of that right or the ability to later assert that right relative to the particular situation involved.

15.7 Headings are included herein for convenience only and shall not be used to construe this AGREEMENT.

15.8 If any part of this AGREEMENT is for any reason found to be unenforceable, all other parts nevertheless remain enforceable.

15.9 This AGREEMENT may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

15.10 Neither party shall be held liable or responsible to the other party nor be deemed to have defaulted under or breached this AGREEMENT for failure or delay in fulfilling or performing any term of this AGREEMENT when such failure or delay is caused by or results from causes beyond the reasonable control of the affected party, including, without limitation, fire, floods, earthquakes, natural disasters, embargoes, war, acts of war (whether war is declared or not), insurrections, riots, civil commotions, strikes, lockouts or other labor disturbances, acts of God or acts, omissions or delays in acting by any governmental authority.

THE REMAINDER OF THIS PAGE IS INTENTIONALLY BLANK

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
IN WITNESS WHEREOF, the parties hereto have caused their duly authorized representatives to execute this AGREEMENT.

BOARD OF REGENTS OF
THE UNIVERSITY OF TEXAS SYSTEM

By /s/ John A. Roan
John A. Roan
Executive Vice President for Business Affairs
UT Southwestern Medical Center at Dallas

Date 4/29/08

Approved as to Content:

By /s/ Dennis K. Stone
Dennis K. Stone, M.D.
Vice President for Technology Development
UT Southwestern Medical Center at Dallas

Date 4/29/08

MIRAGEN THERAPEUTICS, INC.

By /s/ William S. Marshall
William S. Marshall, Ph.D.
Chief Executive Officer

Date April 24, 2008

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
EXHIBIT 1

PATENT RIGHTS

a. [*];
b. [*]; and
c. [*].

Exhibit 1 Page 1 of 1

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
EXHIBIT 2
ROYALTY REPORT

Licensee: __________________________
Agreement #: L1846.miRagen$

If license covers several product lines, please prepare a separate report for each product line. Then combine all product lines into a summary report.

Report Type:  □ Single Product Line Report: ____________________________________________ (Product Name)
□ Multi-Product Summary Report (Page 1 of ____ pages)

<table>
<thead>
<tr>
<th>Country</th>
<th>Quantity Produced</th>
<th>Gross Sales ($)</th>
<th>*Less Allowances</th>
<th>Net Sales ($)</th>
<th>Royalty Rate</th>
<th>Conversion Rate (if applicable)</th>
<th>Royalties Due this period(US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sublicensees:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subtotal: ____________________________
Less Advanced Royalty Balance (if any): ________
TOTAL ROYALTIES DUE THIS PERIOD: ______

* Please indicate in the following space the specific types of deductions and the corresponding amounts used to calculate Allowances:

______________________________________
______________________________________

Prepared by --
Name: ___________________________
Title: ___________________________
Date: ___________________________

Mail completed report and royalty payment (make checks payable to: UT SOUTHWESTERN) to:

UT Southwestern Medical Center at Dallas
Office for Technology Development
5323 Harry Hines Boulevard
Dallas, Texas 75390-9094

Exhibit 2 Page 1 of 2

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
EXCLUSIVE PATENT LICENSE AGREEMENT

BETWEEN

THE UNIVERSITY OF TEXAS SYSTEM

AND

MIRAGEN THERAPEUTICS, INC.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>RECITALS</td>
<td>PAGE 1</td>
</tr>
<tr>
<td>1. EFFECTIVE DATE</td>
<td>PAGE 1</td>
</tr>
<tr>
<td>2. DEFINITIONS</td>
<td>PAGE 2</td>
</tr>
<tr>
<td>3. WARRANTY: SUPERIOR-RIGHTS</td>
<td>PAGE 4</td>
</tr>
<tr>
<td>4. LICENSE</td>
<td>PAGE 5</td>
</tr>
<tr>
<td>5. PAYMENTS AND REPORTS</td>
<td>PAGE 6</td>
</tr>
<tr>
<td>6. TERM AND TERMINATION</td>
<td>PAGE 9</td>
</tr>
<tr>
<td>7. INFRINGEMENT BY THIRD PARTIES</td>
<td>PAGE 10</td>
</tr>
<tr>
<td>8. ASSIGNMENT</td>
<td>PAGE 11</td>
</tr>
<tr>
<td>9. PATENT MARKING</td>
<td>PAGE 11</td>
</tr>
<tr>
<td>10. INDEMNIFICATION AND INSURANCE</td>
<td>PAGE 11</td>
</tr>
<tr>
<td>11. USE OF NAME</td>
<td>PAGE 12</td>
</tr>
<tr>
<td>12. CONFIDENTIAL INFORMATION</td>
<td>PAGE 12</td>
</tr>
<tr>
<td>13. PATENTS AND INVENTIONS</td>
<td>PAGE 13</td>
</tr>
<tr>
<td>14. EXPORT CONTROL</td>
<td>PAGE 15</td>
</tr>
<tr>
<td>15. GENERAL</td>
<td>PAGE 15</td>
</tr>
<tr>
<td>SIGNATURES</td>
<td>PAGE 17</td>
</tr>
</tbody>
</table>

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
EXCLUSIVE PATENT LICENSE AGREEMENT
BETWEEN THE UNIVERSITY OF TEXAS SYSTEM
AND
MIRAGEN THERAPEUTICS, INC.

THIS EXCLUSIVE PATENT LICENSE AGREEMENT (“AGREEMENT”) is between the Board of Regents (“BOARD”) of The University of Texas System (“SYSTEM”), an agency of the State of Texas, on behalf of The University of Texas Southwestern Medical Center at Dallas, whose address is 5323 Harry Hines Boulevard, Dallas, Texas 75390-9094 (“UT SOUTHWESTERN”), a component institution of SYSTEM, and Miragen Therapeutics, Inc. (“LICENSEE”), a Delaware corporation having a principal place of business located at 1900 Ninth Street, Suite 200, Boulder, Colorado 80302.

RECITALS

A. BOARD owns certain PATENT RIGHTS (as defined below) and TECHNOLOGY RIGHTS (as defined below) related to LICENSED SUBJECT MATTER (as defined below), which were developed at UT SOUTHWESTERN.

B. BOARD desires to have the LICENSED SUBJECT MATTER developed and used for the benefit of LICENSEE, INVENTOR (as defined below), UT SOUTHWESTERN, BOARD, and the public as outlined in BOARD’S Intellectual Property Policy.

C. LICENSEE wishes to obtain a license from BOARD to practice LICENSED SUBJECT MATTER.

D. LICENSEE intends to sponsor research relating to LICENSED SUBJECT MATTER at UT SOUTHWESTERN to further develop LICENSED SUBJECT MATTER and to identify related technologies and the parties will execute a sponsored research agreement (“SRA”) concurrently with the execution of this AGREEMENT and the OTHER LICENSE AGREEMENTS (as defined below).

E. LICENSEE and BOARD intend to enter into 10 additional license agreements concurrently with this AGREEMENT under which BOARD will license certain other patent rights and know-how rights owned or otherwise controlled by BOARD (collectively, the “OTHER LICENSE AGREEMENTS”).

F. LICENSEE and BOARD also intend to enter into a stock purchase agreement concurrently with this AGREEMENT. Pursuant to such stock purchase agreement, LICENSEE will issue Series A common stock to BOARD in consideration of the rights granted to LICENSEE by BOARD hereunder and pursuant to the OTHER LICENSE AGREEMENTS and for other good and valuable consideration.

NOW, THEREFORE, in consideration of the mutual covenants and premises herein contained, the parties agree as follows:

1. EFFECTIVE DATE

This AGREEMENT is effective as of April 21, 2008 (the “EFFECTIVE DATE”).

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
2. **DEFINITIONS**

As used in this AGREEMENT, the following terms have the meanings indicated:

2.1 **AFFILIATE** means any entity directly or indirectly controlling, controlled by or under common control with LICENSEE. For purposes of this Section 2.1, “control” means the direct or indirect ownership of 50% or more of the outstanding voting securities of any entity, or the right to receive 50% or more of the profits or earnings of such entity, or the ability to control the policy decisions of an entity.

2.2 **EMEA** means the European Medicines Agency.

2.3 **FDA** means United States Food and Drug Administration.

2.4 **INVENTOR(S)** means Eric N. Olson and Eva Van Rooij.

2.5 **LICENSED PRODUCT** means any product (including, but not limited to, clinical evaluation candidates, diagnostic and pharmaceutical products) or service, the manufacture, use, practice or sale of which is covered by a VALID CLAIM.

2.6 **LICENSED SUBJECT MATTER** means inventions, discoveries and processes claimed or covered by PATENT RIGHTS and/or TECHNOLOGY RIGHTS.

2.7 **LICENSEE PRODUCT** means any LICENSED PRODUCT that is identified, researched or developed by or on behalf of LICENSEE or as part of a bonafide collaboration between LICENSEE and a THIRD PARTY.

2.8 **MHLW** means the Japanese Ministry of Health, Labor, and Welfare.

2.9 **NAKED SUBLICENSE** means a sublicense pursuant to Section 4.4 below in which (a) the sublicensee receives a sublicense of the LICENSED SUBJECT MATTER and (b) such sublicensee does not receive any rights to pursue any LICENSEE PRODUCTS.

2.10 **NET SALES** means the gross revenues received by LICENSEE, AFFILIATE and/or any sublicensee pursuant to Section 4.4 from the SALE of LICENSED PRODUCTS less: (a) cash, trade or quantity discounts, credits or allowances actually granted; (b) sales and/or use taxes actually paid; (c) import and/or export duties actually paid; (d) outbound transportation (including insurance) prepaid or allowed; (e) amounts allowed, credited, refunded or rebated due to returns, rejections or recalls (not to exceed the original billing or invoice amount); (f) retroactive price reductions that are actually allowed or granted; (g) payments or rebates allowed in connection with SALES of LICENSED PRODUCTS to any governmental or regulatory authority in respect of any state or federal Medicare, Medicaid or similar programs; and (h) amounts written off as uncollectible bad debt specifically on the SALE of LICENSED PRODUCTS.

If LICENSED PRODUCTS are SOLD in the form of a combination product containing one or more active ingredients which are themselves not LICENSED PRODUCTS (such combination, a “COMBINATION PRODUCT”), then NET SALES attributable to such COMBINATION PRODUCT shall be calculated on a country-by-country basis by multiplying NET SALES of the COMBINATION PRODUCT (i.e., NET SALES calculated assuming that the entire COMBINATION PRODUCT is LICENSED PRODUCT) by the fraction A/(A+B) where: A is the LICENSEE’S (or its AFFILIATE’S or

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
 sublicensee’s, as applicable) average invoice price during the applicable reporting period for each LICENSED PRODUCT in such COMBINATION PRODUCT if sold separately in such country (or the sum of such average invoice prices if more than one LICENSED PRODUCT is in such COMBINATION PRODUCT), and B is the sum of LICENSEE’S (or its AFFILIATES or sublicensees, as applicable) average invoice price during the applicable reporting period for each active ingredient in such COMBINATION PRODUCT (other than the LICENSED PRODUCT) if sold separately in such country. If, on a country-by-country basis, LICENSEE (or its AFFILIATES or sublicensees, as applicable) does not separately sell the active ingredients in such COMBINATION PRODUCT (other than the LICENSED PRODUCT) during the reporting period when it separately sells the LICENSED PRODUCT in such COMBINATION PRODUCT, then NET SALES attributable to such COMBINATION PRODUCT shall be calculated by multiplying the NET SALES of such COMBINATION PRODUCT (i.e., NET SALES calculated assuming that the entire COMBINATION PRODUCT is a LICENSED PRODUCT) by the fraction A/C where: A is as set forth above and C is LICENSEE’S (or its AFFILIATE’S or sublicensee’s, as applicable) average invoice price during the applicable reporting period for the COMBINATION PRODUCT in such country. If, on a country-by-country basis, LICENSEE (or its AFFILIATES or sublicensees, as applicable) does not separately SELL each LICENSED PRODUCT during the reporting period when it sells such COMBINATION PRODUCT, then NET SALES attributable to such COMBINATION PRODUCT shall be calculated by multiplying the NET SALES of such COMBINATION PRODUCT (i.e., NET SALES calculated assuming that the entire COMBINATION PRODUCT is a LICENSED PRODUCT) by the fraction D/(D+E) where: D is the fair market value of the portion of the COMBINATION PRODUCT that contains the LICENSED PRODUCT and E is the fair market value of the portion of the COMBINATION PRODUCT containing the other active ingredient(s) included in such COMBINATION PRODUCT, as such fair market values are determined by mutual agreement of the parties. In no event will the resulting calculated value of NET SALES of COMBINATION PRODUCTS be less than 50% of the value of NET SALES of LICENSED PRODUCTS had they been SOLD separately.

2.11 PATENT RIGHTS means BOARD’S rights in (a) patents and/or patent applications listed in the attached Exhibit 1; (b) all patent applications claiming priority to any of the foregoing, including divisionals, continuations and continuations-in-part of any of the foregoing; (c) all letters patent that issue on any of the foregoing; (d) all reissues, additions, substitutions, reexaminations or extensions of any of the foregoing; and (e) all foreign counterparts of any of the foregoing.

2.12 PHASE 1 CLINICAL STUDY means that portion of the drug development and review process which provides for the initial introduction of an investigational new drug into humans that would satisfy the requirements specifically defined by the rules and regulations of the FDA under 21 § C.F.R. 312.21(a), or similar rules and regulations in other countries or jurisdictions.

2.13 PHASE 2 CLINICAL STUDY means that portion of the drug development and review process which provides for early controlled clinical studies conducted to obtain preliminary data on the effectiveness of an investigational new drug for a particular indication that would satisfy the requirements specifically defined by the rules and regulations of the FDA under 21 § C.F.R. 312.21(b), or similar rules and regulations in other countries or jurisdictions.

2.14 PHASE 3 CLINICAL STUDY means that portion of the drug development and review process in which expanded clinical studies are conducted to gather the additional information about the effectiveness and safety that is needed to evaluate the overall benefit-risk relationship of an investigational new drug that would satisfy the requirements specifically defined by the rules and regulations of the FDA under 21 § C.F.R. 312.21(c), or similar rules and regulations in other countries or jurisdictions.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
2.15 **SALE, SELL or SOLD** means the transfer or disposition of a LICENSED PRODUCT for value excluding any transfer or disposition to an AFFILIATE or sublicensee unless such AFFILIATE or sublicense is an end user; provided, however, that transfers or dispositions of LICENSED PRODUCTS at or below cost for use in research, development, charitable or clinical trial purposes shall not be considered a SALE.

2.16 **TECHNOLOGY RIGHTS** means BOARD’S rights in technical information, know-how, processes, procedures, compositions, devices, methods, formulas, protocols and techniques developed: (i) by Eric N. Olson at UT SOUTHWESTERN before the EFFECTIVE DATE; (ii) in Eric N. Olson’s laboratory at UT SOUTHWESTERN before the EFFECTIVE DATE; or (iii) during the term of and directly resulting from the research conducted under the SRA; in each case, which are not covered by PATENT RIGHTS but which are necessary for practicing the PATENT RIGHTS.

2.17 **THIRD PARTY** means any person or entity other than BOARD, LICENSEE or an AFFILIATE.

2.18 **VALID CLAIM** means any claim of: (a) a patent application included in PATENT RIGHTS that has been neither abandoned nor pending for more than [*] years; or (b) an issued, unexpired patent included in PATENT RIGHTS that has not been withdrawn, canceled or disclaimed or held invalid by a court or governmental authority of competent jurisdiction in an unappealed or unappealable decision no longer subject to review.

### 3. WARRANTY: SUPERIOR-RIGHTS

3.1 Except for the rights, if any, of the government of the United States of America (“GOVERNMENT”), as set forth below, BOARD represents and warrants (i) that it is the sole owner of the entire right, title, and interest in and to PATENT RIGHTS and TECHNOLOGY RIGHTS, (ii) that it has the sole right to grant licenses thereunder, and (iii) that it has not knowingly granted licenses under the LICENSED SUBJECT MATTER to any other person or entity that would conflict with, or otherwise restrict BOARD’S ability to grant the license rights granted to LICENSEE under this AGREEMENT.

3.2 LICENSEE understands that the LICENSED SUBJECT MATTER may have been developed under a funding agreement with the GOVERNMENT and, if so, that the GOVERNMENT may have certain rights relative thereto. This AGREEMENT is explicitly made subject to the GOVERNMENT’S rights under any agreement and any applicable law or regulation. If there is a conflict between any agreement, applicable law or regulation and this AGREEMENT, the terms of the GOVERNMENT agreement, applicable law or regulation shall prevail. LICENSEE agrees that LICENSED PRODUCTS used or SOLD in the United States to the extent covered by LICENSED SUBJECT MATTER developed under a funding agreement with the GOVERNMENT will be manufactured substantially in the United States, unless a written waiver is obtained in advance from the GOVERNMENT.

3.3 LICENSEE understands and acknowledges that BOARD, by this AGREEMENT, makes no representation as to the operability or fitness for any use, safety, efficacy, approvability by regulatory authorities, time and cost of development, patentability, and/or breadth of the LICENSED SUBJECT MATTER. BOARD, by this AGREEMENT, also makes no representation as to whether there are any patents now held, or which will be held, by others or by BOARD which may be dominant or subordinate to PATENT RIGHTS, nor does BOARD make any representation that the inventions contained in PATENT RIGHTS do not infringe any other patents now held or that they will be held by others or by BOARD.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
4. LICENSE

4.1 BOARD hereby grants to LICENSEE: (i) a worldwide, royalty-bearing, exclusive license under PATENT RIGHTS to discover, research, develop, make, have made, use, offer for SALE, SELL and/or import LICENSED PRODUCTS; and (ii) a worldwide, non-exclusive license under TECHNOLOGY RIGHTS to discover, research, develop, make, have made, use, offer for SALE, SELL and/or import LICENSED PRODUCTS. The licenses granted under this Section 4.1 are subject to the payment by LICENSEE to BOARD of all consideration as provided herein, and are further subject to the rights retained by BOARD to:

a. publish the general scientific findings from research related to LICENSED SUBJECT MATTER subject to the terms of Article 12, Confidential Information of this AGREEMENT and Article 7 of the SRA;

b. use LICENSED SUBJECT MATTER for SYSTEM research, teaching and other educationally-related, non-commercial purposes; and

c. transfer LICENSED SUBJECT MATTER to other non-profit academic or research institutions for non-commercial research use only, which research use shall exclude research for which a commercial entity receives a license or an option to resulting intellectual property.

4.2 Except for the rights retained by BOARD as set forth in Section 4.1, BOARD hereby agrees that it shall not grant to any THIRD PARTY any license under the TECHNOLOGY RIGHTS to discover, research, develop, make, have made, use, offer for SALE, SELL and/or import LICENSED PRODUCTS.

4.3 LICENSEE may extend the license granted herein to any AFFILIATE if the AFFILIATE consents in writing to be bound by this AGREEMENT to the same extent as LICENSEE. LICENSEE must deliver to BOARD a true and accurate copy of such written agreement, and any modification or termination thereof, within 30 days after execution, modification or termination; provided however that such copy may be redacted to delete information that is not relevant to determining LICENSEE’S compliance with its obligations under this AGREEMENT.

4.4 LICENSEE may grant sublicenses consistent with this AGREEMENT to THIRD PARTIES if LICENSEE is responsible to BOARD for the activities of its sublicensees relevant to this AGREEMENT as if the activities were carried out by LICENSEE, including the payment of royalties owed to BOARD whether or not such royalties are paid to LICENSEE by a sublicensee. LICENSEE must furnish to BOARD a true and correct copy of each sublicense granted by LICENSEE, and any modification or termination thereof, within 30 days after execution, modification, or termination; provided however that such copy may be redacted to delete information that is not relevant to determining LICENSEE’S compliance with its obligations under this AGREEMENT. When this AGREEMENT is terminated, BOARD and UT SOUTHWESTERN agree to accept as successors to LICENSEE existing sublicensees in good standing at the date of termination, provided that the sublicensees consent in writing to be bound by all applicable terms and conditions of this AGREEMENT.

4.5 BOARD shall use its best efforts to disclose to LICENSEE (a) all TECHNOLOGY RIGHTS that are in existence as of the EFFECTIVE DATE within thirty (30) days after the EFFECTIVE DATE and (b) all other TECHNOLOGY RIGHTS within a reasonable time after their creation or development.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
4.6 In the event that either party identifies other patents and/or patent applications that such party reasonably believes are necessary to practice the inventions licensed under this AGREEMENT and such patents and/or patent applications (a) disclose or claim inventions that were developed at UT SOUTHWESTERN prior to the EFFECTIVE DATE, (b) were assigned, or should have been assigned, to BOARD, and (c) are not (i) exclusively licensed to a THIRD PARTY, (ii) co-exclusively licensed to one or more THIRD PARTIES with no additional co-exclusive licenses available, (iii) the subject of an option for a THIRD PARTY to obtain an exclusive license, or (iv) the subject of an option for one or more THIRD PARTIES to obtain a co-exclusive license with no additional options for co-exclusive licenses available, then the party making such identification shall promptly notify the other party and upon LICENSEE’S request, BOARD shall negotiate in good faith with LICENSEE to grant a license to LICENSEE under such patents and/or patent applications on commercially reasonable terms.

5. PAYMENTS AND REPORTS

5.1 In consideration of rights granted by BOARD to LICENSEE under this AGREEMENT, LICENSEE will pay BOARD the following:

a. a one time, non-refundable license documentation fee in the amount of $10,000, due and payable within [*] days of the earlier of: (i) [*] or (ii) [*];

b. an annual license maintenance fee in the amount of $10,000, due and payable on each anniversary of the EFFECTIVE DATE beginning on the first anniversary and creditable against royalties, milestone fees or sublicense fees due under Sections 5.1c, 5.1d or 5.1f for that year;

c. a running royalty equal to [*]% of NET SALES. LICENSEE’S obligation to pay royalties under this Section 5.1c will commence upon the first commercial sale of the applicable LICENSED PRODUCT and will expire, on a LICENSED PRODUCT-by-LICENSED PRODUCT and country-by-country basis upon the date of expiration of the last to expire VALID CLAIM that covers such LICENSED PRODUCT in such country. If LICENSEE, its AFFILIATES or sublicensees are required to obtain a license or other similar right under any intellectual property rights of a THIRD PARTY that claim or cover the composition, method of making, or method of using a LICENSED PRODUCT, LICENSEE may reduce the royalty payment owed to BOARD on the same LICENSED PRODUCT under this Section 5.1c by an amount equal to [*], but in no event will such reduction result in a royalty of less than [*]% of NET SALES; provided, however that if LICENSEE has adjusted NET SALES for a COMBINATION PRODUCT as set forth in Paragraph 2.10, then the royalties creditable under this Section 5.1c are limited to an amount such that the royalty payable to BOARD is no less than [*]% of NET SALES unadjusted for a COMBINATION PRODUCT. For clarity, royalties payable under this Section 5.1c are noncumulative and will be payable with respect to a particular LICENSED PRODUCT only once, even if such LICENSED PRODUCT is covered or claimed by multiple VALID CLAIMS within the PATENT RIGHTS;

d. one time milestone fees according to the table below:

<table>
<thead>
<tr>
<th>Milestone Event</th>
<th>Milestone Fee</th>
<th>Due and Payable</th>
</tr>
</thead>
<tbody>
<tr>
<td>[*] for a LICENSEE PRODUCT</td>
<td>[*]</td>
<td>Within [*] days of Milestone Event</td>
</tr>
<tr>
<td>[*] for a LICENSEE PRODUCT</td>
<td>[*]</td>
<td>Within [*] days of Milestone Event</td>
</tr>
<tr>
<td>[*] for a LICENSEE PRODUCT</td>
<td>[*]</td>
<td>Within [*] days of Milestone Event</td>
</tr>
</tbody>
</table>

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
<table>
<thead>
<tr>
<th>Milestone Event</th>
<th>Amount</th>
<th>Within [*] days of Milestone Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>First FDA approval of a new drug application for a LICENSEE PRODUCT</td>
<td>$2,000,000</td>
<td></td>
</tr>
<tr>
<td>First [*] regulatory approval for a LICENSEE PRODUCT</td>
<td>$500,000</td>
<td></td>
</tr>
<tr>
<td>First [*] regulatory approval for a LICENSEE PRODUCT</td>
<td>$500,000</td>
<td></td>
</tr>
</tbody>
</table>

For avoidance of doubt, each milestone payment is payable only once regardless of the number of times the milestone event occurs and regardless of the number of LICENSEE PRODUCTS developed. For the purpose of this Section 5.1d, “[*]” means [*] by or on behalf of LICENSEE or its AFFILIATE(S) or sublicensees(s):

e. an amount equal to the sum of (i) $[*] (to reimburse UT SOUTHWESTERN for all out-of-pocket expenses paid by UT SOUTHWESTERN prior to the EFFECTIVE DATE in filing, prosecuting, enforcing and maintaining PATENT RIGHTS) and (ii) those additional out-of-pocket expenses incurred on UT SOUTHWESTERN’S behalf prior to the EFFECTIVE DATE in filing, prosecuting, enforcing and maintaining PATENT RIGHTS but not paid by UT SOUTHWESTERN prior to the EFFECTIVE DATE, provided that such additional out-of-pocket expenses shall not exceed $[*]. Payment of such amount will be made in two equal installments. The first installment is due and payable [*], and the second installment is due and payable [*]; and

f. a sublicense fee of [*]% of all consideration that is received by LICENSEE from a sublicensee in consideration for the grant of a NAKED SUBLICENSE except for any consideration paid to LICENSEE by a sublicensee: (i) that constitute royalties or other payments based on SALES of LICENSED PRODUCTS, (ii) with respect to research, development and sales and marketing or promotional activities performed by or on behalf of LICENSEE, (iii) that constitute reimbursement of patent prosecution or enforcement expenses for PATENT RIGHTS, (iv) that constitute private or non-publicly traded equity securities of a THIRD PARTY, (v) in exchange for equity securities of LICENSEE, (vi) as loans, credit lines, or other amounts subject to repayment, or (vii) with respect to the supply of goods and/or services by or on behalf of LICENSEE (collectively, the “SUBLICENSEE REVENUES”).

Such sublicense fee will be payable within [*] days of LICENSEE’S receipt of any such SUBLICENSEE REVENUES. For purposes of this Section 5.1f, the value of any equity securities will be calculated as the average market value of the class of stock involved for 5 consecutive days preceding the transfer to LICENSEE. In cases where the applicable sublicense agreement calls for payment to LICENSEE of a premium over the market value of LICENSEE’S equity securities, BOARD will also share [*]% of the premium paid to LICENSEE. If LICENSEE is required to pay BOARD a payment under this Section 5.1f and a sublicense fee payment is also due with respect to the same NAKED SUBLICENSE under the terms of one or more RELATED LICENSE AGREEMENTS (as defined in Section 5.2 below), then LICENSEE may credit, against any payments due hereunder, the full amount of all sublicense fee payments made under such RELATED LICENSE AGREEMENT(S). Notwithstanding anything to the contrary set forth herein, if LICENSEE grants a NAKED SUBLICENSE to a sublicensee where the underlying intellectual property licensed to the sublicensee is the LICENSED SUBJECT MATTER and other intellectual property, then LICENSEE shall only be required to pay BOARD a sublicense fee under this subsection (f) based on the consideration received by LICENSEE that is allocable solely to the grant of the NAKED SUBLICENSE under the LICENSED SUBJECT MATTER.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
5.2 If LICENSEE is required to pay BOARD a royalty under Section 5.1c and a royalty payment is also due with respect to the same LICENSED PRODUCT under the terms of another license agreement between LICENSEE and BOARD and such other license agreement covers intellectual property: (a) developed at UT SOUTHWESTERN; (b) naming Eric Olson or a member of his laboratory as an inventor or a person who was a member of his laboratory at the time the applicable invention was developed (for clarity and the avoidance of doubt, a member of Eric Olson’s laboratory does not include other independent faculty members in his department or center, or their subordinates); and (c) pertaining to microRNA in the areas of cardiovascular and muscle disorders and diseases (such license agreement a "RELATED LICENSE AGREEMENT"), then the royalty payment due BOARD for such LICENSED PRODUCT under such RELATED LICENSE AGREEMENT shall be creditable against the royalty payment due BOARD under Section 5.1c above, up to a credit of [*]. In no event however will the amount creditable under this Section 5.2 reduce the royalty payment due BOARD to less than [*]% of NET SALES.

5.3 Amounts that are not paid when due under Article 5 will accrue interest from the due date until paid, at a rate equal to [*], or the maximum allowed by law, if less; provided however that BOARD shall notify LICENSEE of payment obligations and LICENSEE shall have at least 10 business days to pay any amounts due before interest is assessed.

5.4 During the term of this AGREEMENT and for [*] thereafter, LICENSEE agrees to keep complete and accurate records of its and its sublicensees’ SALES and NET SALES under the licenses granted in this AGREEMENT in sufficient detail to enable the royalties payable hereunder to be determined. LICENSEE agrees to permit an independent accounting firm selected by BOARD and reasonably acceptable to LICENSEE, at BOARD’S expense and with 14 days prior written notice to LICENSEE, to periodically examine LICENSEE’S books, ledgers, and records during LICENSEE’S regular business hours no more than [*] every calendar year, solely for the purpose of and to the extent necessary to verify any report required under this AGREEMENT. If the amounts due to BOARD are determined by such independent accounting firm to have been underpaid by an amount equal to or greater than [*]% of the total amount payable, LICENSEE will pay the cost of the examination and all overdue amounts with accrued interest at the prime rate in effect on the date such payment is due (as quoted in the Wall Street Journal (“WSJ”)) plus [*], unless such interest rate is greater than the highest allowable rate by law, in which case the interest rate shall be the highest allowable rate by law, and no interest payment shall be owed pursuant to Section 5.3 with respect thereto.

5.5 Within 30 days after March 31, June 30, September 30, and December 31 of each year of the term of this AGREEMENT, beginning immediately after the first commercial SALE, LICENSEE shall deliver to BOARD a true and accurate written report, even if no payments are due BOARD, giving the particulars of the business conducted by LICENSEE and its sublicensees(s), if any exist, during the preceding 3 calendar months under this AGREEMENT as are pertinent to calculating payments hereunder. Such reports will be on a per-country and per-LICENSED PRODUCT basis and presented substantially in the form as shown in Exhibit 2. Simultaneously with the delivery of each report, LICENSEE must pay to BOARD the amount due and unpaid, if any, for the period covered by such report.

5.6 Once per calendar year, on or before each anniversary of the EFFECTIVE DATE, irrespective of having a first SALE or offer for SALE, LICENSEE shall deliver to BOARD a written progress report as to LICENSEE’S (and any sublicensee’s) efforts and accomplishments during the preceding year in diligently commercializing LICENSED SUBJECT MATTER and LICENSEE’S (and sublicensee’s) commercialization plans for the upcoming year.

5.7 All amounts payable hereunder by LICENSEE shall be paid in United States dollars without deductions for taxes, assessments, fees, or charges of any kind. Royalties accruing on SALES in
countries other than the United States shall be paid in United States dollars in amounts based on the rate of exchange as quoted in the WSJ as of the last business day of the reporting period. If the WSJ does not publish any such rate, a comparable rate publication will be agreed upon from time to time by the parties, and with respect to each country for which such rate is not published by the WSJ or in a comparable publication, the parties will use the prevailing rate for bank cable transfers for such date, as quoted by leading United States banks in New York City dealing in the foreign exchange market.

5.8 All payments must be payable to UT SOUTHWESTERN and sent to the address listed in Section 15.2.

6. TERM AND TERMINATION

6.1 The term of this AGREEMENT shall commence upon the EFFECTIVE DATE and, unless earlier terminated in accordance with this Article 6, shall continue in full force and effect, on a country-by-country and LICENSED PRODUCT-by-LICENSED PRODUCT basis, until the date on which LICENSEE’S obligations to pay royalties on NET SALES of the applicable LICENSED PRODUCT in the applicable country expires according to the provisions of Section 5.1c. Upon expiration of such royalty payment obligation, LICENSEE shall have a fully paid up license to practice TECHNOLOGY RIGHTS in such country.

6.2 At any time [*] after [*], BOARD shall have the right to terminate this license if LICENSEE, within [*] days after receiving written notice from UT SOUTHWESTERN of the intended termination, fails to provide written evidence reasonably satisfactory to UT SOUTHWESTERN that LICENSEE, its AFFILIATE(S) or sublicensee(s) has:

a. SALES; or
b. an effective, ongoing and active research, development, manufacturing, marketing or sales program as appropriate, directed toward obtaining regulatory approval, and/or production and/or SALES in accordance with LICENSEE’S business, legal, medical and scientific judgment and LICENSEE’S normal practices and procedures for products having similar technical and commercial potential.

6.3 This AGREEMENT will earlier terminate:

a. automatically if LICENSEE becomes bankrupt and/or if the business of LICENSEE is placed in the hands of a receiver, assignee, or trustee, whether by voluntary act of LICENSEE or otherwise; or
b. upon [*] days written notice from BOARD if LICENSEE becomes insolvent unless, before the end of the [*] day period, LICENSEE provides BOARD with evidence of its solvency; or
c. upon [*] days written notice from BOARD if LICENSEE breaches or defaults on its obligation to make payments (if any are due) or reports, in accordance with the terms of Article 5 hereunder, unless, before the end of the [*] day period, LICENSEE has cured the breach or default and so notifies BOARD, stating the manner of the cure; or
d. upon [*] days written notice if either party materially breaches or defaults on any other obligation under this AGREEMENT, unless, before the end of the [*] day period, the breaching

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
or defaulting party has cured the breach or default and so notifies the other party, stating the manner of the cure; or

e. at any time by mutual written agreement of LICENSEE, BOARD and UT SOUTHWESTERN and subject to any terms herein which survive termination; or

f. at any time by LICENSEE upon [*] days written notice and subject to any terms herein which survive termination; or

g. under the provisions of Section 6.2 if invoked.

6.4 If this AGREEMENT is terminated for any cause:

a. nothing herein will be construed to release either party of any obligation that accrued prior to the effective date of the termination; and

b. after the effective date of the termination, LICENSEE (and its AFFILIATES) will provide BOARD with a written inventory of all LICENSED PRODUCTS in process of manufacture, in use or in stock. LICENSEE (and its AFFILIATES) may SELL any such LICENSED PRODUCTS within the [*] day period following such termination if it pays earned royalties thereon, and any other amount due pursuant to the terms of Article 5; and

c. Articles 10 (Indemnification And Insurance), 11 (Use Of Name), 12 (Confidential Information) and 15 (General) and this Section 6.4 shall survive termination of this AGREEMENT.

7. INFRINGEMENT BY THIRD PARTIES

7.1 LICENSEE and BOARD shall each promptly provide the other party written notice of any alleged infringement of the PATENT RIGHTS.

7.2 LICENSEE shall have the first right (but not the obligation), at its expense, to enforce PATENT RIGHTS against infringement by third parties and is entitled to retain recovery from such enforcement. After reimbursement of LICENSEE’S reasonable attorneys’ fees and court costs in connection with such enforcement, the balance of any recovery for damages and/or a reasonable royalty in lieu thereof will be considered NET SALES and subject to royalty payments pursuant to Section 5.1c and applied in the calendar quarter in which the recovery is obtained. If LICENSEE does not file suit against a substantial infringer of PATENT RIGHTS within [*] of knowledge thereof and has not entered into good faith negotiations to sublicense the applicable PATENT RIGHTS to such infringer, and such infringement has not otherwise ceased, then BOARD (a) may enforce PATENT RIGHTS on behalf of itself and LICENSEE and (b) will have the right to (i) retain all recoveries from such enforcement and/or (ii) reduce the exclusive license granted to LICENSEE hereunder to a non-exclusive license with respect to the relevant PATENT RIGHTS (without affecting LICENSEE’S other rights hereunder, including without limitation the right to grant sublicenses) and to grant a non-exclusive, non-transferable, non-sublicensable license under the applicable PATENT RIGHTS solely to such infringer and solely with respect to the infringing product or method.

7.3 In any infringement suit or dispute, the parties agree to cooperate fully with each other. At the request and expense of the party bringing suit, the other party will permit access to all relevant personnel, records, papers, information, samples, specimens, etc., during regular business hours and with reasonable advance written notice.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
8. ASSIGNMENT

LICENSEE may not assign this AGREEMENT without the prior written consent of BOARD, which will not be unreasonably withheld, except in connection with the sale of all or substantially all of LICENSEE’S assets, as it relates to this AGREEMENT, to a THIRD PARTY with written notice to UT SOUTHWESTERN or assignment to an AFFILIATE with written notice to UT SOUTHWESTERN.

9. PATENT MARKING

LICENSEE must permanently and legibly mark all products, packaging and documentation manufactured or SOLD by it in the United States under this AGREEMENT with such patent notice as may be permitted or required under Title 35, United States Code.

10. INDEMNIFICATION AND INSURANCE

10.1 LICENSEE agrees to hold harmless and indemnify BOARD, INVENTOR, SYSTEM, UT SOUTHWESTERN, its Regents, officers, employees and agents from and against any THIRD PARTY claims, demands, or causes of action whatsoever (including, without limitation, those arising on account of any injury or death of persons or damage to property) caused by, or arising out of, or resulting from, the exercise or practice of the license granted hereunder by LICENSEE, its AFFILIATES or their officers, employees, agents or representatives, except for such claims, demands or causes of action whatsoever that result from the negligence or willful misconduct of BOARD, INVENTOR, SYSTEM, UT SOUTHWESTERN, its Regents, officers, employees or agents.

10.2 In no event will any party to this AGREEMENT be liable for any indirect, special, consequential or punitive damages (including, without limitation, damages for loss of profits or expected savings or other economic losses, or for injury to persons or property) arising out of or in connection with this AGREEMENT or its subject matter, regardless of whether such party knows or should know of the possibility of such damages; provided however that this Section 10.2 shall not be construed to limit LICENSEE’S indemnification obligations under Section 10.1.

10.3 Beginning at the time when any LICENSED PRODUCT is being distributed or SOLD (including for the purpose of obtaining regulatory approvals) by LICENSEE or by a sublicensee, LICENSEE will, at its sole cost and expense, procure and maintain commercial general liability insurance in amounts not less than $1,000,000 per incident and $2,000,000 annual aggregate, and LICENSEE will use reasonable efforts to have the BOARD, SYSTEM and UT SOUTHWESTERN named as additional insureds. Such commercial general liability insurance will provide (i) product liability coverage; (ii) broad form contractual liability coverage for LICENSEE’S indemnification under this AGREEMENT; and (iii) coverage for litigation costs. The minimum amounts of insurance coverage required will not be construed to create a limit of LICENSEE’S liability with respect to its indemnification under this AGREEMENT.

10.4 LICENSEE will provide BOARD with written evidence of such insurance upon BOARD’S request. LICENSEE will use reasonable efforts to provide BOARD with written notice of at least 15 days prior to the cancellation, non-renewal or material change in such insurance.

10.5 LICENSEE will maintain such commercial general liability insurance beyond the expiration or termination of this AGREEMENT during (i) the period that any LICENSED PRODUCT developed pursuant to this AGREEMENT is being commercially distributed or SOLD by LICENSEE or by a sublicensee or agent of LICENSEE; and (ii) the 5-year period immediately after such period.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
11. USE OF NAME

LICENSEE may not use the name of UT SOUTHWESTERN, SYSTEM, INVENTOR or BOARD without express written consent from UT SOUTHWESTERN, SYSTEM, INVENTOR and/or BOARD, as applicable, except as required by governmental law, rule or regulation. Consent should be requested in writing at least 5 business days in advance and sent to:

Leah A. Hurley
Vice President for Legal Affairs
The University of Texas Southwestern Medical Center at Dallas
5323 Harry Hines Blvd.
Dallas, TX 75390-9008
Phone: 214-648-7986
Fax: 214-648-8805
Email: Leah.Hurley@UTSouthwestern.edu

12. CONFIDENTIAL INFORMATION

12.1 The parties each agree that all information contained in documents identified as “confidential” and forwarded or otherwise disclosed to one by the other for the purposes of this AGREEMENT (the “Confidential Information”) (i) are to be received in strict confidence, (ii) are to be used only for the purposes of this AGREEMENT, and (iii) are not to be disclosed by the recipient party, its agents or employees without the prior written consent of the other party, except to the extent that the recipient party can establish competent written evidence that such Confidential Information:

a. was in the public domain at the time of disclosure;

b. later became part of the public domain through no act or omission of the recipient party, its employees, agents, successors or assigns;

c. was lawfully disclosed to the recipient party by a THIRD PARTY having the right to disclose it;

d. was already known by the recipient party at the time of disclosure; or

e. was independently developed by the recipient party.

In addition, notwithstanding the foregoing, each party may disclose the other party’s Confidential Information to the extent required by law or regulation to be disclosed; provided however, that the party required to disclose such Confidential Information shall give reasonable advance written notice to the other party of such disclosure requirement and shall fully cooperate (at the other party’s request and expense) with the other party’s efforts to secure, (i) a protective order requiring that the Confidential Information so disclosed by used only for the purposes for which the order was issued or the law or regulation required or (ii) confidential treatment of such Confidential Information required to be disclosed. In addition, notwithstanding anything to the contrary set forth in this Article 12, LICENSEE may disclose BOARD’S Confidential Information to its AFFILIATES and sublicensees provided that such party agrees to confidentiality provisions at least as restrictive as those contained in this Article 12.

12.2 Confidential Information shall not be deemed to be available to the public or to be in the recipient’s possession merely because it:

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
a. includes information that falls within an area of general knowledge available to the public or to the recipient (i.e., it does not include the specific information provided by the other party); or

b. can be reconstructed in hindsight from a combination of information from multiple sources that are available to the public or to the recipient, if not one of those sources actually taught or suggested the entire combination, together with its meaning and importance.

12.3 Each party’s obligation of confidence hereunder shall be fulfilled by using at least the same degree of care with the other party’s confidential information as it uses to protect its own confidential information but in no event less than reasonable care. These obligations shall exist while this AGREEMENT is in force and shall continue for a period of [*] years thereafter.

13. PATENTS AND INVENTIONS

13.1 LICENSEE, in its discretion, shall assume responsibility for and direct the filing, prosecution, and maintenance of the patent applications and patents within the PATENT RIGHTS (“PATENT RESPONSIBILITY”) using the patent attorney and/or law firm of its choice; provided that such patent attorney and/or law firm (“COUNSEL”) has entered into an outside counsel contract with UT SOUTHWESTERN.

13.2 If LICENSEE notifies BOARD in writing that LICENSEE is assuming PATENT RESPONSIBILITY then the following provisions shall apply:

a. LICENSEE shall be responsible for payment of all fees and costs arising from filing, prosecution, and maintenance of the patent applications and patents within the PATENT RIGHTS and will directly pay COUNSEL for all such fees and costs;

b. LICENSEE will provide BOARD, in a timely manner, copies of any and all patent applications included in PATENT RIGHTS, as well as copies of any patent prosecution related documents received or filed during the prosecution thereof including, but not limited to, office actions and responses. BOARD shall have the right to review and comment upon patent applications, responses to office actions and other substantive patent documents prior to filing and the right to have such documents revised prior to filing to reflect such comments provided such comments do not conflict with recommendation of COUNSEL; and

c. if LICENSEE does not intend to file, prosecute or maintain any patent application or patent within the PATENT RIGHTS in a particular country, LICENSEE shall notify BOARD in writing at least 30 days before the time limit, if any, set forth in the applicable laws and regulations for the taking of an action required or permitted with respect to the filing, prosecution, or maintenance of the applicable patent application or patent, then BOARD may elect, at its sole discretion and expense, to undertake the preparation, filing, prosecution, or maintenance of such patent application or patent in such country at its own expense, and such patent application or patent shall no longer be included in the PATENT RIGHTS licensed to LICENSEE under this AGREEMENT.

13.3 Until such time as LICENSEE notifies BOARD that LICENSEE is assuming PATENT RESPONSIBILITY as provided in Section 13.2 or if LICENSEE notifies BOARD in writing that it wishes BOARD to assume PATENT RESPONSIBILITY, the following provisions shall apply:

a. BOARD will work closely with LICENSEE to develop a suitable strategy for the prosecution and maintenance of all PATENT RIGHTS. BOARD will confer with LICENSEE.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
regarding the choice of patent counsel and will identify to LICENSEE the patent counsel selected by BOARD to prosecute the
PATENT RIGHTS; provided, that such patent counsel shall be reasonably acceptable to LICENSEE.

b. it is intended that LICENSEE will interact directly with the selected patent counsel in all phases of patent prosecution, such as
preparation, office action responses, filing strategies for continuation or divisional applications, and other related activities.
LICENSEE will receive, in a timely manner, copies of all documents received, prepared or filed during the prosecution of the patents
and patent applications within the PATENT RIGHTS by the selected patent counsel. LICENSEE shall have the right to review and
comment on all patent applications, responses to office actions and other substantive patent documents prior to filing and the right
to have such documents revised prior to filing to reflect such comments, except to the extent impracticable.

c. BOARD will consult with LICENSEE as provided herein, but shall maintain final authority in all decisions regarding the
prosecution and maintenance of the PATENT RIGHTS. In its discretion, BOARD may delegate specific authority to LICENSEE with
respect to the prosecution and maintenance of the PATENT RIGHTS; provided, that (1) BOARD is provided with copies of patent
applications and related documents as set forth in Section 13.2b, (2) BOARD may revoke the delegation at any time, and (3) counsel
that is prosecuting the patent remains counsel to the BOARD unless BOARD agrees otherwise in writing.

d. if LICENSEE requests in writing, that additional foreign and/or domestic patent applications covering LICENSED SUBJECT
MATTER be filed, then BOARD will prepare and file the appropriate application(s) in the United States and foreign countries.

e. LICENSEE will reimburse UT SOUTHWESTERN for costs actually incurred by UT SOUTHWESTERN in connection with
filing, prosecuting and maintaining PATENT RIGHTS provided such costs have not been reimbursed pursuant to Section 5.1e. UT
SOUTHWESTERN will invoice LICENSEE on a quarterly basis for patent expenses paid by UT SOUTHWESTERN. The invoiced
amounts will be due and payable by LICENSEE within 30 days of receipt.

f. if BOARD elects not to file, prosecute, or maintain a patent application or patent included in the PATENT RIGHTS, it shall so
notify LICENSEE at least 30 days in advance of any such filing or payment deadline and LICENSEE may elect to assume
responsibility for such patent or patent application, in which event, BOARD shall assign to LICENSEE its right, title in and to such
patent application or patent and BOARD shall have no further right, title or interest therein.

13.4 Each party shall fully cooperate with the other party to execute all lawful papers and instruments, make all rightful oaths and
declarations, and provide original patent documents to the party prosecuting or maintaining such patents and patent applications as may be
necessary in the preparation and prosecution of all such patents and other applications and protections referred to in this Article 13. The Rules
and Regulations of the BOARD, Series 90000, Intellectual Property (http://www.utsystem.edu/bor/rules/RRas1.pdf) sets forth the BOARD’S
policy regarding intellectual property. All individuals subject to this policy (persons employed by SYSTEM or any of its institutions including,
but not limited to, full and part-time faculty and staff and visiting faculty members and researchers, and anyone using the facilities or resources
of the SYSTEM or any of its institutions, including, but not limited to, students enrolled at a SYSTEM institution whether undergraduate or
master’s and doctoral degrees, and postdoctoral and predoctoral fellows) must assign their rights in intellectual property to the BOARD in
accordance with the provisions of the policy.

[\*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to
Rule 406 of the Securities Act of 1933, as amended.
14.  EXPORT CONTROL

LICENSEE acknowledges that it is subject to and agrees to abide by the United States laws and regulations (including the Export Administration Act of 1979 and Arms Export Control Act) controlling the export of technical data, computer software, laboratory prototypes, biological material and other commodities. The transfer of such items may require a license from the cognizant agency of the U.S. Government or written assurances by LICENSEE that it shall not export such items to certain foreign countries without prior approval of such agency. BOARD neither represents that a license is or is not required or that, if required, it shall be issued.

15.  GENERAL

15.1 This AGREEMENT constitutes the entire and only agreement between the parties for LICENSED SUBJECT MATTER and all other prior negotiations, representations, agreements, and understandings are hereby superseded. For clarity and the avoidance of doubt, the SRA and any OTHER LICENSE AGREEMENTS entered into by the parties shall remain in full force and effect in accordance with their terms. No agreements altering or supplementing these terms may be made except by a written document signed by both parties.

15.2 Any payments required by this AGREEMENT must be payable to UT SOUTHWESTERN and sent to:

   UT Southwestern Medical Center at Dallas
   Office for Technology Development
   5323 Harry Hines Boulevard
   Mail Code 9094
   Dallas, Texas 75390-9094
   ATTENTION: Director for Technology Transfer

15.3 Any notice required by this AGREEMENT must be given by email or facsimile transmission confirmed by personal delivery (including delivery by reputable messenger services such as Federal Express) or by prepaid, first class, certified mail, return receipt requested, addressed in the case of BOARD and UT SOUTHWESTERN to:

   UT Southwestern Medical Center at Dallas
   Office for Technology Development
   5323 Harry Hines Boulevard
   Mail Code 9094
   Dallas, Texas 75390-9094
   ATTENTION: Director for Technology Transfer
   Email: TechnologyDevelopment@UTSouthwestern.edu
   Phone: (214) 648-1888
   Fax: (214) 648-1889

or in the case of LICENSEE to:

   Miragen Therapeutics, Inc.
   1900 Ninth Street
   Suite 200
   Boulder, CO 80302
   ATTENTION: William S. Marshall, Ph.D., Chief Executive Officer

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
or other addresses as may be given from time to time under the terms of this notice provision.

15.4 LICENSEE must comply with all applicable national, state and local laws and regulations in connection with its activities pursuant to this AGREEMENT.

15.5 This AGREEMENT will be construed and enforced in accordance with the laws of the United States of America and of the State of Texas. The Texas state courts of Dallas County, Texas (or, if there is exclusive federal jurisdiction, the United States District Court for the Northern District of Texas) shall have exclusive jurisdiction and venue over any dispute arising out of this AGREEMENT, and LICENSEE hereby consents to the jurisdiction of such courts.

15.6 Failure of a party to enforce a right under this AGREEMENT will not act as a waiver of that right or the ability to later assert that right relative to the particular situation involved.

15.7 Headings are included herein for convenience only and shall not be used to construe this AGREEMENT.

15.8 If any part of this AGREEMENT is for any reason found to be unenforceable, all other parts nevertheless remain enforceable.

15.9 This AGREEMENT may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

15.10 Neither party shall be held liable or responsible to the other party nor be deemed to have defaulted under or breached this AGREEMENT for failure or delay in fulfilling or performing any term of this AGREEMENT when such failure or delay is caused by or results from causes beyond the reasonable control of the affected party, including, without limitation, fire, floods, earthquakes, natural disasters, embargoes, war, acts of war (whether war is declared or not), insurrections, riots, civil commotions, strikes, lockouts or other labor disturbances, acts of God or acts, omissions or delays in acting by any governmental authority.

THE REMAINDER OF THIS PAGE IS INTENTIONALLY BLANK

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
IN WITNESS WHEREOF, the parties hereto have caused their duly authorized representatives to execute this AGREEMENT.

BOARD OF REGENTS OF
THE UNIVERSITY OF TEXAS SYSTEM

By /s/ John A. Roan
John A. Roan
Executive Vice President for Business Affairs
UT Southwestern Medical Center at Dallas

Date 4/29/08

Approved as to Content:

By /s/ Dennis K. Stone
Dennis K. Stone, M.D.
Vice President for Technology Development
UT Southwestern Medical Center at Dallas

Date 4/29/08

MIRAGEN THERAPEUTICS, INC.

By /s/ William S. Marshall
William S. Marshall, Ph.D.
Chief Executive Officer

Date April 24, 2008

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
EXHIBIT 1

PATENT RIGHTS

a. [*]; and

b. [*].

Exhibit 1 Page 1 of 1

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
**EXHIBIT 2**

**ROYALTY REPORT**

Licensee: ______________________________

Agreement #: **L2021.miRagenS**

If license covers several product lines, please prepare a separate report for each product line. Then combine all product lines into a summary report.

Report Type:  
☐ Single Product Line Report: ________________________________ (Product Name)  
☐ Multi-Product Summary Report (Page 1 of ____ pages)

<table>
<thead>
<tr>
<th>Country</th>
<th>Quantity Produced</th>
<th>Gross Sales ($)</th>
<th>*Less Allowances</th>
<th>Net Sales ($)</th>
<th>Royalty Rate</th>
<th>Conversion Rate (if applicable)</th>
<th>Royalties Due this period(US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sublicensees:

---

Subtotal: ______  
Less Advanced Royalty Balance (if any): ______  
TOTAL ROYALTIES DUE THIS PERIOD: ______

* Please indicate in the following space the specific types of deductions and the corresponding amounts used to calculate Allowances:

Name: ________________  
Title: ________________  
Date: ________________

Prepared by --  

Mail completed report and royalty payment (make checks payable to: UT SOUTHWESTERN) to:

UT Southwestern Medical Center at Dallas  
Office for Technology Development  
5323 Harry Hines Boulevard  
Dallas, Texas 75390-9094

Exhibit 2 Page 1 of 2

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
[+] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
AMENDED AND RESTATED LICENSE AGREEMENT

This Amended and Restated License Agreement (the “Agreement”) is entered into as of December 31, 2012 (the “Restatement Date”), by Miragen Therapeutics, Inc., a corporation organized and existing under the laws of the State of Delaware (“Miragen”), and Santaris Pharma A/S, a corporation organized and existing under the laws of Denmark (“Santaris”). Miragen and Santaris may each be referred to individually as a “Party” and collectively as the “Parties”.

WHEREAS, Miragen is engaged in the research, development and commercialization of pharmaceutical products directed to [*] targets;

WHEREAS, Santaris has developed and owns proprietary rights to certain technology relating to the discovery of novel oligonucleotides active against selected molecular targets;

WHEREAS, Miragen and Santaris desire for Santaris to grant licenses to Miragen to use certain of such technology to allow Miragen to discover novel oligonucleotides active against certain [*] targets and to further research, develop, [*] and commercialize products containing such oligonucleotides; and

WHEREAS, the Parties entered into a License Agreement (the “Original Agreement”) as of June 18, 2010 (the “Effective Date”) and amended such license agreement on October 12, 2011 (the “First Amendment”); the Parties now desire to further amend and restate such agreement in its entirety.

NOW, THEREFORE, the Parties agree as follows:

1. DEFINITIONS.

   When used in this Agreement, the following capitalized terms, whether used in the singular or plural, shall have the meanings set forth in this Article 1:

   1.1. "Active Ingredient" means the clinically active material in a pharmaceutical product which provides its pharmacological activity (excluding formulation components such as coatings, stabilizers, excipients or solvents, or controlled release technologies).

   1.2. "Affiliate" means, with respect to any person or entity, any other person or entity that controls, is controlled by, or is under common control with, such person or entity. For purposes of this Agreement, a person or entity shall be deemed to control an entity if it owns or controls, directly or indirectly, at least 50% of the
equity securities of the subject entity entitled to vote in the election of directors (or, in the case of an entity that is not a corporation, for the election of the corresponding managing authority), or otherwise has the power to direct the management and policies of such other entity.

1.3. “Combination Product” means any one of the following: (a) a pharmaceutical product that contains a Product and at least one other Active Ingredient that is not a Product; (b) product that contains a Product and a medical device, or (c) any combination of a Product and another pharmaceutical product that contains at least one other Active Ingredient that is not a Product where such products are not formulated together but are sold together as a single product, and in each case, invoiced as one product. Except with respect to Section 1.4 and this Section 1.3, all references to Product in this Agreement shall be deemed to include Combination Product.

1.4. “Commercialization” or “Commercialize” means activities directed to marketing, promoting, distributing, importing, exporting, using for commercial purposes or selling a product.

1.5. “Confidential Information” of a Party means all Know-How or other information, including information and materials (whether or not patentable) regarding such Party’s technology, products or business, that is communicated in any way or form to the other Party, pursuant to the Confidentiality Agreement between the Parties dated August 24, 2009, pursuant to the Mutual Non-Disclosure Agreement between the Parties dated September 19, 2008 or pursuant to this Agreement, provided that, in each case, such Know-How or other information or materials are identified as confidential at the time of disclosure. The terms and conditions of this Agreement shall be considered Confidential Information of each Party.

1.6. “Control” or “Controlled” means the ability of a Party to grant the other Party a license or sublicense of or access to any Know-How or Patent, as provided herein, without violating the terms of any agreement or other arrangements with any Third Party.

1.7. “Cost of Goods Sold” or “COGS” means, with respect to a certain quantity of [*], the actual cost paid by Santaris to Third Parties to manufacture and supply such [*] (or any component thereof) (the “Third Party Manufacturing Costs”) and to the extent such [*] are not procured from a Third Party or such costs are not otherwise included in the Third Party Manufacturing Costs, Santaris’ FASC to manufacture or supply such [*], in each case, plus: (a) [*]; (b) [*]; (c) [*]; and (d) [*]. Any calculation of COGS will be based upon accepted contract manufacturing industry standards (including allocation of overhead but excluding allocation of idle capacity) and generally accepted accounting principles, applied consistently across Santaris’ products.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.8. “Development” or “Develop” means the conduct of any pre-clinical, non-clinical or clinical development activity, including toxicology, pharmacology and other similar studies, test method development and stability testing, process development, formulation development, delivery system development, quality assurance and quality control development, statistical analysis, clinical studies (including pre- and post-approval studies), regulatory affairs, pharmacovigilance and all other activities directed to obtaining any Regulatory Approval. Development shall not include any activity relating to the Discovery of Miragen Compounds.

1.9. “Diligent Efforts” means, with respect to any Product, the application of a reasonable level of resources and efforts consistent with the exercise of prudent scientific and business judgment that a company of comparable size and resources within the biotechnology industry to the applicable Party and its Affiliates (or to the extent applicable in the case of Miragen, its Sublicensees) would reasonably devote to a product at a similar stage of research, development or commercialization with similar market potential resulting from its own research efforts, based on conditions then prevailing, but at least those efforts and resources normally used by the applicable Party and its Affiliates (or to the extent applicable in the case of Miragen, its Sublicensees) with respect to a product at a similar stage of research, development or commercialization with similar market potential resulting from such Party’s and its Affiliates’ (or to the extent applicable in the case of Miragen, its Sublicensees’) own research efforts, based on conditions then prevailing. Diligent Efforts shall be determined by taking into account [*]. Diligent Efforts requires that the applicable Party: (a) promptly assign responsibility for research, Development, [*] and Commercialization activities with respect to Products to specific employees or contractors who are held accountable for progress and monitoring such progress on an on-going basis, (b) set and consistently seek to achieve specific and meaningful objectives and timelines for carrying out such research, Development, [*] and Commercialization activities, and (c) consistently make and implement decisions and allocate resources designed to advance progress with respect to such objectives and timelines.

1.10. “Discovery” or “Discover” means any activities relating to the [*] of LNA Compounds prior to the [*] of such LNA Compounds for Development.

1.11. “EMA” or “European Medicine Agency” means the European Medicines Agency or any successor entity thereto.

1.12. “Equity Agreements” means the Series A Preferred Stock Issuance Agreement, dated as of the Effective Date by and between Miragen and Santaris, and the Amended and Restated Investor Rights Agreement, the Amended and Restated Co-Sale Agreement and the Amended and Restated Voting Agreement, each as amended as of the Restatement Date.

1.13. “Exclusive Research License” shall have the meaning set forth in Section 2.1.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.14. “Existing Targets” means (a) each of the Targets that were the subject of this Agreement prior to the Restatement Date, which are described in Schedule 1.14; (b) the Targets comprising Existing Target [*] 4 pursuant to Section 2.1(a); and (c) any Target replacing any such Targets pursuant to Section 2.3.

1.15. “FASC” means, with respect to any particular quantity of [*], the fully allocated cost of manufacturing such [*], which shall comprise all direct costs (including labor, materials, energy, utilities, quality control or other costs incurred directly in and allocated specifically to the manufacturing of such [*] (or any component thereof)) and indirect costs (including [*]) specifically allocable to the production and delivery of such [*]. Any calculation of FASC will be based upon accepted contract manufacturing industry standards (including allocation of overhead but excluding allocation of idle capacity) and generally accepted accounting principles, applied consistently across Santaris’ products. Prior to the commencement of any Manufacturing of [*], the Parties shall agree to more detailed provisions concerning the determination of FASC in a manner consistent with the provisions of this definition.

1.16. “FDA” means the United States Food and Drug Administration or any successor entity thereto.

1.17. “Field” means the treatment, prevention or mitigation of any disease, disorder or medical condition in humans. [*]

1.18. “First Commercial Sale” means, with respect to any Product and any country of the Territory, the first sale of such Product by or on behalf of Miragen, its Affiliates or its Sublicensees to a Third Party in such country, after such Product has been granted Marketing Approval in such country.

1.19. “[*]” means the [*].

1.20. “Improvements to LNA Platform Technology” means [*]

1.21. “IND” means (a) an Investigational New Drug Application (as defined in 21 C.F.R. Part 312 et seq.) filed with the FDA, (b) an application for a Clinical Trial Authorisation pursuant to Directive 2001/20/EC and the regulations promulgated thereunder for initiating clinical trials in the European Union or (c) with respect to Argentina, Australia, Brazil, Canada, Israel, Japan, Mexico, New Zealand, Norway, Russia, Singapore, Switzerland, Turkey and any other country or regulatory jurisdiction, which at the time in question, is a common site for clinical trials in the cardiovascular indications intended for submission to the FDA or European Medicines Agency, (i) an equivalent of the applications described in subsections (a) or (b) in such country or regulatory jurisdiction or (ii) if there is no equivalent to the applications described in subsections (a) or (b) in such country or regulatory jurisdiction, the enrollment of the first subject in a human clinical trial.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.22. “IND Acceptance” means (a) with respect to any IND as defined in Section 1.21(a), (b) or (c)(i), the first date following submission of such IND on which clinical testing of a Product in human subjects may lawfully commence in the country of such submission or (b) with respect to any IND as defined in Section 1.21(c)(ii), the enrollment of the first subject in a human clinical trial for a Product.

1.23. “IND Enabling Studies” means pharmacokinetic and toxicology studies required to meet the requirements for filing an IND, including a toxicology study that is conducted in compliance with GLP.

1.24. “JRC” has the meaning set forth in Section 2.6.

1.25. “Know-How” means any invention, discovery, development, data, information, process, method, practice, technique, material, result or other know-how, in any tangible or intangible form and whether or not patentable, including specifications, formulations, formulae, software, algorithms, technology, test data including pharmacological, biological, chemical, biochemical, toxicological and clinical test data, analytical and quality control data, stability data, studies and procedures.

1.26. “LNA Compound” means any single-stranded oligonucleotide that is comprised of or contains at least one LNA Monomer; provided, that such oligonucleotide is [*] or a [**], but is not [***].

1.27. “LNA Monomer” means any 2’-O, 4’-C [*] ribonucleoside that is claimed in any Patent Controlled by Santaris as of the Effective Date or at any time during the Term. Any such ribonucleoside shall remain an LNA Monomer after expiration of any such Patent.

1.28. “LNA Platform Technology” means:

(a) [*]

(b) [**].

1.29. [***]

1.30. [**] Specifications” means the specifications for the [***] as set forth in Schedule 1.30 and as may be amended by Santaris from time to time upon prior written notice to Miragen; provided, that such amendment applies to all [***].

1.31. [****]

1.32. “Marketing Approval” means (a) approval of a new drug application or biologics license application filed with the FDA that is necessary for the Commercialization of a Product in the United States, (b) approval of a marketing authorization application filed with the European Medicines Agency for a Product under the centralized European procedure that is necessary for the Commercialization of a Product in a country in the European Union or (c) the equivalent marketing approval in any other applicable jurisdiction in the Territory.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.33. “Miragen Change of Control” means (a) a merger, reorganization or consolidation of Miragen with any entity that is not an Affiliate of Miragen as of the Restatement Date that results in the voting securities of Miragen outstanding immediately prior thereto ceasing to represent at least 50% of the combined voting power of the surviving entity immediately after such merger, reorganization or consolidation, (b) any entity that is not an Affiliate of Miragen as of the Restatement Date becoming the beneficial owner of 50% or more of the combined voting power of the outstanding securities of Miragen or (c) the sale or other transfer to any entity that is not an Affiliate of Miragen as of the Restatement Date of all or substantially all of Miragen’s business or assets to which this Agreement relates; provided, that a Miragen Change of Control shall not include (i) any transaction or series of transactions principally for bona fide equity financing purposes in which cash is received by Miragen or any successor or indebtedness of Miragen is cancelled or converted or a combination thereof or (ii) any reincorporation, merger or consolidation effected exclusively for the purpose of changing the domicile of Miragen to another U.S. jurisdiction.

1.34. “Miragen Compound” means any LNA Compound Targeting a Miragen Target.

1.35. “Miragen Compound Patent” means any Patent that (a) covers the composition of matter, [*], use, dose, formulation, import or sale of a Miragen Compound or Product and (b) does not contain claims that [*]. For clarity, any Patent [*] will be considered a Patent in the [*] if [*]. Notwithstanding anything otherwise to the contrary in the foregoing, Miragen Compound Patents shall not include any Miragen Target Technology.

1.36. “Miragen Patents” has the meaning set forth in Section 5.4(a).

1.37. “Miragen Product Technology” means (a) any Know-How Controlled by Miragen, its Affiliates or Sublicensees at any time during the Term and prior to the termination of this Agreement with respect to a Terminated Miragen Target [*]; and (b) any Patents Controlled by Miragen, its Affiliates or Sublicensees at any time during the Term, in each case that (i) are necessary to Develop, [*] or Commercialize any Reversion Product and (ii)(A) are actually used or practiced by Miragen, its Affiliates or Sublicensees with respect to the Development, [*] or Commercialization of such Reversion Product prior to the applicable effective date of termination for such Terminated Miragen Target [*] or by Santaris, its Affiliates or sublicensees with respect to the Development, [*] or Commercialization of such Reversion Product prior to first dosing of the first patient in the first Phase III Clinical Trial of such Reversion Product, or (B) at the applicable effective date of termination for such Terminated Miragen Target [*] or at the time of the first dosing of the first patient in the first Phase III Clinical [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Trial of such Reversion Product, are expected to be used in the further Development, [*] or Commercialization of such Reversion Product. For the avoidance of doubt, Miragen Product Technology shall (1) include any Know-How created by Miragen or its Affiliates or Sublicensees in the course of practicing a Research License or Product License with respect to any Terminated Miragen Target [*] prior to such termination, and any Patent claiming any invention conceived or reduced to practice by Miragen or its Affiliates or Sublicensees in the course of practicing a Research License or Product License with respect to any Terminated Miragen Target [*] prior to such termination, provided in each case that such Know-How or Patent satisfies the criteria set forth in subsections (i) and (ii) of this Section 1.37 and (2) exclude, with respect to any Reversion Product that is a Combination Product, all Know-How and Patents Controlled by Miragen or its Affiliates or Sublicensees that are necessary to Develop, [*] or Commercialize any Active Ingredient, medical device (other than any devices for the delivery or administration of a Product) or other pharmaceutical product (as described in subsection (c) of Section 1.3) in such Reversion Product that is not a Product. Notwithstanding anything otherwise to the contrary in the foregoing, Miragen Product Technology shall not include any Miragen Compound Patents or Miragen Target Technology.

1.38. “Miragen Target” means each of the Existing Targets and the New Targets.

1.39. “Miragen Target Technology” means:

(a) any Know-How Controlled by Miragen, its Affiliates or Sublicensees during the Term and prior to the termination of this Agreement with respect to a Terminated Miragen Target [*], that relates to the subject matter described in clause (i), (ii) or (iii) in subsection (b) below; and

(b) any Patents Controlled by Miragen, its Affiliates or Sublicensees during the Term and prior to the termination of this Agreement with respect to a Terminated Miragen Target [*], that claim or cover (i) any Miragen Target in such Terminated Miragen Target [*] (including the sequence, expression or method of producing or purifying such Miragen Target), (ii) any research tool relating to such Miragen Target, including any material or process for preparing such Miragen Target, any assay reagent prepared from such Miragen Target, any process for its preparation, or any method of using such Miragen Target, material or assay reagent to screen, assay, select or otherwise identify any composition of matter that binds to such Miragen Target and alters the activity of such Miragen Target or (iii) the use of any compound containing an LNA Monomer for therapeutic purposes wherein the therapeutic mechanism of action is mediated by the binding of such compound to such Miragen Target and the resulting regulation or modulation of such Miragen Target.


[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.41. “[*] Patents” means the Patents listed on Schedule 1.41.

1.42. “Net Sales” means the gross amount invoiced for any sale of any Product by Miragen or any of its Affiliates or Sublicensees (a “Selling Person”), to a person or entity other than a Selling Person or any of its Affiliates or Sublicensees, less the following deductions, in each case to the extent specifically related to the Product and taken by the Selling Person or otherwise paid for or accrued by the Selling Person:

(a) [*]
(b) [*]
(c) [*]
(d) [*]
(e) [*]
(f) [*]
(g) [*]

Sales of Products between Miragen, its Affiliates and Sublicensees for resale, [*], shall not be included within Net Sales. Disposition of Products for use in clinical trials or as samples shall not be included in the calculation of Net Sales.

Net Sales for Combination Products, for the purpose of calculating Miragen’s payment obligations hereunder, shall be determined as follows:

(i) In the event one or more Products are sold as part of a Combination Product in a particular country, and all products contained in the Combination Product are sold separately in such country, the Net Sales of such Product(s), for the purposes of determining payments based on Net Sales, shall be determined by multiplying the Net Sales of the Combination Product in such country, during the applicable Net Sales reporting period, by the fraction, A/(A+B), where: [*] in each case during the applicable Net Sales reporting period.

(ii) In the event one or more Products are sold as part of a Combination Product and are sold separately in finished form in such country, but the other product(s) included in the Combination Product are not sold separately in finished form in such country, the Net Sales of such Product(s), for the purposes of determining payments based on Net Sales, shall be determined by multiplying the Net Sales of the Combination Product in such country by the fraction C/D where: [*] in each case during the applicable Net Sales reporting period. Under no circumstances can C/D exceed one hundred percent (100%).

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
In the event that one or more Product(s) are sold as part of a Combination Product and are not sold separately in finished form in the country, but all of the other product(s) included in the Combination Product in such country are sold separately, the Net Sales of such Product(s), for the purposes of determining payments based on Net Sales, shall be determined by multiplying the Net Sales of the Combination Product in such country by the fraction (D-E)/D, where: [*] in each case during the applicable Net Sales reporting period.

In the event that one or more Product(s) are sold as part of a Combination Product and the Net Sales of such Product(s) cannot be determined using the methods above, Net Sales of such Product(s) for the purposes of determining payments based on such Net Sales shall be agreed upon in good faith by the Parties, on the basis of the respective fair market values of such Product(s) and all other products included in such Combination Product.

1.43. “New Target” means the Targets comprising New Target [*] 1, each Target in a Target [*] for which Miragen exercises a Product License Option, and any Target replacing any such Target pursuant to Section 2.3. For clarity, New Target excludes Existing Targets.

1.44. “New Target [*]” means any Target [*] that includes [*] New Targets.

1.45. “Non-Exclusive Research License” shall have the meaning set forth in Section 2.2.

1.46. “Patents” means any and all (a) patents, (b) patent applications, including all provisional and non-provisional applications, substitutions, continuations, continuations-in-part, divisions and renewals, and all patents granted thereon, (c) all patents-of-addition, reissues, reexaminations and extensions or restorations by existing or future extension or restoration mechanisms, including supplementary protection certificates or the equivalent thereof, (d) inventor’s certificates and (e) any other form of government-issued right substantially similar to any of the foregoing.

1.47. “Phase 1 Clinical Trial” means a human clinical trial of a Product in human subjects according to 21 C.F.R. §312.21(a), as amended, or its equivalent, as appropriate, in foreign jurisdictions.

1.48. “Phase 2 Clinical Trial” means a clinical trial of a Product on patients, the principal purpose of which is to establish clinical proof of principle and to obtain sufficient information about such Product’s safety and efficacy to permit the design of further clinical trials, and that would satisfy the requirements of 21 C.F.R. Part 312.21(b), or a similar clinical study prescribed by the Regulatory Authorities in a country other than the United States.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.49. “Phase 3 Clinical Trial” means a pivotal clinical study of a product, which study is designed to: (a) establish that such product is safe and efficacious for its intended use; (b) define warnings, precautions and adverse reactions that are associated with such product in the dosage range to be prescribed; (c) support Regulatory Approval of such product; and (d) be generally consistent with 21 CFR § 312.21(c), as amended (or its successor regulation), or other comparable regulation imposed by a Regulatory Authority in a country other than the United States.

1.50. “Product” means any pharmaceutical product containing, or consisting of, one or more Miragen Compounds.

1.51. “Product License” has the meaning set forth in Section 3.2.

1.52. “Product License Option” has the meaning set forth in Section 3.1.

1.53. “Regulatory Approval” means any technical, medical, scientific or other license, registration, authorization or approval of any Regulatory Authority necessary for the Development, [⁎] or Commercialization of a Product in any regulatory jurisdiction, including any Marketing Approvals.

1.54. “Regulatory Authority” means any agency, department, bureau, commission, council or other governmental entity involved in the granting of a Regulatory Approval for any jurisdiction.

1.55. “Regulatory Documentation” means (a) all regulatory files relating to the Development or Commercialization of Products, including any licenses (to the extent transferable), and minutes of meetings and telephone conferences with any Regulatory Authorities, validation data, preclinical and clinical studies and tests related to Products including original data, case report forms, study files relating to the aforementioned studies and tests, and all audit reports of clinical studies, plus all applications (and amendments thereto) for Regulatory Approvals, annual reports and safety reports associated therewith, drug master files, which are in Miragen’s or its Affiliates’ possession or Control, and all correspondence with Regulatory Authorities regarding the marketing status of Products; and (b) all records maintained under cGMPs or other record keeping or reporting requirements of Regulatory Authorities, including all correspondence and communications with Regulatory Authorities in connection with Products (including any advertising and promotion documents), adverse event files, complaint files and manufacturing records.

1.56. “Research License” has the meaning set forth in Section 2.2.

1.57. “Retained Compound” means (a) any LNA Compound that is designed or being developed to exert its biological effect through binding to a Miragen Target that is not a Miragen Target in a Terminated Miragen Target [⁎] or (b) any other compound with potential therapeutic activities that is not an LNA Compound.

[⁎] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.58. “Reversion Product” means, with respect to a particular Terminated Miragen Target [*], (a) any Miragen Compound that Targets a particular Miragen Target in such Terminated Miragen Target [*] and was identified by Miragen prior to termination of this Agreement for such Terminated Miragen Target [*] or (b) any Product that contains or consists of any Miragen Compound described in clause (a) above, wherein such Product is in the form in existence or contemplated prior to such termination. For the avoidance of doubt, such Product described in clause (b) above in such existing or contemplated form may contain any Miragen Compound described in clause (a) above.

1.59. “Royalty Period” means, on a Product-by-Product and country-by-country basis, the period of time, if any, beginning on the date of the First Commercial Sale of such Product in such country and extending until the later of (a) 10 years after such First Commercial Sale of such Product in such country or (b) the first date on which there is no Valid Claim of any Patents included in the LNA Platform Technology or the Santaris Technology claiming the composition of matter of, or the method of using, such Product (or any Miragen Compound or LNA Monomer contained therein) in such country.

1.60. “Santaris Change of Control” means (a) a merger, reorganization or consolidation of Santaris with any entity that is not an Affiliate of Santaris as of the Restatement Date which results in the voting securities of Santaris outstanding immediately prior thereto ceasing to represent at least 50% of the combined voting power of the surviving entity immediately after such merger, reorganization or consolidation, (b) any entity that is not an Affiliate of Santaris as of the Restatement Date becoming the beneficial owner of 50% or more of the combined voting power of the outstanding securities of Santaris or (c) the sale or other transfer to any entity that is not an Affiliate of Santaris as of the Restatement Date of all or substantially all of Santaris’ business or assets to which this Agreement relates; provided, that a Santaris Change of Control shall not include (i) any transaction or series of transactions principally for bona fide equity financing purposes in which cash is received by Santaris or any successor or indebtedness of Santaris is cancelled or converted or a combination thereof or (ii) any reincorporation, merger or consolidation effected exclusively for the purpose of changing the domicile of Santaris to another jurisdiction.

1.61. “Santaris Technology” means any and all (a) Know-How Controlled by Santaris that is disclosed to Miragen under this Agreement and (b) Patents Controlled by Santaris as of the Effective Date or during the Term that (i) are necessary for the Development, [*] or Commercialization of any Miragen Compound or Product or (ii) (1) are actually used or practiced by Miragen, its Affiliates or Sublicensees with respect to such Miragen Compound or Product prior to first dosing of the first patient in the first Phase III Clinical Trial of such Miragen Compound or Product, or (2) at the time of first dosing of the first patient in the first Phase III Clinical Trial of such Miragen Compound or Product, are expected to be used in the further Development, [*] or Commercialization of such Miragen Compound or Product. Notwithstanding anything otherwise to the contrary in the foregoing, Santaris Technology shall not include any Miragen Compound Patents or any LNA Platform Technology and, except as provided in Section 5.6, shall not include any [*].

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.62. “Sublicense” means (a) a sublicense granted by Miragen or its Affiliates to a Sublicensee under an Exclusive Research License or a Product License in accordance with Section 2.1 or 3.2, as applicable; or (b) a license granted by Miragen or its Affiliates, under a Miragen Compound Patent, to research, develop, make, use, sell, offer to sell or import a Product.

1.63. “Sublicense Revenue” means all consideration in any form received by Miragen or any of its Affiliates in exchange for a grant by Miragen or its Affiliates of a Sublicense, excluding: (i) [*] (ii) consideration as reimbursement for costs and expenses, such as research costs, development costs, manufacturing costs, promotional expenses, patent costs, and the like; (iii) any consideration as a loan to (other than to the extent any loan is forgiven or credited toward any other payment obligations), or in exchange for the equity of, Miragen or any of its Affiliates; and (iv) any royalties paid by any Sublicensee (other than an Affiliate of Miragen) to Miragen or any of its Affiliates with respect to sales of Products by such Sublicensee (the “Sublicense Royalties”); in each case, except to the extent specifically included below, Sublicense Revenue shall include the following amounts paid by any Sublicensee (other than an Affiliate of Miragen) to Miragen or its Affiliates in exchange for the grant of such Sublicense:

(a) any license maintenance fee;
(b) any milestone payments (including development, regulatory and sales-based milestone payments), other than any payment paid by a Sublicensee solely on account of [*]; provided; that, in respect of [*], [*] in respect of [*];
(c) the portion of any minimum royalty payment received by Miragen or any of its Affiliates in excess of Sublicense Royalties received;
(d) any profit-sharing revenues for any Product;
(e) any co-promotion, distribution or joint marketing fees in excess of any payment as reimbursement for the costs and expenses incurred by Miragen or any of its Affiliates in connection with such co-promotion, distribution or marketing activities;
(f) any payments for the supply of Products in excess of [*] of COGS for such Products or any component thereof (calculated using the definitions set forth in Sections 1.7 (COGS) and 1.15 (FASC), applied mutatis mutandis to Miragen and its Affiliates and with respect to Products or any component thereof (instead of [*] or any component thereof);

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

12
any payments for Miragen’s or its Affiliates’ performance of research or development activities, to the extent that such payments exceed both (i) [*] of Miragen’s or its Affiliates’ actual cost of performing such research or development activities and (ii)(A) the amounts paid to Miragen or its Affiliates by Third Parties for similar research or development activities performed by Miragen or its Affiliates or (B) if Miragen and its Affiliates have not been paid by Third Parties for similar research or development activities, the amounts paid to biotechnology companies in arms’ length transactions with Third Parties for similar research or development activities relating to products or technology identified, created or developed by such biotechnology company;

if a Sublicensee (other than an Affiliate of Miragen) issues publicly traded equity or debt securities to Miragen or any of its Affiliates in connection with a Sublicense grant, the fair market value of such securities issued to Miragen or any of its Affiliates (such fair market value to be determined by the method used to determine the amount paid by Miragen or its Affiliates or, if no such method is specified, the average closing price of such securities for the twenty (20) business days preceding the date of issuance to Miragen or any of its Affiliates), net of any cash consideration paid by Miragen or any of its Affiliates for such securities; and

if Miragen or any of its Affiliates issue equity or debt securities to a Sublicensee (other than an Affiliate of Miragen) in connection with a Sublicense grant, any consideration received by Miragen or any of its Affiliates for such securities to the extent such consideration exceeds [*] of the fair market value of such securities (such fair market value to be determined, (i) if such securities are not then publicly traded, [*], or (ii) if such securities are then publicly traded, by the method used to determine the amount paid by such Sublicensee or if no such method is specified, the average closing price of such securities for the twenty (20) business days preceding the date of issuance to such Sublicensee).

1.64. “Sublicensee” means, with respect to a particular Product, either: (a) an Affiliate of Miragen or a Third Party to whom Miragen has granted a Sublicense or rights (including an option) to obtain a Sublicense; or (b) a Third Party to whom Miragen has granted the right to promote or distribute a Product if such Third Party is principally responsible for the marketing, promotion and booking of sales of such Product within a particular country or territory, but excluding wholesalers, physical distributors, subcontractors, [*], or contract sales forces (or other Third Party promoting or distributing the Product but booking sales on behalf of Miragen).

1.65. “Target” means the [*] sequences through which a proposed drug therapeutic mediates or is intended to mediate its therapeutic activity.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.66. “Target [*]” means the Miragen Targets that [*]. As of the Restatement Date, Target [*] consist of the three [*] of Miragen Targets described in Schedule 1.14 (“Existing Target [*] 1-3”). All [*] sequences that comprise other Target [*] shall be designated by the Parties after each Miragen Target proposed by Miragen to be included in a Target [*] clears the gate-keeping procedure set forth in Section 2.4 and shall be comparable in size, nature and scope to the Miragen Targets included in Existing Target [*] 1-3.

1.67. “Target Patent” means any Patent claiming (i) any Target (including the sequence, expression or method of producing or purifying such Target), (ii) any research tool relating to such Target, including any material or process for preparing such Target, any assay reagent prepared from such Target, any process for its preparation, or any method of using such Target, material or assay reagent to screen, assay, select or otherwise identify any composition of matter that binds to such Target and alters the activity of such Target or (iii) the use of any compound for therapeutic purposes wherein the therapeutic mechanism of action is mediated by the binding of such compound to such Target and the resulting regulation or modulation of such Target. Notwithstanding anything otherwise to the contrary in the foregoing, Target Patents shall not include any LNA Platform Technology or Santaris Technology.

1.68. “Targeting” means, when used to describe the relationship between an LNA Compound and a Target, that such LNA Compound (a) [*] to such Target and (b) is designed or being developed to exert its biological effect through binding to such Target. For purposes of this Section 1.67, “[*]” means that [*]. For clarity, an LNA Compound that is [*] to a Target may be [*].

1.69. “Term” has the meaning set forth in Section 8.1.

1.70. “Terminated Miragen Target [*]” has the meaning set forth in Schedule 8.5(b).

1.71. “Territory” means the entire world.

1.72. “Third Party” means any Person other than Miragen, Santaris or their respective Affiliates.

1.73. “Upfront Payment” means (a) all consideration in any form received by Miragen or any of its Affiliates from a Sublicensee (other than an Affiliate of Miragen) upon the execution of an agreement granting a Sublicense with respect to a New Target and in exchange for the grant of such Sublicense by Miragen or its Affiliate to such Sublicensee, and (b) if Miragen or any of its Affiliates grants a Third Party rights (including an option) to obtain a Sublicense with respect to a New Target (including a Target that subsequently becomes a New Target), then upon the earlier of (i) [*] or (ii) [*] (the date of such earlier event is referred to as the “Trigger Date”): (1) [*] of all consideration in any form received by Miragen or any of its Affiliates from such Third Party pursuant to the agreement granting such rights (the “Option Agreement”) prior to the Trigger Date, and (2) [*] of all [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
consideration in any form received by Miragen or any of its Affiliates from such Third Party under the Option Agreement upon the exercise of such right to obtain such Sublicense to such New Target and in exchange for the grant of such Sublicense for such New Target, but in each case of (a) and (b) excluding: (i) any consideration as reimbursement for costs and expenses, such as research costs, development costs, manufacturing costs, promotional expenses, patent costs, and the like; (ii) any consideration as a loan to (other than to the extent any loan is forgiven or credited toward any other payment obligations), or in exchange for the equity of, Miragen or any of its Affiliates; and (iii) any consideration that is reasonably allocable to a Sublicense or grant of other rights to an Existing Target or a Target that never becomes a New Target, or to a license, sublicense or option to receive a license or sublicense to intellectual property other than the LNA Platform Technology or Santaris Technology; in the case of (i) or (ii), except to the extent any such exclusion would be included in Sublicense Revenue pursuant to Section 1.62(f), (g), (h) or (i) if paid after the execution of such agreement or after the exercise of such right, as applicable. In the event that in an Option Agreement, Miragen or any of its Affiliates also grant a Third Party an option or other rights that pertains to other therapeutic target(s) in addition to the New Target for which such Third Party exercises the option and obtains a Sublicense, then the consideration received under the Option Agreement that pertains to both such New Target and other therapeutic target(s) shall, in addition to the [*] described above (if applicable), be allocated among all such therapeutic targets for the purpose of determining the amount of the Upfront Payment as follows: if all such therapeutic targets are at similar stage of development when such consideration is received, then the consideration so received shall be allocated equally among all such therapeutic targets; if at least one such therapeutic target is at different stage of development from another such therapeutic target at such time, then the Parties shall negotiate in good faith a reasonable allocation of the consideration so received among all such therapeutic targets based on the development stage of each such therapeutic target at such time. For example, if Miragen receives [*] from a Third Party under such an Option Agreement, which payment pertains to [*] therapeutic targets (which include the New Target for which such Third Party exercises the option and obtains a Sublicense) and all [*] such therapeutic targets are at the same stage of development when the payment is received, then upon such Third Party’s exercise of such option with respect to the New Target included in such three therapeutic targets, [*] of [*] of such [*] payment ([*]) shall be included in the Upfront Payment, provided that such [*] payment was in exchange for such option and none of the exclusions set forth in (i)-(iii) apply.

1.74. “Valid Claim” means a claim of any unexpired issued Patent that shall not have been dedicated to the public, disclaimed nor held invalid or unenforceable by a court or government agency of competent jurisdiction in an unappealed or unappealable decision.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
2. RESEARCH ACTIVITIES.

2.1. Exclusive Research License.

(a) As of the Effective Date, Miragen was granted an Exclusive Research License for the Miragen Targets included in Existing Target [*] 1-3. Prior to the [*] anniversary of the Restatement Date, and subject to clearance of the gate-keeping procedure set forth in Section 2.4, Miragen shall have the right to nominate and include in the Exclusive Research License and Product License one additional Target [*] of Existing Targets ("Existing Target [*] 4"). If such proposed Target [*] fails such gate-keeping procedure, Miragen shall have the right to propose alternative Target [*] for submission to such gate-keeping procedure until a proposed Target [*] passes the gate-keeping procedure and thereby becomes Existing Target [*] 4, provided however, that, with respect to all alternative submissions that are submitted after the [*] anniversary of the Restatement Date, each such alternative submission shall be made within [*] days after Miragen receives notice that the immediately prior submission failed the gate-keeping procedure.

(b) In respect of each Existing Target, Santaris hereby grants to Miragen an exclusive license, with the right to grant sublicenses as provided below, under the LNA Platform Technology and the Santaris Technology solely to discover, identify, [*] for non-clinical research development, and otherwise conduct non-clinical research of, Miragen Compounds Targeting such Existing Target and conduct pre-clinical development of Products containing such Miragen Compounds in the Field (an "Exclusive Research License"), subject to Section 7.2(g) and the following terms and conditions:

(c) Miragen may grant Sublicenses under an Exclusive Research License only to Sublicensees granted a Product License under Section 3.2 and such Sublicenses shall be subject mutatis mutandis to the terms and conditions set forth in Section 3.2 with respect to Sublicenses under the Product License; provided, that Miragen shall not grant Sublicenses under an Exclusive Research License with respect to an Existing Target unless and until (i) [*] and (ii) such Sublicenses are granted in connection with a grant of rights to such Sublicensees under certain Know-How and Patents Controlled by Miragen and its Affiliates that pertains to one or more Miragen Compounds Targeting such Existing Target. For purposes of this Section 2.1, "[*]" means [*] that (x) [*] and (y) [*];

(d) Any Sublicenses under an Exclusive Research License to Discover Miragen Compounds shall be granted solely for the purpose of [*] the applicable Existing Target. For purposes of this Section 2.1(d), "[*]" means, with respect to a Miragen Compound and the Existing Target to which such Miragen Compound binds, the [*] of LNA Compounds that [*] and thereby [*];

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Except in connection with any Sublicenses granted in accordance with Section 3.2 and this Section 2.1, an option for such a Sublicense, or a Third Party’s evaluation of its interest in obtaining such a Sublicense or option, Miragen shall not perform any fee-for-service or other activities under a Research License for the benefit of any Third Party; and

Notwithstanding anything otherwise to the contrary in this Agreement, [*] any Know-How within the LNA Platform Technology that pertains to [*].

2.2. Non-Exclusive Research License.

(a) In respect of [*], Santaris hereby grants to Miragen and its Affiliates a non-exclusive license, without right to sublicense, under the LNA Platform Technology and the Santaris Technology [*] (the “Non-Exclusive Research License,” and together with the Exclusive Research License, the “Research Licenses”). Miragen shall not have the right to grant any sublicenses under the Non-Exclusive Research License. At such time as Miragen no longer has any right to select any New Target [*] under Section 3.2, or to replace any New Target [*] under Section 2.3, the Non-Exclusive Research License shall become limited to the Targets comprising the six New Target [*] (including those New Target [*] that are replacements for prior New Target [*] but excluding the prior New Target [*] that have been replaced).

(b) [*]

(i) [*]

(ii) [*]

(iii) [*]

(iv) [*]

(v) [*]

(vi) [*]

2.3. Replacement Targets.

(a) Subject to the procedure and limitations set forth in this Section 2.3, Miragen may replace each Miragen Target (and its Target [*]) at any time prior to: (i) in the case of an Existing Target [*] 1-3, the [*] anniversary of the Restatement Date and (ii) in the case of Existing Target Family 4 and each New Target [*], the [*] anniversary of the date such Target [*] was designated as the Existing Target [*] 4 pursuant to Section 2.1(a) or as a New Target [*] pursuant to Section 3.1, as applicable.

(b) If Miragen desires to replace any Miragen Target, it shall notify Santaris and identify such Miragen Target (and its Target [*]) and provide the information described in Section 2.4(a) for the proposed replacement Target. The proposed replacement Target (and its Target [*]) [*]. If such proposed Target (and each member of its Target [*]) passes such gate-keeping procedure, then subject to compliance with subsection (d) below, it shall be designated as an Existing or New Target and its Target [*] shall be designated as an Existing or New Target [*], as the case may be, and this Agreement shall terminate with respect to the Target (and its Target [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
[*]) that has been replaced and the terms of Section 8.5(b) shall apply. If such proposed Target fails such gate-keeping procedure, then it shall not be designated as an Existing or New Target, as the case may be, and Miragen may propose alternative Target to replace such Miragen Target, subject to the same gate-keeping procedure until a proposed Target passes the gate-keeping procedure and is designated as an Existing or New Target; provided that each alternative proposal that is submitted after the applicable time period set forth in Section 2.3(a) shall be submitted within [*] days after the immediately prior proposal fails the gate-keeping procedure.

(c) Miragen may replace each Miragen Target only [*], except that it may replace New Target [*] 1 [*].

(d) Within [*] days after a proposed replacement Target passes the gate-keeping procedure, Miragen shall pay Santaris the amounts required under Section 4.3.

2.4. Target Gate-keeping Procedure.

(a) In respect of each Target that is subject to a gate-keeping procedure, including as provided in Sections 2.1(a), 2.3(b), 3.1(a) and 3.1(b), Miragen shall provide a notice of the proposed Target [*] (the “Target Notice”). In the Target Notice, Miragen will identify the proposed Targets comprising the Target [*] by the provision of the full length DNA sequence and [*] number.

(b) Within [*] days after receipt of a Target Notice, Santaris shall either:

(i) notify Miragen in writing that none of the Targets in the proposed Target [*] is an Excluded Target (as defined below), in which case the proposed Target shall be deemed to have passed the gate-keeping procedure; or

(ii) notify Miragen in writing that the proposed Target [*] includes an Excluded Target, in which case Miragen shall have the right to verify such determination as set forth below.

If Santaris does not notify Miragen pursuant to Section 2.4(b)(i) or (ii) within such [*]-day period, then proposed Target shall be deemed to have passed the gate-keeping procedure.

(c) If Santaris notifies Miragen in writing that the proposed Target [*] includes an Excluded Target, then upon Miragen’s request within [*] days thereafter, Santaris shall promptly submit to a mutually agreed independent Third Party auditor sufficient documentation for such Third Party auditor to verify that the proposed Target [*] includes an Excluded Target. Such Third Party auditor shall disclose to Miragen, within [*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

18
days of receiving such documentation from Santaris, only whether the proposed Target [*] includes an Excluded Target. The results of such verification procedure by such Third Party auditor shall be deemed the Confidential Information of Santaris. Miragen shall bear the costs of such Third Party auditor if such auditor finds that the proposed Target [*] includes an Excluded Target, and Santaris shall bear the costs of such Third Party auditor if such auditor finds that the proposed Target [*] does not include an Excluded Target. If such auditor finds that the proposed Target [*] does not include an Excluded Target or Miragen does not so request such verification, then the proposed Target [*] shall be deemed to have passed the gate-keeping procedure. If such auditor finds that the proposed Target [*] includes an Excluded Target, then the proposed Target [*] shall be deemed to have failed the gate-keeping procedure.

(d) “Excluded Target” means a proposed Miragen Target (i.e., Existing Target [*] 4, New Target or replacement of an Existing or New Target) for which (i) prior to the date of Miragen’s nomination Santaris entered into an agreement with a Third Party that, at the time of Miragen’s nomination, prevents Santaris from granting an exclusive license to develop and commercialize LNA Compounds Targeting such Target as provided in Section 3.2; or (ii) prior to the date of Miragen’s nomination, Santaris has commenced a bona fide internal research and development program directed against such Target and the program is still ongoing at the time of Miragen’s nomination; or (iii) with respect to a Target other than [*], prior to the date of Miragen’s nomination, (A) Santaris has either (1) entered into an agreement with a Third Party that, when such agreement was in force, prevented Santaris from granting an exclusive license to develop and commercialize LNA Compounds Targeting such Target as provided in Section 3.2, but, at the time of Miragen’s nomination, such Third Party agreement has been terminated or otherwise no longer prevents Santaris from granting such an exclusive license, or (2) commenced a bona fide internal research and development program directed against such Target, but, at the time of Miragen’s nomination, the program has been suspended or halted, (B) a Patent claiming LNA Compounds Targeting such Target was filed by Santaris or its Third Party licensee and, at the time of Miragen’s nomination, (1) such Patent still includes at least one claim that claims one or more LNA Compounds Targeting such Target and (2) such Patent is still a pending patent application or is an issued and unexpired patent that has not been dedicated to the public, disclaimed, abandoned or held unenforceable or invalid by a court or other government authority of competent jurisdiction in an unappealed or unappealable decision, and (C) at least [*] have been completed [*] on such LNA Compounds by Santaris or its Third Party licensee.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
If Miragen nominates as a Miragen Target any Target that is described in clause (iii) and not also described in clauses (i) or (ii) of subsection (d), Santaris shall notify Miragen of such status. If such nominated Target was previously the subject of an exclusive license granted by Santaris to a Third Party for such Third Party to develop and commercialize LNA Compounds Targeting such Target and at the time of Miragen’s nomination, such license agreement has been terminated and Santaris has payment obligations to such former exclusive licensee on account of the practice of Santaris Technology exclusively licensed to Santaris by such former exclusive licensee (such Santaris Technology, the “Reverted Technology”), then Santaris shall, within [*] days after receipt of the applicable Target Notice, disclose in writing to Miragen the scope and content of the Reverted Technology and Santaris’ payment obligations with respect to the practice of such Reverted Technology for the development and commercialization of LNA Compounds Targeting such Target. If Santaris then elects, in its discretion, to allow such nominated Target to be a Miragen Target, then the Parties shall negotiate in good faith to reach agreement on commercially reasonable terms and conditions to include such Target as a Miragen Target, including, if Miragen elects to obtain rights to the Reverted Technology, the obligation of Miragen to make all payments to such Third Party to obtain such rights. If the Parties have not reached such agreement within [*] days after Santaris notifies Miragen of its willingness to allow such nominated Target to be a Miragen Target, such nominated Target shall not become a Miragen Target.

2.5. Research Diligence. In respect of each Exclusive Research License, Miragen shall use Diligent Efforts, either directly or, subject to the terms of Section 2.1, through one or more Sublicensees, to Discover and research Miragen Compounds and conduct pre-clinical development of one Product per Target [*] prior to IND Acceptance for a Product Targeting such Target [*] under such Exclusive Research License, including by maintaining and utilizing sufficient resources and facilities to perform such activities and using personnel with sufficient skills, experience and in such number as may be reasonably required to accomplish efficiently and expeditiously its objectives under such Exclusive Research License in good scientific manner and in compliance in all material respects with all applicable laws. Santaris’ sole remedy with respect to any breach of the diligence obligations set forth in this Section 2.5 shall be termination of the Exclusive Research License granted to Miragen with immediate effect with respect to the Existing Target for which Miragen has breached its diligence obligations set forth in this Section 2.5 in accordance with Section 8.2 and all other applicable effects of such termination set forth or referred to in Section 8.5. The Parties acknowledge and agree that Miragen has used Diligent Efforts in compliance with this Section 2.5 as of the Restatement Date.

2.6. Joint Research Committee. Within 30 days following the Effective Date, Santaris and Miragen shall establish a joint research committee (the “JRC”) to assist Miragen’s efforts to research and Develop Products hereunder. The JRC shall serve primarily as a forum to facilitate communications between the Parties and enable Santaris to provide to Miragen such technical assistance and expertise as the Parties desire in the form of consultation and advice pursuant to Section 2.7.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
2.7. **Technical Support.** Santaris shall make its scientific personnel reasonably available to Miragen in connection with the meetings of the JRC or otherwise (including by telephone or email but not by any method that requires travel for such purpose) to:

(a) [*]; and

(b) [*]

Santaris shall not be required to provide any consultation or other services pursuant to this Section 2.7 after the earlier of (x) the [*] anniversary of the Restatement Date, and (y) the date on which a Miragen or Santaris Change of Control becomes effective; provided, that in the absence of a Miragen Change of Control, Santaris shall share with Miragen, during the Term of this Agreement, Know-How Controlled by Santaris that relates to toxicology or manufacture of, or obtaining Regulatory Approval for, LNA Compounds if Santaris identifies, in its sole discretion, such Know-How as useful to Miragen’s research, Development, [*] or Commercialization efforts pursuant to this Agreement. Notwithstanding anything otherwise to the contrary hereunder, Santaris shall not be required to perform any research or Development activities in connection with the Miragen Targets, Miragen Compounds or Products on behalf of Miragen, its Affiliates or Sublicensees or transfer to Miragen, its Affiliates or Sublicensees any materials in connection with the activities contemplated pursuant to this Section 2.7.

2.8. **Research Reports.** Until the termination of this Agreement or Miragen’s provision of reports pursuant to Section 3.4 with respect to an Existing Target, whichever comes first, Miragen shall provide to the JRC, at least five business days in advance of each JRC meeting, a reasonably detailed written progress report on the status of its research activities with respect to each Existing Target for which the Exclusive Research License has not terminated, including summaries of data and results generated with respect to any such Targets and an assessment of the likelihood of, and timetable for, the completion of any applicable IND Enabling Studies and filing of any INDs with respect to such Targets. Each such report shall be deemed the Confidential Information of Miragen. For clarity, Miragen shall have no obligation to provide any report on its research activities conducted under its Non-Exclusive Research License.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
2.9. Miragen hereby acknowledges and agrees that, (a) it assumes sole responsibility for designating any Target, and (b) neither Santaris nor any of its Affiliates makes any representations or warranties [*]

3. PRODUCT DEVELOPMENT, [*] COMMERCIALIZATION.

3.1. Product License Option. Miragen shall have the option to obtain a Product License for each New Target [*] as provided below (a “Product License Option”):

(a) At [*] prior to commencing IND Enabling Studies of an LNA Compound Targeting any Target (other than an Existing Target), Miragen may exercise its right to obtain a Product License in respect of such Target (and members of its Target [*]) by written notice to Santaris and the Parties shall follow the gate-keeping procedure set forth in Section 2.4. Within [*] days after such proposed Target (and each member of its Target [*]) passes the gate-keeping procedure, Miragen shall pay the amount required under Section 4.5 and such Target and its Target [*] members shall then be a New Target and its Target [*] shall then be a New Target [*].

(b) Within [*] days after the Effective Date, Miragen shall propose a Target (and members of its Target [*]) to be included in the Product License by written notice to Santaris and the Parties shall follow the gate-keeping procedure set forth in Section 2.4. If such proposed Target (and members of its Target [*]) passes such gate-keeping procedure, such Target and members of its Target [*] shall be designated as “New Target [*] 1”. If such proposed Target (or any member of its Target [*]) fails such gate-keeping procedure, Miragen shall have the right to propose alternative Targets until a proposed Target (and members of its Target [*]) passes the gate-keeping procedure and is thereby designated as New Target [*] 1.

(c) There shall be no more than [*] New Target [*] at any particular time point. For clarity, if a New Target [*] is replaced under Section 2.3, such replaced Target [*] shall no longer be a New Target [*] and shall not be counted toward the total number of New Target [*]. Miragen shall not have the right to propose any New Target [*] (but excluding replacements for New Target [*]), which may be proposed during the time period set forth in Section 2.3(a)) after the [*] anniversary of the Restatement Date.

(d) For clarity, Miragen’s Product License under Section 3.2 for New Targets will not cover any Target that is nominated by Miragen as a New Target but fails the gate-keeping procedure set forth in Section 2.4 or any other Target (other than an Existing Target) for which Miragen does not seek to nominate as a New Target (or any LNA Compounds Targeting any such Targets identified by the practice of the Non-Exclusive Research License).

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Miragen acknowledges that nothing in this Agreement shall restrict Santaris, by itself and through its Affiliates and Third Parties, from discovering, researching, developing and commercializing LNA Compounds Targeting any Target that is not an Existing Target or a New Target. [*]

3.2. **Product License.** Subject to the terms of Section 7.2(g), Santaris hereby grants to Miragen an exclusive license under the LNA Platform Technology and the Santaris Technology to research (other than to Discover), Develop, [*] and Commercialize Products in the Territory for use in the Field (the "**Product License**"). For clarity, the Product License for any Target that is subject to the gate-keeping procedure in Section 2.4 shall not become effective unless and until such Target has passed such gate-keeping procedure and Miragen pays the applicable amount (if any) under Section 4.5. Miragen may grant to its Affiliates or any Third Party a Sublicense under the Product License with the right to grant additional Sublicenses; **provided,** that each such Sublicense shall:

(a) be a written agreement subject and subordinate to, and consistent with, the terms and conditions of this Agreement that are applicable to such Sublicense;

(b) require each such Sublicensee to comply with all applicable terms of this Agreement, including keeping books and records with respect to sales of Products by such Sublicensee, permitting Santaris to audit (through an independent auditor and consistent with Section 4.12(b)) such books and records for the sole purpose of verifying Net Sales-based payments required to be paid by Miragen pursuant to Sections 4.9 and 4.10 and indemnifying Santaris in the same manner as provided in Section 9.1(a) with respect to activities performed by such Sublicensee; and

(c) not in any way diminish, reduce or eliminate any of Miragen’s obligations under this Agreement, including any obligation to use Diligent Efforts to Develop or Commercialize any Product (but efforts of any Sublicensee in such regard shall be considered efforts of Miragen).

Miragen shall remain primarily responsible for its obligations hereunder and for the performance of its Sublicensees and shall guarantee that any such Sublicensees comply with all relevant provisions of this Agreement. Miragen shall provide Santaris a copy of each such sublicense agreement, which may be redacted of all confidential information not reasonably required for Santaris to verify that such agreement complies with this Section 3.2, provided that Miragen shall not redact the triggers for milestone or other payments under such sublicense agreement which will qualify as Upfront Payments or Sublicense Revenue upon receipt by Miragen, but may redact the amount of each such payment (which amount shall be disclosed to Santaris when Miragen receives such payment and is obligated to make a payment under Section 4.10 as a result of such receipt).

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

23
3.3. Exclusivity.

(a) Santaris Exclusivity. For as long as this Agreement has not expired or been terminated with respect to a particular Target [*], Santaris and its Affiliates shall not, either for their own benefit or on behalf of any Third Party (and shall not grant or maintain a grant to any rights to any Third Parties to), [*], or [*], (i) any Miragen Target in such Target [*], (ii) any [*] Miragen Target in such Target [*] but [*] that is not a Miragen Target or (iii) any [*] Miragen Target in such Target [*] and [*] that are not Miragen Targets but wherein [*] or [*].

(b) Miragen Exclusivity. Neither Miragen nor any of its Affiliates or Sublicensees shall, directly or indirectly, [*] until (i) [*], or (ii) [*], whichever occurs first.

3.4. Product Development; Semi-Annual Updates. Miragen shall use Diligent Efforts to Develop, obtain Regulatory Approvals (including Marketing Approvals) for the Commercialization of, [*] (except as provided in Section 3.7), and Commercialize, at least one Product per Target [*] pursuant to the Product License for such Target [*]. Miragen shall provide to Santaris semi-annual written reports regarding its Product research and Development activities and, upon request by Santaris, shall meet with Santaris to review such Product research and Development activities at reasonable times and locations at least twice during each year of the Term.

3.5. Regulatory Approvals. As between the Parties, Miragen shall file, in its own name or in the name of its Affiliate or Sublicensee, all applications for Regulatory Approvals for Products. As between the Parties, Miragen shall have the sole responsibility for communicating with any Regulatory Authority regarding any application for a Regulatory Approval or any Regulatory Approval once granted.

3.6. Regulatory Reporting. As between the Parties, Miragen shall be responsible for filing all reports required to be filed in order to maintain any Regulatory Approvals granted for Products in the Territory; provided, however, [*]. As between the Parties, Miragen shall be solely responsible for adverse drug experience reports, literature review and associated reports; adverse drug experience follow-up reports; preparation and submission of all safety reports to the Regulatory Authorities as required; maintaining the global safety database; all interactions with Regulatory Authorities; periodic submissions; labeling modifications; risk management; safety monitoring and detection; and safety measures (e.g., clinical holds and restriction in distribution).

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
3.7. [*]
   (a) [*]
   (b) [*]
      (i) [*]
      (ii) [*]
   (c) [*]
      (i) [*]
      (ii) [*]
      (iii) [*]
      (iv) [*]
      (v) [*]
      (vi) [*]
      (vii) [*]
      (viii) [*]

3.8. **Commercialization.** Miragen shall use Diligent Efforts to Commercialize each Product in each country for which Miragen has obtained Marketing Approval. Upon Santaris’ written request but not to exceed once annually, Miragen shall provide summaries of Miragen’s (and its Affiliates’ and Sublicensees’) major marketing, promotional and sales activities and results. In performing its marketing and promotion activities in respect of Products, Miragen and its Affiliates and Sublicensees shall comply with all applicable laws, regulations and guidelines concerning such promotional activities.

4. **CONSIDERATION.**

4.1. **Cash Consideration Paid prior to the Restatement Date.** The Parties acknowledge that Miragen paid Santaris the sum of €500,000 prior to the Restatement Date in connection with the execution of the First Amendment to the Original Agreement.

4.2. **Additional Upfront Cash Consideration.** Within [*] days after the Restatement Date, Miragen shall pay the sum of $1,000,000.

4.3. **Existing Target [*] 4.** Within [*] days after the Restatement Date, Miragen shall pay in euros the sum of €450,000 in respect of rights granted to Existing Target [*].

4.4. **Target Replacement Fee.** Within [*] days after notice from Santaris that a proposed replacement Target (and members of its Target [*]) is accepted as an Existing or New Target pursuant to the terms set forth in **Section 2.3**, Miragen shall pay [*], provided that no payment shall be due under this **Section 4.4** (a) for [*] or (b) for the [*] (for clarity, the [*] shall be not be considered a [*]).

4.5. **Product License Option Fee.** Within [*] days after the exercise of a Product License Option for a proposed New Target [*] and notice from Santaris that such Target [*] is accepted as a New Target [*] pursuant to **Section 3.1**, Miragen shall pay [*], provided that no payment shall be due under this **Section 4.5** for New Target [*].

4.6. **Equity.** Miragen issued to Santaris up to 856,806 shares (the "Shares") of Miragen’s Series A Preferred Stock, par value $0.001 per share (the "Series A Preferred Stock"), which such shares were issued in accordance with the Equity Agreements. The Parties are amending the Equity Agreements on the date hereof to provide for the immediate vesting of all Shares.

4.7. **Milestone Payments.**
   (a) Subject to **Sections 4.7(c), 11.1(b) and 11.1(c)**, on a Product-by-Product basis and only once for each Product, Miragen shall pay to Santaris, the amounts set forth below within [*] days after the achievement of the corresponding milestone event by Miragen or its Affiliates:

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(b) For clarity, no milestone payment shall be made twice for the same Product, and for the purpose of determining whether a milestone payment is triggered under this Section 4.7, Products containing a Miragen Compound as a single Active Ingredient and Combination Products comprising the same Miragen Compound (and no other Miragen Compounds Developed pursuant to an IND that is separate from the IND for the first Miragen Compound in such Product) shall be deemed the same Product, regardless of dosage, formulation, route of administration, product indication, intended use, label or other active ingredients contained therein.

(c) This Section 4.7 shall no longer apply in respect of a particular milestone event for a particular Product, and the corresponding milestone payment under this Section 4.7 shall not be triggered, if at the time such milestone event is achieved for such Product, Miragen or its Affiliates has granted to a Sublicensee (other than an Affiliate of Miragen) a Sublicense to Develop and Commercialize such Product in at least the United States or the entire European Union. If at the time such milestone event is achieved for such Product, Miragen or its Affiliates has granted to one or more Sublicensees (other than Affiliates of Miragen) Sublicenses to Develop and Commercialize such Product, but none of such Sublicenses include the United States or the entire European Union, then Miragen shall pay Santaris the greater of (i) the milestone payment due under this Section 4.7 for the achievement of such milestone event for such Product, or (ii) Santaris’ share pursuant to Section 4.10 of all Sublicense Revenue received by Miragen from such Sublicensees on account of the achievement of such milestone event for such Product.

4.8. Payments. All payments under this Article 4 are non-refundable and non-creditable and shall be paid in immediately available funds to the bank accounts designated by Santaris.

4.9. Royalties. For the duration of the Royalty Period, on a Product-by-Product and country-by-country basis, Miragen shall pay to Santaris royalties equal to (a) [*] of Net Sales of such Product in such country by Miragen or its Affiliates and (b)

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(i) [*] of Net Sales of such Product in such country by Sublicensees or (ii) [*] of the Sublicense Royalties received by Miragen and its Affiliates on Net Sales of such Product in such country by Sublicensees, but not less than [*] of such Net Sales (except that, if Sublicense Royalties received by Miragen and its Affiliates on account of such Net Sales are, after deduction of Miragen’s Third Party payment obligations with respect thereto, less than [*] of such Net Sales, then [*] royalty shall be owed to Santaris with respect to such Net Sales); [*]. After the Royalty Period for any Product in any country in the Territory, no further royalties shall be payable in respect of sales of such Product in such country and thereafter the Product License with respect to such Product in such country shall be a fully paid-up, perpetual, irrevocable, royalty-free, exclusive license.

4.10. Sharing of Upfront Payments and Sublicense Revenue. In respect of each Miragen Target for which a Product License is or becomes effective, Miragen shall pay Santaris (a) [*] of all Upfront Payments; and (b) subject to Section 4.7(c), [*] of Sublicense Revenue (for clarity, excluding any Sublicense Royalties) that, in each case, Miragen receives from a Sublicensee.

4.11. Reports and Payments.

(a) Royalty Statements and Payments. During the Royalty Period for a particular Product in a particular country, within [*] days after the end of each calendar quarter, Miragen shall deliver to Santaris a report setting forth for such calendar quarter the following information, on a Product-by-Product and country-by-country basis: (i) the Net Sales of such Product in such country during such calendar quarter, (ii) the basis for any adjustments to the royalty payable for such Net Sales of such Product in such country, (iii) the royalty due hereunder for the Net Sales of such Product in such country, (iv) the currency exchange rates used in determining such royalties and (v) the amount of Sublicense Revenue received by Miragen or its Affiliates for such Product in such country during such calendar quarter. No such reports shall be due for any Product until the First Commercial Sale of such Product in the Territory or Miragen has granted a Sublicense hereunder, whichever is earlier. The total royalty and share of Sublicense Revenue due for the sale of Products during such quarter shall be remitted at the time such report is made.

(b) Taxes and Withholding. All payments under this Agreement shall be made in full without any deduction or withholding for or on account of any tax unless such deduction or withholding is required by applicable laws or regulations. If Miragen is so required to deduct or withhold, Miragen will (i) promptly notify Santaris of such requirement, (ii) pay to the relevant authorities the full amount required to be deducted or withheld promptly upon the earlier of determining that such deduction or withholding is required or receiving notice that such amount has been assessed against Santaris, and reduce the payment to Santaris by the same amount, (iii) promptly forward to Santaris an official receipt (or certified

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
copy) or other documentation reasonably acceptable to Santaris evidencing such payment to such authorities and (iv) cooperate reasonably, as Santaris may request (at Santaris’ expense), in efforts of Santaris to obtain a refund or otherwise recover such withheld taxes.

(c) **Currency.** Except as expressly indicated otherwise, all amounts payable and calculations hereunder shall be in United States dollars. As applicable, Net Sales, Sublicense Revenues, Sublicense Royalties and any royalty deductions shall be converted into United States dollars in accordance with Miragen’s customary and usual conversion procedures, consistently applied.

(d) **Blocked Currency.** If, at any time, legal restrictions prevent the prompt remittance of part or all royalties with respect to any country where any Product is sold, payment shall be made through such lawful means or methods as the Parties may mutually determine.

(e) **Interest on Late Payments.** Any amounts not paid within [*] days after the date due under this Agreement are subject to interest from the date due through and including the date upon which payment is received. Such interest shall be calculated at a rate equal to [*] percentage points over the 90 day “London Interbank Offered Rate,” as such rate is published in *The Wall Street Journal* or successor thereto on the last business day of the applicable quarter prior to the date on which such payment is due, or the maximum rate permitted by law, whichever is less.

4.12. **Maintenance of Records; Audits.**

(a) **Record Keeping.** Miragen and its Affiliates shall keep, and shall cause its Sublicensees to keep, accurate books of account and records in connection with the sale of Products, in sufficient detail to permit accurate determination of all figures necessary for verification of all payments to be paid hereunder. Miragen, its Affiliates or Sublicensees shall maintain such records for a period of at least [*] years after the end of the year in which they were generated.

(b) **Audits.** Upon [*] days prior written notice from Santaris, Miragen shall permit an independent certified public accounting firm of internationally recognized standing selected by Santaris and reasonably acceptable to Miragen, to examine, at Santaris’ sole expense, the relevant books and records of Miragen as may be reasonably necessary to verify the accuracy of the reports submitted by Miragen in accordance with Section 4.11(a) and the payment of royalties and the amounts payable under Section 4.10. An examination by Santaris under this Section 4.12(b) shall occur not more than [*] in any year and shall be limited to the pertinent books and records which have not previously been examined under this Section 4.12(b) by Santaris for any year ending not more than [*] years before the

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
date of the request. The accounting firm shall be provided access to such books and records at Miragen’s facilities where such books and records are normally kept and such examination shall be conducted during Miragen’s normal business hours. Miragen shall require its Sublicensees to grant Miragen, Santaris or an independent auditor approved by such Sublicensee and Santaris, to have comparable access to such Sublicensees’ relevant books and records to verify the payment of royalties. If a Party or an independent auditor engaged by a Party conducts an audit of a Sublicensee pursuant to the preceding sentence, such Party shall share the results of such audit, in confidence, with the other Party.

(c) Underpayments/Overpayments. If such accounting firm concludes that additional royalties or share of Sublicense Revenue were due to Santaris, Miragen shall pay to Santaris the additional royalties within [*] days of the date Miragen receives such accountant’s written report so concluding. If such underpayment exceeds [*] of the royalties or share of Sublicense Revenue that were to be paid to Santaris, Miragen also shall reimburse Santaris for all reasonable charges of such accountants for conducting the audit. If such accounting firm concludes that Miragen overpaid royalties or share of Sublicense Revenue to Santaris, Miragen shall be entitled to reduce any subsequent payments by the amount of the overpayment.

5. INTELLECTUAL PROPERTY.

5.1. Ownership.

(a) As between the Parties, Miragen shall be the sole and exclusive owner of all right, title and interest in and to all Miragen Compound Patents.

(b) Subject to Section 5.1(a), as between the Parties, each Party shall own all inventions and other Know-How conceived, reduced to practice or otherwise made solely by employees of such Party and any Patents claiming such inventions.

(c) Subject to Section 5.1(a), if any inventions or other Know-How are conceived, reduced to practice or otherwise made jointly by employees of both Parties in connection with any activities performed under this Agreement, such inventions and Know-How, and any Patents claiming such inventions (collectively, the “Joint IP”), shall be jointly owned by the Parties. Each Party may exploit any Joint IP without accounting to or obtaining consent from the other Party, subject to the rights and obligations of the Parties with respect to the Joint IP under this Agreement, including Miragen’s Research Licenses and Product Licenses and the rights granted Santaris under Section 8.5 (including Schedule 8.5(b)). The Parties shall discuss in good faith the terms and conditions upon which the prosecution, maintenance and enforcement of all Patents within the Joint IP shall be conducted and allocated between the Parties.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
5.2. **Inventorship.** All determinations of inventorship under this Agreement shall be made in accordance with the patent laws of the United States.

5.3. **Improvements to LNA Platform Technology.**

(a) [*]

(b) [*]

5.4. **Patent Prosecution and Maintenance.**

(a) [*]

(b) [*]

5.5. **Enforcement of Patents.**

(a) [*]

(b) [*]

(c) [*].

5.6. **[*] Patents.**

(a) As of the Restatement Date, Santaris is conducting a bona fide internal program to develop LNA Compounds Targeting [*] (also referred to as “[*]”), and in connection with such program, Santaris is planning to assign the [*] Patents to an Affiliate that, at the time of such assignment, will be a wholly owned subsidiary of Santaris but that may subsequently become a Third Party as a result of investment by or sale to one or more Third Parties (such assignee of the [*] Patents, the “[*] Assignee”). Santaris hereby covenants to Miragen that, in connection with the assignment of the [*] Patents, Santaris shall obtain from the [*] Assignee and shall maintain during remainder of the Term after such assignment:

(i) the exclusive license, with right to grant sublicenses, under the [*] Patents, to research, Develop, [*] and Commercialize LNA Compounds that are claimed by the [*] Patents and that are Targeting any Target other than [*] (the “[*] Targets”) in the Territory for use in the Field; and

(ii) the right to cause the [*] Assignee, to the extent possible, practicable and not likely to have an adverse effect on the patentability, validity or enforceability of the [*] Patents, to file divisional patent applications to separate claims covering LNA Compounds Targeting [*] from claims that cover only LNA Compounds Targeting [*] Targets,

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(iii) the right to cause the [*] Assignee to assign to Santaris any and all right, title and interest in and to each divisional patent application that does not claim LNA Compounds Targeting [*] and all Patents issuing from any such divisional patent application (collectively, the “[*] Divisional Patents”).

(b) Miragen shall not have any rights with respect to any [*] Patents, except as set forth in this Section 5.6(b) or Section 5.6(c) below. Santaris shall not, and shall ensure that its Affiliates, the [*] Assignee, and any future assignees or licensees of the [*] Patents shall not, assert against Miragen or its Affiliates, any of the [*] Patents that claim LNA Compounds Targeting [*] Targets, with respect to Miragen’s or its Affiliate’s discovery, identification, [*] for non-clinical research development, or performance of non-clinical research or pre-clinical development (up to immediately prior the commencement of IND Enabling Studies) of, LNA Compounds Targeting any such [*] Target, provided that such [*] Target passed the screening procedure set forth in Section 2.2(b). For clarity, the foregoing covenant not to sue does not pertain to any LNA Compounds Targeting [*] because it is a Blocked Target and not capable of passing the screening procedure set forth in Section 2.2(b).

(c) In the event that Miragen nominates a [*] Target as a Miragen Target (whether as an Existing Target, New Target or a replacement for an Existing Target or New Target) for a Product License and such Target passes the gate-keeping procedure in Section 2.4 such that such [*] Target becomes a Miragen Target, then:

(i) [*]

(ii) [*]

(iii) [*]

(iv) [*]

(v) [*]

6. CONFIDENTIALITY.

6.1. Confidentiality. Except to the extent expressly authorized by this Agreement or otherwise agreed in writing by the Parties, the Parties agree that each Party (the “Receiving Party”) receiving any Confidential Information of the other Party (the “Disclosing Party”) shall keep such Confidential Information confidential and shall not publish or otherwise disclose or use such Confidential Information for any purpose other than to exercise rights or perform its obligations under this Agreement, provided that such disclosure is (a) limited on a “need to know” basis to those persons directly involved in performing the relevant activities permitted under this Agreement who require access to such Confidential Information, and to legal representatives or (b) is subject to confidentiality obligations no less restrictive than those set forth herein.

6.2. Confidential Information shall not include information that the Receiving Party can establish:

(a) was already known by the Receiving Party (other than under an obligation of confidentiality) at the time of disclosure by the Disclosing Party and such Receiving Party has documentary evidence to that effect;

(b) was generally available to the public or otherwise part of the public domain at the time of its disclosure to the Receiving Party;

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
became generally available to the public or otherwise part of the public domain after its disclosure to the Receiving Party and other than through any act or omission of the Receiving Party in breach of the confidentiality obligations set forth in this Article 6;

(d) was disclosed to the Receiving Party, other than under an obligation of confidentiality, by a Third Party who had no obligation to the Disclosing Party not to disclose such information to others; or

(e) was independently discovered or developed by or on behalf of the Receiving Party without the use of or reference to the Confidential Information of the other Party and the Receiving Party has documentary evidence to that effect.

6.3. Authorized Disclosure and Use. Notwithstanding Section 6.2, the Receiving Party may disclose Confidential Information of the Disclosing Party to the extent such disclosure is reasonably necessary to:

(a) file or prosecute patent applications which the Receiving Party is authorized to file or prosecute hereunder;

(b) facilitate discussions with actual or potential collaborators, investors or acquirers in connection with a collaboration with, investment in or acquisition of the Receiving Party, subject to confidentiality obligations no less restrictive than those set forth herein (with shorter duration if appropriate but in no event for a period that is shorter than [*] years from the date of disclosure by the Receiving Party to such person or entity); or

(c) to the extent necessary to comply with applicable laws or regulations of applicable governmental authorities, including in connection with filing, obtaining and maintaining Regulatory Approvals.

In the event that the Receiving Party shall deem it necessary to disclose pursuant to this Section 6.3 Confidential Information of the Disclosing Party, the Receiving Party shall to the extent possible give reasonable advance notice of such disclosure to the Disclosing Party and take reasonable measures to ensure confidential treatment of such information.

6.4. SEC or Similar Filings. Either Party may disclose the terms of this Agreement to the extent required, in the reasonable opinion of such Party’s legal counsel, to comply with applicable laws, rules and regulations, including the rules and regulations promulgated by the United States Securities and Exchange Commission, the Copenhagen Stock Exchange or other applicable regulatory organizations or self-regulatory organizations. Notwithstanding the foregoing, before disclosing this Agreement or any of the terms hereof pursuant to this Section 6.4, the Parties will consult with one another on the terms of this Agreement to be redacted in making any such disclosure. If a Party discloses this Agreement or any of the terms hereof in accordance with this Section 6.4, such Party agrees, at its own expense, to seek confidential treatment of portions of this Agreement, or such terms, as may be reasonably requested by the other Party.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
6.5. Public Announcements; Publications.

(a) **Coordination.** Santaris and Miragen shall, from time to time, and at the request of the other Party, discuss and agree on the general information content relating to this Agreement that may be publicly disclosed (including by means of any printed publication or oral presentation); provided, that Miragen, subject to Section 6.5(b) and Section 6.2, shall have no obligation to consult with Santaris with respect to any scientific publication or public announcement concerning its Development, Manufacturing or Commercialization activities with respect to Miragen Compounds and Products under this Agreement.

(b) **Announcements.** Except as may be expressly permitted under Section 6.5(a) or as may be appropriate for Miragen to make in connection with its Development, [*] or Commercialization activities as contemplated hereunder, neither Party will make any public announcement regarding this Agreement or the Development, [*] or Commercialization of Miragen Compounds or Products without the prior written approval of the other Party. For the sake of clarity, nothing in this Agreement shall prevent Miragen from making any scientific publication or public announcement concerning its Development, [*] or Commercialization activities with respect to Miragen Compounds or Products under this Agreement; provided, that Miragen shall not disclose any Confidential Information of Santaris in any such publication or announcement without obtaining Santaris’ prior written consent to do so.

6.6. Termination of Prior Confidentiality Agreement. This Agreement supersedes any confidentiality agreement(s) between the Parties dated prior to the Effective Date (collectively, the “Prior Confidentiality Agreements”), including any amendments thereto; provided, that the foregoing shall not limit any remedies available to either Party with respect to any breach of the Prior Confidentiality Agreements which occurred prior to the Effective Date. All Information (as defined in the Prior Confidentiality Agreements) exchanged between the Parties under the Prior Confidentiality Agreements shall be deemed to be Confidential Information under this Agreement and shall be subject to the terms of this Article 6.

[ ] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
7. REPRESENTATIONS.

7.1. Representations and Covenants of Each Party. Each of Santaris and Miragen hereby represents and covenants to the other Party as follows as of the Effective Date and the Restatement Date:

(a) it is a corporation or entity duly organized and validly existing under the laws of the state or other jurisdiction of its incorporation or formation;

(b) the execution, delivery and performance of this Agreement by such Party has been duly authorized by all requisite corporate action;

(c) it has the power and authority to execute and deliver this Agreement and to perform its obligations hereunder;

(d) this Agreement is a legal and valid obligation binding upon it and is enforceable in accordance with its terms, subject to applicable limitations on enforcement based on bankruptcy laws and other debtors’ rights;

(e) the execution, delivery and performance by such Party of this Agreement and its compliance with the terms and provisions hereof does not and will not conflict with or result in a breach of any of the terms and provisions of or constitute a default under (i) a loan agreement, guaranty, financing agreement, agreement affecting a product or other agreement or instrument binding or affecting it or its property; (ii) the provisions of its charter or other governing documents or bylaws; or (iii) any order, writ, injunction or decree of any court or governmental authority entered against it or by which any of its property is bound;

(f) it shall at all times comply in all material respects with all applicable laws and regulations relating to its activities under this Agreement; and

(g) it has not entered into, and after the Effective Date shall not enter into, any oral or written agreement or arrangement that would be inconsistent with its obligations under this Agreement.

7.2. Additional Santaris Representations. Except to the extent disclosed by Santaris pursuant to a letter to Miragen dated as of the Effective Date, Santaris further represents and covenants to Miragen as follows that:

(a) Santaris has not, as of the Effective Date and the Restatement Date, and will not following the Effective Date knowingly (i) grant any rights that are inconsistent with the rights granted to Miragen herein or (ii) take any action that would prevent it from granting the rights granted to Miragen under this Agreement, or that would otherwise materially conflict with or adversely affect Miragen’s rights under this Agreement;

(b) As of the Effective Date and the Restatement Date, there are no actions, suits, proceedings or investigations pending against Santaris before any court, government or regulatory body, agency, commission, official or any arbitrator that are reasonably expected to have a material adverse effect on Santaris’ ability to consummate the transactions contemplated hereby;

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
As of the Effective Date and the Restatement Date, (i) Santaris solely owns, or as identified in Schedule 1.28, is the exclusive licensee in good standing of, all LNA Platform Technology in existence as of the Effective Date or the Restatement Date, as applicable and (ii) the [*] Assignee solely owns, all [*] Patents in existence as of the Restatement Date;

As of the Effective Date and the Restatement Date, Santaris has not received, nor is aware, of any claims or allegations that a Third Party (other than a Third Party licensor identified in Schedule 1.28) has any right or interest in or to any [*] Patent or any Patent in the LNA Platform Technology or Santaris Technology or that any of such Patents are invalid or unenforceable;

As of the Effective Date and the Restatement Date, Santaris has not filed any claims or sent any notices to any Third Parties claiming that the activities of such Third Parties have infringed or misappropriated the LNA Platform Technology or Santaris Technology and to Santaris’ knowledge, no Third Parties are infringing or misappropriating any LNA Platform Technology or Santaris Technology (in the case of pending claims evaluating them as if issued), in each case to the extent relating to any Miragen Targets; and

As of the Effective Date and the Restatement Date, Santaris has not received, nor is it aware, of any claims or allegations that practice of the LNA Platform Technology infringes or misappropriates any intellectual property rights of any Third Party.

Santaris hereby further represents and warrants to Miragen that:

(i) [*]

(ii) unless a particular target has been selected by the Santaris Licensee for a license from Santaris, under the LNA Platform Technology, for development (beyond the commencement of IND-Enabling Studies) and commercialization of products directed to such target, before Miragen submits such Target to the Target gate-keeping procedure set forth in Section 2.4, Santaris’ agreement with the Santaris Licensee permits Santaris to grant rights to Miragen to such target as part of Existing Target [*] 4 or any New Target, subject to the Santaris Licensee’s non-exclusive license described in clause (a) for research up to but not including IND Enabling Studies; and

(iii) the Product License for Existing Target [*] 4 and any New Target in connection with all pre-clinical development activities performed after the commencement of IND-Enabling Studies, all clinical development activities and all commercialization

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
activities shall be exclusive even with respect to Santaris Licensee. In reliance on such representations and warranties, Miragen acknowledges that, solely with respect to Existing Target [*] 4, any New Targets and any Target replacing any Miragen Target pursuant to Section 2.3, Miragen’s Exclusive Research Licenses and Product Licenses, and Santaris’ obligations under Section 3.3(a), in each case in connection with any discovery and research activities conducted prior to the commencement of IND-Enabling Studies, may be subject to the non-exclusive license granted by Santaris to the Santaris Licensee as described above in clause (i).

7.3. **Disclaimer.** EXCEPT AS OTHERWISE EXPRESSLY SET FORTH HEREIN, THE PARTIES MAKE NO REPRESENTATIONS AND EXTEND NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, AND PARTICULARLY THAT THE USE OF ANY TARGET IS FREE OF ANY PATENT OR OTHER INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES, THAT PRODUCTS WILL BE SUCCESSFULLY DEVELOPED HEREUNDER, AND IF PRODUCTS ARE DEVELOPED, WITH RESPECT TO SUCH PRODUCTS, THE PARTIES DISCLAIM ALL IMPLIED WARRANTIES OF TITLE, NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

8. **TERM AND TERMINATION.**

8.1. **Term.** The term of this Agreement will commence on the Effective Date and shall extend, unless this Agreement is terminated earlier in accordance with this Article 8, until (a) if there is at least one Miragen Target that has not been terminated, the expiration of all Royalty Periods, (b) the termination of the last Miragen Target (including all replacement Targets), provided that Miragen’s right pursuant to Section 3.1 to obtain a Product License for any New Target [*] expired prior to such termination, or (c) the expiration of Miragen’s right pursuant to Section 3.1 to obtain a Product License for any New Target [*], provided that all Miragen Targets (including their replacement Targets) were terminated before such expiration (the “Term”).

8.2. **Termination by Either Party for Material Breach by the Other Party.**

(a) Either Party may terminate this Agreement on a Target [*]-by-Target [*] basis at any time by giving written notice to the other Party if the other Party commits a material breach of its obligations under this Agreement with respect to a particular Target [*] and such breach remains uncured for [*] days (or [*] days in the case of the breach of a payment obligation) from the date written notice of such breach (which notice shall identify the relevant Target [*]) is given to the breaching Party. Additionally, if Miragen fails to cure any deemed material breach under the penultimate sentence of Section 3.1(f) within the cure period referred to therein, Santaris may terminate this Agreement with respect to one or more Miragen Targets upon written notice to Miragen and without any additional cure periods.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Either Party may terminate this Agreement in its entirety at any time by giving written notice to the other Party if the other Party commits a material breach of its obligations under this Agreement that are not directed only to a particular Target [*] and such breach remains uncured for [*] days (or [*] days in the case of the breach of a payment obligation) from the date written notice of such breach is given to the breaching Party.

Each Party may terminate this Agreement with immediate effect upon providing the other Party with written notice if the other Party breaches Section 11.1(a).

[86x798]8.3. Termination on Insolvency. This Agreement may be terminated in its entirety with immediate effect by Santaris upon written notice to Miragen if (a) a case is commenced by or against Miragen under applicable bankruptcy, insolvency or similar laws and not dismissed within [*] days thereafter, (b) Miragen files for or is subject to the institution of bankruptcy, reorganization, liquidation, receivership or similar proceedings that are not dismissed within [*] days thereafter, (c) Miragen assigns all or a substantial portion of its assets for the benefit of creditors, (d) a receiver or custodian is appointed for Miragen’s business and is not dismissed within [*] days after appointment, (e) a substantial portion of Miragen’s business is subject to attachment or similar process, which attachment or similar process is not dismissed within [*] days thereafter, (f) Miragen suspends making payments with respect to all or any class of its debts for a period of more than [*] days or (g) anything analogous to any of the events described in the foregoing subsections (a) through (f) occurs under the laws of any applicable jurisdiction and is not addressed or corrected within [*] days.

8.4. Termination At Will by Miragen. Miragen may terminate this Agreement in its entirety or on a Target [*]-by-Target [*] basis for any reason at any time upon [*] days prior written notice to Santaris.

8.5. Effects of Termination.

(a) Effect of Termination by Miragen for Material Breach by Santaris. If Miragen terminates this Agreement with respect to any or all Target [*] pursuant to Section 8.2, then all rights and obligations of each Party under this Agreement shall terminate with respect to such Target [*] (or the Agreement in its entirety as the case may be), subject to Section 8.7.

(b) Effect of Termination for Targets Terminated by Miragen At Will, Replaced by Miragen, or Terminated by Santaris for Miragen’s Material Breach or Insolvency. If:

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Miragen gives notice of termination of one or more Miragen Target(s) (and its Target [*]) pursuant to Section 8.4,

Miragen replaces one or more Miragen Target(s) (and its Target [*]) pursuant to Section 2.3, or

Santaris terminates one or more Miragen Target(s) (and its Target [*]) pursuant to Sections 3.1(f), 8.2 or 8.3

then, in each case, upon the effective date of such termination, the provisions in Schedule 8.5(b) shall apply.

(c) Santaris agrees that, if this Agreement is terminated by Santaris pursuant to Section 8.2 or 8.3 and such termination did not arise directly or indirectly from any acts or omissions of a particular Sublicensee, Santaris will, at such Sublicensee’s request, enter into an agreement (the “Direct License”) with such Sublicensee whereby such Sublicensee would receive:

(i) with respect to the rights granted by Santaris to Miragen under this Agreement and sublicensed to such Sublicensee by Miragen under a Sublicense, as a substitute for its Sublicense from Miragen (which Sublicense was terminated as a result of the termination of this Agreement), a direct license from Santaris of the same scope as such Sublicense; and

(ii) with respect to rights licensed to Santaris from or by Miragen pursuant to Schedule 8.5(b) upon such termination, a direct sublicense from Santaris of the same scope as such Sublicensee’s licenses with respect thereto under its Sublicense with Miragen, and such Sublicensee would retain, with respect thereto, the patent prosecution and enforcement rights set forth in its Sublicense with Miragen.

If such Sublicensee requests a Direct License from Santaris, such Sublicensee shall not be required as a result of such termination of this Agreement with respect to Miragen the licenses set forth in Schedule 8.5(b) in respect of any Miragen Compound Patents or Miragen Product Technology Controlled by such Sublicensee. The Direct License shall be on the same terms and conditions that applied to Miragen under this Agreement, including terms with respect to termination and the effects thereof; provided, that Santaris shall receive from such Sublicensee the same financial payments that Santaris would have otherwise received from Miragen under Sections 4.9(b) and 4.10 of this Agreement if this Agreement had not been terminated with respect to Miragen and such Sublicensee had remained a Sublicensee. For clarity, the Direct License shall not require such Sublicensee to pay Santaris the amounts that Miragen would have been required to pay to Santaris pursuant to Section 4.7 or 4.9(a). [*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
8.6. **Pending Dispute Resolution.** If a Party gives notice of termination under Section 8.2 and the other Party disputes whether such notice was proper, then the issue of whether this Agreement has been terminated (in its entirety or with respect to only one or more Target [*]) shall be resolved in accordance with Article 10, and each Party shall continue to perform its obligations hereunder pending the conclusion of such dispute resolution proceeding. If as a result of such dispute resolution process it is determined that the notice of termination was proper, then such termination shall become effective if the breach is not cured within [*] or [*] days, as applicable, of such determination. Subject to Section 9.5, a breaching Party shall remain liable for any damages accrued during any dispute resolution proceeding described in this Section 8.6. If as a result of such dispute resolution proceeding, it is determined that the notice of termination was improper, then no termination shall have occurred and this Agreement shall remain in effect.

8.7. **Survival of Certain Obligations.** Expiration or termination of this Agreement shall not relieve either Party of any obligation (including payment obligations) that accrued before the effective date of such expiration or termination. Nothing in Section 3.1(f) or this Article 8 shall be deemed to limit a Party from any other remedy that such Party may have for a material breach of this Agreement by the other Party. The rights and obligations of the Parties with respect to any Target [*] not terminated hereunder shall remain in full force and effect for the remainder of the Term. The following provisions shall survive expiration or termination of this Agreement: Sections 2.2(b)(vi), 3.1(f), 3.6 (last sentence only and solely in respect of activities conducted or Product sold prior to termination), 4.9 (last sentence and solely with respect to Royalty Periods that have expired prior to the termination of this Agreement and to the expiration of the Agreement), 4.11 (solely in respect of royalties and other amounts accrued hereunder prior to termination), 4.12, 5.1, 5.2, 5.3(b), 7.3, 8.5 (including Schedule 8.5(b)) and 8.7, and Articles 1, 6 (provided that Section 6.5(b) shall survive solely with respect to the announcement of the termination or expiration of this Agreement), 9, 10 and 11.

9. **INDEMNIFICATION AND INSURANCE.**

9.1. **Indemnification by Miragen.** Miragen shall indemnify and defend Santaris, its Affiliates, licensors and assignors, and each of their respective employees, officers, directors and agents (each, a “Santaris Indemnified Party”), from and [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
against any and all liability, loss, damage, expense (including reasonable attorneys’ fees and expenses) and cost (collectively, “Liabilities”) that the Santaris Indemnified Party incurs or suffers resulting from or arising out of any Third Party claims arising out of:

(a) the practice of a Research License or the Development, Manufacture or Commercialization of any Miragen Compound or Product by, on behalf of or under the authority of, Miragen, its Affiliates or Sublicensees, including any patent infringement (for clarity, including infringement of any Target Patent) or the personal injury or death of any person as a result of use of any Miragen Compound or Product;

(b) any Miragen representation set forth herein being untrue when made; or

(c) any breach by Miragen of any of its covenants under this Agreement;

except, in each case, to the extent caused by (i) the gross negligence or willful misconduct of Santaris or any Santaris Indemnified Party, (ii) any Miragen representation set forth herein being untrue when made or (iii) any breach by Santaris of any of its covenants under this Agreement.

9.2. Indemnification by Santaris. Santaris shall indemnify and defend Miragen and its Affiliates, and each of their respective employees, officers, directors and agents (each, a “Miragen Indemnified Party”), from and against any and all Liabilities that the Miragen Indemnified Party incurs or suffers resulting from or arising out of any Third Party claims arising out of:

(a) the Development, Manufacture or Commercialization of (i) any Reversion Product by, on behalf of or under the authority of, Santaris, its Affiliates or sublicensees, including any patent infringement or the personal injury or death of any person as a result of use of any Reversion Product or (ii) any product containing an LNA Compound Targeting a Miragen Target in a Terminated Miragen Target [*], on behalf of or under the authority of, Santaris, its Affiliates or sublicensees, including any patent infringement or the personal injury or death of any person as a result of use of any such product;

(b) the commercial supply of LNA Raw Materials by Santaris to Miragen pursuant to Section 3.7;

(c) any Santaris representation set forth herein being untrue when made; or

(d) any breach by Santaris of any of its covenants under this Agreement;

except, in each case, to the extent caused by (i) the gross negligence or willful misconduct of Miragen or any Miragen Indemnified Party, (ii) any Miragen representation set forth herein being untrue when made or (iii) any breach by Miragen of any of its covenants under this Agreement.

9.3. Procedure. Each Party will notify the other promptly in the event it becomes aware of a claim for which indemnification may be sought hereunder. In furtherance and not in limitation of the preceding sentence, in case any proceeding (including any governmental investigation) shall be instituted involving any Party in respect of which indemnity may be sought pursuant to this Article 9, such Party (the “Indemnified Party”) shall promptly notify the other Party (the “Indemnifying Party”) in writing within 15 days after the Indemnified Party first becomes aware of such proceeding and the Parties shall promptly meet

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
to discuss how to respond to any claims that are the subject matter of such proceeding. The Indemnifying Party shall have the right to assume the defense of any claim asserted by a Third Party subject to indemnification obligations hereunder. The Indemnifying Party, upon assuming the defense of such claim, shall retain counsel reasonably satisfactory to the Indemnified Party to conduct the defense of such claim and shall pay the fees and expenses of such counsel. The Indemnified Party shall cooperate fully with the Indemnifying Party in the defense of any such claim or proceeding. In any such proceeding, the Indemnified Party shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of the Indemnified Party unless the named parties to any such proceeding (including any impleaded parties) include both the Indemnifying Party and the Indemnified Party and representation of both such parties by the same counsel would be inappropriate due to actual or potential differing interests between them. The Indemnifying Party shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the Indemnifying Party agrees to indemnify the Indemnified Party from and against any loss or liability by reason of such settlement or judgment. The Indemnifying Party shall not, without the written consent of the Indemnified Party, effect any settlement of any pending or threatened proceeding in respect of which the Indemnified Party is, or arising out of the same set of facts could have been, a party and indemnity could have been sought hereunder by the Indemnified Party, unless such settlement includes an unconditional release of the Indemnified Party from all liability on claims that are the subject matter of such proceeding.

9.4. Insurance. Miragen shall obtain and maintain commercial general liability insurance with reputable and financially secure insurance carriers to cover its indemnification obligations under Section 9.1, with limits of not less than $1,000,000.00 per occurrence and in the aggregate, or after Miragen’s commencement of a human clinical trial with limits of not less than $5,000,000.00 per occurrence and in the aggregate. Such insurance shall be procured with carriers having an A.M. Best Rating of A-VII or better.

9.5. Liability. Except with respect to liability arising from a breach of Article 6, or to the extent such Party may be required to indemnify the other Party under this Article 9, NEITHER PARTY NOR ITS RESPECTIVE AFFILIATES SHALL BE LIABLE TO THE OTHER PARTY FOR SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, WHETHER BASED ON CONTRACT OR TORT, OR ARISING UNDER APPLICABLE LAW OR OTHERWISE, IN CONNECTION WITH THIS AGREEMENT.

10. DISPUTE RESOLUTION.

10.1. Executive Mediation. The Parties shall first seek to resolve any controversy, claim or dispute arising out of or relating to this Agreement through good faith discussions. If the Parties are unable to resolve such dispute in the course of such discussions, the matter shall be referred to the Parties’ respective Executive

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Officers to be resolved by negotiation in good faith as soon as is practicable but in no event later than [*] days after referral. If the Executive Officers cannot resolve such dispute within such [*]-day period, either Party may initiate the dispute resolution procedures set forth in Section 10.2. Any discussions or negotiations between the Parties pursuant to this Section 10.1 shall not be admissible in any subsequent dispute resolution proceeding. For purposes of this Article 10, “Executive Officers” means the President of Miragen (or an executive officer of Miragen designated by such President of Miragen) and the Chief Executive Officer of Santaris (or an executive officer of Santaris designated by such Chief Executive Officer of Santaris). For the avoidance of doubt, no controversy, claim or dispute arising out of or relating to this Agreement may be referred to binding arbitration under Section 10.2 until the Parties have followed the executive mediation procedure set forth in this Section 10.1; provided, however, neither Party shall be required to follow the executive mediation procedure set forth in this Section 10.1 before attempting to obtain a temporary restraining order, preliminary injunction or other interim or conservatory relief.

10.2. Arbitration.

(a) If a dispute is not resolved by the negotiation of the Executive Officers as set forth in Section 10.1, the Parties agree to resolve such dispute through final and binding arbitration conducted under [*]. At any time following the [*]-day period of negotiation between the Executive Officers set forth in Section 10.1, either Party may initiate arbitration of an unresolved dispute by written notice to the other Party of its intention to arbitrate, which notice shall specify in reasonable detail the nature of the dispute.

(b) The arbitration shall be conducted by a panel of three persons; provided, that if the dispute involves claims for damages of less than [*], there shall be only one arbitrator, nominated jointly by the Parties within [*] days of such arbitration notice. Within [*] days after the initiation of arbitration, each Party shall nominate one person to act as arbitrator and the two Party-selected arbitrators shall jointly nominate a third arbitrator within [*] days of their appointment. If any arbitrator is not nominated within these time periods or any arbitrator so nominated by the Parties under this Section 10.2 is not approved by the [*] for appointment, the [*] shall appoint a suitable replacement. Arbitrators shall be independent experts (including lawyers) with at least ten years experience with intellectual property licensing agreements in the pharmaceutical industry and shall not be or have been an Affiliate, sublicensee, employee, consultant, officer, director or stockholder of either Party, and shall comply with the requirements of the IBA Guidelines on Conflicts of Interest in International Arbitration. The chair of the tribunal shall not have the same nationality of either Party.

(c) The arbitration proceedings shall be conducted [*]. The arbitration proceedings and all pleadings and written evidence shall be in the English language. Any written evidence originally in another language shall be submitted in English translation accompanied by the original or a true copy thereof.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Each Party agrees to use reasonable efforts to make all of its current employees available to testify or provide written statements, if reasonably necessary. In addition to the authority conferred upon the arbitral tribunal by the Rules, the arbitral tribunal shall have the authority to order production of documents in accordance with the IBA Rules on the Taking of Evidence in International Arbitration.

The arbitrators shall have the power to decide all questions of arbitrability. The arbitrators shall be instructed and required to render (A) a draft resolution or award within [*] days of the conclusion of the taking of evidence, and the Parties may provide comments thereon within ten days after its receipt and (B) a final written resolution and award on each issue that clearly states the basis upon which such resolution and award is made. The final written resolution and award shall be delivered to the Parties as expeditiously as possible, but in no event more than [*] days after conclusion of the taking of evidence.

Confirmation of, or judgment upon, any award rendered by the tribunal may be entered in any competent court or application may be made to any competent court for judicial acceptance of such an award and order for enforcement. Each Party agrees that, notwithstanding any provision of applicable laws or of this Agreement, it shall not request, and the arbitrators shall have no authority to award, punitive or exemplary damages against any Party. The Parties may apply to any court of competent jurisdiction for a temporary restraining order, preliminary injunction or other interim or conservatory relief, as necessary, without breaching these arbitration provisions and without abridging the powers of the arbitrators.

Except to the extent necessary to confirm or obtain judgment on an award or decision or as may be required by applicable laws, neither Party may, and the Parties shall instruct the arbitrators not to, disclose the existence, content, or results of an arbitration without the prior written consent of both Parties.

The Parties agree that (i) [*] (ii) [*]. Any payment to be made by a Party pursuant to a decision of the tribunal shall be made in United States dollars, without any deductions made for tax obligations or any other deductions.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
11. MISCELLANEOUS.

11.1. Assignment; Change of Control.

(a) **Assignment.** Neither this Agreement nor any interest hereunder shall be assignable, nor any obligation hereunder shall be delegated, by either Party without the prior written consent of the other Party, which consent shall not be unreasonably withheld or delayed; **provided,** that Santaris shall have the right to assign its right to receive cash payments under Article 4 to a Third Party upon prior written notice to Miragen. Notwithstanding the foregoing and subject to subsections (b) and (c) below, each Party may, without the other Party’s consent, assign its entire interest in this Agreement to (i) an Affiliate of such assigning Party for so long as such person or entity remains an Affiliate of such assigning Party or (ii) a successor to all or substantially all of its assets, whether by acquisition, merger, sale of stock, sale of assets or other transaction; **provided** that, in the case of assignment to its Affiliate, the assigning Party shall guarantee the performance of this Agreement by such Affiliate. This Agreement shall be binding upon the successors and permitted assigns of the Parties. Any assignment not in accordance with this Section 11.1 shall be void.

(b) **Miragen Change of Control.** Upon a Miragen Change of Control, the milestone payments referred to in items (i) and (ii) in the table set forth in Section 4.7(a) that have not been achieved by Miragen or its Affiliates before such Miragen Change of Control shall be **increased** by [*] of the amounts set forth in such sections.

(c) **Santaris Change of Control** Upon a Santaris Change of Control:

(i) the milestone payments referred to in items (i), (ii), (iii) and (iv) in the table set forth in Section 4.7(a) that have not been achieved by Miragen or its Affiliates before such Santaris Change of Control shall be **decreased** by [*] of the amounts set forth in such sections; and

(ii) Santaris shall not have any rights, and Miragen shall not have any obligations, under Schedule 8.5(b) in respect of any Target [*] that becomes a Terminated Miragen Target [*] after such Santaris Change of Control.

11.2. No Implied Rights. Except as expressly provided in this Agreement, neither Party shall be deemed by estoppel, implication or otherwise to have granted the other Party any license or other right with respect to any intellectual property of such Party.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
11.3. **Further Actions.** Each Party agrees to execute, acknowledge and deliver such further instruments, and to do all such other acts, as may be necessary or appropriate in order to carry out the purposes and intent of this Agreement.

11.4. **Force Majeure.** Neither Party shall be liable to the other for delay or failure in the performance of the obligations on its part contained in this Agreement if and to the extent that such failure or delay is due to circumstances beyond its control and could not have avoided by the exercise of reasonable diligence. It shall notify the other Party promptly should such circumstances arise, giving an indication of the likely extent and duration thereof, and shall use diligent efforts to resume performance of its obligations as soon as practicable; provided, that neither Party shall be required to settle any labor dispute or disturbance.

11.5. **Notices.** Any notice or notification required or permitted to be provided under this Agreement shall be in writing and shall be deemed given if delivered personally or by facsimile transmission (receipt verified), five days after deposited in the mail if mailed by certified mail (return receipt requested), postage prepaid, or on the third business day if sent by internationally recognized express courier service, to the Parties at the following addresses or facsimile numbers (or at such other address or facsimile number for a Party as shall be specified by like notice; provided, that notices of a change of address or facsimile number shall be effective only upon receipt thereof):

- **Miragen Therapeutics, Inc.**
  6200 Lookout Road
  Suite 100
  Boulder, CO 80301
  United States of America
  Attn: William S. Marshall, Ph.D., CEO
  Fax: +1 (303) 531-5094

  with copies to:
  Cooley LLP
  Five Palo Alto Square
  3000 El Camino Real
  Palo Alto, CA 94306
  United States of America
  Attention: Marya A. Postner, Ph.D.
  Facsimile: +1 (650) 849-7400

- **Santaris Pharma A/S**
  Kogle Allé 6

  [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
11.6. Amendment. No amendment, modification or supplement of any provision of this Agreement shall be valid or effective unless made in writing and signed by a duly authorized officer of each Party.

11.7. Waiver. No provision of the Agreement shall be waived by any act, omission or knowledge of a Party or its agents or employees except by an instrument in writing expressly waiving such provision and signed by a duly authorized officer of the waiving Party. The waiver by either of the Parties of any breach of any provision hereof by the other Party shall not be construed to be a waiver of any succeeding breach of such provision or a waiver of the provision itself.

11.8. Severability. If any provision of this Agreement is held to be invalid or unenforceable by a court of competent jurisdiction from which no appeal can be or is taken, such provision shall be considered severed from this Agreement and shall not serve to invalidate any remaining provisions hereof. The Parties shall make a good faith effort to replace any invalid or unenforceable provision with a valid and enforceable one such that the objectives contemplated by the Parties when entering into this Agreement may be realized.

11.9. Descriptive Headings. The descriptive headings of this Agreement are for convenience only, and shall be of no force or effect in construing or interpreting any of the provisions of this Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
11.10. Governing Law. Except as provided in the following sentence, this Agreement shall be governed by and interpreted in accordance with the substantive laws of [*], without regard to conflict of law principles thereof, other than [*].

11.11. Entire Agreement of the Parties. This Agreement (including its Schedules) and the Equity Agreements constitute and contain the complete, final and exclusive understanding and agreement of the Parties respecting the subject matter hereof and cancels and supersedes any and all prior negotiations, correspondence, understandings and agreements, whether oral or written, among the Parties respecting the subject matter hereof.

11.12. Independent Contractors. It is agreed that both Parties are independent contractors under this Agreement. Nothing herein contained shall be deemed to create an employment, agency, joint venture or partnership relationship between the Parties or any of their agents or employees, or any other legal arrangement that would impose liability upon one Party for the act or failure to act of the other Party. Neither Party shall have any express or implied power to enter into any contracts or commitments or to incur any liabilities in the name of, or on behalf of, the other Party, or to bind the other Party in any respect whatsoever. This Agreement shall be understood to be a joint research agreement under 35 U.S.C. § 103(c)(3) entered into for the purpose of researching, identifying and Developing Miragen Compounds and Products.

11.13. Counterparts. This Agreement may be executed in two counterparts, each of which need not contain the signature of more than one Party but all such counterparts taken together shall constitute one and the same agreement.

11.14. Interpretation. Except where the context otherwise requires, the use of any gender herein shall be deemed to be or include the other genders, the use of the singular shall be deemed to include the plural (and vice versa) and the word “or” is used in the inclusive sense. The words “include”, “includes” and “including” shall be deemed to be followed by the phrase “without limitation.” The word “will” shall be construed to have the same meaning and effect as the word “shall.” Unless the context requires otherwise, (a) any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein), (b) any reference herein to any Person shall be construed to include the Person’s successors and assigns, (c) the words “herein”, “hereof” and “hereunder”, and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof and (d) all references herein to Articles, Sections or Schedules shall be construed to refer to Articles, Sections or Schedules of this Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
IN WITNESS WHEREOF, duly authorized representatives of the Parties have duly executed this Agreement to be effective as of the Effective Date.

MIRAGEN THERAPEUTICS, INC.

By:  /s/ Jason A. Leverone
Jason A. Leverone
Chief Financial Officer
miRagen Therapeutics, Inc.

SANTARIS PHARMA A/S

By:  /s/ Henrik Stage
Henrik Stage
President and Chief Executive Officer
Santaris Pharma A/S

[Signature Page of the Amended and Restated License Agreement
By and between Miragen Therapeutics, Inc., and Santaris Pharma A/S]
### Schedule 1.28
LNA Platform Technology Patents existing as of the Restatement Date

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

#### Owned by Santaris:

<table>
<thead>
<tr>
<th>Priority</th>
<th>USA</th>
<th>Europe</th>
<th>Canada</th>
<th>Japan</th>
<th>Australia</th>
<th>Rest of World</th>
</tr>
</thead>
<tbody>
<tr>
<td>[*]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
</tr>
<tr>
<td>[*]</td>
<td></td>
<td></td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
</tr>
<tr>
<td>[*]</td>
<td></td>
<td>[•]</td>
<td></td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
</tr>
<tr>
<td>[*]</td>
<td></td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
</tr>
<tr>
<td>[*]</td>
<td></td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
</tr>
<tr>
<td>[*]</td>
<td></td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
</tr>
<tr>
<td>[*]</td>
<td></td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
</tr>
<tr>
<td>[*]</td>
<td></td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
</tr>
<tr>
<td>[*]</td>
<td></td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
<td>[•]</td>
</tr>
</tbody>
</table>

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

50
<table>
<thead>
<tr>
<th>Priority</th>
<th>USA</th>
<th>Europe</th>
<th>Canada</th>
<th>Japan</th>
<th>Australia</th>
<th>Rest of World</th>
</tr>
</thead>
<tbody>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
</tr>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td></td>
<td>[*]</td>
<td>[*]</td>
</tr>
</tbody>
</table>

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

51
| [*] | [*] | [*] | [*] | [*] | [*] | [*] |

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Schedule 1.30
[*] Specifications

The [*] Specifications are attached hereto and incorporated herein by reference.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Each of Target [*] shall be comprised of certain [*] sequences, each identified by its name and accession number as provided in the [*] at [*] and described below, and each such [*] sequence shall be deemed a “Miragen Target”:

<table>
<thead>
<tr>
<th>Target [*]</th>
<th>[*] Name</th>
<th>[*] Accession Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
</tr>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
</tr>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
</tr>
</tbody>
</table>

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Effect of Termination for Targets Terminated by Miragen At Will, Replaced by Miragen, or Terminated by Santaris for Miragen’s Material Breach or Insolvency.

If:

(i) Miragen gives notice of termination of one or more Miragen Target(s) (and its Target [*]) pursuant to Section 8.4,

(ii) Miragen replaces one or more Miragen Target(s) (and its Target [*]) pursuant to Section 2.3, or

(iii) Santaris terminates one or more Miragen Target(s) (and its Target [*]) pursuant to Sections 3.1(f), 8.2 or 8.3

(each such Miragen Target (and its Target [*]) terminated or replaced as described in (i), (ii) or (iii) above, a “Terminated Miragen Target [*]”) then, in each case, upon the effective date of such termination:

(1) [*]

(2) [*]

(3) [*]

(4) [*]

(A) [*]

(B) [*]

(5) [*]

(6) [*]

(A) [*]

(B) [*]

[*]

(a) [*]

(b) [*]

(c) [*]

(d) [*]

(e) [*]

(f) [*]

(g) [*]

(h) [*]

(i) [*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
License and Collaboration Agreement

by and between

Miragen Therapeutics, Inc.

and

Les Laboratoires Servier

and

Institut de Recherches Servier
LICENSE AND COLLABORATION AGREEMENT

This LICENSE AND COLLABORATION AGREEMENT (this “Agreement”) is made as of October 13, 2011 (the “Effective Date”), by and between Miragen Therapeutics, Inc., a corporation organized and existing under the laws of Delaware, having its principal place of business at 6200 Lookout Rd., Suite 100, Boulder, CO 80301, USA (“Miragen”) on the first part, and Les Laboratoires Servier, a corporation organized and existing under the laws of France, having offices at 50 rue Carnot, 92284 Suresnes cedex France and Institut de Recherches Servier, a corporation organized and existing under the laws of France, having offices at 3 rue de la République, 92150 Suresnes, France (these two entities jointly referred to as “Servier”) on the second part. Servier and Miragen are referred to in this Agreement individually as a “Party” and collectively as the “Parties.”

RECITALS

WHEREAS, Miragen is a biotechnology company focused on the research and development of pharmaceutical products directed to miRNA targets and owns and/or controls valuable proprietary technology relating to such miRNA targets and products directed thereto;

WHEREAS, Servier is a pharmaceutical company working to create and develop novel therapies;

WHEREAS, Servier has been evaluating certain Miragen targets and products under a Material Transfer Agreement between the Parties dated January 17, 2011 (the “MTA”); and

WHEREAS, Miragen and Servier desire to establish a collaboration for the research and development and, if successful, commercialization of products directed to miRNA targets for the treatment of cardiovascular diseases, all under the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the foregoing premises and the mutual covenants contained herein, the receipt and sufficiency of which are hereby acknowledged, Servier and Miragen hereby agree as follows:

ARTICLE 1
DEFINITIONS

Unless the context otherwise requires, the terms in this Agreement with initial letters capitalized, shall have the meanings set forth below, or the meaning as designated in the indicated places throughout this Agreement.

1.1 “Acquiror IP” is defined in Section 2.9.

1.2 “Active Ingredient” means the clinically active material(s) that provide pharmacological activity in a pharmaceutical product (excluding formulation components such as coatings, stabilizers, excipients or solvents, adjuvants or controlled release technologies).

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.3 “Additional Target” is defined in Section 2.6.

1.4 “Additional Third Party Companion Diagnostic License Agreement” is defined in Section 2.8.

1.5 “Additional Third Party Therapeutic License Agreement” is defined in Section 2.7.

1.6 “Affiliate” means, with respect to a Party, any Person that controls, is controlled by, or is under common control with that Party. For the purpose of this definition, “control” (including, with correlative meaning, the terms “controlled by” and “under the common control”) means the actual power, either directly or indirectly through one or more intermediaries, to direct or cause the direction of the management and policies of such Person, whether by the ownership of more than fifty percent (50%) of the voting stock of such Person, by contract or otherwise.

1.7 “Alliance Business-Development Manager” is defined in Section 3.1.

1.8 “Alliance R&D Manager” is defined in Section 3.2.

1.9 “Cardiovascular Disease” means any disease, disorder or medical condition relating to a structural or functional abnormality of the cardiovascular system that impairs its normal functioning, including any disease, disorder or medical condition that directly involves or affects the heart or vascular system, including stroke. For clarity, Cardiovascular Disease excludes hematological disorders, immunological disorders, neoplasms, neurological disorders and metabolic disorders (except for the direct vascular or cardiovascular effects of a metabolic disorder).

1.10 “Change of Control” means, with respect to Miragen: (a) the sale to a Third Party of all or substantially all of Miragen’s assets or business relating to the subject matter of this Agreement; (b) a merger, reorganization or consolidation involving Miragen and a Third Party in which the voting securities of Miragen outstanding immediately prior thereto cease to represent at least fifty percent (50%) of the combined voting power of the surviving entity immediately after such merger, reorganization or consolidation; or (c) the acquisition by a Third Party of more than fifty percent (50%) of the voting equity securities of Miragen as a result of a single transaction or a series of related transactions. Change of Control shall exclude private financing (provided that the acquisition of more than fifty percent (50%) of the voting equity securities of Miragen as a result of a single transaction or a series of related transactions by a venture fund of a pharmaceutical company is not excluded from Change of Control) and the initial public offering of Miragen’s securities.

1.11 “Claims” means all Third Party demands, claims, actions, proceedings and liability (whether criminal or civil, in contract, tort or otherwise) for losses, damages, reasonable legal costs and other reasonable expenses of any nature.

1.12 “Combination Product” is defined in Section 1.72 (definition of “Net Sales”).

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.13 “Commercialization” means all activities directed to marketing, distribution, detailing or selling a Licensed Product in the Field (as well as importing and exporting activities in connection therewith), all activities directed to obtaining Pricing Approvals, and all activities directed to Phase 4 Studies.

1.14 “Commercialization Plan” is defined in Section 8.2.

1.15 “Commercially Reasonable Efforts” means: (a) where applied to carrying out specific tasks and obligations of a Party under this Agreement, expending reasonable, diligent, good faith efforts and resources to accomplish such task or obligation as such Party (on its own and/or acting through any of its Affiliates, sublicensees or subcontractors) would normally use to accomplish a similar task or obligation under similar circumstances; and (b) where applied to Development, manufacture or Commercialization of a Licensed Product, the use of reasonable, diligent, good faith efforts and resources, in an active and ongoing program, as normally used by such Party for a product discovered or identified internally by such Party, which product is at a similar stage in its development or product life and is of similar market potential and similar in terms of profitability (without taking into account the effects of any payments to Miragen pursuant to this Agreement, except to the extent that such payments cause or may reasonably be expected to cause the relevant Licensed Product to be unprofitable or to have a negative net present value based on Servier’s usual financial evaluations).

1.16 “Committee” means the JEC, the JSC, the JRDC or any subcommittee established under Section 3.5(f), as applicable.

1.17 “Companion Diagnostic” means any diagnostic product or service that is specific to a particular Licensed Product and (i) identifies whether a patient is a candidate for treatment with such Licensed Product for an indication in the Field, and/or (ii) allows to follow the efficacy of such Licensed Product, and/or (iii) allows to define therapeutic objectives for treatment with such Licensed Product.

1.18 “Companion Diagnostic Contracting Party” has the meaning set forth in Section 3.5(d).

1.19 “Companion Diagnostic Development Costs” is defined in Section 5.4(d)(i).

1.20 “Confidential Information” of a Party means all proprietary Know-How, unpublished patent applications and other information and data of a financial, commercial, business, operational or technical nature of such Party, including information comprising or relating to concepts, discoveries, inventions, data, designs or formulae in relation to this Agreement, that is: (a) disclosed by or on behalf of such Party or any of its Affiliates or otherwise made available to the other Party or any of its Affiliates, whether made available orally, in writing or in electronic form; or (b) learned by the other Party pursuant to the MTA or this Agreement.

1.21 “Confidentiality Agreement” is defined in Section 15.8.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.22 “Control” or “Controlled” means, with respect to any Know-How, Patent Rights or other intellectual property rights, that a Party has the legal authority or right (whether by ownership, license or otherwise) to grant a license, sublicense, access or right to use (as applicable) under such Know-How, Patent Rights, or other intellectual property rights to the other Party on the terms and conditions set forth herein, in each case without breaching the terms of any agreement with a Third Party.

1.23 “Cost of Goods” means, with respect to a particular Licensed Oligo or Licensed Product:

(a) if such Licensed Oligo or Licensed Product is manufactured by a Third Party manufacturer, (i) Miragen or Servier’s actual Third Party cost (expressed on a per unit manufactured basis) of manufacturing, processing, testing, filling, finishing, packaging and labeling such Licensed Oligo or Licensed Product, and (ii) any costs incurred by Miragen or Servier for manufacturing oversight and quality assurance with respect to such Licensed Oligo or Licensed Product, [*];

(b) if such Licensed Oligo or Licensed Product is manufactured by Miragen or Servier, the actual, fully-burdened cost of manufacturing, processing, testing, filling, finishing, packaging and labeling such Licensed Oligo or Licensed Product, including without limitation raw materials, direct labor and benefits, and the proportionate share of indirect manufacturing costs. For clarity, such fully-burdened cost shall be calculated (i) on a theoretical full-capacity basis (with reasonable changeover and maintenance downtime) with the percentage allocable to Cost of Goods representing the number of units or runs of Licensed Oligo or Licensed Product produced or performed as a percentage of the total number of units or runs, including those of other products, that could be manufactured in such facility during a calendar year and (ii) in accordance with IFRS or GAAP, whichever such manufacturing Party uses throughout its organization at the time in question, consistently applied with allocations by Miragen or Servier calculated in accordance with a methodology unanimously approved by the JSC (which methodology shall be consistent with IFRS or GAAP, as applicable) and based upon all similar activities conducted by Miragen or Servier (i.e., not to disproportionately allocate costs to manufacturing of Licensed Oligo or Licensed Products when compared to similar costs for other manufacturing activities of Miragen or Servier). Costs that cannot be identified to a specific activity supporting product manufacturing, such as changes for central corporate overhead that are not controllable by the manufacturing plant, shall not be included in the determination of Cost of Goods.

For clarity, Cost of Goods does not include any margin or mark-up relating to inter-company supply between a Party and its Affiliates (or among such Affiliates).

1.24 “CTA” means any investigational new drug application, clinical trial application, clinical trial exemption or similar or equivalent application or submission for approval to conduct human clinical investigations filed with or submitted to a Regulatory Authority in conformance with the requirements of such Regulatory Authority.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.25 “Develop” or “Development” means all development activities for any Licensed Product in the Field, beginning with IMPD-enabling toxicology studies for such Licensed Product and including all clinical testing and studies of such Licensed Product, manufacturing development, process development, toxicology studies, distribution of Licensed Product for use in clinical trials (including placebos and comparators), research and development of a Companion Diagnostic, after selection of the relevant Selected Biomarker(s) pursuant to Section 3.5(d), for use in connection with clinical trials of Licensed Product as well as approved Licensed Products, statistical analyses, and the preparation, filing and prosecution of any Marketing Approval Application for such Licensed Product, as well as all regulatory affairs related to any of the foregoing. Development shall not include the discovery, design, identification, modification or derivatization of Licensed Oligos or the non-clinical or preclinical testing of Licensed Products prior to their selection as Selected Licensed Products pursuant to Section 3.5(c).

1.26 “Development Budget” is defined in Section 5.2.

1.27 “Development Costs” means the actual and direct costs and expenses incurred by a Party and its Affiliates or for its account, as calculated in accordance with IFRS or GAAP, whichever such Party uses throughout its organization at the time in question, consistently applied, that are specifically identifiable or reasonably and consistently allocable to the Development of Licensed Products and that are directed to achieving or maintaining Regulatory Approval of the Licensed Products. The Development Costs shall include amounts, without mark-up, that a Party pays to Third Parties involved in such Development work, and all internal costs incurred by a Party in connection with such Development work. Development Costs include the following: (a) all pre-clinical costs, such as costs for toxicology, pharmacokinetics/metabolism and pharmacological studies, that are incurred after the selection of a Selected Licensed Product pursuant to Section 3.5(c); (b) costs of formulation development, process development, test method development, test method development, process development, to clinical trials of Licensed Products, including Phase 1 Clinical Trials, Phase 2 Clinical Trials and Phase 3 Clinical Trials of the Licensed Products, including ethics committee fees, investigators fees, investigators meeting costs, fees for clinical research organization’s services (limited to the following activities: monitoring, central and core laboratory services (including bioanalysis), medical writing, data management, statistics analysis, PK and PK/PD analysis); (c) costs of Goods of Licensed Oligos and Licensed Products for use in Development activities, including the manufacture, purchase and/or packaging of comparators or placebo for use in clinical studies of the Licensed Products, as well as the direct costs and expenses of transportation, storage, disposal of drugs and other supplies used in such clinical studies and inventory write-offs and capacity reservation charges therefor; (d) costs of manufacturing process development for a Licensed Oligo or Licensed Product, including CMC, scale up, validation, improvement, qualification and validation of the manufacturing site and manufacturer; (e) regulatory expense relating to Development activities for the purpose of obtaining Regulatory Approval for the Licensed Products (but excluding the filing fees for MAAs); (g) the costs of Developing a Companion Diagnostic after the selection of the relevant Selected Biomarker(s); and (h) other costs and expenses that meet the criteria set forth above. Development Costs shall specifically exclude general corporate and administrative overhead of each Party. In calculating the Development Costs, each Party’s FTE efforts shall be calculated at the FTE Rate.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.28 “Development Plan” is defined in Section 5.2.

1.29 “Development Plan Costs” means (a) the Development Costs incurred by a Party in conducting the Development activities assigned to it under the Development Plan, provided that such costs are consistent with the Development Budget and do not exceed the relevant amount set forth in the budget by more than [*] unless approved in writing by the JRDC, and (b) such other costs as are expressly approved in writing by the JRDC as “Development Plan Costs”.

1.30 “Disclosing Party” is defined in Section 11.1(a).

1.31 “EMA” means the European Medicines Agency or any successor entity thereto.

1.32 “EU” or the “European Union” means the European Union and its member states as may be altered from time to time.

1.33 “Executive Officers” is defined in Section 3.9.

1.34 “FDA” means the United States Food and Drug Administration or any successor entity thereto.

1.35 “Field” means the treatment, prevention or mitigation of Cardiovascular Disease. The Field does not include any diagnostic applications of Licensed Products, but Companion Diagnostics may be used in connection with the development or commercialization of Licensed Products for use in the Field.

1.36 “Filing” of a Marketing Approval Application means the acceptance by a Regulatory Authority of a Marketing Approval Application for filing and review, if applicable, or otherwise the submission of such Marketing Approval Application.

1.37 “First Commercial Sale” means, with respect to any Licensed Product in any country or jurisdiction in the Territory, the first sale of such Licensed Product to a Third Party (other than a licensee or sublicensee) for distribution, use or consumption in such country or jurisdiction after the Regulatory Approvals have been obtained for such Licensed Product in such country or jurisdiction.

1.38 “FTE” means the equivalent of a full time individual’s work for a twelve (12) month period according to the applicable Law in the country where the individual is employed. FTE efforts shall not include the work of general corporate or administrative personnel.

1.39 “FTE Rate” means an initial rate of [*] per FTE per year. Commencing January 1, 2012, the FTE Rate shall be changed annually on a calendar year basis by the JSC to reflect any year-to-year percentage increase or decrease (as the case may be) in the Consumer Price Index in the US, in the Indice des Prix à la Consommation of INSEE in France or any local equivalent in the country where the individuals are employed (“CPI”) (based on the change in the CPI from the most recent index available as of the Effective Date to the most recent index available as of the date of the calculation of such revised FTE Rate).

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.40 “GAAP” means United States generally accepted accounting principles, consistent applied.

1.41 “Generic Competitor” means, with respect to a particular Licensed Product in a country, a pharmaceutical product that (a) contains a highly similar (if such Licensed Product is regulated in such country as a biological product) or identical (if such Licensed Product is regulated in such country as a small molecule or other new chemical entity product) active ingredient(s) as such Licensed Product, (b) is approved for use in such country pursuant to an abbreviated or expedited regulatory approval process (or other process for countries where there is no such abbreviated or expedited process) governing approval of generic pharmaceutical products or bio-similar products based on (i) the then-current standards for regulatory approval in such country and/or on (ii) data generated by the Parties pursuant to this Agreement, and (c) is sold in the same country as such Licensed Product by any Third Party that is not a licensee or sublicensee of Servier (for such product or for such Licensed Product) or an Affiliate of Servier and that did not purchase such product in a chain of distribution that included any of Servier or its Affiliates or any such licensees or sublicensees.

1.42 “Government Authority” means any federal, national, state, provincial or local government, or political subdivision thereof, or any multinational organization or any authority, agency or commission entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power, any court or tribunal (or any department, bureau or division thereof, or any governmental arbitrator or arbitral body).

1.43 “IFRS” means International Financial Reporting Standards.

1.44 “IMPD” means an Investigational Medicinal Product Dossier, any successor thereto or any other data package for submission to a Regulatory Authority as part of a CTA.

1.45 “Indemnified Party” is defined in Section 14.3.

1.46 “Indemnifying Party” is defined in Section 14.3.

1.47 “Initiation” means, with respect to a clinical trial of a Licensed Product, the first dosing of the first human subject for such clinical trial.

1.48 “Invention” shall mean any process, method, composition of matter, article of manufacture, discovery or finding, patentable or otherwise, that is invented as a result of a Party exercising its rights or carrying out its obligations under this Agreement, including all rights, title and interest in and to the intellectual property rights therein.

1.49 “Joint Executive Committee” or “JEC” is defined in Section 3.4.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.50 “Joint IP” is defined in Section 10.1.

1.51 “Joint Know-How” is defined in Section 10.1.

1.52 “Joint Patents” is defined in Section 10.1.

1.53 “Joint Research and Development Committee” or “JRDC” is defined in Section 3.6.

1.54 “Joint Steering Committee” or “JSC” is defined in Section 3.5.

1.55 “Know-How” means any information and materials, including discoveries, improvements, modifications, processes, methods, protocols, formulas, data, inventions, know-how and trade secrets, patentable or otherwise, but excluding any Patent Rights.

1.56 “Law” means any federal, state, local, foreign or multinational law, statute, standard, ordinance, code, rule, regulation, resolution or promulgation, or any order by any Government Authority, or any license, franchise, permit or similar right granted under any of the foregoing, or any similar provision having the force or effect of law.

1.57 “Licensed Oligo” means any oligonucleotide identified by Miragen either prior to the Effective Date or during the course of Miragen’s performance of the Research Plan, in each case as a direct and selective modulator of a Target.

1.58 “Licensed Product” means any pharmaceutical product containing a Licensed Oligo, alone or in combination with other Active Ingredients (which may be another Licensed Oligo but shall not be any Active Ingredient that is proprietary to Miragen and that is not a Licensed Oligo), in any formulation or dosage form and for any mode of administration.

1.59 “MAA” or “Marketing Authorization Application” means an application to the appropriate Regulatory Authority for approval to market a Licensed Product (but excluding Pricing Approval) in the Field in any particular jurisdiction and all amendments and supplements thereto.

1.60 “Major Indication” means an indication in the Field that, [*] has projected annual peak Net Sales in the Territory of at least [*].

1.61 “Major Market Countries” means (a) the EU and (b) the following [*] non-EU countries in the Territory: [*]. At Servier’s request at any time and upon Miragen’s consent (such consent not to be unreasonably withheld, provided that Servier provides Miragen information reasonably requested by Miragen regarding the basis for Servier’s request), [*] may replace [*] in the foregoing list of Major Market Countries.

1.62 “Miragen Acquiror” is defined in Section 2.9.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.63 “Miragen Companion Diagnostic IP” means all Patent Rights and Know-How that are (a) Controlled by Miragen or its Affiliates (subject to Section 15.2) as of the Effective Date or during the Term and (b) reasonably necessary or useful for the development, manufacture, importation or sale of a Companion Diagnostic or its use. Miragen Companion Diagnostic IP shall include Miragen’s rights to any Joint IP that satisfies “(b),” but, notwithstanding the foregoing, shall exclude (i) all Patent Rights and Know-How that satisfy “(a)” and “(b)” and arose from Unsponsored Work performed by Miragen unless and until Servier reimburses Miragen for such work in accordance with Section 5.4(c) and (ii) all Patent Rights and Know-How licensed to Miragen or its Affiliate pursuant to a license agreement entered into after the Effective Date that is not an Additional Third Party Companion Diagnostic License.

1.64 “Miragen Indemnitee” is defined in Section 14.2.

1.65 “Miragen Know-How” means the Know-How included in the Miragen Therapeutic IP or Miragen Companion Diagnostic IP. “Miragen Know-How” shall include Miragen’s interest in any Joint Know-How.

1.66 “Miragen Partner” is defined in Section 5.1(b).

1.67 “Miragen Partner Agreement” is defined in Section 5.1(b).

1.68 “Miragen Patents” means the Patent Rights included in the Miragen Therapeutic IP or Miragen Companion Diagnostic IP. Miragen Patents existing as of the Effective Date are set forth in Exhibit A. “Miragen Patents” shall include Miragen’s interest in any Joint Patents.

1.69 “Miragen Sole Patent” is defined in Section 10.2(a)(i).

1.70 “Miragen Therapeutic IP” means all Patent Rights and Know-How that are (a) Controlled by Miragen or its Affiliates (subject to Section 15.2) as of the Effective Date or during the Term and (b) reasonably necessary or useful for the development, manufacture, use, importation and/or sale of Licensed Oligos and/or Licensed Products in the Field. Miragen Therapeutic IP shall include Miragen’s rights to Joint IP that satisfies “(b),” but, notwithstanding the foregoing, shall exclude (i) all Patent Rights and Know-How that satisfy “(a)” and “(b)” and arose from Unsponsored Work performed by Miragen unless and until Servier reimburses Miragen for such work in accordance with Section 5.4(c) and (ii) all Patent Rights and Know-How licensed to Miragen or its Affiliate pursuant to a license agreement entered into after the Effective Date that is not an Additional Third Party Therapeutic License.

1.71 “MTA” is defined in the Recitals.

1.72 “Net Sales” means, in the case of sales by or for the benefit of Servier, its Affiliates, and its sublicensees (the “Seller”) to independent, unrelated persons ("Buyers") in bona fide arm’s length transactions (except as provided below with respect to clinical trial samples), the gross amount billed or invoiced by Seller with respect to the Licensed Product, less the following deductions, in each case to the extent actually allowed and taken by such Buyers and not otherwise recovered by or reimbursed to Seller in connection with such Licensed Product ("Permitted Deductions"): (i) trade, cash, promotional and quantity discounts to the

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

10
extent that such amounts are set forth separately as such in the total amount billed or invoiced; (ii) taxes on sales (such as excise, sales or use taxes or value added tax) to the extent imposed upon and paid directly with respect to the sales price and set forth separately as such in the total amount billed or invoiced (and excluding national, state or local taxes based on income); (iii) taxes on sales of reimbursed pharmaceutical specialties; (iv) freight, insurance, packing costs and other transportation charges to the extent added to the sales price and set forth separately as such in the total amount billed or invoiced; (v) amounts repaid or credits taken by reason of rejections, defects or returns or because of retroactive price reductions, or due to recalls or laws or regulations requiring rebates; (vi) free goods, rebates taken by or fees paid to distributors, and charge-backs to the extent that such amounts are documented; (vii) documented customs duties actually paid by Seller on import into the country of sale; and (viii) rebates and/or discounts on sales of Licensed Product given to health insurance and other types of payers in any given country of the Territory due to specific agreement ("claw-back" type of agreements) involving the Licensed Product. “Net Sales” shall not include any consideration received with respect to a sale, use or other disposition of any Licensed Product in a country as part of a clinical trial necessary to obtain Regulatory Approval in such country. All of the foregoing elements of Net Sales calculations shall be determined in accordance with IFRS or successor standards and guidelines thereto. In the case of transfers of Licensed Product between any of Servier, its sublicensees, and affiliates of any of the foregoing, for subsequent sale, rental, lease or other transfer of such Licensed Products to third parties, Net Sales shall be the gross invoice or contract price charged to the third party customer for that Licensed Product, less the deductions set forth in clauses (i) through (viii) above.

In the event that a Licensed Product consists of a combination of the Licensed Oligo with one or more other Active Ingredients (“Combination Product”), Net Sales, for the purpose of determining royalty payments, shall be discussed and agreed to by the Parties taking into account the relative value of the Licensed Oligo and of the other Active Ingredients.

1.73 “Non-Major Indication” means an indication in the Field that is neither an Orphan Indication nor a Major Indication.

1.74 “Orphan Indication” means an indication in the Field that satisfies the EMA criteria for an orphan disease.

1.75 “Patent Rights” means all patents and patent applications (which for the purpose of this Agreement shall be deemed to include certificates of invention and applications for certificates of invention), including all divisionals, continuations, substitutions, continuations-in-part, re-examinations, reissues, additions, renewals, revalidations, extensions, registrations, pediatric exclusivity periods and supplemental protection certificates (including pediatric extensions thereof) and the like of any such patents and patent applications, and any and all foreign equivalents of the foregoing.

1.76 “Person” means any individual, partnership, limited liability company, firm, corporation, association, trust, unincorporated organization or other entity.

1.77 “Pharmacovigilance Agreement” is defined in Section 6.4.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.78 "Phase 1 Clinical Trial" shall mean a human clinical trial of a Licensed Product that would satisfy the requirements of 21 CFR 312.21(a), regardless of whether such trial is referred to as a "phase 1 clinical trial" in the Development Plan.

1.79 "Phase 2 Clinical Trial" shall mean a controlled human clinical trial of a Licensed Product that would satisfy the requirements of 21 CFR 312.21(b), regardless of whether such trial is referred to as a "phase 2 clinical trial" in the Development Plan.

1.80 "Phase 3 Clinical Trial" shall mean a controlled or uncontrolled human clinical trial of a Licensed Product that would satisfy the requirements of 21 CFR 312.21(c), regardless of whether such trial is referred to as a "phase 3 clinical trial" in the Development Plan.

1.81 "Phase 3 Costs" is defined in Section 5.4(b).

1.82 "Phase 4 Study" means any study or data collection effort in respect to any Licensed Product for a particular indication that is initiated after receipt of Regulatory Approval for such Licensed Product for such indication.

1.83 "Pre-Phase 3 Costs" is defined in Section 5.4(a).

1.84 "Pricing Approval" means such governmental approval, agreement, determination or decision establishing prices for the Licensed Product that can be charged and/or reimbursed in regulatory jurisdictions where the applicable Governmental Authorities approve or determine the price and/or reimbursement of pharmaceutical products.

1.85 "Product Infringement" is defined in Section 10.3(a).

1.86 "Product Marks" has the meaning set forth in Section 10.4.

1.87 "Project Director" is defined in Section 3.3.

1.88 "Receiving Party" is defined in Section 11.1(a).

1.89 "Regulatory Approval" means all approvals, including Pricing Approvals, necessary for the commercial sale of a Licensed Product in the Field in a given country or regulatory jurisdiction.

1.90 "Regulatory Authority" means any applicable Government Authority responsible for granting Regulatory Approvals for Licensed Products, including the FDA, the EMA and any corresponding national or regional regulatory authorities.

1.91 "Regulatory Materials" means any regulatory application, submission, notification, communication, correspondence, registration and other filings made to, received from or otherwise conducted with a Regulatory Authority in order to Develop, manufacture, market, sell or otherwise Commercialize a Licensed Oligo or Licensed Product in the Field in a particular country or jurisdiction. "Regulatory Materials" includes any CTA, Marketing Approval Application and Regulatory Approval.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.92 “Remainder” is defined in Section 10.3(f).

1.93 “Remedial Action” is defined in Section 6.8.

1.94 “Replacement Target” is defined in Section 4.6(d).

1.95 “Research Budget” is defined in Section 4.3.

1.96 “Research Collaboration” is defined in Section 4.1.

1.97 “Research Plan” is defined in Section 4.1.

1.98 “Research Term” is defined in Section 4.2.

1.99 “Royalty Term” means the time period during which Servier’s royalty payment obligations continues in accordance with Section 9.5(b).

1.100 “Santaris Agreement” means that certain License Agreement by and between Santaris Pharma A/S (“Santaris”) and Miragen, dated June 18, 2010, as amended.

1.101 “Selected Biomarkers” is defined in Section 3.5(d).

1.102 “Selected Licensed Product” is defined in Section 3.5(c).

1.103 “Servier Companion Diagnostic IP” means all Patent Rights and Know-How that are (a) Controlled by Servier or its Affiliates as of the Effective Date or during the Term and (b) reasonably necessary or useful for the development, manufacture, importation or sale of a Companion Diagnostic or its use. Servier Companion Diagnostic IP shall include Servier’s rights to Joint IP that satisfies “(b),” but, notwithstanding the foregoing, shall exclude (i) all Patent Rights and Know-How that satisfy “(a)” and “(b)” and arose from Un-sponsored Work performed by Servier unless and until Miragen reimburses Servier for such work in accordance with Section 5.4(c) and (ii) all Patent Rights and Know-How licensed to Servier or its Affiliate pursuant to a license agreement entered into after the Effective Date that is not an Additional Third Party Companion Diagnostic License.

1.104 “Servier Indemnitee” is defined in Section 14.1.

1.105 “Servier Know-How” means the Know-How included in Servier Therapeutic IP or Servier Companion Diagnostic IP. “Servier Know-How” shall include Servier’s interest in any Joint Know-How.

1.106 “Servier Patents” means the Patent Rights included in Servier Therapeutic IP or Servier Companion Diagnostic IP. “Servier Patents” shall include Servier’s interest in any Joint Patents.

1.107 “Servier Samples” is defined in Section 4.3.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.108 “Servier Sole Patent” is defined in Section 10.2(c)(i).

1.109 “Servier Therapeutic IP” means all Patent Rights and Know-How that are (a) Controlled by Servier or its Affiliates as of the Effective Date or during the Term and (b) reasonably necessary or useful for the development, manufacture, use, importation or sale of Licensed Oligos or Licensed Products. Servier Therapeutic IP shall include Servier’s rights to Joint IP that satisfies “(b),” but, notwithstanding the foregoing, shall exclude (i) all Patent Rights and Know-How that satisfy “(a)” and “(b)” and arose from Unsponsored Work performed by Servier unless and until Miragen reimburses Servier for such work in accordance with Section 5.4(c) and (ii) all Patent Rights and Know-How licensed to Servier or its Affiliate pursuant to a license agreement entered into after the Effective Date that is not an Additional Third Party Therapeutic License.

1.110 “Target” means each of the three microRNA target families identified below (as further described in Exhibit B):

(a) microRNA-208/499, unless the Parties choose a Replacement Target in accordance with Section 4.6, in which case, the Replacement Target,

(b) microRNA-15/195, unless the Parties choose a Replacement Target in accordance with Section 4.6, in which case, the Replacement Target, and

(c) one additional microRNA target family to be selected by the Parties in accordance with Section 4.5 (the “Third Target”), unless the Parties choose a Replacement Target in accordance with Section 4.6, in which case, the Replacement Target.

1.111 “Target List” is defined in Section 4.5.

1.112 “Term” is defined in Section 12.1.

1.113 “Territory” means the world except for the United States and Japan.

1.114 “Third Party” means any Person other than a Party or an Affiliate of a Party.

1.115 “Third Target” is defined in Section 1.110 (definition of “Target”).

1.116 “UNC Agreement” means that certain Exclusive Technology License Agreement by and between the University of North Carolina at Chapel Hill and Miragen, dated August 21, 2008.

1.117 “United States” or “US” means the United States of America including its territories and possessions.

1.118 “Unsponsored Work” is defined in Section 5.3(b)(ii).

1.119 “Unsponsored Work Development Costs” means the Development Costs incurred by a Party in conducting the Unsponsored Work.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.120 “Upstream License Agreements” means, as of the Effective Date, the Santaris Agreement, UNC Agreement, and UT Southwestern Agreements. Upon the selection of the Third Target, the Parties shall amend this definition as necessary to add all additional license agreements between Miragen and a Third Party entered into before the Effective Date pursuant to which Miragen has a sublicensable license to Miragen Therapeutic IP that covers such Third Target or Licensed Oligos that directly and selectively modulate such Third Target. Upon the selection of a Replacement Target, the Parties shall amend this definition as necessary to add all additional license agreements between Miragen and a Third Party entered into before the Effective Date pursuant to which Miragen has a sublicensable license to Miragen Therapeutic IP that covers such Replacement Target or Licensed Oligos that directly and selectively modulate such Third Target. Upon the selection of a Replacement Target, the Parties shall amend this definition to remove all license agreements between Miragen and a Third Party pursuant to which Miragen has a sublicensable license to intellectual property that is no longer Miragen Therapeutic IP because it covers a member of the microRNA target family that was replaced by such Replacement Target or Licensed Oligos that directly and selectively modulate such member.

1.121 “Upstream Licensors” means, as of the Effective Date, Santaris, University of North Carolina at Chapel Hill, and University of Texas System. The Parties shall amend this definition together with the amendment of the definition of “Upstream License Agreements” so that the entities included in this definition are the Third Parties that granted licenses to Miragen under the agreements that are then included in the definition of Upstream License Agreements.

1.122 “U.S. Partner Agreement” is defined in Section 5.4(b)(i).

1.123 “UT Southwestern Agreements” means those certain Exclusive License Agreements by and between the University of Texas System and Miragen with the following agreement numbers: L1846.miRagen$ (dated April 21, 2008), L1964.miRagen$ (dated April 21, 2008), L1992.miRagen$ (dated April 21, 2008), L2028.miRagen$ (dated April 21, 2008), and L2314.miRagen$ (dated February 17, 2011). Each of the foregoing agreements shall be referred to individually as a “UT Southwestern Agreement.”

1.124 “Valid Claim” means, with respect to any country: (a) a claim of an issued and unexpired patent (as may be extended through supplementary protection certificate or patent term extension or the like) that, at such time, has not been revoked, held invalid or unenforceable by a patent office, court or other governmental agency of competent jurisdiction in a final and non-appealable judgment (or judgment from which no appeal was taken within the allowable time period) and which claim, at such time, has not been disclaimed, denied or admitted to be invalid or unenforceable through reissue, re-examination or disclaimer or otherwise; or (b) a pending claim of an unissued patent application, which application, at such time, has not been pending for more than [*] years since its filing, provided that such [*]-year period shall be tolled for the duration of any proceeding (e.g., an opposition or interference proceeding) with respect to such pending application.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.125 Interpretation. In this Agreement, unless otherwise specified:

(a) “includes” and “including” shall mean respectively includes and including without limitation;

(b) words denoting the singular shall include the plural and vice versa and words denoting any gender shall include all genders;

(c) words such as “herein”, “hereof”, and “hereunder” refer to this Agreement as a whole and not merely to the particular provision in which such words appear; and

(d) the Exhibits and other attachments form part of the operative provision of this Agreement and references to this Agreement shall include references to the Exhibits and attachments.

ARTICLE 2
LICENSES

2.1 Licenses to Servier.

(a) Under Miragen Therapeutic IP. Subject to the terms and conditions of this Agreement, Miragen hereby grants to Servier an exclusive (even as to Miragen except as provided in Section 2.3(a) below), royalty-bearing, sub-licensable (solely as provided in Section 2.2) license, under the Miragen Therapeutic IP,

(i) to perform Servier’s obligations under the Research Plan;

(ii) to Develop Licensed Products for the purpose of obtaining Regulatory Approval in the Field in the Territory;

(iii) to make and have made Licensed Products solely for use in the Field in the Territory; and

(iv) to use, import, offer for sale and sell Licensed Products in the Field in the Territory.

(b) Under Miragen Companion Diagnostic IP.

(i) Subject to the terms and conditions of this Agreement, Miragen hereby grants to Servier a non-exclusive, sub-licensable (solely as provided in Section 2.2) license, under the Miragen Companion Diagnostic IP, to research and/or develop Companion Diagnostics for use in connection with Licensed Products in the Field.

(ii) Subject to the terms and conditions of this Agreement, Miragen hereby grants to Servier, solely with respect to any Companion Diagnostic and the associated Licensed Product for which Servier is the Companion Diagnostic Contracting Party, the exclusive right to grant a sublicense, under the Miragen Companion Diagnostic IP, to a Third Party contractor for such Third Party contractor to research and/or develop such Companion Diagnostic solely for use in connection with the Development and/or Commercialization of such Licensed Product in the Field pursuant to this Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Subject to the terms and conditions of this Agreement, Miragen hereby grants to Servier, with respect to any Companion Diagnostic and the associated Licensed Product, an exclusive, sub-licensable (solely as provided in Section 2.2) license, under the Miragen Companion Diagnostic IP, to (1) make and have made such Companion Diagnostic solely for use in connection with the Development and/or Commercialization of such Licensed Product in the Field in the Territory pursuant to this Agreement, (2) use such Companion Diagnostic solely in connection with the Development and/or Commercialization of such Licensed Product in the Field in the Territory pursuant to this Agreement, and (3) to import, offer for sale and sell such Companion Diagnostic in the Territory solely for use in connection with the Development and/or Commercialization of such Licensed Product in the Field in the Territory pursuant to this Agreement.

(iv) The licenses granted under this Section 2.1(b) shall be royalty-free except that the Parties shall share the costs of all Additional Third Party Companion Diagnostic License Agreements as provided in Section 2.8.

(c) Servier acknowledges and agrees that:

(i) Miragen obtained the rights to certain Miragen Therapeutic IP or Miragen Companion Diagnostic IP under the Upstream License Agreements;

(ii) the licenses and right granted by Miragen to Servier under Sections 2.1(a) and 2.1(b) constitute sublicenses under the Upstream License Agreements, as applicable;

(iii) such sublicenses are subject and subordinate to the terms and conditions of the applicable Upstream License Agreements described in Exhibit F, which exhibit shall be amended upon the selection of the Third Target and/or a Replacement Target to add the relevant terms and conditions of any new Upstream License Agreement and to delete the terms and conditions of any agreement which is no longer an Upstream License Agreement;

(iv) Servier shall comply only with those terms of the Upstream License Agreements which are specifically described in Exhibit F, which exhibit shall be amended upon the selection of the Third Target and/or a Replacement Target to add the relevant terms and conditions of any new Upstream License Agreement and to delete the terms and conditions of any agreement which is no longer an Upstream License Agreement.

(d) Servier shall not have the right to develop and/or commercialize any Licensed Oligo or Licensed Product outside the Field in the Territory or in any field outside the Territory. If Servier desires to expand the licenses and right granted to it under Sections 2.1(a) and 2.1(b) above to any indication(s) outside the Field in the Territory, Servier shall notify Miragen in writing and the Parties shall negotiate in good faith the terms and conditions upon which the license and right granted to Servier under Sections 2.1(a) and 2.1(b) may be extended to include such other indication(s). If the Parties reach agreement on such terms and conditions, then the Parties shall amend this Agreement to reflect such terms and conditions.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
2.2 Sublicense Rights. Subject to the terms and conditions of this Agreement:

(a) Servier may exercise its rights and perform its obligations under this Agreement by itself or through the engagement of any of its Affiliates without the prior written consent of Miragen.

(b) Servier may sublicense the rights granted to it under Sections 2.1(a) and 2.1(b) to one (1) or more Third Parties, provided that concerning the rights granted to it under Section 2.1(a), such sublicensing shall be subject to the prior written consent of Miragen, such consent not to be unreasonably withheld. Subject to Sections 2.2(c) and 5.8, Servier may subcontract to Third Parties the performance of tasks and obligations with respect to the Development and manufacture of any Licensed Product as Servier deems appropriate, and grant a limited sublicense to such Third Parties solely for the purpose of performing such tasks and obligations, without the prior written consent of Miragen. Notwithstanding the foregoing, Miragen shall have the right to approve, prior to entry, any sublicense granted pursuant to Section 2.1(b)(ii).

(c) Servier shall remain responsible for all of its obligations under this Agreement that have been delegated, subcontracted or sublicensed to any of its Affiliates, sublicensees or subcontractors.

2.3 Miragen’s Retained Rights; Licenses to Miragen.

(a) Miragen’s Retained Rights. Miragen and its Affiliates hereby retain the exclusive right under the Miragen Therapeutic IP and Miragen Companion Diagnostic IP to: (i) practice Miragen Therapeutic IP and Miragen Companion Diagnostic IP to exercise its rights and perform its obligations under this Agreement, whether directly or through one or more licensees; and (ii) practice and license Miragen Therapeutic IP or Miragen Companion Diagnostic IP outside the scope of the licenses granted to Servier under Sections 2.1(a) and 2.1(b), including to Develop Licensed Products for the purpose of obtaining Regulatory Approval outside the Territory, to make and have made Licensed Products for use outside the Territory, and to use, import, offer for sale and sell Licensed Products outside the Territory; in each case of the foregoing, subject to and without prejudice of Section 2.5.

(b) License to Miragen under Servier Therapeutic IP. Subject to the terms and conditions of this Agreement, Servier hereby grants to Miragen a fully paid (except as expressly set forth below), sublicenseable (through multiple tiers) license, under the Servier Therapeutic IP:

(i) to conduct Miragen’s obligations under the Research Plan,

(ii) to Develop Licensed Products for the purpose of obtaining Regulatory Approval in the Field outside the Territory,
(iii) to make and have made Licensed Products solely for use in the Field outside the Territory,

(iv) to use, import, offer for sale and sell Licensed Products in the Field outside the Territory, and

(v) to research, develop, make, have made, use, import, offer for sale and sell Licensed Products outside the Field and outside the Territory.

Such license shall be: (x) [*] with respect to Servier’s interest in Joint IP; (y) [*] with respect to all Servier Therapeutic IP that is generated pursuant to the Development Plan in Phase 3 Clinical Trials of the Licensed Products, provided however that if Miragen fails to reimburse Servier for Miragen’s share of the Phase 3 Costs for any Phase 3 Clinical Trial as provided in Section 5.4(b) and fails to cure such breach within [*] days after receiving a notice from Servier, Servier shall have the right to terminate the license granted under this Section 2.3(b) solely with respect to the Servier Therapeutic IP that is generated in such Phase 3 Clinical Trial; and (z) [*] with respect to all other Servier Therapeutic IP. If [*], it would be [*] and [*].

(c) License to Miragen under Servier Companion Diagnostic IP.

(i) Subject to the terms and conditions of this Agreement, Servier hereby grants to Miragen a non-exclusive, sub-licensable license, under the Servier Companion Diagnostic IP, to research and/or develop Companion Diagnostics for use in connection with Licensed Products.

(ii) Subject to the terms and conditions of this Agreement, Servier hereby grants to Miragen, solely with respect to any Companion Diagnostic and the associated Licensed Product for which Miragen is the Companion Diagnostic Contracting Party, the exclusive right to grant a sublicense solely with Servier’s prior approval, which will not be unreasonably withheld, under the Servier Companion Diagnostic IP, to a Third Party contractor for such Third Party contractor to research and/or develop such Companion Diagnostic solely for use connection with the Development and/or Commercialization of such Licensed Product in the Field pursuant to this Agreement.

(iii) Subject to the terms and conditions of this Agreement, Servier hereby grants to Miragen, with respect to any Companion Diagnostic and the associated Licensed Product an exclusive, sub-licensable (through multiple tiers) license, under the Servier Companion Diagnostic IP, to (1) make and have made such Companion Diagnostic solely for use in connection with the Development and/or Commercialization of such Licensed Product in the Field outside the Territory pursuant to this Agreement, (2) use such Companion Diagnostic solely in connection with the Development and/or Commercialization of such Licensed Product in the Field outside the Territory pursuant to this Agreement, (3) to import, offer for sale and sell such Companion Diagnostic outside the Territory solely for use in connection with the Development and/or Commercialization of such Licensed Product in the Field outside the Territory pursuant to this Agreement, and (4) make, have made, use, import, offer for sale and sell such Companion Diagnostic solely for use in connection with the Development and/or Commercialization of such Licensed Product outside the Field outside the Territory.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
The licenses granted under this Section 2.3(c) shall be royalty free except that the Parties shall share the costs of any Additional Third Party Companion Diagnostic License Agreement as provided in Section 2.8.

2.4 No Implied Licenses; Negative Covenant. Except as set forth herein, neither Party shall acquire any license or other intellectual property interest, by implication or otherwise, under any trademarks, patents or patent applications of the other Party. Each Party shall not, and shall not permit any of its Affiliates or sublicensees to, practice any Patent Rights or Know-How licensed to it by the other Party outside the scope of the license granted to it under this Agreement.

2.5 Exclusivity. During the Term, neither Servier nor Miragen shall, directly or indirectly, develop or commercialize [*], or enter into any collaboration or license agreement with any Third Party in connection with the development or commercialization [*] of, any molecules or products, other than [*], that [*]; provided, however, that [*] retains its rights to: (a) directly or indirectly develop or commercialize [*] molecules or products that [*], [*]; and (b) directly or indirectly develop or commercialize molecules and products other than [*], provided such activities would [*]. For clarity, during the Term, [*] shall not, directly or indirectly, develop or commercialize [*] molecule or product that [*]. In addition, for so long as [*] pursuant to this Agreement, [*] shall not, directly or indirectly, develop a product that [*] and [*]. In addition, during the Term and for [*] years thereafter, neither Servier nor Miragen shall, without the consent of the other Party, [*] or [*] pursuant to the Research Plan that is [*] that (i) is [*] and [*] under the Research Plan, (ii) is not [*] or [*] that was [*] pursuant to the Research Plan, and (iii) is not [*] or [*]. Notwithstanding anything to the contrary in this Section 2.5, this Section 2.5 shall not prohibit either Party, after the Completion Date, from performing research and development, independently of each other and either alone or together with Third Parties, (A) [*] upon molecules or products that [*] or (B) that [*] pursuant to the Research Plan that is [*] that [*]. For the purposes of this Agreement, the “Completion Date” means the earlier of (1) the date of [*] for the [*] that the [*] or (2) the first date, after [*], on which [*] or [*].

2.6 Right of First Negotiation for Additional Targets. During the first [*] years after the Effective Date, Miragen shall keep Servier reasonably informed, via the JRDC, regarding any other microRNA target or target family developed by Miragen or its Affiliates (alone or in collaboration with any Third Party unless it is prevented to do so in the agreement with such Third Party) for its utility as a target for oligonucleotides in the Field ("Additional Target"). In the event that a Third Party becomes Miragen’s Affiliate after the Effective Date, this Section 2.6 shall not apply to microRNA target or target family identified or developed by such entity before it becomes Miragen’s Affiliate. If during such [*]-year period Miragen wishes to grant to a Third Party a license to develop and commercialize in the Field oligonucleotide products that directly bind to and thereby modulate such Additional Target, Miragen shall promptly inform Servier in writing [*] and Servier shall have [*] days to confirm its interest to

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
license such Additional Target. Upon such confirmation of interest, Miragen shall promptly disclose to Servier all the relevant data package for such Additional Target. Servier shall have the exclusive right, during a period of [*] days following the receipt of such data package, to negotiate with Miragen in good faith regarding the terms and conditions of a separate agreement under which Servier could receive an exclusive license from Miragen with respect to such Additional Target. If Servier does not notify Miragen its intention to engage in such negotiation within [*] days of the receipt of such written notice or if such negotiations do not result in a binding written agreement by the end of such [*]-day period, then Miragen shall be free to negotiate with any Third Party with respect to such a license, and, subject to the fourth sentence of Section 2.5, to grant such a license to any Third Party, without any further obligation to Servier. For clarity, the obligations set forth in this Section 2.6 shall not survive any expiration or termination of this Agreement. For further clarity, the right of first negotiation set forth in this Section 2.6 is in addition to and not exclusive of the selection of the Third Target and the Replacement Target pursuant to Sections 4.5 and 4.6. The Parties may evaluate and select any Additional Target as the Third Target or as a Replacement Target pursuant to Section 4.5 or 4.6, as applicable, and this Section 2.7 shall apply to any Additional Target that is not selected as the Third Target or a Replacement Target.

2.7 Additional Third Party Therapeutic Licenses. If either Party desires to obtain a license to any intellectual property rights that are owned or controlled by a Third Party and are reasonably necessary or useful for the Development, manufacture or Commercialization of one or more Licensed Products in the Field, then such Party shall bring such matter to the attention of the JSC and the JSC shall discuss whether it is advisable for one Party to obtain a worldwide license which would be sublicensed to the other Party under the terms of this Agreement. If the JSC decides to seek such a worldwide license for the benefit of both Parties, the JSC shall designate a Party to negotiate the terms on which such license would be granted and to serve as the primary point of contact with such Third Party licensor. Upon approval of the license agreement by the JSC, the designated Party shall execute such license agreement (each such agreement, an “Additional Third Party Therapeutic License Agreement”). The intellectual property licensed pursuant to any Additional Third Party Therapeutic License Agreement shall be automatically included in Miragen Therapeutic IP, if Miragen was the contracting Party, or the Servier Therapeutic IP, if Servier was the contracting Party, and sublicensed to the other Party under the terms of this Agreement. Each Party shall be responsible for any payments to the Third Party licensor under such Additional Third Party Therapeutic License Agreement that are specific to its territory (for example, a milestone payment for Regulatory Approval in its territory and royalties on sales of Licensed Products in its territory) and shall share equally any payments to Third Party licensor under such Additional Third Party Therapeutic License Agreement that are not specific to a particular territory (for example, an upfront payment or a payment for the initiation of a clinical trial pursuant to the Development Plan). For clarity, the foregoing sentence shall not be interpreted as depriving Servier of its rights pursuant to Section 9.5(c)(iii). For further clarity, if the JSC decides not to seek such a worldwide license for the benefit of both Parties, either Party may enter into a license agreement to obtain a license to practice such Third Party intellectual property with respect to the Development, manufacture and/or Commercialization of Licensed Products in the Field in its territory pursuant to this Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
2.8 Additional Third Party Companion Diagnostic Licenses. If either Party desires to obtain a license to any intellectual property rights that are owned or controlled by a Third Party and are reasonably necessary or useful for the development, manufacture or commercialization of a Companion Diagnostic for use in connection with the Development and/or Commercialization of a Licensed Product in the Field, then such Party shall bring such matter to the attention of the JSC and the JSC shall discuss whether it is advisable for one Party to obtain a worldwide license which would be sublicensed to the other Party under the terms of this Agreement. If the JSC decides to seek such a worldwide license for the benefit of both Parties, then the Companion Diagnostic Contracting Party for such Companion Diagnostic shall negotiate the terms on which such license would be granted and to serve as the primary point of contact with such Third Party licensor. Upon approval of the license agreement by the JSC, the Companion Diagnostic Contracting Party shall execute such license agreement (each such agreement, an “Additional Third Party Companion Diagnostic License Agreement”). The intellectual property licensed pursuant to any Additional Third Party Diagnostic License Agreement shall be automatically included in Miragen Companion Diagnostic IP, if Miragen was the contracting Party, or the Servier Companion Diagnostic IP, if Servier was the contracting Party, and sublicensed to the other Party under the terms of this Agreement. Each Party shall be responsible for any payments to the Third Party licensor under such Additional Third Party Companion Diagnostic License Agreement that are specific to its territory (for example, a milestone payment for Regulatory Approval in its territory and royalties on sales of the Companion Diagnostic in its territory) and shall share any payments to the Third Party licensor under such Additional Third Party Companion Diagnostic License Agreement that are not specific to a particular territory (for example, an upfront payment or a payment for the initiation of a clinical trial if the Companion Diagnostic is used in a clinical trial of a Licensed Product pursuant to the Development Plan) as part of the Companion Diagnostic Development Costs pursuant to Section 5.4(d). For further clarity, if the JSC decides not to seek such a worldwide license for the benefit of both Parties, either Party may enter into a license agreement to obtain a license to practice such Third Party intellectual property with respect to the development, manufacture and/or commercialization of a Companion Diagnostic for use in connection with the Development and/or Commercialization of a Licensed Product in the Field in its territory pursuant to this Agreement.

2.9 Miragen’s Acquiror’s IP. If Miragen undergoes a Change of Control during the Term, such Change of Control causes a Third Party (the “Miragen Acquiror”) to become an Affiliate or a successor of Miragen, and on the date of closing of the Change of Control transaction, the Miragen Acquiror owns or controls any intellectual property rights that is reasonably necessary for the Development, manufacture or Commercialization of the Licensed Products in the Field (as such Licensed Product exists on such date or any subsequent modification thereof that is approved by Miragen) or for the development, manufacture or commercialization of a Companion Diagnostic for use in connection with the Development and/or Commercialization of a Licensed Product (as such Companion Diagnostic exists on such date or any subsequent modification thereof that is approved by Miragen) in the Field (such intellectual property rights, the “Acquiror IP”) and has the right to grant to Servier a license under the Acquiror IP of the scope set forth in Section 2.1(a) or 2.1(b), then at Servier’s request identifying the Acquiror IP that it wishes to license, provided that such request is made within [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
one hundred twenty (120) days after the Notification of Relevant IP, (a) if such Acquiror IP relates to a Companion Diagnostic, the Miragen Acquiror shall notify Servier the amount, if any, that Miragen Acquiror is obligated to pay to any Third Party in connection with a license granted to Servier of such scope and if Servier agrees in writing to reimburse Miragen for all such costs, the Parties shall amend this Agreement to include such Acquiror IP in the Miragen Companion Diagnostic IP for no addition cost; and (b) if such Acquiror IP relates to a Licensed Product, the Miragen Acquiror and Servier shall negotiate in good faith an increase in the royalty rate in Section 9.5 for such a license to such Acquiror IP, provided however that the increase in royalty rate shall [*] and shall not [*]. If the Miragen Acquiror and Servier agree on such royalty rate increase or if Servier agrees to [*], the Parties shall amend this Agreement to include such Acquiror IP in the Miragen Therapeutic IP. Notwithstanding the foregoing, if the Miragen Acquiror only has a non-exclusive rights to any Acquiror IP or if the Miragen Acquiror has already granted one or more non-exclusive licenses to Third Parties under any Acquiror IP, then the license granted to Servier under such Acquiror IP shall be exclusive only with respect to the Miragen Acquiror’s remaining rights in such Acquiror IP. For clarity, the Miragen Acquiror shall not be obligated to grant a license to Servier under any Acquiror IP if the grant of such license will cause the Miragen Acquiror to breach any agreement to which it is a party or by which it may be bound, provided that in such case, to the extent permitted by such agreement, Miragen shall not, and shall procure that its Affiliates and the Miragen Acquiror shall not, bring any claim, suit or other proceedings against Servier or its Affiliates or their respective licensees or sublicensees before any court alleging that the Development, manufacture or Commercialization of the Licensed Products in the Field in the Territory or the development, manufacture or commercialization of a Companion Diagnostic for use in connection with the Development and/or Commercialization of a Licensed Product in the Field in the Territory infringes any such Acquiror IP. For further clarity, if (x) Servier does not request, within one hundred twenty (120) days after the Notification of Relevant IP, negotiations to obtain a license to particular Acquiror IP; (y) Servier does not agree to reimburse the costs incurred by Miragen in granting such a license to Servier under any Companion Diagnostics related Acquiror IP; or (z) the Miragen Acquiror and Servier do not agree upon a royalty rate increase for a license to any Licensed Product related Acquiror IP and Servier does not agree to [*], then the Miragen Acquiror shall retain the right to enforce, and to permit others to enforce, such Acquiror IP against Servier and its Affiliates and sublicensees with respect to any infringement or misappropriation of such Acquiror IP. For the purposes of this Section 2.9, the “Notification of Relevant IP” means the written notification sent by Miragen to Servier at any time during the Term that identifies, by patent number or patent application publication number or any other reasonable information requested by Servier within thirty (30) days after the receipt of such notice, any intellectual property rights which Miragen believes satisfies the definition of Acquiror IP. For the sake of clarity, this Section 2.9 shall not be interpreted as requiring either Miragen or the Miragen Acquiror to review Miragen Acquiror’s intellectual property portfolio to identify any Acquiror IP contained therein; provided, however, that (i) Miragen Acquiror shall not enforce any Acquiror IP against Servier, its Affiliates or sublicensees with respect to the development, manufacture or commercialization, by Servier, its Affiliates or sublicensees during the Term, of any Licensed Product described in this Section 2.9 in the Field in the Territory until Miragen has provided Servier with the Notification of Relevant IP that identifies such Acquiror IP and the one hundred twenty (120) day period after such Notification of Relevant IP has

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
3.1 **Alliance Business-Development Managers.** Within thirty (30) days following the Effective Date, each Party shall appoint (and notify the other Party of the identity of) a representative to act as its business development alliance manager under this Agreement (“Alliance Business-Development Manager”). The Alliance Business-Development Managers shall be to coordinate any business related activities under this Agreement. The Alliance Business-Development Managers shall attend all JSC meetings and may bring any matter in relation to business to the attention of any Committee if such Alliance Business-Development Manager reasonably believes that such matter warrants such attention. Each Party may replace its Alliance Business-Development Manager on written notice to the other Party.

3.2 **Alliance R&D Managers.** Within thirty (30) days following the Effective Date, each Party shall appoint (and notify the other Party of the identity of) a representative to act as its alliance research and development manager under this Agreement (“Alliance R&D Manager”). As regard to research and development activities, the Alliance R&D Managers shall serve as the primary contact points between the Parties and shall be primarily responsible for facilitating the flow of information, interaction and collaboration between the Parties and shall be responsible for ensuring that the governance procedures and rules set forth herein are complied with. The Alliance R&D Manager shall attend the meetings of the Joint Research and Development Committee and the Joint Steering Committee and may bring any matter in relation to the alliance research and development management to the attention of any Committee, if such Alliance R&D Manager reasonably believes that such matter warrants such attention. Each Party may replace its Alliance R&D Manager on written notice to the other Party.

3.3 **Project Directors.** Within thirty (30) days following the Effective Date each Party shall appoint (and notify the other Party of the identity of) a representative to act as its project director (“Project Director”). The Project Director shall be responsible for the follow up of the respective research and development activities under this Agreement on a regular basis. The Project Director shall attend the meetings of the Joint Research and Development Committee, and may bring any matter in relation to the project management to the attention of the Joint Steering Committee, if such Project Director reasonably believes that such matter warrants such attention. Each Party may replace its Project Director on written notice to the other Party.

3.4 **Joint Executive Committee.** The Parties shall establish a joint executive committee (the “Joint Executive Committee” or the “JEC”), composed of up to three (3) senior executives from each Party. The JEC shall manage the overall collaboration of the Parties under this Agreement (including the intellectual property strategy, resources allocation and major changes to the collaboration requiring amendments to the Agreement) and resolve any disputed matter of the JSC.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
3.5 Joint Steering Committee. The Parties shall establish a joint steering committee (the “Joint Steering Committee” or the “JSC”), composed each Party’s Alliance Business-Development Manager, Alliance R&D Manager and two (2) senior executives of each Party. The JSC shall (a) oversee the Research Collaboration and the Development, manufacture and Commercialization of Licensed Products in the Field in the Territory; (b) review and approve annual or interim amendments to the Research Plan (including the Research Budget) and the Development Plan (including the Development Budget); (c) upon proposal of the JRDC, select each Licensed Product for which IMPD-enabling toxicology studies shall be initiated (each, a “Selected Licensed Product”) and review and approve the Development Plan proposed by the JRDC for such Selected Licensed Product; (d) assess the advisability and/or necessity of developing a Companion Diagnostic for any Licensed Product in the Field and, upon determining that a Companion Diagnostic is advisable or necessary for such Licensed Product in the Field and upon proposal of the JRDC, select each biomarker or combination of biomarkers for the development of Companion Diagnostic (the “Selected Biomarkers”) and develop a plan for engaging a Third Party contractor to research, and/or develop such a Companion Diagnostic in the Field both within and outside the Territory, decide which Party (which is contemplated as of the Effective Date to be Miragen) will be responsible for engaging such Third Party (such Party, the “Companion Diagnostic Contracting Party” for such Companion Diagnostic and Licensed Product); (e) discuss and resolve any disputes with respect to the conduct of the collaboration; (f) establish additional joint subcommittees, as appropriate; (g) consider and act upon such other matters as specified in the Agreement; and (h) resolve any disputed matter of the JRDC.

3.6 Joint Research and Development Committee. The Parties shall establish a joint research and development committee (the “Joint Research and Development Committee” or the “JRDC”), composed three (3) representatives of each Party that have knowledge and expertise in the Field and in the development of products similar to the Licensed Products. The JRDC shall oversee the research and Development activities of the Parties under the Research Plan and the Development Plan and recommend amendments to the Research Plan (including the Research Budget) and Development Plan (including the Development Budget). Such activities shall include recommending to the JSC the choice of the Selected Licensed Products and Selected Biomarkers. The JRDC shall review, and approve the detailed protocols for the studies which are already included in the Research Plan or in the Development Plan.

3.7 Limitation of Committee Authority. Each Committee shall only have the powers expressly assigned to in this Article 3 and elsewhere in this Agreement and shall not have the authority to: (a) modify or amend the terms and conditions of this Agreement; (b) waive either Party’s compliance with the terms and conditions of under this Agreement; or (c) determine any such issue in a manner that would conflict with the express terms and conditions of this Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

25
3.8 Committee Membership and Meetings.

(a) Committee Members. Within thirty (30) days following the Effective Date, each Party shall designate its initial members to serve on each Committee. Each Party may replace its representatives on any Committee on written notice to the other Party. Each Party shall appoint one (1) of its representatives on each Committee to act as a co-chairperson of such Committee. The co-chairpersons shall jointly prepare and circulate agendas and reasonably detailed minutes for each Committee meeting.

(b) Meetings. Each Committee shall hold meetings at such times as it elects to do so, but in no event shall such meetings be held less frequently than once every six (6) months for the JEC and JSC and once every four (4) months for the JRDC. For clarity, the Parties anticipate holding an ad hoc meeting of the JSC promptly after the JRDC submits a initial, updated or amended Research Plan or Development Plan to the JSC for its review and approval. Meetings of any Committee may be held in person, by audio or video teleconference; provided that at least one (1) meeting per year of each Committee shall be held in person. In person Committee meetings shall be held at locations selected alternatively by the Parties. Each Party shall be responsible for all of its own expenses of participating in any Committee. No action taken at any meeting of a Committee shall be effective unless a representative of each Party is participating.

(c) Non-Member Attendance. Each Party may from time to time invite a reasonable number of participants, in addition to its representatives, to attend the Committee meetings in a non-voting capacity; provided that if either Party intends to have any Third Party (including any consultant) attend such a meeting, such Third Party shall be bound by confidentiality and non-use obligations consistent with the terms of this Agreement.

3.9 Decision-Making. All decisions of each Committee shall be made by unanimous vote, with each Party’s representatives collectively having one (1) vote. If after reasonable discussion and good faith consideration of each Party’s view on a particular matter before a Committee, the representatives of the Parties cannot reach an agreement as to such matter within thirty (30) days after such matter was brought to such Committee for resolution or after such matter has been referred to such Committee, such disagreement shall be referred to the JSC (in the case of disagreement of the JRDC), the JEC (in the case of disagreement of the JSC), or the Chief Executive Officers of Miragen and the Chief Executive Officer of Servier or its designee (the “Executive Officers”) (in the case of disagreement of the JEC) for resolution. If the Executive Officers cannot resolve such matter within thirty (30) days after such matter has been referred to them, then [*] that is the subject of the dispute [*]. For clarity, if the Executive Officers cannot resolve such a matter that pertains to [*], [*] will not be obligated to [*] and [*]. For further clarity, if the Executive Officers cannot resolve such a matter that pertains to [*], neither Party shall be obligated to [*] and [*]. Notwithstanding the foregoing provision and any provision to the contrary, [*] shall have the final say with respect to any decision which involves [*] (including, by way of example, [*], whether [*], or whether [*]), and neither Party shall be obligated to [*] on account of [*] for which [*] has exercised such final say unless [*] agreed on by the JSC, JEC or Executive Officers and [*].

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
3.10 Discontinuation of Participation on a Committee. The activities to be performed by each Committee shall solely relate to governance under this Agreement, and shall not involve the delivery of services. Each Committee shall continue to exist until the first to occur of: (a) the Parties mutually agreeing to disband the committee; or (b) Miragen providing written notice to Servier of its intention to disband and no longer participate in such Committee. Once the Parties mutually agree or Miragen has provided written notice to disband such Committee, such Committee shall have no further obligations under this Agreement and, thereafter, the Alliance Business-Development Managers, Alliance R&D Managers and Project Directors shall be the contact persons for the exchange of information under this Agreement and decisions of such Committee shall be decisions as between the Parties, subject to the other terms and conditions of this Agreement.

ARTICLE 4
RESEARCH

4.1 General. Subject to the terms and conditions of this Agreement, the Parties desire to establish a research collaboration where Servier will fund and the Parties will conduct research activities pursuant to a research plan to be agreed upon by the Parties directed to the identification and characterization of microRNA targets and oligonucleotides in the Field (such research plan, the “Research Plan”, such collaboration, the “Research Collaboration”).

4.2 Research Term. The initial term of the Research Collaboration (“Research Term”) shall be the three (3)-year period after the Effective Date. Upon mutual agreement of the Parties, the Research Term may be extended for up to two (2) additional one (1)-year periods.

4.3 Research Plan. All research activities (i.e., activities prior to the initiation of IMPD-enabling toxicology studies) under this Agreement shall be conducted by the Parties pursuant to the Research Plan. The Research Plan shall allocate research responsibilities between the Parties and shall set forth the timeline and details of the research activities to be conducted by each Party, which shall include but not be limited to (a) [*], (b) [*], (c) [*], (d) [*], and (e) [*]. The Research Plan shall also set forth the budget of the research activities to be carried out by Miragen (the “Research Budget”). As of the Effective Date, the Parties have agreed upon an initial Research Plan, attached to this Agreement as Exhibit C. As soon as advisable during the Research Term (and no less than once a year), the JRDC shall prepare updates and amendments, as appropriate, to the then-current Research Plan (including Research Budget) and shall submit such updates and amendments to the JSC for review and approval. Once approved by the JSC, such revised Research Plan shall replace the prior Research Plan. If the terms of the Research Plan contradict, or create inconsistencies or ambiguities with, the terms of this Agreement, then the terms of this Agreement shall govern.

4.4 Conduct of Research; Research Costs. Each Party shall use Commercially Reasonable Efforts to carry out the activities assigned to it in the Research Plan and shall conduct such activities in good scientific manner, and in compliance with all applicable Laws. Each Party shall keep the other Party reasonably informed as to the progress of the conduct of the Research Plan through meetings of the JRDC. Servier shall be responsible for all the costs and expenses incurred by both Parties in performing the Research Plan and shall reimburse Miragen for the costs and expenses incurred by or on account of Miragen in performing the Research Plan pursuant to Section 9.2.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
4.5 Selection of Third Target. The JRDC shall review and discuss the results and data from the conduct of the Research Plan at its meetings and shall maintain a list (the “Target List”) of at least [*] microRNA target families proposed by Miragen, it being specified that Servier shall also be entitled to propose microRNA target families for inclusion in the Target List. The JRDC shall update the Target List from time to time to exclude any microRNA target family that is either subject to a bona fide internal research and/or development program of Miragen outside the Field or subject to an obligation of Miragen to any Third Party that would prevent Miragen from granting the rights to Servier to such microRNA target family as contemplated in this Agreement. The JRDC shall also rank the microRNA target families on the Target List in order of preference based on safety, efficacy, intellectual property status and other relevant factors, provided that in the case the JRDC cannot reach an agreement as to such order of preference, Servier shall have the final say. No later than [*] months after the Effective Date, Servier shall notify Miragen in writing that the microRNA target families on the Target List are ready for submission to Santaris, in the order of preference then in effect, for inclusion in the Santaris Agreement. Promptly after the receipt of such notice, Miragen shall submit the microRNA target family on the Target List with highest ranking to Santaris for inclusion in the Santaris Agreement. If such microRNA target family is not accepted by Santaris, Miragen shall submit the microRNA target family on the Target List with the next highest ranking to Santaris until a microRNA target family on the Target List is accepted by Santaris for inclusion in the Santaris Agreement. Upon acceptance by Santaris for inclusion in the Santaris Agreement, such microRNA target family shall be selected as the Third Target under this Agreement, and the Parties shall promptly update and amend the Research Plan and the Development Plan to include the research and Development activities related to the Third Target.

4.6 Replacement Target.

(a) As of the Effective Date, the microRNA-15/195 target family and the microRNA-208/199 target family are Targets. Pursuant to activities set forth in the Research Plan, the Parties shall, through the JRDC, further evaluate the suitability of the microRNA-15/195 target family and of the microRNA-208/199 target family as Targets. The JRDC’s decision or, in case of disagreement, Servier’s decision as to whether each of the microRNA-15/195 target family and the microRNA-208/199 target family is suitable as a Target shall be made based [*] on one (1) or more of the following four (4) criteria: (i) the Licensed Oligos that directly and selectively modulate the Target [*], (ii) the Licensed Oligos that directly and selectively modulate the Target [*], (iii) the Licensed Oligos that directly and selectively modulate the Target [*] (i.e., [*]), and (iv) the [*].

(b) If, based on results obtained from the activities set forth in the Research Plan and the criteria set forth above in Section 4.6(a), the JRDC or Servier as the case may be determines that the microRNA-15/195 target family and/or the microRNA-208/199 target family remain(s) suitable as Target(s), then the microRNA-15/195 target family and/or the microRNA-208/199 target family, as applicable, shall remain Target(s) under this Agreement and the terms and conditions applicable to such Target(s) under this Agreement shall remain unchanged.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(c) After selection of a Third Target, the Parties may decide to further evaluate the suitability of the Third Target as a Target. If, based on the criteria set forth above in Section 4.6(a) (which criteria shall apply mutatis mutandis to the evaluation of the suitability of the Third Target as a Target) the JRDC or Servier as the case may be determines that the Third Target remains suitable as a Target, then the Third Target shall remain a Target under this Agreement and the terms and conditions applicable to such Target under this Agreement shall remain unchanged.

(d) If, based on results obtained from the activities set forth in the Research Plan and the criteria set forth above in Section 4.6(a), the JRDC or Servier as the case may be determines that the microRNA-15/195 target family, the microRNA-208/199 target family or the Third Target is not suitable as a Target, then the microRNA-15/195 target family and/or the microRNA-208/199 target family and/or the Third Target, as applicable, shall no longer be deemed a Target hereunder, and the JRDC shall select a microRNA target family from the Target List as a replacement for such target (such replacement, the "Replacement Target"), provided however that in the case the JRDC cannot reach an agreement as to such selection, Servier shall have the final say. Upon the selection of the Replacement Target:

(i) Servier’s licenses and rights under this Agreement pertaining to the microRNA-15/195 target family and/or to the microRNA-208/199 target family and/or the Third Target, as applicable, shall terminate;

(ii) such Replacement Target(s) shall be deemed Target(s) hereunder;

(iii) the Parties shall update and amend the Research Plan and the Development Plan to exclude the research and Development activities related to the microRNA-15/195 target family and/or to the microRNA-208/199 target family and/or the Third Target, as applicable, and to include the research and Development activities related to such Replacement Target(s);

(iv) Servier hereby assigns to Miragen, effective as of such JRDC determination, all right, title and interest in and to any and all Inventions related to the microRNA-15/195 target family and/or to the microRNA-208/199 target family and/or the Third Target, as applicable, as well as any and all data and results generated by Servier in the course of any work performed pursuant to this Agreement with respect to the microRNA-15/195 target family and/or to the microRNA-208/199 target family and/or the Third Target, as applicable;

(v) all such Inventions, data and results shall be deemed Confidential Information of Miragen;

(vi) Servier shall promptly transfer all tangible and electronic embodiments of such Inventions, data and results to Miragen;

(vii) Miragen shall have the right to research, develop and/or commercialize any product pertaining to the microRNA-15/195 target family and/or the microRNA-208/199 target family and/or the Third Target, as applicable, or any component therein in any field and anywhere, either by itself or in collaboration with a Third Party, without any further obligation to Servier; and

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Miragen shall use Commercially Reasonable Efforts to either (1) amend the Santaris Agreement to include such Replacement Target, or (2) if the Parties decides to incorporate, in lieu of Santaris’ LNA technology, an alternative chemistry having drug-like properties intoLicensed Product directed to such Replacement Target, enter into a Third Party agreement to obtain a license to such alternative technology with respect to such Replacement Target, which license can be sublicensed to Servier, without further payment by Servier, under the terms of this Agreement. For clarity, it shall not be a breach of this Agreement if Miragen, after using Commercially Reasonable Efforts, fails to include the Replacement Target in the Santaris Agreement and fails to obtain a Third Party license to the alternative technology that covers the Replacement Target.

(e) The Parties’ right to evaluate suitability of each of the microRNA-15/195 target family, the microRNA-208/199 target family and the Third Target as a Target and, if either of them is decided pursuant to Section 4.6(a) or 4.6(c) to not be suitable as a Target, to replace it with a Replacement Target pursuant to Section 4.6(d) shall expire at the end of the [*] period immediately following the Effective Date (or a longer period as may be agreed in writing by the Parties). For clarity, the Replacement Target(s) may not be replaced.

ARTICLE 5
DEVELOPMENT

5.1 General.

(a) Subject to the terms and conditions of this Agreement, the Parties desire to collaborate with respect to the Development of the Licensed Products in the Field and to share the data resulting from such collaboration to facilitate the Development of the Licensed Product in the Field.

(b) Servier acknowledges and understands that Miragen may, at its sole discretion, enter into one or more agreements with Third Parties and grant such Third Parties the right to Develop and/or Commercialize the Licensed Products outside the Territory (each such Third Party, a “Miragen Partner” and each such agreement, a “Miragen Partner Agreement”). If Miragen enters into such a Miragen Partner Agreement with a Third Party that was not refused by Servier, pursuant to Section 11.3(b)(ii)(B), to allow Miragen to disclose Servier’s Confidential Information, then Miragen shall have the right (but not the obligation) to grant such Miragen Partner (such Miragen Partner, an “Approved Miragen Partner”) the right to participate in the Development of the Licensed Products and serve as a representative of Miragen on one or more of the Committees established under this Agreement. Servier shall cooperate fully with such Approved Miragen Partner with respect to the Development of the Licensed Product, to the extent that Servier has the obligation under this Agreement to cooperate with Miragen as to such activities. Miragen shall have the right to disclose to such Approved Miragen Partner all information regarding the Licensed Products and all Regulatory Materials disclosed by Servier to Miragen under this Agreement, for use by such Approved Miragen

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Partner in its Development and Commercialization of the Licensed Products outside the Territory, consistent with Section 5.7 and Article 11. In addition, Miragen shall have the right (but not the obligation) to exercise or fulfill the following rights and obligations through such Approved Miragen Partner:

(i) conduct the Development activities assigned to Miragen under the Development Plan;

(ii) review and copy Servier’s Development records as provided in Section 5.6;

(iii) receive and use data generated by or on behalf of Servier in the course of performing the Development Plan and the Un-sponsored Work as provided in Section 5.7;

(iv) prepare and submit Regulatory Materials for the Licensed Product outside the Territory as provided in Section 6.1;

(v) review and comment on Regulatory Materials received or prepared by or on behalf of Servier as provided in Section 6.2;

(vi) attend meetings with Regulatory Authorities that relate to the Development of the Licensed Product in the Territory as provided in Section 6.3;

(vii) use the right of reference to Regulatory Materials pertaining to the Licensed Product in the Field that are submitted by or on behalf of Servier to seek, obtain and maintain regulatory approval of the Licensed Product outside the Territory as provided in Section 6.7;

(viii) initiate and control Remedial Actions outside the Territory as provided in Section 6.8;

(ix) manufacture and supply Licensed Oligos and/or Licensed Products as provided in Section 7.1;

(x) prosecute and enforce Miragen Patents and Servier Patents as provided in Section 10.2 and Section 10.3; and

(xi) disclose and use Servier’s Confidential Information as provided in Sections 11.3, 11.4 and 11.5.

5.2 Development Plan. The Development of each Licensed Product in the Field under this Agreement shall be conducted pursuant to a comprehensive written Development plan (the “Development Plan”). Each Development Plan shall set forth the timeline and details of all non-clinical and clinical Development activities: (a) to be conducted by the Parties as necessary to generate data useful for both Parties to obtain Regulatory Approval of such Licensed Product.
by both the EMA and FDA for any indication in the Field that the Parties agree to pursue; and (b) any other Development activities that the Parties agree to pursue in collaboration for such Licensed Product in the Field in the Territory. The Development Plan shall also set forth the budget of such Development activities to be carried out by the Parties (the “Development Budget”). As of the Effective Date, the Parties have agreed upon a sample Development Plan for a particular Licensed Product that directly and selectively modulates a Target that is member of the microRNA 208/499 target family, which plan is attached to this Agreement as Exhibit D, includes only the pre-clinical Development activities for such Licensed Product and shall be updated as provided below. The JRDC shall prepare and submit to the JSC for review and approval the initial Development Plan for each Selected Licensed Product promptly upon the JRDC’s selection of such Selected Licensed Product. From time to time during the Term (no less than once per year), the JRDC shall prepare an update and amendment, as appropriate, to each then-current Development Plan (including Development Budget) and shall submit such updates and amendments to the JSC for review and approval. Once approved by the JSC, each such revised Development Plan shall replace the prior Development Plan for such Licensed Product. If the terms of the Development Plan contradict, or create inconsistencies or ambiguities with, the terms of this Agreement, then the terms of this Agreement shall govern.

5.3 Allocation of Development Responsibilities.

(a) Each Development Plan shall reasonably allocate Development responsibilities for the relevant Licensed Product in the Field between the Parties, provided that Servier shall be the regulatory sponsor of all clinical studies of the Licensed Products in the Field conducted in the Territory and Miragen shall be the regulatory sponsor of all clinical studies of the Licensed Products in the Field conducted outside the Territory.

(b) If a Party is interested in pursuing additional Development work on a particular Licensed Product in the Field that is not then included in the Development Plan for such Licensed Product, then such Party shall submit to the other Party a reasonably detailed plan for such Development work. Then:

(i) if the other Party is also interested in pursuing such Development work, the Parties shall amend the applicable Development Plan to include such additional Development work, and the Parties shall share the Development Plan Costs incurred by the Parties in connection with the conduct of such Development work in accordance with Section 5.4; and

(ii) if the other Party is not interested in pursuing such Development work but (1) does not reasonably object to such Development work for likely having a material adverse effect upon the procurement or maintenance of Regulatory Approval or Commercialization of a Licensed Product in its territory, or (2) such Development work is required by the EMA or other Regulatory Authorities in other countries within the Territory in the case of Servier or by the FDA in the case of Miragen, then such Party shall have the right to perform such Development work (the “Unsponsored Work”) at its own cost and expense, and such Unsponsored Work shall not be included in the applicable Development Plan or subject to the Parties’ sharing of Development Plan Costs. Each Party shall have the sole discretion in the

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
conduct of its Unsponsored Work, provided that each Party shall keep the other Party informed of its progress on such Unsponsored Work through the JRDC and JSC by providing, as soon as available, at least: the draft protocol, the final protocol, the list of the investigator centers, the top line results and the final results. Any dispute over whether such Development work is likely to have a material adverse effect upon the procurement or maintenance of Regulatory Approval or Commercialization of a Licensed Product in its territory shall be resolved pursuant to Section 15.7. Except as set forth in Section 5.7, any data resulting from such Unsponsored Work will be shared with the other Party solely as necessary for such other Party to comply with the regulatory requirements (in particular with respect to safety reporting) for the Licensed Product in such other Party’s territory.

(c) In addition, Miragen shall have the right to conduct, at its discretion and at its own cost and expense, any development work of any Licensed Product for the purpose of obtaining Regulatory Approval for such Licensed Product outside the Field outside the Territory, unless Servier reasonably objects to such work for likely having a material adverse effect upon the procurement or maintenance of Regulatory Approval or Commercialization of such Licensed Product in the Field in the Territory, and such development work shall not be included in the Development Plan or subject to the Parties’ sharing of Development Plan Costs. Any data resulting from such development work will be shared with Servier solely as necessary for Servier to comply with the regulatory requirements (in particular with respect to safety reporting) for the Licensed Product in the Territory.

5.4 Development Costs.

(a) Pre-Phase 3 Costs. Servier shall be responsible for [*] of the Development Plan Costs that are incurred by the Parties through the completion of Phase 2 Clinical Trials and that are not Companion Diagnostic Development Costs (“Pre-Phase 3 Costs”) of the Licensed Products and shall reimburse [*] Pre-Phase 3 Costs incurred by Miragen pursuant to Section 9.3(a).

(b) Phase 3 Costs. The Development Plan Costs that are incurred by the Parties in preparing, conducting and analyzing the Phase 3 Clinical Trials and that are not Companion Diagnostic Development Costs (the “Phase 3 Costs”) of each Licensed Product shall be allocated between the Parties as follows:

(i) If (1) Miragen enters into an agreement with a Third Party and grants such Third Party the right to Develop and/or Commercialize a Licensed Product in the Field in the U.S. (a “U.S. Partner Agreement”) at least 180 days before the Initiation of the first Phase 3 Clinical Trial of such Licensed Product, or (2) Miragen notifies Servier at least 180 days before the Initiation of the first Phase 3 Clinical Trial that it wishes to share the costs of such Phase 3 Clinical Trial and all subsequent Phase 3 Clinical Trials for such Licensed Product then, Servier and Miragen shall [*] be responsible for [*] of all Phase 3 Costs of such Licensed Product as set forth in Section 9.3(b)(i).

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
If Miragen does not enter into a U.S. Partner Agreement at least 180 days before the Initiation of the first Phase 3 Clinical Trial of a Licensed Product, then Servier shall be responsible for [*] of such Phase 3 Costs of such Licensed Products and shall reimburse such Phase 3 Costs incurred by Miragen pursuant to Section 9.3(b)(ii). Miragen shall reimburse Servier for part of such Phase 3 Costs as follows, pursuant to Section 9.3(b)(iii):

1. If Miragen subsequently enters into a U.S. Partner Agreement before the completion of any Phase 3 Clinical Trial of such Licensed Product, then Miragen shall promptly reimburse Servier for [*] of all Phase 3 Costs of such Licensed Product incurred by Servier prior to Miragen’s entry into such U.S. Partner Agreement, and Miragen shall continue to reimburse Servier for [*] of the Phase 3 Costs of such Licensed Product incurred by Servier thereafter with respect to any Phase 3 Clinical Trial; and

2. If Miragen does not enter into a U.S. Partner Agreement before the completion of any Phase 3 Clinical Trial of such Licensed Product, then Miragen shall reimburse Servier for [*] of the Phase 3 Costs of such Licensed Product incurred by Servier with respect to such Phase 3 Clinical Trial upon Miragen’s filing of MAA for such Licensed Product in the U.S., which MAA includes data from such Phase 3 Clinical Trial.

For the purpose of this Section 5.4(b), [*] means the [*].

(c) Unponsored Work Development Costs. Each Party shall be solely responsible for [*] of the Unponsored Work Development Costs incurred by such Party, provided that if the other Party desires to use any data resulting from such Development work for purposes other than complying with a regulatory reporting requirement in such other Party’s territory, such other Party shall reimburse the Party conducting such Development work [*] of the Unponsored Work Development Costs incurred by such Party in the course of conducting the Development work that generated such data.

(d) Companion Diagnostic Development Costs.

(i) Subject to Section 5.4(d)(ii) below, Servier shall be responsible for [*] of the Development Plan Costs incurred by the Parties in the development of each Companion Diagnostic pursuant to the Development Plan (the “Companion Diagnostic Development Costs”) and shall reimburse such Companion Diagnostic Development Costs incurred by Miragen pursuant to Section 9.3(d)(i).

(ii) Miragen shall reimburse Servier for part of such Companion Diagnostic Development Costs as follows, pursuant to Section 9.3(d)(ii). If Miragen (1) enters into an agreement with a Third Party and grants such Third Party the right to import, offer for sale and/or sale such Companion Diagnostic outside the Territory; or (2) enters into a U.S. Partner Agreement for the Licensed Product associated with such Companion Diagnostic; or (3) at any time during the development of a Companion Diagnostic, notifies Servier in writing that Miragen will reimburse Servier for part of the Companion Diagnostic Development Costs for such Companion Diagnostic, then Miragen shall, upon the first to occur of (1), (2) or (3), reimburse Servier for [*] of the Companion Diagnostic Development Costs of such Companion Diagnostic incurred by Servier prior to such notice, and thereafter Miragen shall reimburse Servier, on a quarterly basis, for [*] of the Companion Diagnostic Development Costs of such

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
5.5 Diligence. Each Party shall use Commercially Reasonable Efforts to conduct the Development activities assigned to it under the Development Plan. Without limiting the foregoing, Servier shall use Commercially Reasonable Efforts to Develop at least one Licensed Product for each Target in the Field and shall use Commercially Reasonable Efforts to pursue Regulatory Approval of each such Licensed Product, in each of the Major Market Countries, in indications that will maximize the profitability of such Licensed Products (on a total profit basis and not on a per unit basis) for Servier, its Affiliate or sublicensee, whichever is the selling party of such Licensed Product. Subject to the foregoing sentence, Servier shall be entitled at any time to discontinue the Development of any Licensed Product, provided that (a) Servier shall use Commercially Reasonable Efforts to Develop at least one other Licensed Product for the same Target as the discontinued Licensed Product; and (b) Servier shall send a prior written notice to that effect to Miragen at least three (3) months prior to the effective date of termination of the Development for such Licensed Product, except where such termination is due to safety reasons pursuant to Section 12.2(b).

5.6 Development Records. Each Party shall maintain complete, current and accurate records of all Development activities conducted by it hereunder, and all data and other Information resulting from such activities. Such records shall fully and properly reflect all work done and results achieved in the performance of the Development activities in good scientific manner appropriate for regulatory and patent purposes. Each Party shall document all non-clinical studies and clinical trials in formal written study reports according to applicable Laws and national and international (e.g., ICH, GCP, GLP, and GMP) guidelines. Each Party shall have the right to review and copy such records maintained by the other Party at reasonable times and to obtain access to the original to the extent necessary for regulatory and patent purposes or for other legal proceedings and in connection with the sharing of data and results as set forth in Section 5.7.

5.7 Mutual Data Exchange and Use. In addition to adverse event and safety data reporting obligations pursuant to Section 6.4, each Party shall promptly provide the other Party with copies of all data and results generated by or on behalf of such Party in the course of performing the Development Plan and the Unsponsored Work. The Party receiving such data shall have the rights to use and reference all such data (a) for the purpose of obtaining and maintaining Regulatory Approval of the Licensed Products in the Field in its territory, and (b) where Miragen is the receiving Party, for the purpose of obtaining and maintaining Regulatory Approval of the Licensed Products outside the Field outside the Territory, provided such activities would not be reasonably likely to have a material adverse effect upon the procurement or maintenance of Regulatory Approval or Commercialization of a Licensed Product in the Territory; provided however that the data resulting from the Unsponsored Work may only be used by the receiving Party to comply with the regulatory requirements (in particular with respect to safety reporting) in such receiving Party’s territory, unless the receiving Party

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
reimburse the other Party a portion of the Unsponsored Work Development Costs as set forth in Section 5.4(c). Each Party shall provide the JRDC with regular reports detailing its Development activities for the Licensed Products pursuant to the Development Plan, as well as any Unsponsored Work conducted by such Party, and the results of such activities at each regularly scheduled JRDC meeting. The Parties shall discuss the status, progress and results of each Party’s Development activities under the Development Plan, as well as any Unsponsored Work conducted by such Party, at such JRDC meetings.

5.8 Compliance; Subcontractors. Each Party agrees that in performing its obligations or exercising its rights under this Agreement: (a) it shall comply in all material respects with all applicable Laws; and (b) it shall not employ or engage any Person who has been debarred by any Regulatory Authority, or, to such Party’s knowledge, is the subject of debarment proceedings by a Regulatory Authority. The Parties shall comply with pharmacovigilance procedures set forth in Section 6.4 and as further agreed in writing by the Parties in the course of Developing, Manufacturing and Commercializing the Licensed Products hereunder. Each Party shall have the right to engage subcontractors for purposes of conducting activities assigned to it under the Development Plan, provided that any such subcontractor is bound by written obligations of confidentiality and non-use consistent with this Agreement and has agreed to assign to the Party engaging such subcontractor inventions made by such subcontractor in the course of performing such subcontracted work that relate to any Licensed Oligos or Licensed Products or their use, manufacture or sale. Each Party shall remain responsible for any obligations under the Development Plan that have been delegated or subcontracted to any subcontractor, and shall be responsible for the performance of its subcontractors.

ARTICLE 6
REGULATORY

6.1 Regulatory Responsibilities. The Development Plan shall set forth the regulatory strategy for seeking Regulatory Approval of the Licensed Products by both the EMA and FDA for all indications in the Field that the Parties agree to pursue jointly. Servier shall be responsible for the preparation and submission of any and all Regulatory Materials for the Licensed Products in the Field in the Territory and shall own all such Regulatory Materials. Miragen shall be responsible for the preparation and submission of any and all Regulatory Materials for the Licensed Products outside the Territory and shall own all such Regulatory Materials. Each Party shall use Commercially Reasonable Efforts to carry out the regulatory activities assigned to it in the Development Plan and the costs associated with regulatory activities for a Licensed Product (but excluding filing fees for MAAs) shall be included in the Development Plan Costs for such Licensed Product and allocated between the Parties in accordance with Section 5.4. Unless the Parties otherwise agree in writing, neither Party shall submit any Regulatory Materials to, or communicate with, any Regulatory Authority outside its territory, except as required by applicable Laws, in which case such Party shall immediately provide notice of such requirement to the other Party prior to such submission or communication.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
6.2 Cooperation. Each Party shall send Regulatory Materials (in the case of Servier for the EMA only) in draft form to the other Party and give the latter a reasonable period of time (not exceeding twenty days) to comment on such drafts of Regulatory Materials. Each Party shall notify the other Party of any Regulatory Materials (other than routine correspondence) submitted to or received from any Regulatory Authorities respectively outside the Territory for Miragen and in the EU for Servier and shall provide the other Party with copies thereof.

6.3 Meetings with Regulatory Authorities. Each Party shall provide the other Party with reasonable advance notification of any in-person meeting or teleconference with the Regulatory Authorities in its territory that relates to the Development of the Licensed Products in the Field under the Development Plan. The other Party shall be entitled to the right, but not the obligation, to have its representatives attend (but, unless otherwise requested by the other Party, not participate in) such meetings in the first Party’s territory.

6.4 Adverse Events Reporting. At least six (6) months prior to the expected date for the filing of the first CTA with respect to a Licensed Product, the Parties shall discuss in good faith and enter (before such CTA filing) into a pharmacovigilance and adverse event reporting agreement setting forth the worldwide pharmacovigilance procedures for the Parties with respect to the Licensed Product, such as safety data sharing, adverse events reporting and prescription events monitoring (the "Pharmacovigilance Agreement"). Such procedures shall be in accordance with, and enable the Parties to fulfill, local and national regulatory reporting obligations under applicable Laws. Servier shall maintain an adverse event database for the Licensed Products in the Territory at its costs and shall be responsible for reporting quality complaints, adverse events and safety data related to the Licensed Products to the applicable Regulatory Authorities in the Territory, as well as responding to safety issues and to all requests of Regulatory Authorities related to the Licensed Products in the Territory. Each Party hereby agrees to comply with its respective obligations under the Pharmacovigilance Agreement and to cause its Affiliates, licensees and sublicensees to comply with such obligations.

6.5 No Harmful Actions. If either Party believes that the other Party, as the case may be, is taking or intends to take any action with respect to the Licensed Product that could reasonably be expected to have a material adverse impact upon the regulatory status of the Licensed Product in its territory, such Party shall have the right to bring the matter to the attention of the JRDC and the Parties shall discuss in good faith to resolve such concern of the first Party.

6.6 Notification of Threatened Action. Each Party shall immediately notify the other Party of any information it receives regarding any threatened or pending action, inspection or communication by any Regulatory Authority, which may affect the safety or efficacy claims of any Licensed Product or the continued marketing of any Licensed Product in the Field. Upon receipt of such information, the Parties shall consult with each other in an effort to arrive at a mutually acceptable procedure for taking appropriate action.

6.7 Right of Reference to Regulatory Materials. Each Party hereby grants to the other Party the right of reference to all Regulatory Materials pertaining to the Licensed Product in the Field submitted by or on behalf of such Party. Servier may use such right of reference to [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

37
Miragen’s Regulatory Material in the Field solely for the purpose of seeking, obtaining and maintaining Regulatory Approval of the Licensed Products in Field in the Territory. Miragen may use the right of reference to Servier’s Regulatory Material in the Field solely for the purpose of seeking, obtaining and maintaining regulatory approval of the Licensed Products outside the Territory. Notwithstanding the foregoing, each Party may use the right of reference to any Regulatory Materials based on data resulting from the Unsponsored Work conducted by the other Party only to comply with the regulatory requirements (in particular with respect to safety reporting) in such Party’s territory, unless such Party reimburse the other Party a portion of the Unsponsored Work Development Costs as set forth in Section 5.4(c).

6.8 Remedial Actions. Each Party shall notify the other immediately, and promptly confirm such notice in writing, if it obtains information indicating that any Licensed Product in the Field may be subject to any recall, corrective action or other regulatory action with respect to the Licensed Product in the Field taken by virtue of applicable Law (a "Remedial Action"). The Parties shall assist each other in gathering and evaluating such information as is necessary to determine the necessity of conducting a Remedial Action. Each Party shall, and shall ensure that its Affiliates and sublicensees will, maintain adequate records to permit the Parties to trace the manufacture of the Licensed Product and the distribution and use of the Licensed Product. Each Party shall have sole discretion with respect to any matters relating to any Remedial Action in its territory, including the decision to commence such Remedial Action and the control over such Remedial Action, at its cost and expense, except to the extent such Remedial Action is attributed to the non-compliance or non-conformity of any Licensed Product supplied to such Party by the other Party, in which case the Party that supplied such defective Licensed Product shall bear all cost and expense in connection with such Remedial Action.

ARTICLE 7
MANUFACTURING

7.1 Manufacture and Supply.

(a) Research and Pre-Clinical Supply. Miragen shall, either itself or through Third Party manufacturer, manufacture and supply Licensed Oligos for use by Miragen and Servier to conduct the Research Plan and any pre-clinical studies under the Development Plan.

(b) Clinical Supply. Servier shall be primarily responsible for manufacturing and supplying bulk Licensed Oligos and finished Licensed Products for use in clinical studies conducted pursuant to the Development Plan in the Field in the Territory, provided that Servier may engage Miragen for such manufacture and supply as follows: At least 180 days prior to the anticipated filing of the first CTA for the first indication with respect to a Licensed Product, Servier shall notify Miragen in writing whether it desires to engage Miragen for such manufacture and supply. If Servier chooses to have Miragen provide such clinical supply, Servier and Miragen shall negotiate in good faith and enter into a separate supply agreement having mutually agreed terms with respect to such clinical supply, which supply shall be at Cost of Goods (except for Unsponsored Work, in which case the supply shall be at Cost of Goods plus [*]). For clarity, Miragen’s manufacturing-related Development costs, as described in Section 1.27(e),

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
are not included in the Cost of Goods but shall be included in Development Plan Costs and shared by the Parties pursuant to Section 9.3. If Servier does not engage Miragen but elects to manufacture and supply bulk Licensed Oligos and finished Licensed Products for Development purposes, either through itself or its Third Party manufacturer, then Miragen shall have the right to purchase such bulk Licensed Oligos and finished Licensed Products from Servier at Cost of Goods (except for Unsponsored Work, in which case the supply shall be at Cost of Goods plus [*]), and the other terms and conditions to be agreed upon by the Parties and set forth in a separate supply agreement. For clarity, Miragen shall have the right to manufacture and have manufactured, anywhere in the world, the Licensed Oligos and Licensed Products for clinical and commercial use outside the Territory.

(c) Commercial Supply. Servier shall be solely responsible for manufacturing and supplying bulk Licensed Oligos and finished Licensed Products for Commercial use in the Field in the Territory. Miragen shall be solely responsible for manufacturing and supplying bulk Licensed Oligos and finished Licensed Products for Commercial use in the Field outside the Territory.

(d) Transfer of Manufacturing Know-How. If Servier notifies Miragen that it chooses to manufacture the clinical or commercial supply of the Licensed Oligos and Licensed Products, Miragen shall make available to Servier Miragen Know-How that is then being used by Miragen or its Third Party manufacturer in the manufacture of the Licensed Oligos and Licensed Products. In addition, Miragen shall provide reasonable technical assistance as requested by Servier in connection with such technology transfer. Servier shall be responsible for the costs and expenses incurred by Miragen in performing such technology transfer, including the fully burdened cost of Miragen personnel directly involved in such technology transfer allocated to efforts spent on such technology transfer, provided such costs and expenses are detailed in a mutually agreed budget prior to the technology transfer. If so requested by Miragen at a later stage, Servier shall make available to Miragen Servier Know-How that is then being used by Servier or its Third Party manufacturer in the manufacture of the Licensed Oligos and Licensed Products. In addition, Servier shall provide reasonable technical assistance as requested by Miragen in connection with such technology transfer. Miragen shall be responsible for the costs and expenses incurred by Servier in performing such technology transfer, including the fully burdened cost of Servier personnel directly involved in such technology transfer allocated to efforts spent on such technology transfer, provided such costs and expenses are detailed in an approved budget prior to the technology transfer.

ARTICLE 8
COMMERCIALIZATION

8.1 Commercialization in the Territory. Subject to the terms and conditions of this Article 8, Servier shall be responsible for all aspects of the Commercialization of the Licensed Products in the Field in the Territory. Servier shall bear all of the costs and expenses incurred in connection with such Commercialization activities.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
8.2 Commercialization Plan. Servier shall pursue Commercialization of the Product in the Territory, in accordance with its normal business practices for its internal products at a similar stage. Servier shall deliver an initial Commercialization plan to Miragen no later than twelve (12) months prior to the anticipated date of the first filing of the first MAA for a Licensed Product in the Territory (the “Commercialization Plan”). After the establishment of the initial Commercialization Plan, Servier shall prepare updates and amendments to such Commercialization Plan at least annually and deliver such updated Commercialization Plan to Miragen no later than October 31st of each year.

8.3 Commercial Diligence. Servier shall use Commercially Reasonable Efforts to Commercialize each Licensed Product in (i) each of the Major Market Countries outside the EU in which it receives Regulatory Approval and (ii) in the EU in at least two of the three following countries: France, Germany and Italy provided that it has received Regulatory Approval and unless the launch of a particular Licensed Product in more than one of these three countries could reasonably be expected to have a negative effect on the Commercialization of such Licensed Product in other countries in the EU, in which case Servier shall use Commercially Reasonable Efforts to Commercialize such Licensed Product in the remaining country, if any, of these three countries.

8.4 Patent Marking. Servier shall mark all Licensed Products in accordance with the applicable patent marking laws, and shall require all of its Affiliates and sublicensees to do the same. To the extent required by applicable Law, Servier shall indicate on Licensed Product packaging, advertisement and promotional materials that the Licensed Product is in-licensed from Miragen.

8.5 Diversion. Each Party hereby covenants and agrees that it shall not, and shall ensure that its Affiliates and sublicensees will not, either directly or indirectly, promote, market, distribute, import, sell or have sold Licensed Products, including via the Internet or mail order, to any Third Party, address or Internet Protocol address in the other Party’s territory. As to such countries in the other Party’s territory: (a) such Party shall not engage in any advertising or promotional activities relating to the Licensed Product directed primarily to customers or other buyers or users of the Licensed Product located in such countries; and (b) such Party shall not solicit orders from any prospective purchaser located in such countries. If a Party receives any order from a prospective purchaser located in a country in the other Party’s territory, such Party shall immediately refer that order to such other Party and shall not accept any such orders. Neither Party may deliver or tender (or cause to be delivered or tendered) any Licensed Product in the other Party’s territory.

8.6 Reports. Servier shall update the JSC once a year in October regarding Servier’s Commercialization activities with respect to the Licensed Products in the Territory. Each such update shall be in a form to be agreed by the JSC and shall summarize Servier’s, its Affiliates’ and sublicensees’ significant Commercialization activities with respect to the Licensed Product in the Territory, covering subject matter at a level of detail reasonably required by Miragen and sufficient to enable Miragen to determine Servier’s compliance with its diligence obligations pursuant to Section 8.3.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
ARTICLE 9
FINANCIAL PROVISIONS

9.1 Upfront Payment. Servier shall pay to Miragen a one-time, non-refundable, non-creditable upfront payment of six million Euros (€6,000,000) upon signature of the Agreement and within [*] business days of receipt of the corresponding invoice.

9.2 Reimbursements of Research Costs. Within [*] days after the end of each calendar quarter of the Research Term, Miragen shall submit to Servier a reasonably detailed invoice setting forth all costs and expenses incurred by Miragen in such calendar quarter in conducting the Research Plan. Such costs and expenses shall include the costs of all FTEs of Miragen (at the current FTE Rate) that performed research activities set forth in the Research Plan, as well as out-of-pocket costs allocable to such research activities and Miragen’s fully burdened costs of manufacturing and supplying, or procuring supply of Licensed Oligos for use in the Research Plan, in each case to the extent such costs do not exceed the Research Budget by more than [*] unless approved in writing by the JRDC or are otherwise approved by the JRDC. Servier shall pay to Miragen the amount invoiced within [*] days after the receipt of the invoice.

9.3 Reimbursements and Share of Development Costs.

(a) Pre-Phase 3 Costs. Within [*] days after the end of each calendar quarter before the completion of Phase 2 Clinical Trials of the Licensed Products, Miragen shall submit to Servier a reasonably detailed invoice setting forth all the Pre-Phase 3 Costs incurred by Miragen in such calendar quarter. Servier shall pay to Miragen the amount invoiced within [*] days after the receipt of the invoice.

(b) Phase 3 Costs.

(i) If Miragen and Servier are required to share the Phase 3 Costs as set forth in Section 5.4(b)(i), then within [*] days after the end of each calendar quarter during which the Parties are conducting the Phase 3 Clinical Trials of the Licensed Products, each Party shall submit to the other Party a reasonably detailed report setting forth all Phase 3 Costs incurred by such Party in such calendar quarter. Within [*] days after the receipt of such reports, the Parties shall confer and agree on whether a reconciliation payment is due from one Party to the other, and if so, the amount of such reconciliation payment, so that the Parties share the Phase 3 Costs in accordance with Section 5.4(b)(i). The Party required to pay such reconciliation payment shall pay to the other Party such payment within [*] days after the end of such [*] day period.

(ii) If Servier is responsible for one hundred percent (100%) of the Phase 3 Costs as set forth in Section 5.4(b)(ii), then within [*] days after the end of each calendar quarter which the Parties are conducting the Phase 3 Clinical Trials of the Licensed Products, Miragen shall submit to Servier a reasonably detailed invoice setting forth all the Phase 3 Costs incurred by Miragen in such calendar quarter. Servier shall pay to Miragen the amount invoiced within [*] days after the receipt of the invoice.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(iii) If Miragen is required to reimburse Servier for [*] of the Phase 3 Costs as set forth in Section 5.4(b)(ii)(1) or 5.4(b)(ii)(2), then within [*] days after the end of each calendar quarter which the Parties are conducting the Phase 3 Clinical Trials of the Licensed Products, the date upon which Miragen enters into a U.S. Partner Agreement, and/or the date upon which Miragen files MAA for the Licensed Product in the U.S., as applicable, Servier shall submit to Miragen a reasonably detailed invoice setting forth [*] of the Phase 3 Costs incurred by Servier in such calendar quarter or before such date, as applicable. Miragen shall pay to Servier the amount invoiced within [*] days after the receipt of the invoice.

(c) Unsponsored Work. If a Party desires to use the data resulting from any Unsponsored Work conducted by the other Party and related Regulatory Materials for purposes other than to comply with any regulatory reporting requirements in its territory, such Party shall notify the other Party in writing, and within [*] days after the receipt of such notice, the other Party shall submit to such Party a reasonable detailed invoice setting forth [*] of the Unsponsored Work Development Costs incurred by such other Party in the course of conducting the Development work that generated such data. If the Party seeking to use such data desires to use such data for such other purposes after reimbursing such costs, such Party shall notify the other Party in writing and shall pay to the other Party the amount invoiced within [*] days after the receipt of the invoice.

(d) Companion Diagnostic Development Costs.

(i) Within [*] days after the end of each calendar quarter during which the Parties are developing a Companion Diagnostic, Miragen shall submit to Servier a reasonably detailed invoice setting forth all the Companion Diagnostic Development Costs incurred by Miragen in such calendar quarter. Servier shall pay to Miragen the amount invoiced within [*] days after the receipt of the invoice.

(ii) After (1) Miragen has entered into an agreement with a Third Party and grant such Third Party the right to import, offer for sale and/or sale such Companion Diagnostic outside the Territory as set forth in Section 5.4(d)(ii)(1); or (2) Miragen has entered into a U.S. Partner Agreement for the Licensed Product associated with such Companion Diagnostic as set forth in Section 5.4(d)(ii)(2); or (3) the receipt of a notice from Miragen that Miragen will reimburse Servier for part of the Companion Diagnostic Development Costs for a Companion Diagnostic as set forth in Section 5.4(d)(ii)(3); or (4) the date upon which Miragen files a regulatory approval application for a Companion Diagnostic in the U.S., whichever is the earlier, Servier shall submit to Miragen a reasonably detailed invoice setting forth [*] of the Companion Diagnostic Development Costs of such Companion Diagnostic incurred by Servier prior to such date. Thereafter, if applicable, within [*] days after the end of each calendar quarter during which the Parties are developing such Companion Diagnostic, Servier shall submit to Miragen a reasonably detailed invoice setting forth [*] of all the Companion Diagnostic Development Costs of such Companion Diagnostic incurred by Servier in such calendar quarter. Miragen shall pay to Servier the amount(s) invoiced within [*] days after the receipt of the invoice.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
9.4 Milestone Payments.

(a) Designation of Third Target. Servier shall pay to Miragen a one-time non-refundable, non-creditable payment of three million Euro (€3,000,000) after the selection of the Third Target that has successfully passed the gate-keeping and been accepted by Santaris pursuant to Section 4.5. Such payment shall be made within [*] days after the receipt of the invoice, provided however, that the amount of this payment shall be [*] if the Third Target is [*] and the Third Target is not [*] that was [*].

(b) [*]. For each of the three (3) Targets, Servier shall pay to Miragen a non-refundable, non-creditable payment after [*] of the first Licensed Product that modulates such Target, which shall be notified by Servier to Miragen within [*] days after [*], and within [*] days after the receipt of the invoice, which amount shall be (i) (1) [*] for the Target that first achieves such milestone if such Target is a member of either the microRNA-208/199 target family or the microRNA-15/195 target family, or (2) [*] if the Target that first achieves such milestone is not a member of the microRNA-208/199 target family or the microRNA-15/195 target family; and (ii) [*] for each of the second and third Targets that achieve such milestone.

(c) Other Development Milestones.

(i) Subject to Section 9.4(c)(ii) and to the last sentence of Section 9.4(d)(i) below, for each of the three (3) Targets, Servier shall pay to Miragen the non-refundable, non-creditable payments set forth below, in each case after the milestone for such Target is first achieved by a Licensed Product directed to such Target, which shall be notified by Servier to Miragen within [*] days after such achievement, and within [*] days after the receipt of the invoice:

| [*] | [*] | [*] | [*] |
| [*] | [*] | [*] | [*] |
| [*] | [*] | [*] | [*] |

(ii) In the event that a milestone set forth in Section 9.4(c)(i) is achieved with respect to a particular Target for a Non-Major Indication after such milestone has already been achieved with respect to such Target for an Orphan Indication, then upon the achievement of such milestone for such Non-Major Indication, Servier shall pay to Miragen the difference between the applicable milestone payment for such Non-Major Indication and the milestone payment already paid for such Target for such Orphan Indication. In the event that a milestone is achieved with respect to a particular Target for a Major Indication after such milestone has already been achieved with respect to such Target for an Orphan Indication or a

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Non-Major Indication, then upon the achievement of such milestone for such Major Indication, Servier shall pay to Miragen the difference between the applicable milestone payment for such Major Indication and the milestone payment already paid for such Target for such Orphan Indication or Non-Major Indication (as applicable). The determination as to whether an indication is a Major Indication shall be made by [*] and if [*], the JEC shall discuss such determination, provided [*]. In the event that [*] a particular indication was a Non-Major Indication and made milestone payments to Miragen based upon such determination and [*] such indication is subsequently demonstrated to have annual peak Net Sales in the Territory of at least [*], then with respect to each such milestone payment, Servier shall promptly pay to Miragen the difference between the applicable milestone payment for such Major Indication and the milestone payment already paid to Miragen at the Non-Major Indication rate.

(d) Commercial Milestones.

(i) For each of the three (3) Targets, Servier shall pay to Miragen a non-refundable, non-creditable payment within [*] days after the end of the calendar quarter during which the aggregated annual Net Sales of Licensed Products directed to such Target across the Territory for all indications, to the exclusion of Orphan Indications first equal or exceed [*], which amount shall equal to [*]. For clarity, upon payment by Servier of the amount set forth in this Section 9.4(d)(i), no further amount shall be due by Servier pursuant to Sections 9.4(c)(i) and 9.4(c)(ii) above with respect to such Target except as applicable for Orphan Indications.

(ii) In addition to the payments set forth in Section 9.4(d)(i), Servier shall pay to Miragen the one-time, non-refundable, non-creditable payments set forth below, in each case within [*] days after the end of the calendar quarter during which the aggregated annual Net Sales of all Licensed Products in the Territory first reach the values indicated below. For clarity, the milestone payments in this Section 9.4(d)(ii) shall be additive such that if more than one milestones specified below are achieved in the same calendar quarter or in different calendar quarters, then the milestone payments for all such milestones shall be payable.

<table>
<thead>
<tr>
<th>Annual Net Sales of all Licensed Products in the Territory</th>
<th>Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal or exceed [*]</td>
<td>[*]</td>
</tr>
<tr>
<td>Equal or exceed [*]</td>
<td>[*]</td>
</tr>
<tr>
<td>Equal or exceed [*]</td>
<td>[*]</td>
</tr>
</tbody>
</table>

9.5 Royalty Payments for Licensed Products.

(a) Royalty Rates. Subject to the other terms of this Section 9.5, during the Royalty Term, Servier shall make quarterly non-refundable, non-creditable royalty payments to Miragen on the Net Sales of each Licensed Product sold in the Territory, on a Licensed Product-by-Licensed Product and country-by-country basis, at the applicable royalty rate set forth below.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
For the purpose of this Section, Daily Costs of Treatment for a particular Licensed Product in a particular country means the average Net Sales per unit of such Licensed Product in such country in a specific calendar quarter (converted to Euros), divided by the number of days between each use of such Licensed Product as specified in the label for such Licensed Product in such country (e.g., per unit Net Sales divided by 30 for a Licensed Product labeled to be administered once per month)

<table>
<thead>
<tr>
<th>Daily Costs of Treatment</th>
<th>Royalty Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than or equal to [*] per day</td>
<td>[*]</td>
</tr>
<tr>
<td>Greater than [<em>] per day and less than or equal to [</em>] per day</td>
<td>[*]</td>
</tr>
<tr>
<td>Greater than [<em>] per day and less than or equal to [</em>] per day</td>
<td>[*]</td>
</tr>
<tr>
<td>Greater than [*] per day</td>
<td>[*]</td>
</tr>
</tbody>
</table>

(b) Royalty Term. For each Licensed Product, on a Licensed Product-by-Licensed Product and country-by-country basis, Servier’s royalty payment obligations under this Section 9.5 shall commence upon the First Commercial Sale of such Licensed Product in such country and expire upon the later of: (i) the expiration of the last-to-expire Valid Claim included in Miragen Patents (to the exclusion of any Patent Rights (1) included in the Acquiror IP, or (2) licensed to Miragen as part of an Additional Third Party Therapeutic License Agreement) in such country claiming the Licensed Product, its manufacture, or its use for which it is being sold or used in such country; or (ii) the tenth (10th) anniversary of the First Commercial Sale of such Licensed Product in such country; provided however that Servier’s payment obligations under this Section 9.5 with respect to the royalty increase provided for in Section 2.9 with respect to license to Acquiror IP shall expire, on a Licensed Product-by-Licensed Product and country-by-country basis, upon the expiration of the last-to-expire Valid Claim included in the Acquiror IP that claims the Licensed Product, its manufacture, or its use for which it is being sold or used in such country.

(c) Royalty Reductions.

(i) If a Licensed Product is generating Net Sales in a country in the Territory during the Royalty Term in such country at a time when the sale, manufacture or use in the Field of such Licensed Product is not covered by any Valid Claim included in the Miragen Patents (not including any Miragen Patent in such country to which Servier’s licenses under this Agreement have been terminated pursuant to Section 10.2(a)(iii)) in such country, then the royalty rate applicable to Net Sales of such Licensed Product in such country shall be reduced to [*] of the royalty rate set forth in Section 9.5(a).

(ii) If at any time following the First Commercial Sale, in a country where a Licensed Product is covered by any Valid Claim included in the Miragen Patents licensed to Servier in such country, (A) one or several Generic Competitor(s) of such Licensed Product sold in such calendar quarter represent(s) on a unit basis [*] or more of the units of Licensed Product sold in that country in that quarter, then the royalty rate applicable to Net Sales of such Licensed Product in such country in such calendar quarter shall be reduced to [*] of the [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
royalty rate that would otherwise be applicable to such Licensed Product in such country or (B) one or several Generic Competitor(s) of suchLicensed Product sold in such calendar quarter represent(s) on a unit basis [*] or more of the units of Licensed Product sold in that country in such calendar quarter, then the royalty rate applicable to Net Sales of such Licensed Product in such country in such calendar quarter shall be reduced to [*] of the royalty rate that would otherwise be applicable to such Licensed Product in such country. The royalty reduction provided in this Section 9.5(c)(ii) shall only remain in effect for so long as the Generic Competitor(s) exceeds the market share threshold set forth above in the relevant calendar quarter.

(iii) If it is necessary for Servier to obtain a license from a Third Party under any Patent Right in a country in the Territory (i) in order to manufacture, use, import or sell the Licensed Product or (ii) in order to have the exclusive right to manufacture, use, import or sell the Licensed Product (in the event Servier is the co-owner of any Patent Right with a Third Party), and Servier obtains such a license, Servier shall have the right to deduct, from the royalty payment that would otherwise have been due with respect to Net Sales of such Licensed Product in such country in a particular calendar quarter, an amount equal to [*] of the royalties paid by Servier to such Third Party pursuant to such license on account of the sale of such Licensed Product in such country during such calendar quarter; provided however, that in no event shall the royalties payable to Miragen be reduced by more than [*] in any calendar quarter by operation of this Section 9.5(c)(iii).

(iv) On a Licensed Product-by-Licensed Product, country-by-country and calendar quarter-by-calendar quarter basis, if the Cost of Goods of an average unit of such Licensed Product sold in such country exceeds the percentage set forth in the table below of the Net Sales of such average unit of such Licensed Product in such country, then the then-applicable royalty rate shall be reduced with respect to Net Sales of such Licensed Product in such country during such calendar quarter by the applicable royalty offset set forth in the table below:

<table>
<thead>
<tr>
<th>Costs of Good (finished product per unit) as a percentage of Net Sales per unit</th>
<th>Royalty Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than [<em>], but less than or equal to [</em>]</td>
<td>[*]</td>
</tr>
<tr>
<td>Greater than [<em>], but less than or equal to [</em>]</td>
<td>[*]</td>
</tr>
<tr>
<td>Greater than [*]</td>
<td>[*]</td>
</tr>
</tbody>
</table>

(v) Servier shall not be entitled to reduce the royalties payable to Miragen on account of sales of Licensed Products in the Territory for any other reason and in no event shall the royalties payable to Miragen be less than (A) the total payments owed by Miragen to Third Parties on account of such sales plus [*], if only one of Sections 9.5(c)(i), 9.5(c)(ii), 9.5(c)(iii) and 9.5(c)(iv) is applicable to such sales; or (B) the total payments owed by Miragen to Third Parties on account of such sales plus [*], if more than one of Sections 9.5(c)(i), 9.5(c)(ii), 9.5(c)(iii) and 9.5(c)(iv) are applicable to such sales, provided however that the

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
application of (A) or (B) above shall not result in Servier having to pay more royalties than by the application of the initial royalty rates set forth in Section 9.5(a) (i.e., without the application of Section 9.5(c)(i), 9.5(c)(ii), 9.5(c)(iii) or 9.5(c)(iv)). If any factors affecting the profitability of the Licensed Product in the Territory change materially during the Term, the Parties shall meet and discuss in good faith possible modifications to the royalty payments for the Licensed Product in the Territory in light of such changed factors, provided however that any disagreement with respect to such modification shall not be subject to the dispute resolution mechanism set forth in Section 15.7.

(d) Royalty Reports and Payment. Within [*] days after each calendar quarter, commencing with the calendar quarter during which the First Commercial Sale of aLicensed Product is made anywhere in the Territory, Servier shall provide Miragen with a report that contains the following information for the applicable calendar quarter, on a Licensed Product-by-Licensed Product and country-by-country basis: (i) the amount of gross sales of the Licensed Products in the Territory, (ii) an itemized calculation of Net Sales in the Territory showing deductions provided for in the definition of “Net Sales,” (iii) a calculation of the royalty payment due on such sales, including the application of the reduction and adjustment, if any, made in accordance with Section 9.5, and (iv) the exchange rate for such country. Within fifteen days of the delivery of the applicable quarterly report, Servier shall pay in Euros all royalties due to Miragen with respect to Net Sales by Servier, its Affiliates and their respective sublicensees for such calendar quarter.

9.6 Currency; Exchange Rate. All amounts due and payable hereunder shall be in Euros by bank wire transfer in immediately available funds to a bank account designated by written notice from the Party that receives the payment. All calculations relating to Net Sales and royalties hereunder shall be in Euros. As applicable, Net Sales shall be translated from other currencies into Euros using the monthly average of daily rates of exchange published by European Central Bank for the monthly period in which Net Sales are accounted.

9.7 Late Payments. If either Party does not receive payment of any sum due to it on or before the due date therefor, simple interest shall thereafter accrue on a daily basis on the sum due to such Party from the due date until the date of payment at a rate equal to EURIBOR plus [*] per annum or the maximum rate allowable by applicable Law, whichever is less.

9.8 Taxes.

(a) Taxes on Income. Each Party shall be solely responsible for the payment of all taxes imposed on its share of income arising directly or indirectly from the collaborative efforts of the Parties under this Agreement.

(b) Tax Cooperation. The Parties agree to cooperate with one another and use reasonable commercial efforts in accordance with applicable Law to reduce or eliminate to the extent possible withholding taxes and similar obligations on payments made under this Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(c) Withholding Taxes. It is the common understanding of the Parties that, as of the Effective Date, none of the payments due and payable under this Agreement is subject to deduction or withholding for on account of any tax by application of the Tax Treaty in force between France and The United States since August 31st 1994 and in accordance with its amendment signed January 13th 2009 which came into force retroactively January 1st 2009. All payments due and payable under this Agreement will be made without any deduction or withholding for on account of any tax, unless such deduction or withholding tax is required by applicable laws. If the paying Party is so required to deduct or withhold, such Party shall (a) promptly notify the other Party of such requirement, (b) pay to the relevant authorities the full amount required to be deducted or withheld promptly upon the earlier of determining that such deduction or withholding is required or receiving notice that such amount has been assessed against the other Party, and (c) promptly forward to the other Party an official receipt (or certified copy), or other documentation reasonably acceptable to the other Party evidencing such payment to such authorities.

(d) Taxes Resulting From Servier Action. If, as a result of any action taken by Servier (or Servier’s Affiliates or successors), including an assignment or transfer of all or a portion of this Agreement as permitted under Section 15.2, or any failure to act by Servier (or Servier’s Affiliates or successors) (such action or failure to act, a “Servier Withholding Tax Action”), the amount of any tax that Servier is required to deduct or withhold from a payment made by Servier to Miragen under this Agreement is increased, then the sum payable by Servier to Miragen shall be increased to the extent necessary to ensure that Miragen receives a sum equal to the sum that Miragen would have received had no such Servier Withholding Tax Action occurred.

9.9 Records and Audit Rights. Each Party shall maintain complete and accurate records in sufficient detail to permit the other Party to confirm the accuracy of the amount of research and Development Plan Costs to be reimbursed or shared, achievement of sales milestones, royalty payments and other amounts payable under this Agreement. Upon reasonable prior notice, such records shall be open during regular business hours for a period of [*] years from the creation of individual records for examination at the auditing Party’s expense, and not more often than once each calendar year, by an independent certified public accountant selected by the auditing Party and reasonably acceptable to the auditing Party for the sole purpose of verifying for the auditing Party the accuracy of the financial reports furnished by the audited Party pursuant to this Agreement or of any payments made, or required to be made, by or to the audited Party pursuant to this Agreement. Any such auditor shall not disclose the audited Party’s Confidential Information to the auditing Party, except to the extent such disclosure is necessary to verify the accuracy of the financial reports furnished by the audited Party or the amount of payments to or by the audited Party under this Agreement. Any amounts shown to be owed but unpaid, or overpaid and in need of reimbursement, shall be paid or refunded (as the case may be) within [*] days after the accountant’s report, plus interest (as set forth in Section 9.7) from the original due date (unless challenged in good faith by the audited Party in which case any dispute with respect thereto shall be resolved in accordance with Section 15.7). The auditing Party shall bear the full cost of such audit unless such audit reveals an overpayment to, or an underpayment by, the audited Party that resulted from a discrepancy in the financial report provided by the audited Party for the audited period, which underpayment or overpayment was more than [*] of the amount set forth in such report, in which case the audited Party shall reimburse the auditing Party for the costs for such audit.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
ARTICLE 10
INTELLECTUAL PROPERTY RIGHTS

10.1 Ownership of Inventions; Disclosure. Ownership of all Inventions shall be assigned based on inventorship, as determined in accordance with the rules of inventorship under United States patent laws, except that the Parties shall jointly own any and all Inventions first developed pursuant to the Research Plan whether such Inventions are made solely by a Party or jointly by the Parties. All jointly owned Inventions shall be referred to as “Joint IP” and each Party shall own an undivided half interest in the Joint IP, without a duty of accounting or an obligation to seek consent from the other Party for the exploitation or license of the Joint IP (subject to the licenses granted to the other Party under this Agreement and to the restriction set forth in Section 2.5). Know-How included in Joint IP shall be referred to as “Joint Know-How” and Patent Rights included in Joint IP shall be referred to as “Joint Patents”. Promptly after making an Invention, the inventing Party shall provide the other Party with a complete written disclosure of such Invention.

10.2 Patent Prosecution.

(a) Miragen Sole Patents.

(i) As between the Parties, Miragen shall be responsible for filing, prosecuting and maintaining the Miragen Patents that are not Joint Patents (“Miragen Sole Patents”). Servier shall be responsible for, and shall reimburse Miragen for, the reasonable costs and expenses of filing, prosecuting and maintaining the Miragen Sole Patents in the Territory. Miragen shall be responsible for the costs and expenses of filing, prosecuting and maintaining Miragen Sole Patents outside the Territory. Miragen shall consult with Servier and keep Servier reasonably informed of the status of the Miragen Sole Patents in the Territory and shall promptly provide Servier with material correspondences received from any patent authorities in connection therewith. In addition, Miragen shall promptly provide Servier with drafts of all proposed material filings and correspondences to any patent authorities with respect to the Miragen Sole Patents in the Territory for Servier’s review and comment prior to the submission of such proposed filings and correspondences. Miragen shall confer with Servier and take into consideration Servier’s comments prior to submitting such filings and correspondences, provided that Servier shall provide such comments within one (1) month of receiving the draft filings and correspondences from Miragen. If Servier does not provide comments within such period of time, then Servier shall be deemed to have no comment to such proposed filings or correspondences. In case of disagreement between the Parties with respect to the filing, prosecution and maintenance of such Miragen Sole Patents, the final decision shall be made by Miragen. For the purpose of this Article 10, “prosecution” shall include any post-grant proceeding including patent interference proceeding, opposition proceeding and reexamination.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(ii) Miragen shall notify Servier of any decision to cease prosecution and/or maintenance of any Miragen Sole Patents in the Territory. Miragen shall provide such notice at least sixty (60) days prior to any filing or payment due date, or any other due date that requires action, in connection with such Miragen Sole Patent. In such event, Miragen shall permit Servier, at its discretion and expense, to continue prosecution or maintenance of such Miragen Sole Patent and the licenses granted to Servier under this Agreement with respect to such Miragen Sole Patent shall be royalty free. Servier’s prosecution or maintenance of such Miragen Sole Patent shall not change the Parties’ respective rights and obligations under this Agreement with respect to such Miragen Sole Patent other than those expressly set forth in this Section 10.2(a)(ii).

(iii) Servier shall notify Miragen of any decision not to continue to pay the expenses of prosecution and/or maintenance of any Miragen Sole Patents in the Territory. Servier shall provide such notice at least sixty (60) days prior to any payment due date, in connection with such Miragen Sole Patent. In such event, the licenses granted to Servier under this Agreement with respect to such Miragen Sole Patent shall be terminated.

(b) Joint Patents

(i) Each Party shall be responsible for filing, prosecuting and maintaining any Joint Patents in its territory at its own cost and expense. Each Party shall fully cooperate with the other Party in connection with the filing, prosecution and maintenance of such Joint Patents in such other Party’s territory. The responsible Party in a particular territory shall consult with the other Party, shall keep the other Party reasonably informed of the status of such Joint Patents, and shall promptly provide the other Party with drafts of all proposed material filings and correspondences with the patent authorities with respect to such Joint Patents for such other Party’s review and comment prior to the submission of such proposed filings and correspondences. The responsible Party shall confer with the other Party and take into consideration such other Party’s comments prior to submitting such filings and correspondences, provided that such other Party shall provide such comments within one (1) month of receiving the draft filings and correspondences from the responsible Party. If such other Party does not provide comments within such period of time, then such other Party shall be deemed to have no comment to such proposed filings or correspondences. In case of disagreement between the Parties with respect to the filing, prosecution and maintenance of such Joint Patents, the final decision shall be made by the responsible Party. Notwithstanding the foregoing, the Parties shall confer and reach an agreement prior to the filing of a priority patent application for any Joint IP whether such filing is in the Territory or outside the Territory.

(ii) The responsible Party shall notify the other Party of any decision to cease prosecution and/or maintenance of, or not to continue to pay the expenses of prosecution and/or maintenance of, any Joint Patents. The responsible Party shall provide such notice at least sixty (60) days prior to any filing or payment due date, or any other due date that requires action, in connection with such Joint Patent. In such event, at such other Party’s request, the responsible Party shall assign to such other Party, free of charge, all its rights in such Joint Patent worldwide and such Joint Patent shall thereafter fall out of the scope of this Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(iii) In the event that this Agreement terminates and Miragen obtains an exclusive license under the Joint IP pursuant to Section 12.3(b)(ii), then Miragen shall have the right, but not the obligation, to elect to prosecute and maintain the Joint Patents that are exclusively licensed to Miragen throughout the world at Miragen’s cost and expense. To the extent that any such Joint Patent includes both claims that are exclusively licensed to Miragen and other claims, Miragen shall use Commercially Reasonable Efforts to file divisional applications for such Joint Patent to separate these claims to allow Sections 10.2(b)(i) and 10(2)(b)(ii) to continue to apply to the claims that are not exclusively licensed to Miragen.

(c) Servier Sole Patents.

(i) As between the Parties, Servier shall be responsible for filing, prosecuting and maintaining the Servier Patents that are not Joint Patents ("Servier Sole Patents") Miragen shall be responsible for, and shall reimburse Servier for, the reasonable costs and expenses of filing, prosecuting and maintaining the Servier Sole Patents outside the Territory. Servier shall be responsible for the costs and expenses of filing, prosecuting and maintaining Servier Sole Patents in the Territory. Servier shall consult with Miragen and keep Miragen reasonably informed of the status of all Servier Sole Patents outside the Territory and shall promptly provide Miragen with material correspondences received from patent authorities. In addition, Servier shall promptly provide Miragen with drafts of all proposed material filings and correspondences to the patent authorities with respect to the Servier Sole Patents for Miragen’s review and comment prior to the submission of such proposed filings and correspondences. Servier shall confer with Miragen and take into consideration Miragen’s comments prior to submitting such filings and correspondences, provided that Miragen shall provide such comments within one (1) month of receiving the draft filings and correspondences from Servier. If Miragen does not provide comments within such period of time, then Miragen shall be deemed to have no comment to such proposed filings or correspondences. In case of disagreement between the Parties with respect to the filing, prosecution and maintenance of any Servier Sole Patent, the final decision shall be made by Servier.

(ii) Servier shall notify Miragen of any decision to cease prosecution and/or maintenance of prosecution and/or maintenance of, any Servier Sole Patents outside the Territory. Servier shall provide such notice at least sixty (60) days prior to any filing or payment due date, or any other due date that requires action, in connection with such Servier Sole Patent. In such event, Servier shall permit Miragen, at its discretion and expense, to continue prosecution or maintenance of such Servier Sole Patent. Miragen’s prosecution or maintenance of such Servier Sole Patent shall not change the Parties’ respective rights and obligations under this Agreement with respect to such Servier Sole Patent other than as expressly set forth in this Section 10.2(c)(ii).

(iii) Miragen shall notify Servier of any decision not to continue to pay the expenses of prosecution and/or maintenance of any Servier Sole Patents outside the Territory. Miragen shall provide such notice at least sixty (60) days prior to any payment due date, in connection with such Servier Sole Patent. In such event, the licenses granted to Miragen under this Agreement with respect to such Servier Sole Patent shall be terminated.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
10.3 Patent Enforcement.

(a) Each Party shall notify the other within fifteen (15) business days of becoming aware of any alleged or threatened infringement by a Third Party of any of the Miragen Patents or Servier Patents, which infringement adversely affects or is expected to adversely affect any Licensed Product or any Companion Diagnostic, including any “patent certification” filed in the United States under 21 U.S.C. §355(b)(2) or 21 U.S.C. §355(j)(2) or similar provisions in other jurisdictions and of any declaratory judgment, opposition, or similar action alleging the invalidity, unenforceability or non-infringement of any of the Miragen Patents or Servier Patents (collectively “Product Infringement”).

(b) Servier shall have the first right to bring and control any legal action in connection with such Product Infringement in the Territory at its own expense as it reasonably determines appropriate, and Miragen shall have the right to be represented in any such action by counsel of its choice. If Servier decides not to bring such legal action, it shall so inform Miragen promptly and Miragen shall have the right to bring and control any legal action in connection with such Product Infringement in the Territory at its own expense as it reasonably determines appropriate after consultation with Servier, unless Servier reasonably objects to such action for likely having a material adverse effect upon the Commercialization (including profitability) of the Licensed Product in the Territory.

(c) Miragen shall have the exclusive right to bring and control any legal action in connection with such Product Infringement outside the Territory at its own expense as it reasonably determines appropriate. Miragen shall have the exclusive right to enforce the Miragen Patents (other than Joint Patents) for any infringement that is not a Product Infringement at its own expense as it reasonably determines appropriate. Servier shall have the exclusive right to enforce the Servier Patents (other than Joint Patents) for any infringement that is not a Product Infringement at its own expense as it reasonably determines appropriate. Each Party shall have the first right in its territory to enforce the Joint Patents for any infringement that is not a Product Infringement at its own expense as it reasonably determines appropriate; if such Party decides not to bring such legal action, it shall so inform the other Party promptly and the other Party shall have the right to bring and control any legal action in connection with such infringement at its own expense as it reasonably determines appropriate after consultation with the Party having the first right to enforce, unless the Party having the first right to enforce reasonably objects to such action for likely having a material adverse effect upon its activities in its territory.

(d) At the request of the Party bringing the action, the other Party shall provide reasonable assistance in connection therewith, including by executing reasonably appropriate documents, cooperating in discovery and joining as a party to the action if required.

(e) In connection with any such proceeding, the Party bringing the action shall not enter into any settlement admitting the invalidity or non-infringement of, or otherwise impairing the other Party’s rights in, the Miragen Patents or Servier Patents without the prior written consent of the other Party.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Any recoveries resulting from enforcement action relating to a claim of Product Infringement in the Territory shall be first applied against payment of each Party’s costs and expenses in connection therewith. Any such recoveries in excess of such costs and expenses (the “Remainder”) shall be [**]. Any recoveries resulting from enforcement action relating to a claim of Product Infringement outside the Territory shall be retained by Miragen.

10.4 Trademarks. Servier shall have the right to brand the Licensed Products using Servier related trademarks and any other trademarks and trade names it determines appropriate for the Licensed Products, which may vary by country or within a country (“Product Marks”). Servier shall own all rights in the Product Marks in the Territory and shall register and maintain the Product Marks in the countries and regions in the Territory that it determines reasonably necessary, at Servier’s cost and expense.

10.5 Patent Extensions

(a) The Parties shall cooperate in obtaining patent term restoration (under but not limited to Drug Price Competition and Patent Term Restoration Act), supplemental protection certificates or their equivalents, and patent term extensions with respect to the Miragen Patents and/or Servier Patents in any country and/or region where applicable.

(b) [**] shall determine which Miragen Patent it shall apply to extend in the Territory, and Servier shall file for such extension at Servier’s cost and expense. At Servier’s reasonable request, Miragen shall provide all reasonable assistance to Servier in connection with such filing.

ARTICLE 11
CONFIDENTIALITY; PUBLICATION

11.1 Duty of Confidence. Subject to the other provisions of this Article 11:

(a) all Confidential Information disclosed by a Party (the “Disclosing Party”) or its Affiliates under this Agreement shall be maintained in confidence and otherwise safeguarded by the recipient Party (the “Receiving Party”) and its Affiliates, in the same manner and with the same protection as such Receiving Party maintains its own confidential information; for clarity, the Miragen Know-How and Servier Know-How shall be deemed the Confidential Information of both Parties, with each Party having the obligations of the Receiving Party set forth in this Article 11 (but not having the right to be exempted from such obligations on account of Section 11.2(a));

(b) the Receiving Party may only use any such Confidential Information for the purposes of performing its obligations or exercising its rights under this Agreement;

(c) the Receiving Party may disclose Confidential Information of the other Party to: (i) its Affiliates and sublicensees; and (ii) employees, directors, agents, contractors, consultants and advisers of the Receiving Party and its Affiliates and sublicensees, in each case to the extent reasonably necessary for the purposes of, and for those matters undertaken pursuant to, this Agreement; provided that such Persons are bound to maintain the confidentiality of the Confidential Information in a manner consistent with the confidentiality provisions of this Agreement; and

[**] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
11.2 Exceptions. The foregoing obligations as to particular Confidential Information of a Disclosing Party shall not apply to the extent that the Receiving Party can demonstrate that such Confidential Information:

(a) is known by the Receiving Party at the time of its receipt without an obligation of confidentiality, and not through a prior disclosure by the Disclosing Party, as documented by the Receiving Party’s business records;

(b) is in the public domain before its receipt from the Disclosing Party, or thereafter enters the public domain through no fault of the Receiving Party;

(c) is subsequently disclosed to the Receiving Party by a Third Party who may lawfully do so and is not under an obligation of confidentiality to the Disclosing Party; or

(d) is developed by the Receiving Party independently and without use of or reference to any Confidential Information received from the Disclosing Party, as documented by the Receiving Party’s business records.

Any combination of features or disclosures shall not be deemed to fall within the foregoing exclusions merely because individual features are published or available to the general public or in the rightful possession of the Receiving Party unless the combination itself and principle of operation are published or available to the general public or in the rightful possession of the Receiving Party.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
11.3 Authorized Disclosures. Notwithstanding the obligations set forth in Sections 11.1 and 11.5, a Party may disclose the other Party’s Confidential Information (including this Agreement and the terms herein) to the extent:

(a) such disclosure: (i) is reasonably necessary for the filing or prosecuting patent rights as contemplated by this Agreement; (ii) is reasonably necessary in connection with regulatory filings for Licensed Products; (iii) is reasonably necessary for the prosecuting or defending litigation as contemplated by this Agreement; or (iv) is made to any Third Party bound by written obligation of confidentiality and non-use similar to those set forth under this Article 11, to the extent otherwise necessary or appropriate in connection with the exercise of its rights or the performance of its obligations hereunder;

(b) such disclosure is reasonably necessary: (i) to such Party’s directors, attorneys, independent accountants or financial advisors for the sole purpose of enabling such directors, attorneys, independent accountants or financial advisors to provide advice to the such Party, provided that in each such case on the condition that such directors, attorneys, independent accountants and financial advisors are bound by confidentiality and non-use obligations substantially consistent with those contained in this Agreement; provided, however, that the term of confidentiality for such directors, attorneys, independent accountants and financial advisors shall be no less than [*] years from disclosure; or (ii) to any bona fide actual or potential investors, acquirors, licensees and other financial or commercial partners solely for the purpose of evaluating an actual or potential investment, acquisition or collaboration; provided that (A) in each such case on the condition that such actual or potential partners are bound by confidentiality and non-use obligations substantially consistent with those contained in the Agreement, provided, however, that the term of confidentiality for such partners shall be no less than [*] years from disclosure and (B) Miragen shall provide Servier with a list of bona fide potential partners before making the first such confidential disclosure to such potential partners and Servier shall have the right to select from such list one (1) potential partner to which Miragen cannot make such disclosure;

(c) such disclosure is required by judicial or administrative process, provided that in such event such Party shall promptly inform the other Party of such required disclosure and provide the other Party an opportunity to challenge or limit the disclosure obligations. Confidential Information that is disclosed by judicial or administrative process shall remain otherwise subject to the confidentiality and non-use provisions of this Article 11, and the Party disclosing Confidential Information pursuant to law or court order shall take all steps reasonably necessary, including seeking of confidential treatment or a protective order to ensure the continued confidential treatment of such Confidential Information.

11.4 Scientific Publication. Publication strategy shall be managed by the JRDC, which shall have the right to review and approve any scientific publication, considering Servier’s and Miragen’s interest in publishing the results of the research and Development work in order to obtain recognition within the scientific community and to advance the state of scientific knowledge, the need to protect Confidential Information and the Parties’ mutual interest in obtaining valid patent protection, protecting reasonable business interests and trade secret information, and having an integrated approach to developing one or more Licensed Products for one or more indications. Consequently, except for disclosures permitted pursuant to Sections 11.2 and 11.3, each Party and their Affiliates, employee(s) and consultant(s) shall deliver to the JRDC for review and comment a copy of any proposed publication or presentation.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
that pertains to any Licensed Oligo or Licensed Product, pursuant to a procedure to be established by the JRDC. The JRDC shall have the right to require modifications of the publication or presentation: (a) to protect each Parties’ respective Confidential Information; (b) for trade secret reasons or business reasons; and/or (c) to delay such submission for an additional [*] days as may be reasonably necessary to seek patent protection for the information disclosed in such proposed submission. In case of disagreement at the JRDC level, the Party receiving the proposal of publication or presentation shall have the final say.

11.5 Publicity; Use of Names. Servier and Miragen have agreed on language of a joint press release announcing this Agreement, which is attached hereto as Exhibit E, to be issued by the Parties promptly after the mutual execution of the Agreement. Subject to Section 11.3 above, no other disclosure of the existence or the terms of this Agreement may be made by either Party or its Affiliates except as provided in this Section 11.5 or as may be required by applicable Law, and no Party shall use the name, trademark, trade name or logo of the other Party, its Affiliates or their respective employees in any publicity, promotion, news release or disclosure relating to this Agreement or its subject matter, except as provided in this Section 11.5 or with the prior express written permission of the other Party, except as may be required by applicable Law.

(a) A Party may disclose this Agreement and its terms, and material developments or material information generated under this Agreement, in securities filings with the Securities Exchange Commission (or equivalent foreign agency) to the extent required by applicable Law after complying with the procedure set forth in this Section 11.5(a). In such event, the Party seeking such disclosure shall prepare a draft confidential treatment request and proposed redacted version of this Agreement to request confidential treatment for this Agreement, and the other Party agrees to promptly (and in any event, no less than seven (7) days after receipt of such confidential treatment request and proposed redactions) give its input in a reasonable manner in order to allow the Party seeking disclosure to file its request within the time lines proscribed by applicable Law. The Party seeking such disclosure shall exercise Commercially Reasonable Efforts to obtain confidential treatment of the Agreement from the Securities Exchange Commission (or equivalent foreign agency) as represented by the redacted version reviewed by the other Party.

(b) Further, each Party acknowledges that the other Party may be legally required to make public disclosures (including in filings with the Government Authorities) of certain material developments or material information generated under this Agreement and agrees that each Party may make such disclosures as required by law, provided that the Party seeking such disclosure first provides the other Party a copy of the proposed disclosure, and provided further that (except to the extent that the Party seeking disclosure is required to disclose such information to comply with applicable Law) if the other Party demonstrates to the reasonable satisfaction of the Party seeking disclosure, within ten (10) days of such Party’s providing the copy, that the public disclosure of previously undisclosed information shall materially adversely affect the Development and/or Commercialization of a Licensed Oligo or Licensed Product being Developed or Commercialized under this Agreement, the Party seeking disclosure shall remove from the disclosure such specific previously undisclosed information as the other Party shall reasonably request to be removed.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(c) Other than the press release set forth in Exhibit E, the Parties agree that any other news release or other public announcement relating to this Agreement or the performance hereunder that would disclose information other than that already in the public domain, shall first be reviewed and approved by both Parties (with such approval not to be unreasonably withheld or delayed); provided, however, that notwithstanding the foregoing, Miragen shall have the right to disclose publicly (including on its website): (i) the fact that it has entered into this Agreement; (ii) the commencement and key results of each clinical trial conducted by the Parties under this Agreement; (iii) the receipt of any milestone payments under this Agreement; (iv) Regulatory Approval of any Licensed Product; (v) the First Commercial Sale of any Licensed Product; and (vi) royalties received from Servier (without disclosing the royalty rate or Net Sales reported by Servier). For each such disclosure, unless Miragen otherwise has the right to make such disclosure under this Article 11, Miragen shall provide Servier with a draft of such disclosure at least five (5) business days prior to its intended release for Servier’s review and comment, and shall consider Servier’s comments in good faith. If Miragen does not receive comments from Servier within five (5) business days, Miragen shall have the right to make such disclosure without further delay.

(d) The Parties agree that after a disclosure pursuant to Section 11.5(b), a press release (including the initial press release) or other public announcement pursuant to Section 11.5(c) has been reviewed and approved by the other Party, the disclosing Party may make subsequent public disclosures reiterating such information (without alteration and in its entirety) without having to obtain the other Party’s prior consent and approval.

(e) Each Party agrees that the other Party shall have the right to use such first Party’s name and logo in presentations, the company’s website, collateral materials and corporate overviews to describe the collaboration relationship, as well as in taglines of press releases issued pursuant to this Section 11.5.

ARTICLE 12
TERM AND TERMINATION

12.1 Term. The term of this Agreement shall commence upon the Effective Date and continue in full force and effect, on a Licensed Product-by-Licensed Product basis, until the expiration of the royalty obligations of Servier with respect to the applicable Licensed Product, unless earlier terminated as set forth in Section 12.2 below (the "Term").

12.2 Termination.

(a) Termination by Servier for Convenience. At any time, Servier may terminate this Agreement either in its entirety or on a Target-by-Target and/or country-by-country basis by providing written notice of termination to Miragen, which notice includes an effective date of termination at least [*] days after the date of the notice; provided that, if this Agreement has been terminated for all Major Market Countries (including all prior terminations of this Agreement in any Major Market Country pursuant to this Section 12.2), then this Agreement shall be deemed to have been terminated with respect to all countries across the Territory on a Target-by-Target basis.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(b) Termination by Servier for Safety or Public Health Reasons. Notwithstanding Section 12.2(a), if Servier reasonably determines that a safety or public health issue has arisen which is demonstrated by clinically relevant events which are documented and which relate to at least two Licensed Products directed to a particular Target, it shall immediately notify Miragen, and it shall be permitted to terminate the Agreement with respect to such Target by providing written notice of termination to Miragen, which termination may be with respect to the Territory in its entirety, the EU or, with respect to countries outside the EU only, on a country-by-country basis, and which termination shall be effective (i) with respect to Target-related activities in the Research Plan, [*] days after Miragen’s receipt of the termination notice, and (ii) with respect to other Target-related activities under the Development Plan or with respect to Un-sponsored Work being conducted by or on behalf of Servier, [*] days after Miragen’s receipt of the termination notice. Promptly after Miragen’s receipt of Servier’s notice pursuant to this Section 12.2(b), the JEC shall hold a special meeting to discuss the clinically relevant events that are basis for Servier’s termination pursuant to this Section 12.2(b).

(c) Termination for Material Breach. If either Party believes that the other is in breach of its material obligations hereunder, then the non-breaching Party may deliver notice of such breach to the other Party which notice shall clearly mention the remedies that the non-breaching Party intends to apply should the breach remain uncured. The allegedly breaching Party shall have [*] days from such notice to dispute or cure such breach. If the Party receiving notice of breach fails to cure such breach, or fails to dispute any of the matters described in the next sentence, within such [*]-day period, then (i) if the Party originally delivering notice is Servier, then Servier may either (1) terminate this Agreement, in its entirety or on a Target-by-Target or country-by-country basis (with the EU being considered as a single country) provided however that if Servier opts for a termination on a Target-by-Target or country-by-country basis such termination shall only be possible for the country(ies) and/or the Target(s) to which such breach relates, effective on written notice of termination to Miragen or (2) proceed under Section 12.6 on written notice to Miragen specifying Servier’s intent to proceed under Section 12.6 or (ii) if the Party originally delivering notice is Miragen and either (A) Servier’s uncured material breach [*], or (B) Servier’s uncured material breach [*], or (C) [*], then Miragen may terminate this Agreement, in its entirety or on a Target-by-Target or country-by-country basis (with the EU being considered as a single country) provided however that if Miragen opts for a termination on a Target-by-Target or country-by-country basis such termination shall only be possible for the country(ies) and/or the Target(s) to which such breach relates, effective on written notice of termination to Servier. If the allegedly breaching Party in good faith disputes such material breach or disputes the failure to cure or remedy such material breach or, if Servier is the allegedly breaching party of a material breach [*], disputes whether [*] and [*], and provides written notice of that dispute to the other Party within the applicable period set forth above, the matter shall be addressed under the dispute resolution provisions in Section 15.7, and the notifying Party may not terminate this Agreement until it has been determined under Section 15.7 that (i) the allegedly breaching Party is in material breach of this Agreement and (ii) if [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Servier is the breaching party of a material breach [*], that [*] and [*], and such breaching Party further fails to cure such breach within [*] days after the conclusion of that dispute resolution procedure (if such dispute was concerning the existence of such material breach), and such termination shall then be effective upon written notification from the notifying Party to the breaching Party. For Servier’s uncured material breach [*], if the arbitrator under Section 15.7 decides that [*] and [*] under this Agreement by reason of [*] by reason of the [*] but [*], then Servier may elect, within thirty (30) days after the arbitrator’s decision, to [*] (with respect to [*]) and [*], in which case [*]. In deciding whether [*], the arbitrator shall consider [*], including whether [*], whether [*], whether [*], whether [*] or [*], whether [*]. Notwithstanding the above, except the dispute mechanism, if [*] is in breach of its obligation to [*] or [*], then [*] terminate the Agreement [*]; provided however that for [*], [*] terminate this Agreement [*] as set forth in Section [*] and either [*] or [*] as set forth above in the dispute mechanism and [*] on account of such breach. For the sake of clarity, [*] shall have the right to terminate this Agreement, on account of [*] breach of its obligation to [*] if [*].

(d) Termination for Patent Challenge. Except to the extent the following is unenforceable under the laws of a particular jurisdiction, Miragen may terminate this Agreement in its entirety if Servier or its Affiliates or sublicensees, individually or in association with any other person or entity, commences a legal action challenging the validity, enforceability or scope of any Miragen Patents, and Servier may terminate this Agreement in its entirety if Miragen or its Affiliates or sublicensees, individually or in association with any other person or entity, commences a legal action challenging the validity, enforceability or scope of any Servier Patents.

12.3 Effect of Termination.

(a) Upon the earlier termination of this Agreement for any reason, all licenses and other rights granted to Servier under the Miragen Therapeutic IP and Miragen Companion Diagnostic IP shall terminate, provided that such termination shall be limited to the terminated Target in the terminated countries in the event that this Agreement is terminated only for a particular Target in particular countries and, unless otherwise provided in this Section 12.3, all licenses and other rights granted to Miragen under the Servier Therapeutic IP and Servier Companion Diagnostic IP shall terminate, provided that such termination shall be limited to the terminated Target and shall only apply in the event that this Agreement is terminated for such Target in all countries across the Territory.

(b) The following consequences shall apply, at Miragen’s written request, only in the event of termination by Servier pursuant to Section 12.2(a) or 12.2(b) or by Miragen pursuant to Section 12.2(c)(ii) or 12.2(d), provided, however, in the event of termination only for a particular Target in particular countries, such consequences shall be limited to Licensed Oligos and Licensed Products for the terminated Target in the terminated countries and Companion Diagnostics for use in connection with the Licensed Products for the terminated Target in the terminated countries, as applicable:

(i) Miragen Licenses. All licenses and other rights granted to Miragen under the Servier Therapeutic IP and Servier Companion Diagnostic IP shall survive.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
In addition, Servier hereby grants to Miragen, effective only upon such termination, an exclusive, royalty bearing, sublicenseable (through multiple tiers) license under the Servier Therapeutic IP to Develop, make, have made, use, import, offer for sale and sell Licensed Oligos and Licensed Products for the terminated Targets in the terminated countries and (ii) an exclusive, fully paid (except if payments are to be made by Servier to a Third Party, in which case against reimbursement of corresponding amounts), sublicenseable (through multiple tiers) license under the Servier Companion Diagnostic IP to develop, make, have made, use, import, offer for sale and sell Companion Diagnostics for use in connection with the Licensed Product for the terminated Targets in the terminated countries.

(ii) Joint IP. Servier hereby grants to Miragen, effective upon termination of this Agreement, a royalty bearing, exclusive, sublicenseable (through multiple tiers), license under Servier’s interest in the Joint IP to Develop, make, have made, use, import, offer for sale and sell Licensed Oligos and Licensed Products for the terminated Targets in the terminated countries and Companion Diagnostics for use in connection with the Licensed Product for the terminated Targets in the terminated countries.

(iii) Regulatory Materials; Data. Servier shall transfer and assign to Miragen, at no cost to Miragen other than as specified in Section 12.3(b)(iv), all Regulatory Materials and Regulatory Approvals of the Licensed Products, data from non-clinical and clinical studies conducted by or on behalf of Servier, its Affiliates or sublicensees on the Licensed Products and all pharmacovigilance data (including all adverse event database) on the Licensed Products, and all regulatory materials and regulatory approvals of the Companion Diagnostics and data generated by or on behalf of Servier, its Affiliates or sublicensee in the development of the Companion Diagnostics, in each case for the terminated Targets in the terminated countries.

(iv) Transition Assistance.

1. If this Agreement is terminated with respect to all Targets in all countries in the Territory, Servier shall promptly return to Miragen, all Know-How, data, materials and other Confidential Information transferred by Miragen to Servier under this Agreement.

2. If at the time of such termination, Servier is supplying the Licensed Oligos or Licensed Products for the terminated Target to Miragen or for Servier’s own use in the terminated countries, Servier shall assist Miragen in establishing an alternative supplier for such Licensed Oligos and Licensed Products and shall supply such Licensed Oligos and Licensed Products to Miragen, at the same financial conditions under which Servier was supplying Miragen prior to termination or at Servier’s cost [*] if Servier was supplying itself prior to termination, until Miragen has established an alternative supplier, provided such obligation shall under no circumstances lead to Servier having to supply Miragen with Licensed Products or Licensed Oligos (i) for use in human in the US or (ii) if termination was for reasons of safety.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(3) Upon Miragen’s request, Servier shall, at Servier’s choice, assign or sublicense to Miragen any license agreements (where Servier or its Affiliates is the licensor or where Servier or its Affiliates is granted a license to intellectual property that is not Servier Therapeutic IP) with respect to the Licensed Products in the Field in the Territory and any agreements or arrangement with Third Party vendors that are specific or necessary to the development, manufacture and commercialization of the Licensed Products in the Field in the Territory, provided that (i) such provision shall only apply in respect of terminated countries and terminated Targets, (ii) Miragen shall reimburse to Servier all reasonable costs borne by Servier to satisfy such obligation, which costs shall be subject to Miragen’s prior review and approval (not to be unreasonably withheld) and (iii) Servier is entitled to do so without breaching any obligation it may have with a Third Party.

(4) Servier shall, at Miragen’s request, provide reasonable technical assistance and transfer all Servier Know-How relating to the Licensed Oligos or Licensed Products for the terminated Target to Miragen or its designee;

(5) If at the time of such termination, Servier is conducting any clinical trials for the Licensed Product for the terminated Target in the terminated countries, then, at Miragen’s election on a trial-by-trial basis: (A) Servier shall fully cooperate with Miragen to transfer the conduct of all such clinical trials to Miragen and Miragen shall assume any and all liability and costs for such clinical trials after the effective date of such termination, provided that in the event this Agreement is terminated by Miragen under Section 12.2(c)(ii) or 12.2(d), Servier shall continue to bear all costs and expenses incurred in connection with such clinical trial until the earlier of the completion of such trial or [*] after the effective date of such termination; or (B) Servier shall, at its expense, orderly wind down the conduct of any such clinical trial which is not assumed by Miragen under clause (A). In each case, if Servier is the contracting party for any Third Party agreement relating to such clinical trials, Servier shall reimburse Miragen for any non-cancelable and non-refundable out-of-pocket costs Miragen may incur under such Third Party agreement in connection with the conduct or wind down of all such clinical trials if such costs were incurred prior to the effective date of such termination; and

(6) If this Agreement is terminated by Servier under Section 12.2(b) or by Miragen under Section 12.2(c)(ii), Servier shall be responsible for any non-cancelable and non-refundable out-of-pocket costs already committed by Miragen pursuant to the Research Plan or the Development Plan. Miragen shall do its reasonable efforts to limit as much as possible its commitments in terms of non-cancelable and non-refundable out-of-pocket costs while entering into agreements with Third Parties.

(v) Financial conditions and liability. In consideration of 12.3(b)(i) – (iv) above, Miragen shall:

(1) reimburse to Servier on a quarterly basis (with first payment only payable [*] months after the effective date of termination) all post-termination costs borne by Servier in relation to the transfer to Miragen of Regulatory Materials, Regulatory Approvals, non-clinical and clinical data and to the transition assistance (except the costs that Servier is responsible for under Sections 12.3(b)(iv)(5) and (6)).

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(2) except in the events described in Section 12.3(b)(v)(3) below, in the event that this Agreement is terminated for one or several particular Target(s), or in its entirety, in all countries across the Territory and the data provided by Servier were used or are being used in the filing of MAA in the U.S. or in the EU for a Licensed Product for such terminated Target(s), reimburse to Servier for [*] of the Development Costs (to the extent not already reimbursed prior to the effective date of termination) incurred by Servier in the Development activities that generated the data used in such MAA filing. For clarity, Miragen shall only be required to make the payments set forth in either this Section 12.3(b)(v)(2) or Section 12.3(b)(v)(3) below, but not both.

(3) in the event that this Agreement is terminated by Miragen for one or several particular Target(s), in some countries across the Territory including the EU (for material breach by Servier of its commercial diligence commitment) and the data provided by Servier were used or are being used in the filing of MAA in the U.S. and/or in the EU for a Licensed Product for such terminated Target(s), reimburse to Servier (i) for [*] of the Development Costs if the data were used or are being used for the U.S. only or the EU only (but not both) or (ii) for [*] of the Development Costs if the data were used or are being used for both the U.S. and the EU. For the purpose of this Section 12.3(b)(v)(3) the Development Costs shall be those incurred by Servier in the Development activities that generated the data used in such MAA filing and shall be reimbursed by Miragen to the extent not already reimbursed prior to the effective date of termination.

(4) if Miragen uses the data provided by Servier in the filing of MAA in the one or more terminated countries outside the EU in the Territory for a Licensed Product, or uses an MAA obtained by Servier prior to termination in such terminated countries outside the EU in the Territory, make the following quarterly non-refundable, non-creditable royalty payments to Servier on the Net Sales (whose definition applies to Miragen mutatis mutandis) of Licensed Product for the terminated Target in such terminated countries outside the EU in the Territory on a Licensed Product-by-Licensed Product basis:

- [*] if such Licensed Product was [*] at the effective date of termination;
- [*] if such Licensed Product was [*] at the effective date of termination; or
- [*] if such Licensed Product was [*] at the effective date of termination.

The abovementioned royalty payment obligation shall expire, on a Licensed Product-by-Licensed Product and country-by-country basis, upon the later of (A) the expiration of the last-to-expire Valid Claim included in the Servier Patents [*] in such country claiming the Licensed Product, its manufacture, or its use for which it is being sold or used in such country; or (B) the tenth (10th) anniversary of the First Commercial Sale (whether by Servier or Miragen or their respective Affiliates or sublicensees) of such Licensed Product in such country. If the combined royalty payments to Servier and Third Parties (including Upstream Licensors) on any Licensed Product make it not commercially reasonable to commercialize such Licensed Product, Servier and Miragen shall negotiate in good faith a reasonable reduction in the royalty rates set forth above in this section.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

62
provided that Servier complies with the procedures set forth in Section 14.3, hold Servier and its Affiliates fully indemnified and harmless from and against any Claims (including but not limited to any product liability claim) against them to the extent (A) arising or resulting from the development and commercialization of the Licensed Products for the terminated Target in the terminated countries by Miragen or any of its Affiliates, licensees, sublicensees or subcontractors after the effective date of termination and (B) not arising from Servier’s or its Affiliate’s breach of any covenant, representation or warranty in this Agreement or the gross negligence or willful misconduct of Servier or its Affiliates.

12.4 Survival. Expiration or termination of this Agreement shall not relieve the Parties of any obligation accruing prior to such expiration or termination. Without limiting the foregoing, the provisions of Articles 1, 11, 14, and 15, and Sections 2.5 (the fourth sentence only), 6.8, 9.7, 9.9, 10.1, 10.2(b), 12.3, 12.4, and 12.5 shall survive the expiration or termination of this Agreement.

12.5 Termination Not Sole Remedy. Termination is not the sole remedy under this Agreement and, whether or not termination is effected and notwithstanding anything contained in this Agreement to the contrary, all other remedies shall remain available except as agreed to otherwise herein.

12.6 Alternative Remedy for Miragen’s Uncured Material Breach. If Servier has the right to proceed under this Section 12.6 and notifies Miragen pursuant to Section 12.2(c)(i)(2) that it is exercising such right, then this Agreement shall stay in full force and effect with the following modifications. Commencing upon Servier’s initiation of an arbitration pursuant to Section 15.7 to obtain damages on account of Miragen’s uncured material breach that led to the invocation of this Section 12.6 and continuing until the issuance of a decision in such arbitration (provided that Servier’s diligently pursues the issuance of a decision in such arbitration), Servier may [*]. Upon the issuance of a decision in such arbitration, if [*], then Miragen shall [*], and if [*] or [*] is [*], then Servier shall [*]. [*] obligations to [*] specified in Sections [*] shall [*] unless otherwise decided by the arbitrator(s).

ARTICLE 13
REPRESENTATIONS AND WARRANTIES

13.1 Representations and Warranties of Each Party. Each Party represents and warrants to the other Party as of the Execution Date and as of the Effective Date that:

(a) it has the full right, power and authority to enter into this Agreement, to perform its obligations hereunder; and

(b) this Agreement has been duly executed by it and is legally binding upon it, enforceable in accordance with its terms, and does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor violate any material law or regulation of any court, governmental body or administrative or other agency having jurisdiction over it.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
13.2 Representations and Warranties by Miragen. Miragen represents and warrants to Servier that, except as set forth in Exhibit G:

(a) to Miragen’s and its Affiliates’ knowledge as of the Effective Date, the Miragen Patents are all of the Patents Controlled by Miragen or its Affiliates as of the Effective Date which are reasonably necessary for the development, manufacture, use, importation and/or sale of Licensed Oligos and/or Licensed Products in the Field, in each case to the extent that the Licensed Oligos and Licensed Products pertain to the microRNA 15/195 or microRNA 208/400 target families;

(b) as of the Effective Date, neither it nor any of its Affiliates or, to Miragen’s and its Affiliates’ knowledge, Upstream Licensors has previously assigned, transferred, conveyed or otherwise encumbered its right, title and interest in Miragen Therapeutic IP or Miragen Companion Diagnostic IP in a manner that is inconsistent with the licenses and rights granted to Servier under Section 2.1;

(c) it has the right to grant the license and rights granted herein to Servier and it has not granted any license, right or interest in, to or under the Miragen Therapeutic IP or Miragen Companion Diagnostic IP to any Third Party or Affiliate that is inconsistent with the licenses and rights granted to Servier under Section 2.1;

(d) as of the Effective Date, neither it nor any of its Affiliates or, to Miragen’s and its Affiliates’ knowledge, Upstream Licensors has received any written notice from any Third Party asserting or alleging that the creation of or the use of the Miragen Therapeutic IP or Miragen Companion Diagnostic IP infringed or misappropriated the intellectual property rights of such Third Party;

(e) to Miragen’s and its Affiliates’ knowledge as of the Effective Date, the conduct of the activities specified in the Research Plan attached hereto as Exhibit C and the sample Development Plan attached hereto as Exhibit D will not infringe any intellectual property rights owned or possessed by any Third Party as of the Effective Date;

(f) as of the Effective Date, there are no judgments or settlements against or owed by Miragen, its Affiliates or, to Miragen’s and its Affiliates’ knowledge as of the Effective Date, Upstream Licensors, relating to Miragen Therapeutic IP or Miragen Companion Diagnostic IP, and to Miragen’s and its Affiliates’ knowledge, there are no, as of the Effective Date, pending or threatened claims or litigation, relating to Miragen Therapeutic IP or Miragen Companion Diagnostic IP.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
13.3 Miragen Covenants.

(a) Miragen shall maintain all Upstream License Agreements in force and effect, subject to amendment permitted pursuant to Section 13.3(c), until and for so long as the intellectual property rights licensed to Miragen under such Upstream License Agreements are necessary for the conduct of the activities contemplated under this Agreement (including the Development, manufacturing and Commercialization of the Licensed Products) without infringing or misappropriating the intellectual property rights of the Upstream Licensors. In the event that any Upstream License Agreement is terminated by Upstream Licensors due to Miragen’s uncured material breach, bankruptcy or challenge of the licensed patents and such termination did not arise directly or indirectly from any acts or omission of Servier, and Servier obtains from the applicable Upstream Licensor a direct license as a substitute for Servier’s sublicense from Miragen under such Upstream License Agreement, Servier shall have the right to deduct, from payments due to Miragen hereunder, the amount paid by Servier under the direct license to such Upstream Licensor.

(b) Miragen shall prosecute and maintain, and shall procure that its Affiliates and Upstream Licensors, as the case may be, shall prosecute and maintain, the Miragen Sole Patents in the Territory until either they are held invalid or unenforceable or Miragen notifies Servier of Miragen’s decision to cease prosecution and/or maintenance of any Miragen Sole Patents in the Territory and offer Servier the opportunity to continue prosecution and maintenance of such Miragen Sole Patent in accordance with Section 10.2(a)(ii).

(c) Miragen shall not amend any Upstream License Agreement without Servier’s prior written consent except to the extent such amendment does not materially affect Servier’s Development, manufacture and Commercialization of the Licensed Products and does not create new obligations for Servier. Miragen shall provide Servier with a copy of any proposed amendment to any Upstream License Agreement for review and comment prior to entering into such amendment.

(d) Prior to the Completion Date, Miragen shall not, without Servier’s prior written consent, [*], unless [*] pursuant to the Research Plan or Development Plan for research or Development activities [*] and in such case subject to Section [*].

(e) Prior to the Completion Date, Miragen shall not, without Servier’s prior written consent (not to be unreasonably withheld or delayed), [*].

(f) [*]

13.4 Representations and Warranties by Servier. Servier represents and warrants to Miragen that:

(a) to Servier’s and its Affiliates’ knowledge as of the Effective Date, it does not Control any patent which are reasonably necessary or useful for the development, manufacture, use, importation and/or sale of Licensed Oligos and/or Licensed Products in the Field, in each case to the extent that the Licensed Oligos and Licensed Products pertain to the microRNA 15/195 or microRNA 208/499 target families;

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(b) to Servier’s and its Affiliates’ knowledge as of the Effective Date, the conduct of the activities specified in the Research Plan attached hereto as Exhibit C and the sample Development Plan attached hereto as Exhibit D will not infringe any intellectual property rights owned or possessed by any Third Party as of the Effective Date; and

(c) to Servier’s and its Affiliates’ knowledge as of the Effective Date, it has the right to transfer the Servier Samples to Miragen for use in evaluation and analysis pursuant to the Research Plan, and such transfer and use of Servier Samples do not violate any applicable Laws or conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound.

13.5 No Other Warranties. EXCEPT AS EXPRESSLY STATED IN THIS ARTICLE 13, (A) NO REPRESENTATION, CONDITION OR WARRANTY WHATSOEVER IS MADE OR GIVEN BY OR ON BEHALF OF SERVIER OR MIRAGEN; AND (B) ALL OTHER CONDITIONS AND WARRANTIES WHETHER ARISING BY OPERATION OF LAW OR OTHERWISE ARE HEREBY EXPRESSLY EXCLUDED, INCLUDING ANY CONDITIONS AND WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT.

ARTICLE 14
INDEMNIFICATION; LIABILITY

14.1 Indemnification by Miragen. Miragen shall indemnify and hold Servier, its Affiliates and their respective officers, directors, agents and employees (“Servier Indemnitees”) harmless from and against any Claims against them to the extent arising or resulting from:

(a) the Development of the Licensed Oligos, the Companion Diagnostics and/or Licensed Products by Miragen or any of its Affiliates, licensees, sublicensees or subcontractors, in each case outside the Development Plan; or

(b) the Commercialization of the Licensed Oligos, the Companion Diagnostic and/or Licensed Products by Miragen or any of its Affiliates, licensees, sublicensees or subcontractors; or

(c) the gross negligence or willful misconduct of any of the Miragen Indemnitees; or

(d) the breach of any of the warranties, covenants, or representations made by Miragen to Servier under this Agreement; or

(e) the breach by Miragen of its material obligations pursuant to this Agreement;

except in each case, to the extent such Claims result from the material breach by any Servier Indemnitee of any covenant, representation, warranty or other agreement made by Servier in this Agreement or the gross negligence or willful misconduct of any Servier Indemnitee. For clarity, Miragen’s indemnification obligations pursuant to this Section 14.1 will include Claims brought by Santaris against Servier on account of Servier’s indemnification

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
14.2 Indemnification by Servier. Servier shall indemnify and hold Miragen, its Affiliates, and their respective officers, directors, agents and employees ("Miragen Indemnitees") harmless from and against any Claims arising under or related to this Agreement against them to the extent arising or resulting from:

(a) the Development of the Licensed Oligos, the Companion Diagnostic and/or Licensed Products by Servier or any of its Affiliates, sublicensees or subcontractors, in each case outside the Development Plan; or

(b) the Commercialization of the Licensed Oligos, the Companion Diagnostic and/or Licensed Products by Servier or any of its Affiliates, sublicensees or subcontractors; or

(c) the gross negligence or willful misconduct of any of the Servier Indemnitees; or

(d) the breach of any of the warranties, covenants, or representations made by Servier to Miragen under this Agreement; or

(e) any breach by Servier of its material obligations pursuant to this Agreement;

except in each case, to the extent such Claims result from the material breach by any Miragen Indemnitee of any covenant, representation, warranty or other agreement made by Miragen in this Agreement or the gross negligence or willful misconduct of any Miragen Indemnitee.

14.3 Indemnification Procedure. If either Party is seeking indemnification under Sections 14.1 or 14.2 (the "Indemnified Party"), it shall inform the other Party (the "Indemnifying Party") of the Claim giving rise to the obligation to indemnify pursuant to such Section as soon as reasonably practicable after receiving notice of the Claim. The Indemnifying Party shall have the right to assume the defense of any such Claim for which it is obligated to indemnify the Indemnified Party, which shall include the right to settle any Claim (i) without the written consent of the Indemnified Party if the settlement involves only the payment of money or (ii) with the prior written consent of the Indemnified Party, such consent not to be unreasonably withheld, in other circumstances. The Indemnified Party shall cooperate with the Indemnifying Party and the Indemnifying Party’s insurer as the Indemnifying Party may reasonably request, and at the Indemnifying Party’s cost and expense. The Indemnified Party shall have the right to participate, at its own expense and with counsel of its choice, in the defense of any Claim that has been assumed by the Indemnifying Party. Neither Party shall have the obligation to indemnify the other Party in connection with any settlement made without the Indemnifying Party’s written consent, which consent shall not be unreasonably withheld or delayed. If the

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

67
Parties cannot agree as to the application of Section 14.1 or 14.2 as to any Claim, pending resolution of the dispute pursuant to Section 15.7, the Parties may conduct separate defenses of such Claims, with each Party retaining the right to claim indemnification from the other Party in accordance with Section 14.1 or 14.2 upon resolution of the underlying Claim.

14.4 Mitigation of Loss. Each Indemnified Party shall take and shall procure that its Affiliates take all such reasonable steps and action as are reasonably necessary or as the Indemnifying Party may reasonably require in order to mitigate any Claims (or potential losses or damages) under this Article 14. Nothing in this Agreement shall or shall be deemed to relieve any Party of any common law or other duty to mitigate any losses incurred by it.

14.5 Limitation of Liability. NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY SPECIAL, CONSEQUENTIAL (including but not limited to loss of profits and loss of revenue), INCIDENTAL, PUNITIVE, OR INDIRECT DAMAGES ARISING FROM OR RELATING TO ANY BREACH OF THIS AGREEMENT, REGARDLESS OF ANY NOTICE OF THE POSSIBILITY OF SUCH DAMAGES. NOTWITHSTANDING THE FOREGOING, NOTHING IN THIS SECTION 14.5 IS INTENDED TO OR SHALL LIMIT OR RESTRICT THE INDEMNIFICATION RIGHTS OR OBLIGATIONS OF ANY PARTY UNDER SECTION 14.1 OR 14.2 OR DAMAGES AVAILABLE FOR A PARTY’S BREACH OF CONFIDENTIALITY OBLIGATIONS IN ARTICLE 11. This limitation of liability does not apply to the extent German law does not allow such limitation.

14.6 Insurance. Each Party shall procure and maintain insurance, including product liability insurance, with respect to its activities hereunder and which is consistent with normal business practices of prudent companies similarly situated at all times during which any Licensed Product is being clinically tested in human subjects or commercially distributed or sold. Each Party shall provide the other Party with evidence of such insurance upon request and shall provide the other Party with written notice at least thirty (30) days prior to such Party’s decision or receipt of notice from the insurance company, as applicable, with respect to the cancellation, non-renewal or material decrease in the coverage level of such insurance. It is understood that such insurance shall not be construed to create a limit of either Party’s liability.

ARTICLE 15
GENERAL PROVISIONS

15.1 Force Majeure. Neither Party shall be held liable to the other Party nor be deemed to have defaulted under or breached this Agreement for failure or delay in performing any obligation under this Agreement to the extent such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party, potentially including embargoes, war, acts of war (whether war be declared or not), acts of terrorism, insurrections, riots, civil commotions, strikes, lockouts or other labor disturbances, fire, floods, earthquakes or other acts of God, or acts, omissions or delays in acting by any governmental authority or the other Party or unavailability of materials related to the manufacture of Licensed Oligos or Licensed Products. The affected Party shall notify the other Party in writing of such force majeure circumstances as soon as reasonably practical, and shall promptly undertake and continue diligently all reasonable efforts necessary to cure such force majeure circumstances or to perform its obligations in spite of the ongoing circumstances.

[**] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
15.2 Assignment. This Agreement may not be assigned or otherwise transferred, nor may any right or obligation hereunder be assigned or transferred, by either Party without the prior written consent of the other Party. Notwithstanding the foregoing, either Party may, without consent of the other Party, assign this Agreement and its rights and obligations hereunder in whole or in part to an Affiliate of such Party, or in whole to its successor in interest in connection with the sale of all or substantially all of its stock or its assets to which this Agreement relates, or in connection with a merger, acquisition or similar transaction. Any permitted assignee shall assume, and shall confirm in writing to the other Party that it will assume, all assigned obligations of its assignor under this Agreement, provided that the assignor (i) shall not be released from its exclusivity obligations set forth in Section 2.5 and confidentiality obligations set forth in Article 11; and (ii) shall be jointly and severally liable with the permitted assignee of any breach to the assigned rights and obligations. Any attempted assignment not in accordance with this Section 15.2 shall be null and void and of no legal effect. The terms and conditions of this Agreement shall be binding upon, and shall inure to the benefit of, the Parties and their respected successors and permitted assigns. The Patent Rights and Know-How owned or in-licensed by a permitted assignee, or an entity who becomes an Affiliate of Miragen during the Term through a Change of Control, in each case as existing on the date of closing of the transaction that was the basis for such assignment or resulted in such entity becoming an Affiliate, shall be automatically excluded from the rights licensed to the other Party under this Agreement, except for the right granted to Servier under Section 2.9 in the event such Affiliate or permitted assignee is a Miragen Acquiror. Miragen shall promptly notify Servier of any Change of Control.

15.3 Subcontracting. Notwithstanding any provision to the contrary, neither Party shall be entitled to subcontract to a Third Party, or enter into any agreement with a Third Party for, the performance by such Third Party of any non-clinical work related to any Licensed Oligo or to any Target without having obtained prior approval by the JSC.

15.4 Severability. If any one or more of the provisions contained in this Agreement is held invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby, unless the absence of the invalidated provision(s) adversely affects the substantive rights of the Parties. The Parties shall in such an instance use their best efforts to replace the invalid, illegal or unenforceable provision(s) with valid, legal and enforceable provision(s) which, insofar as practical, implement the purposes of this Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
15.5 Notices. All notices which are required or permitted hereunder shall be in writing and sufficient if delivered personally, sent by facsimile (and promptly confirmed by personal delivery, registered or certified mail or overnight courier), sent by nationally-recognized overnight courier or sent by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

If to Miragen:
Miragen Therapeutics, Inc.
6200 Lookout Rd., Suite 100
Boulder, CO 80301
USA
Attn: William S. Marshall, Ph.D.
Fax: (303) 531-5094

with a copy to:
Cooley LLP
3175 Hanover Street
Palo Alto, CA 94304
Attn: Marya Postner, Ph.D.
Fax: (650) 849-7400

If to Servier:
Institut de Recherches Servier
3 rue de la République
92150 Suresnes
France
Attn: Head of Research
Fax: 33 1 55 72 26 40

with a copy, except for invoices, to:
Les Laboratoires Servier
50 rue Carnot
92284 Suresnes cedex
Attn: Legal Department
Fax: 33 1 55 72 56 93

or to such other address(es) as the Party to whom notice is to be given may have furnished to the other Party in writing in accordance herewith. Any such notice shall be deemed to have been given: (a) when delivered if personally delivered or sent by facsimile on a business day (or if delivered or sent on a non-business day, then on the next business day); (b) on the business day after dispatch if sent by nationally-recognized overnight courier; or (c) on the fifth (5th) business day following the date of mailing, if sent by mail.

15.6 Governing Law. This Agreement and the resolution of all disputes, controversies or claims arising out of, or relating to or in connection with this Agreement or the performance, enforcement, breach or termination of this Agreement and any remedies relating thereto shall be governed by and construed in accordance with the laws of [*] without reference to any rules of conflict of laws.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
15.7 Dispute Resolution

(a) If the Parties are unable to resolve any dispute arising out of or in connection with the Parties’ respective rights and responsibilities under this Agreement, then either Party by written notice to the other, may have such dispute referred to their Executive Officers to resolve such a dispute by good faith negotiations. In the event the Executive Officers are not able to resolve any such dispute within thirty (30) days after receipt of written notice submitting the dispute to such Executive Officers, such dispute may be submitted by either Party to arbitration. Any such arbitration shall be governed by and finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or three arbitrators appointed in accordance with the said Rules. The arbitration proceedings shall take place in [*], in the English language.

(b) All negotiations conducted by the Parties pursuant to this Article 15.7 shall be deemed to be and shall be treated as compromise and settlement negotiations. Nothing said or disclosed, nor any document produced, in the course of such negotiations which is not otherwise independently discoverable shall be offered or received as evidence or used for impeachment or for any other purpose in any current or future arbitration or litigation.

(c) Either Party may apply to the arbitrators for interim injunctive relief until the arbitration award is rendered or the controversy is otherwise resolved. Either Party also may, without waiving any remedy under this Agreement, seek from any court having jurisdiction any injunctive or provisional relief necessary to protect the rights or property of that Party pending the arbitration award. Each Party shall bear its own attorney’s fees. The arbitrators’ fees and any administrative fees of arbitration shall be shared equally by the Parties unless otherwise decided by the arbitrators.

15.8 Entire Agreement; Amendments. This Agreement, together with the Exhibits hereto, contains the entire understanding of the Parties with respect to the collaboration and the licenses granted hereunder. Any other express or implied agreements and understandings, negotiations, writings and commitments, either oral or written, in respect to the Collaboration and the licenses granted hereunder are superseded by the terms of this Agreement. The Exhibits to this Agreement are incorporated herein by reference and shall be deemed a part of this Agreement. This Agreement may be amended, or any term hereof modified, only by a written instrument duly executed by authorized representative(s) of both Parties hereto. The Parties agree that, effective as of the Effective Date, that certain Exchange of Proprietary Information and Nondisclosure Agreement between the Parties dated as of September 3, 2010, as amended (“Confidentiality Agreement”) shall be superseded by this Agreement, and that disclosures made prior to the Effective Date pursuant to the Confidentiality Agreement shall be subject to the confidentiality and non-use provisions of this Agreement. The Parties acknowledges that the MTA remains in force as of the Effective Date hereof and shall continue until its termination or expiration as set forth therein.

15.9 Headings. The captions to the several Articles, Sections and subsections hereof are not a part of this Agreement, but are merely for convenience to assist in locating and reading the several Articles and Sections hereof.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
15.10 Independent Contractors. It is expressly agreed that Miragen and Servier shall be independent contractors and that the relationship between the two Parties shall not constitute a partnership, joint venture or agency. Neither Miragen nor Servier shall have the authority to make any statements, representations or commitments of any kind, or to take any action, which shall be binding on the other Party, without the prior written consent of the other Party.

15.11 Waiver. The waiver by either Party hereof of any right hereunder, or of any failure of the other Party to perform, or of any breach by the other Party, shall not be deemed a waiver of any other right hereunder or of any other breach by or failure of such other Party whether of a similar nature or otherwise.

15.12 Cumulative Remedies. Unless otherwise provided in this Agreement, no remedy referred to in this Agreement is intended to be exclusive, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under law.

15.13 Waiver of Rule of Construction. Each Party has had the opportunity to consult with counsel in connection with the review, drafting and negotiation of this Agreement. Accordingly, the rule of construction that any ambiguity in this Agreement shall be construed against the drafting Party shall not apply.

15.14 Business Day Requirements. In the event that any notice or other action or omission is required to be taken by a Party under this Agreement on a day that is not a business day then such notice or other action or omission shall be deemed to required to be taken on the next occurring business day.

15.15 Translations. This Agreement is in the English language only, which language shall be controlling in all respects, and all versions hereof in any other language shall be for accommodation only and shall not be binding upon the Parties. All communications and notices to be made or given pursuant to this Agreement, and any dispute proceeding related to or arising hereunder, shall be in the English language. If there is a discrepancy between any translation of this Agreement and this Agreement, this Agreement shall prevail.

15.16 Counterparts. This Agreement may be executed in two or more counterparts by original signature, facsimile or PDF files, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

(REMAINDER OF PAGE INTENTIONALLY LEFT BLANK)

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
IN WITNESS WHEREOF, the Parties intending to be bound have caused this Agreement to be executed by their duly authorized representatives as of the Effective Date.

Miragen Therapeutics, Inc.
By: /s/ William S. MARSHALL
Name: William S. MARSHALL
Title: President and CEO

Les Laboratoires Servier
By: /s/ Christian BAZANTAY
Name: Christian BAZANTAY
Title: Proxy

By: /s/ Jean-Philippe SETA
Name: Jean-Philippe SETA
Title: Proxy

Institut de Recherches Servier
By: /s/ Emmanuel CANET
Name: Emmanuel CANET
Title: President Research and Development

By: /s/ Bernard MARCHAND
Name: Bernard MARCHAND
Title: General Director of Research

{SIGNATURE PAGE OF THE LICENSE AND COLLABORATION AGREEMENT BY AND BETWEEN
MIRAGEN THERAPEUTICS, INC. AND LES LABORATOIRES SERVIER}

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
LIST OF EXHIBITS

Exhibit A: Existing Miragen Patents
Exhibit B: Targets
Exhibit C: Research Plan
Exhibit D: Development Plan
Exhibit E: Press Release
Exhibit F: Certain Terms of Upstream Licenses
Exhibit G: Exceptions to Miragen's Representations and Warranties

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
<table>
<thead>
<tr>
<th>Publication No.</th>
<th>Application No./Filing Date</th>
<th>Inventors / Assignee</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Existing Miragen Patents licensed to Miragen under Santaris Agreement

[*]

[*]

[*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Exhibit B: Targets

Each of Target shall be comprised of certain mature miRNA sequences, each identified by its name and accession number as provided in the miRBase (Sanger) at http://microrna.sanger.ac.uk/sequences/index.shtml) and described below, and each such miRNA sequence shall be deemed a “Target”:

<table>
<thead>
<tr>
<th>Target miRBase Name</th>
<th>miRBase Accession Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>hsa-miR-15a</td>
<td>MI0000069</td>
</tr>
<tr>
<td>hsa-miR-15b</td>
<td>MI0000438</td>
</tr>
<tr>
<td>hsa-miR-16-1</td>
<td>MI0000070</td>
</tr>
<tr>
<td>hsa-miR-162</td>
<td>MI0000115</td>
</tr>
<tr>
<td>hsa-miR-195</td>
<td>MI0000489</td>
</tr>
<tr>
<td>hsa-miR-208a</td>
<td>MI0000251</td>
</tr>
<tr>
<td>hsa-miR-208b</td>
<td>MI0005570</td>
</tr>
<tr>
<td>hsa-miR-499</td>
<td>MI0003183</td>
</tr>
</tbody>
</table>

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
The aim of the Research Collaboration is to [*].

Servier and Miragen have developed the following Research Plan outline which includes:

I. [*]
   A. [*]
      1. [*]
   B. [*]
      2. [*]

II. [*]
   A. [*]
   B. [*]

III. [*]
   A. [*]
   B. [*]
   C. [*]
      [*]
      1. [*]
         A. [*]

[*]:
   1. [*]

[*]:
   1. [*]
   2. [*]
   3. [*]

[*]:
   [*]

B. [*]:

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
[*]

[*]:

1. [*]

[*]:

1. [*]
2. [*]

II. [*]

A. [*]
   (i) [*]
   (ii) [*]

B. [*]

[*]

a) [*]

1. [*]
   a. [*]
   b. [*]

2. [*]
   c. [*]
   d. [*]

3. [*]
   e. [*]
   f. [*]

4. [*]
   g. [*]
   h. [*]

5. [*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
b) [*]
1. [*]
2. [*]

c) [*]
d) [*]
e) [*]
f) [*]
g) [*]
h) [*]
i) [*]
j) [*]
k) [*]

III [*]
A. [*]:
a) [*]
   [*]
b) [*]
   [*]
c) [*]
   [*]

B. [*]:
a) [*]
   1. [*]
   2. [*]
   3. [*]
b) [*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Exhibit D
Development Plan

The proposed Development Plan for safety and non-clinical pharmacokinetic studies to go to phase 1 for each Licensed Product will set forth the timeline and details of all non-clinical and clinical Development activities. As of the Effective Date, the Parties have agreed upon the following sample Development Plan for a Licensed Product that directly and selectively modulates a Target that is a member of the microRNA 208/499 target family. The following sample Development Plan only includes preclinical Development activities and will be updated by the JRDC as provided for in the Agreement.

Servier and Miragen have established the following sample Development Plan outline which includes:

[*]:

[*]
A. [*]
B. [*]
C. [*]

[*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
NEUILLY SUR SEINE, France, and BOULDER, Colo., October 10, 2011 – Les Laboratoires Servier, a leading European pharmaceutical company with expertise in innovative treatments for cardiovascular diseases, and Miragen Therapeutics, Inc., a preclinical-stage biopharmaceutical company focused on improving patients’ lives by developing innovative microRNA (miRNA)-based therapeutics for cardiovascular and muscle disease, announced today an agreement for advancing the research, development and commercialization of three cardiovascular targets, including two of miRagen’s lead programs (miR-208 and miR-15/195) and one additional target yet to be identified. This partnership provides worldwide rights, excluding the U.S. and Japan, to Servier.

Under the terms of the agreement, Miragen will receive up to $45 million in total upfront, research support and near-term milestone payments over the next three years, as well as royalties on sales, based on the successful outcome of the collaboration. Additional clinical and commercial milestones, as well as clinical development support for the successful development of the three compounds, would value the deal at approximately $1 billion. Miragen and Servier will collaborate on the research and development effort, while Servier alone will be responsible for all costs associated with the global development.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
regulatory approval and commercialization of the three product candidates worldwide, excluding the U.S. and Japanese markets. Miragen retains all rights in the U.S. and Japan, and the option to co-sponsor any Phase III programs in the event that Miragen, alone or together with a partner, should seek marketing approvals for any of the targets in the U.S. and Japan.

“We are very pleased with this new partnership, which demonstrates once again our ability to explore truly innovative treatments for patients suffering from cardiovascular diseases. Indeed, these diseases still represent the number one cause of mortality in most of the world,” said Emmanuel Canet, M.D., Ph.D., Head of Servier R&D.

“More and more evidence is gathering to show that some microRNAs are not only cardiovascular biomarkers, but they also play a significant role in the pathogenesis of various diseases from heart failure to coronary disease,” added Dr Jean-Paul Vilaine, Head of Servier’s Cardiovascular Unit.

“Our agreement with Servier not only provides validation of our lead programs in cardiac disease, but further underscores the potential of our innovative technology platform to deliver compelling drug candidates,” said William S. Marshall, Ph.D., President and Chief Executive Officer of Miragen Therapeutics, Inc. “We are delighted to partner with Servier, whose demonstrated leadership and expertise in the development of cardiovascular drugs are truly impressive. By combining our strengths, we hope to translate the potential of microRNA targeting into life-changing medicines for patients in need.”

The agreement includes two of Miragen’s lead programs: miR-208, which plays an important role in the pathogenesis and progression of heart failure, and miR-15/195, which plays a role in the survival and proliferative capacity of cardiomyocytes. The agreement also includes one additional cardiovascular microRNA modulator yet to be identified.

- **miR-208**: Miragen’s research has demonstrated that therapeutic inhibition of miR-208 may improve cardiac function and survival rates during heart failure. In addition, chemically-synthesized inhibitors of miR-208 have been shown to suppress pathological cardiac remodeling in a model of heart failure induced by chronic high blood pressure, while enhancing cardiac function and survival.

- **miR-15/195**: Research has shown that the inhibition of miR-15 may stimulate cardiomyogenesis, the process whereby new heart muscle cells are formed, and that inhibition of miR-15 can spare cardiomyocytes from death during myocardial infarction (MI), resulting in less heart tissue death and an improvement in cardiac function after a heart attack.

**About microRNAs:** MicroRNAs have emerged as an important class of small RNAs encoded in the genome. They act to control the expression of sets of genes and entire pathways and are thus thought of as master regulators of gene expression. Recent studies have demonstrated that microRNAs are associated with many disease processes. Because they are single molecular entities that dictate the expression of fundamental regulatory pathways, microRNAs represent potential drug targets for controlling many biologic and disease processes.

**About Servier:** Servier is the leading independent pharmaceutical company in France with sales worldwide reaching EUR3.7 billion in 2010. Servier is established in 140 countries with its main therapeutic products treating cardiovascular diseases, diabetes, CNS disorders, oncology and rheumatological diseases. More than 25 percent of Servier’s turnover is invested in research and development. Servier has more than 20,000 employees worldwide, including nearly 3,000 in R&D. For more information, please visit www.servier.com.

[= Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.]
About Miragen Therapeutics: Miragen Therapeutics, Inc., was founded in 2007 to develop innovative microRNA-based therapeutics for cardiovascular and muscle disease. Only recently discovered, microRNAs are short, single-stranded RNA molecules encoded in the genome that regulate gene expression and play a vital role in influencing cardiovascular and muscle disease. Cardiovascular disease is the leading cause of death globally and represents an enormous burden on global healthcare systems. Principally funded through venture capital investments, miRagen combines world recognized leadership in cardiovascular medicine with unprecedented in-house expertise in microRNA biology and chemistry. For more information, please visit www.miragentherapeutics.com.

- ENDS -

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Exhibit F

 Certain Terms of Upstream Licenses

 UNC Agreement

1. Notwithstanding the exclusive sublicenses granted by Miragen to Servier pursuant to Section 2.1 of this Agreement with respect to intellectual property licensed to Miragen pursuant to the UNC Agreement (such intellectual property, the "Licensed Technology"), Miragen's license to the Licensed Technology is not completely exclusive because (a) the University of North Carolina at Chapel Hill ("UNC") retains the right to use the Licensed Technology for its own internal research, teaching and other educationally-related non-commercial purposes and (b) to the extent that such Licensed Technology is an invention that is claimed in a patent application or issued patent and that was made with funding from the United States government, the United States government retains rights to such inventions as specified in 35 United States Code Sections 200-212 and 37 Code of Federal Regulations Part 401.

2. Notwithstanding the obligations of the Parties pursuant to Section 11.1 of this Agreement to keep Miragen Know-How confidential and the obligations of the Parties pursuant to Section 11.4 of this Agreement with respect to scientific publications, UNC has the right to publish Know-How included in the Licensed Technology, provided that it complies with the publication review provisions set forth in Section 3.1 of the UNC Agreement.

3. Notwithstanding the patent prosecution provisions set forth in Section 10.2 of this Agreement, unless Miragen and UNC reach agreement for Miragen to assume responsibility for the filing, prosecution and maintenance of patent applications within the Licensed Technology, UNC has the primary right to file, prosecute and maintain such applications and such right is only subject to UNC’s obligations pursuant to Section 7.1 of the UNC Agreement. With respect to those patent applications within the Licensed Technology that Miragen and UNC have agreed or will agreed for Miragen to assume responsibility for the filing, prosecution and maintenance thereof, Miragen has or will have the obligations set forth in Section 7.2 of the UNC Agreement with respect to such filing, prosecution and maintenance and such obligations take precedence over any provisions of Section 10.2 of this Agreement that are not consistent therewith.

4. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to Confidential Information of Servier regarding the infringement or alleged infringement of Miragen Patents, Miragen shall have the right to fulfill its obligations pursuant to Section 8.1 of the UNC Agreement to promptly provide UNC with written notice of any alleged infringement of patents within the Licensed Technology.

5. Notwithstanding the patent enforcement provisions set forth in Section 10.3 of this Agreement, if Miragen does not file suit against a substantial infringer of a patent within the Licensed Technology within [*] of knowledge thereof and has not entered into good [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
faith negotiations to sublicense such patent to such infringer and such infringement has not otherwise ceased, then (a) UNC may enforce such patent on behalf of itself and Miragen, (b) UNC has the right to retain [*] of any recoveries it receives from such enforcement, after deduction of its reasonable attorneys’ fees and court costs in connection with such enforcement and (c) Miragen shall cooperate with UNC with respect such suit, including providing access to relevant personnel, records, papers, information, samples and specimens.

6. If the UNC Agreement is terminated at a time when Servier holds a sublicense to the Licensed Technology and Servier is in good standing at the time of such termination, then UNC is obligated to accept Servier as a successor to Miragen under the UNC Agreement if Servier consents in writing to be bound by all applicable terms and conditions of the UNC Agreement.

7. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to the existence or terms of this Agreement, Miragen shall have the right to fulfill its obligations pursuant to Section 3.2 of the UNC Agreement to provide UNC with a redacted copy of this Agreement and all modifications and terminations thereof.

8. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to the Miragen Know-How, Servier Know-How and other Know-How disclosed by Servier concerning its Development activities for Licensed Products, Miragen shall have the right to fulfill its obligations pursuant to Section 4.5 of the UNC Agreement to provide UNC with (a) annual reports concerning efforts towards achieving the first commercial sale of a Licensed Product (provided that such Licensed Product also satisfies the definition of “Licensed Product” set forth in the UNC Agreement) and summarizing Licensed Product Data (as defined in the UNC Agreement) and (b) additional information reasonably requested by UNC regarding such efforts. Servier shall promptly provide Miragen with all such additional information available to Servier and reasonably requested by Miragen for the purpose of facilitating Miragen’s compliance with such obligations.

9. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to Confidential Information of Servier regarding the Initiation of clinical trials for a Licensed Product or the approval of an MAA, Miragen shall have the right to fulfill its obligations pursuant to Section 4.1(c) of the UNC Agreement to make milestone payments to UNC on account of the Initiation of certain such clinical trials or certain such MAA approvals.

10. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to Confidential Information of Servier included in the royalty reports provided by Servier pursuant to Section 9.5(d) of this Agreement or disclosed to Miragen pursuant to Section 9.9 of this Agreement, Miragen shall have the right to fulfill its obligations (a) pursuant to Section 4.3 of the UNC Agreement to provide UNC with quarterly reports concerning sales of Licensed Product (provided that such Licensed Product also satisfies the definition of “Licensed Product” set forth in the UNC Agreement) and calculation of the royalties owed to UNC on account of such sales and (b) to permit UNC to audit its books.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
ledgers and records in accordance with Section 4.4 of the UNC Agreement. Servier acknowledges that the definition of “Net Sales” and the mechanisms for adjusting Net Sales to account for sales of a Combination Product, for reducing royalty payments on account of payment made to other licensors, and for currency conversions in the UNC Agreement are different from the corresponding provisions of this Agreement, and Servier agrees to provide, at least five (5) days before Miragen's deadline for submitting its royalty report to UNC, all information available to Servier and reasonably requested by Miragen for the purpose of facilitating Miragen's compliance with its royalty reporting obligations to UNC.

**UT Southwestern Agreements**

1. Notwithstanding the exclusive sublicenses granted by Miragen to Servier pursuant to Section 2.1 of this Agreement with respect to intellectual property licensed to Miragen pursuant to a UT Southwestern Agreement (such intellectual property, the “Licensed Subject Matter”), Miragen’s license to the Licensed Subject Matter is not completely exclusive because: (a) the Board of Regents of the University of Texas System (the “Board”) retains the right to use the Licensed Subject Matter for University of Texas System research, teaching and other educationally-related non-commercial purposes; (b) the Board retains the right to transfer Licensed Subject Matter to other non-profit academic or research institutions for non-commercial research, which research shall exclude research for which a commercial entity gets a license or option to resulting intellectual property; (c) Miragen’s license to the Know-How within the Licensed Subject Matter is non-exclusive but the Board, except as specified in (b) above, is not permitted to grant to any Third Party (as defined in the UT Southwestern Agreement) a license under such Know-How to discover, research, develop, make, have made, use, offer for sale, sell or import Licensed Products (as defined in the UT Southwestern Agreement); and (d) to the extent that such Licensed Subject Matter is an invention that is claimed in a patent application or issued patent and that was made with funding from the United States government, the United States government retains rights to such inventions as specified in 35 United States Code Sections 200-212 and 37 Code of Federal Regulations Part 401.

2. Notwithstanding the obligations of the Parties pursuant to Section 11.1 of this Agreement to keep Miragen Know-How confidential and the obligations of the Parties pursuant to Section 11.4 of this Agreement with respect to scientific publications, the Board has the right to publish general scientific findings from research related to the Licensed Subject Matter, provided that it does not disclose confidential information of Miragen and that it complies with its confidentiality obligations to Miragen pursuant to the Sponsored Research Agreement between Miragen and Board.

3. Notwithstanding the patent prosecution provisions set forth in Section 10.2 of this Agreement, unless Miragen assumes responsibility for the filing, prosecution and maintenance of patent applications within the Licensed Subject Matter, Board has the primary right to file, prosecute and maintain such applications and such right is only subject to Board’s obligations pursuant to Section 13.3 of the UT Southwestern Agreement. With respect to those patent applications within the Licensed Subject Matter for which Miragen assumes responsibility for the filing, prosecution and maintenance

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
thereof, Miragen has or will have the obligations set forth in Section 13.2 of the UT Southwestern Agreement with respect to such filing, prosecution
and maintenance and such obligations take precedence over any provisions of Section 10.2 of this Agreement that are not consistent therewith.

4. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to Confidential Information of Servier regarding the
infringement or alleged infringement of Miragen Patents, Miragen shall have the right to fulfill its obligations pursuant to Section 7.1 of the UT
Southwestern Agreement to promptly provide Board with written notice of any alleged infringement of patents within the Licensed Subject Matter.

5. Notwithstanding the patent enforcement provisions set forth in Section 10.3 of this Agreement, if Miragen does not file suit against a substantial
infringer of a patent within the Licensed Subject Matter within [*] of knowledge thereof and has not entered into good faith negotiations to sublicense
such patent to such infringer and such infringement has not otherwise ceased, then (a) Board may enforce such patent on behalf of itself and Miragen,
(b) Board has the right to retain [*] recoveries it receives from such enforcement, (c) Board has the right to reduce the exclusive license granted to
Miragen pursuant to the UT Southwestern Agreement to a non-exclusive license with respect to such patent and to grant a non-exclusive, non-
transferable, non-sublicensable license under such patent solely to such infringer and solely with respect to the infringing product or method and
(d) Miragen shall cooperate with Board with respect such suit, including providing access to relevant personnel, records, papers, information, samples
and specimens. If Board exercises its right to reduce the exclusive license granted to Miragen pursuant to the UT Southwestern Agreement to a non-
exclusive license, then such reduction shall be an exception to the exclusivity of Servier’s sublicense with respect thereto. Miragen hereby agrees that it
shall not decide not to file a suit against a substantial infringer without first discussing with Servier of the opportunity of bringing such a suit.

6. If a UT Southwestern Agreement is terminated at a time when Servier holds a sublicense to the Licensed Subject Matter for such UT Southwestern
Agreement and Servier is in good standing at the time of such termination, then Board and University of Texas Southwestern Medical Center are
obligated to accept Servier as a successor to Miragen under such UT Southwestern Agreement if Servier consents in writing to be bound by all
applicable terms and conditions of such UT Southwestern Agreement.

7. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to the existence or terms of this Agreement, Miragen shall
have the right to fulfill its obligations pursuant to Section 4.4 of the UT Southwestern Agreement to provide Board with a redacted copy of this
Agreement and all modifications and terminations thereof.

8. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to Confidential Information of Servier regarding the Initiation
of clinical trials for a Licensed Product or the approval of an MAA, Miragen shall have the right to fulfill its obligations pursuant to Section 5.1(d) of
the UT Southwestern Agreement to make milestone payments to Board on account of the Initiation of certain such clinical trials or certain such MAA
approvals.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to
Rule 406 of the Securities Act of 1933, as amended.
9. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to Confidential Information of Servier concerning its Commercialization plans and activities for Licensed Products, Miragen shall have the right to fulfill its obligations pursuant to Section 5.6 of the UT Southwestern Agreement to provide Board with annual written progress reports concerning Miragen’s and Servier’s efforts and accomplishments during the preceding year in diligently commercializing Licensed Subject Matter and Miragen’s and Servier’s commercialization plans for the upcoming year. Servier shall promptly provide Miragen with all information available to Servier and reasonably requested by Miragen for the purpose of facilitating Miragen’s compliance with such obligations.

10. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to Confidential Information of Servier included in the royalty reports provided by Servier pursuant to Section 9.5(d) of this Agreement or disclosed to Miragen pursuant to Section 9.9 of this Agreement, Miragen shall have the right to fulfill its obligations (a) pursuant to Section 5.5 of the UT Southwestern Agreement to provide Board with quarterly reports concerning sales of Licensed Product (provided that such Licensed Product also satisfies the definition of “Licensed Product” set forth in the UT Southwestern Agreement) and calculation of the royalties owed to Board on account of such sales and (b) to permit UNC to audit its books, ledgers and records in accordance with Section 5.4 of the UT Southwestern Agreement. Servier acknowledges that the definition of “Net Sales” and the mechanisms for adjusting Net Sales to account for sales of a Combination Product, for reducing royalty payments on account of royalty payment made to other licensors, and for currency conversions in the UT Southwestern Agreement are different from the corresponding provisions of this Agreement, and Servier agrees to provide, at least five (5) days before Miragen’s deadline for submitting its royalty report to Board, all information available to Servier and reasonably requested by Miragen for the purpose of facilitating Miragen’s compliance with its royalty reporting obligations to Board.

**Santaris Agreement**

1. The licenses granted by Miragen to Servier pursuant to Section 2.1(a) of this Agreement [*]. Servier acknowledges that [*] any Know-How within the LNA Platform Technology (as defined in the Santaris Agreement) that pertains to [*].

2. The licenses granted by Miragen to Servier pursuant to Section 2.1(a) of this Agreement, are, with respect to the intellectual property licensed to Miragen pursuant to the Santaris Agreement (the “Santaris IP”), sublicenses of the license granted to Miragen pursuant to Section 3.1 of the Santaris Agreement (the “Product License”) and are limited to the scope of such Product License. The Product License is limited to research (other than to Discover), Development, Manufacture and Commercialization (as such terms are defined in the Santaris Agreement) of Products for the treatment, prevention or mitigation of any disease, disorder or medical condition in humans, wherein the term “Product” means a pharmaceutical product that contains at least one single-stranded oligonucleotide that (a) contains at least one 2’,O,4’-C methylene ribonucleoside that is claimed in a Santaris [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
patent, (b) is [*] as such terms are defined in Section 1.27 of the Santaris Agreement, (c) [*] and (d) is designed or being developed to exert its biological effect through binding to such Miragen Target. For clarity, as of the Effective Date, the term “Miragen Target” is limited to mature microRNA sequences, identified in Schedule 1.64 of the Santaris Agreement, that are within the microRNA-208/499 target family, the microRNA15/195 target family or the [*] target family. Therefore, unless the Third Target and/or Replacement Target is accepted by Santaris for inclusion under the Santaris Agreement pursuant to Paragraph 3 of the Amendment to License Agreement between Santaris and Miragen, dated October 12, 2011 (the “Santaris Amendment”) (in which case the Parties will amend this Exhibit F accordingly) or the [*] target family is chosen as a Target pursuant to Section 4.5 or 4.6 of this Agreement, Servier’s license pursuant to Section 2.1(a) of this Agreement does not include a sublicense of the Santaris IP with respect to any Licensed Product that contains a Licensed Oligo that modulates the Third Target or Replacement Target and such license shall cease to include Licensed Products that contain Licensed Oligos that modulate the microRNA-208/499 target family or the microRNA15/195 target family if a Replacement Target is selected for such target family in accordance with Section 4.6 of this Agreement.

3. The licenses granted by Miragen to Servier pursuant to Section 2.1(b) of this Agreement [*] because [*] and [*] or [*] and [*].

4. Miragen’s grant of a sublicense to Servier under the Product License, and Servier’s grant of any subsequent sublicense thereof, is contingent upon such sublicense being in writing and being subject and subordinate to, and consistent with, the terms of the Santaris Agreement that apply to such sublicense, which terms and conditions are set forth in this Exhibit F. Servier hereby agrees to comply with, and agrees to cause its sub-sublicees to comply with, those terms of the Santaris Agreement set forth in this Exhibit F, including the following terms of the Santaris Agreement, (a) keeping books and records with respect to sales of Products for a period of [*] years after the year in which they were generated, (b) permitting Santaris Pharma A/S (“Santaris”) to audit (through an independent auditor and consistent with Section 4.7(b) of the Santaris Agreement) such books and records for the sole purpose of verifying Net Sales-based payments (as defined in Section 1.43 of the Santaris Agreement) made by Miragen pursuant to Section 4.5 of the Santaris Agreement, and (c) indemnifying Santaris from and against any and all liability, loss, damage, expense and cost that Santaris, its Affiliates (as defined in the Santaris Agreement) licensors and assignors and each of their respective employees, officers, directors and agents (collectively, the “Santaris Indemnitees”), incurs or suffers resulting from or arising out of any third party claims arising out of Servier’s (or its sub-sublicee’s, as applicable) development, manufacture, or commercialization of any Product or a single-stranded oligonucleotide described above as being contained therein, including any patent infringement or the personal injury or death of any person as a result of use of any such Product or oligonucleotide, except to the extent caused by (i) the gross negligence or willful misconduct of Santaris or any Santaris Indemnitee, (ii) any Santaris representation set forth in the Santaris Agreement as being untrue when made, or (iii) any breach by Santaris of any of its covenants under the Santaris Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
5. Miragen, Servier (for so long as Servier has a sublicense under the Santaris IP pursuant to this Agreement), and Servier’s sub-sublicensees of the Santaris IP shall not [*] until the earliest of: (a) [*], (b) [*], or (iii) [*]. The Parties shall agree upon a Development Plan that allows Miragen and Servier to comply with such obligation.

6. Miragen, Servier and Servier’s sub-sublicensees of the Santaris IP shall not use in humans any LNA Raw Materials (as defined in the Santaris Agreement) procured by Miragen pursuant to Section 3.6(d) of the Santaris Agreement. Servier hereby acknowledges that such LNA Raw Materials are experimental in nature and shall secure the equivalent acknowledgement from its sub-sublicensees, if any. The Parties shall agree upon a Development Plan that allows Miragen and Servier to comply with such obligation.

7. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to the Miragen Know-How, Servier Know-How and other Know-How disclosed by Servier concerning its Development activities and plans for Licensed Products, Miragen shall have the right to fulfill its obligations pursuant to (a) Section 2.5 of the Santaris Agreement to provide the JRC (as defined in the Santaris Agreement) with reports concerning Miragen’s research activities with respect to each Target Family (as defined in the Santaris Agreement) for which the Research License has not terminated, including summaries of data and results with respect to such Target Families and an assessment of the likelihood of, and timetable for, the completion of any IMPD-enabling studies and filing of a CTA for such Target Families and (b) Section 3.3 of the Santaris Agreement to provide semi-annual reports regarding Product research and development activities and to meet with Santaris, upon Santaris’ request, to review such Product research and development activities. Servier shall promptly provide Miragen with all information available to Servier and reasonably requested by Miragen for the purpose of facilitating Miragen’s compliance with such obligations.

8. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to the existence or terms of this Agreement, Miragen shall have the right to fulfill its obligations pursuant to Section 4.6 of the Santaris Agreement to provide Santaris with quarterly reports concerning consideration received by Miragen from Servier on account of Miragen’s grant of a sublicense to the Santaris IP (provided that such consideration also satisfies the definition of “Sublicense Revenue” set forth in the Santaris Agreement) and calculation of the payments owed to Santaris on account of such consideration.

9. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to Confidential Information of Servier included in the royalty reports provided by Servier pursuant to Section 9.5(d) of this Agreement or disclosed to Miragen pursuant to Section 9.9 of this Agreement, Miragen shall have the right to fulfill its obligations pursuant to Section 4.6 of the Santaris Agreement to provide Santaris with quarterly reports concerning sales of Licensed Product (provided that such Licensed Product also satisfies the definition of “Product” set forth in the Santaris Agreement) and calculation of the royalties owed to Santaris on account of such sales. Servier acknowledges that the definition of “Net Sales” and the mechanisms for adjusting Net Sales to account for sales of a Combination Product, for reducing royalty payments on account of lack of a Valid Claim (as defined in the Santaris Agreement) within the Santaris IP that claims the

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
composition of matter of, or method of using, such Licensed Product in the country of sale, for reducing royalty payments on account of sales of a
generic version of such Licensed Product and for currency conversions in the Santaris Agreement are different from the corresponding provisions of
this Agreement, and Servier agrees to provide, at least five (5) days before Miragen’s deadline for submitting its royalty report to Santaris, all
information available to Servier and reasonably requested by Miragen for the purpose of facilitating Miragen’s compliance with its royalty reporting
obligations to Santaris.

10. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to the Miragen Know-How, Servier Know-How and other
Inventions disclosed by Servier pursuant to Section 10.1 of this Agreement, Miragen shall have the right to fulfill its obligations pursuant to
Section 5.3(a) of the Santaris Agreement to disclose to Santaris any and all Improvements to LNA Platform Technology (as defined in the Santaris
Agreement).

11. Servier hereby grants to Santaris a worldwide, non-exclusive, irrevocable and fully paid-up license, with the right to sublicense, to exploit for any
purpose any and all Improvements to LNA Platform Technology made by Servier and its Affiliates. Servier and its Affiliates shall take appropriate
steps to ensure that their employees, consultants and all other personnel are obligated to grant such license to Santaris.

12. Notwithstanding the patent prosecution provisions set forth in Section 10.2 of this Agreement, Santaris has the sole right to prepare, file, prosecute and
maintain any patent within the Santaris Technology (as defined in the Santaris Agreement) and such right is only subject to Santaris’ obligations
pursuant to Section 5.4(b) of the Santaris Agreement.

13. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to Confidential Information of Servier regarding the
infringement or alleged infringement of Miragen Patents, Miragen shall have the right to fulfill its obligations pursuant to Section 5.5(a) of the Santaris
Agreement to promptly provide Santaris with written notice of any alleged infringement of Miragen Patents (as defined in the Santaris Agreement) or
patents within the Santaris IP.

14. Notwithstanding the patent enforcement provisions set forth in Section 10.3 of this Agreement, Santaris has the sole right to enforce all patents within
the LNA Platform Technology (as defined in the Santaris Agreement) and the first right to enforce all patents within the Santaris Technology (as
defined in the Santaris Agreement), provided that if a third party infringes any patents within the LNA Platform Technology or the Santaris Technology
by selling any product comprising a Miragen Compound for use in the Field, then Santaris shall: (a) enforce such patents within the LNA Platform
Technology or the Santaris Technology against such third party at Santaris’ sole cost and expense or (b) permit Miragen to enforce such patents within
the Santaris Technology (but not patents within the LNA Platform Technology) at Miragen’s cost and expense, as provided in Section 5.5(c) of the
Santaris Agreement. If Santaris so enforces such patent, Miragen shall assist and cooperate with Santaris with respect such suit and Santaris has the
right to retain, after reimbursement of Santaris’ and Miragen’s expenses incurred in connection with such enforcement action, [*] of all recoveries it
receives from such

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to
Rule 406 of the Securities Act of 1933, as amended.
enforcement. If Miragen so enforces such patent, (i) Santaris may participate, at its own expense and with its own counsel, in any proceedings relating
to the validity of such patent, (ii) Miragen is obligated to keep Santaris reasonably informed of all material developments relating to such enforcement
action, (iii) Santaris shall not be bound by any offer of settlement or compromise without its prior written consent (which shall not be unreasonably
withheld), and (iv) Miragen is obligated to pay to Santaris, after reimbursement of Santaris’ and Miragen’s expenses incurred in connection with such
enforcement action, [*] of all recoveries it receives from such enforcement, except to the extent that such payment would otherwise [*].

15. [*]
   a. [*]
   b. [*]
   c. [*]
   d. [*]
   e. [*]
   f. [*]

16. [*]
   a. [*]
   b. [*]
   c. [*]
   d. [*]
   e. [*]
   f. [*]
   g. [*]
   h. [*]
   i. [*]
   j. [*]
   k. [*]
   l. [*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to
Rule 406 of the Securities Act of 1933, as amended.
Exhibit G
Exceptions to Miragen’s Representations and Warranties

1. [*]
   a. [*]
   b. [*]
   c. [*]

2. [*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
FIRST AMENDMENT OF
THE LICENSE AND COLLABORATION AGREEMENT

This FIRST AMENDMENT OF THE LICENSE AND COLLABORATION AGREEMENT (this “First Amendment”) is made and effective as of May 13, 2013 (the “First Amendment Effective Date”) by and between Miragen Therapeutics, Inc., a corporation organized and existing under the laws of Delaware, having its principal place of business at 6200 Lookout Rd., Suite 100, Boulder, CO 80301, USA (“Miragen”) on the first part, and Les Laboratoires Servier, a corporation organized and existing under the laws of France, having offices at 50 rue Carnot, 92284 Suresnes cedex France and Institut de Recherches Servier, a corporation organized and existing under the laws of France, having offices at 3 rue de la République, 92150 Suresnes, France (these two entities jointly referred to as “Servier”) on the second part. Servier and Miragen are referred to in this Agreement individually as a “Party” and collectively as the “Parties.”

WHEREAS, Miragen and Servier are parties to that certain License and Collaboration Agreement, dated October 13, 2011 (the “Collaboration Agreement”), pursuant to which the Parties established a collaboration for the research, development and commercialization of products directed at miRNA targets for the treatment of cardiovascular diseases;

WHEREAS, Section 4.5 of the Collaboration Agreement contemplates that the Parties will select the Third Target (as defined in the Collaboration Agreement) under the terms and conditions thereof, and the Parties have now selected [*] as the Third Target;

WHEREAS, Miragen amended the Santaris Agreement (as defined in the Collaboration Agreement) on December 31, 2012 in accordance with Section 13.3(c) of the Collaboration Agreement;

WHEREAS, in connection with the selection of [*] and the amendment to the Santaris Agreement, the Parties now desire to amend certain terms and conditions of the Collaboration Agreement, all as set forth below.

NOW THEREFORE, in consideration of the foregoing premises and the mutual promises, covenants and conditions contained in this First Amendment, the Parties agree as follows:

1. Unless otherwise indicated, capitalized terms used but not defined herein shall have the meanings set forth in the Collaboration Agreement.

2. The Parties acknowledge that, pursuant to Section 4.5 of the Collaboration Agreement, Miragen, at Servier’s request, submitted [*] (as described on Exhibit 1 hereto) to Santaris for inclusion in the Santaris Agreement, that [*] has been accepted by Santaris for
inclusion in the Santaris Agreement as Existing Target Family 4 (as defined in the Santaris Agreement), and as a result of such acceptance [*] has been selected as the Third Target under the Collaboration Agreement. This First Amendment is the amendment that the Parties are obligated to enter into to satisfy the obligations of Sections 1.120, 1.121, 2.1(c)(iii), 2.1(c)(iv) and 4.5 of the Collaboration Agreement.

3. As required by Section 4.5 of the Collaboration Agreement upon the selection of the Third Target, the Parties hereby delete Exhibit C (the Research Plan) of the Collaboration Agreement and replace it with the amended Research Plan set forth in Exhibit 2 hereto, which include the research activities related to [*] as the Third Target. Notwithstanding the requirement in Section 4.5 to update and amend the Development Plan promptly upon the selection of the Third Target to include the Development activities related to the Third Target, the Parties have decided to update and amend the Development Plan at a later date, but not later than at the selection by the Parties of Licensed Products directed to the Third Target for use in IMPD-enabling toxicology studies, to include the Development activities related to the Third Target.

4. Section 1.9 of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“1.9 “Cardiovascular Disease” means any disease, disorder or medical condition relating to a structural or functional abnormality of the cardiovascular system that impairs its normal functioning, including any disease, disorder or medical condition that directly involves or affects the heart or vascular system, including stroke and pulmonary hypertension. For clarity, Cardiovascular Disease excludes hematological disorders, immunological disorders, neoplasms, neurological disorders and metabolic disorders (except for the direct vascular or cardiovascular effects of a metabolic disorder).

5. Section 1.70 of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“1.70 “Miragen Therapeutic IP” means all Patent Rights and Know-How that are (a) Controlled by Miragen or its Affiliates (subject to Section 15.2) as of the Effective Date or during the Term and (b) reasonably necessary or useful for the development, manufacture, use, importation and/or sale of Licensed Oligos and/or Licensed Products in the Field. Miragen Therapeutic IP shall include Miragen’s rights to Joint IP that satisfies “(b),” but, notwithstanding the foregoing, shall exclude (i) all Patent Rights and Know-How that satisfy “(a)” and “(b)” and arose from Unsponsored Work performed by Miragen unless and until Servier reimburses Miragen for such work in accordance with Section 5.4(c) and (ii) except for the Patent Rights and Know-How licensed to Miragen pursuant to the Glasgow Agreement, all Patent Rights and Know-How licensed to Miragen or its Affiliate pursuant to a license agreement entered into after the Effective Date that is not an Additional Third Party Therapeutic License.”

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
6. Section 1.100 of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“1.100 "Santaris Agreement" means that certain Amended and Restated License Agreement by and between Santaris Pharma A/S ("Santaris") and Miragen, dated December 31, 2012.”

7. Section 1.120 of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“1.120 “Upstream License Agreements” means, as of the First Amendment Effective Date, the Santaris Agreement, UNC Agreement, UT Southwestern Agreements and the Glasgow Agreement. Upon the selection of a Replacement Target, the Parties shall amend this definition as necessary to add all additional license agreements between Miragen and a Third Party entered into before the Effective Date pursuant to which Miragen has a sublicensable license to Miragen Therapeutic IP that covers such Replacement Target or Licensed Oligos that directly and selectively modulate such Third Target. Upon the selection of a Replacement Target, the Parties shall amend this definition to remove all license agreements between Miragen and a Third Party pursuant to which Miragen has a sublicensable license to intellectual property that is no longer Miragen Therapeutic IP because it covers a member of the microRNA target family that was replaced by such Replacement Target or Licensed Oligos that directly and selectively modulate such member.”

8. Section 1.121 of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“1.121 “Upstream Licensors” means, as of the First Amendment Effective Date, Santaris, University of North Carolina at Chapel Hill, University of Texas System and Glasgow. The Parties shall amend this definition together with the amendment of the definition of “Upstream License Agreements” so that the entities included in this definition are the Third Parties that granted licenses to Miragen under the agreements that are then included in the definition of Upstream License Agreements.”

9. The following definitions are hereby added to the Collaboration Agreement:

“1.126 “Glasgow” means the University Court of the University of Glasgow.

1.127 “Glasgow Agreement” means that certain Licence Agreement by and between Miragen and Glasgow, dated February 15, 2013, as amended by that letter agreement between Miragen and Glasgow, dated April 25th, 2013.”

10. Section 2.1(c)(iii) of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“(iii) such sublicenses are subject and subordinate to the terms and conditions of the applicable Upstream License Agreements described in Exhibit F, which exhibit shall be amended upon the selection of a Replacement Target to add the relevant terms and conditions of any new Upstream License Agreement and to delete the terms and conditions of any agreement which is no longer an Upstream License Agreement;”

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
11. Section 2.1(c)(iv) of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“(iv) Servier shall comply only with those terms of the Upstream License Agreements which are specifically described in Exhibit F, which exhibit shall be amended upon the selection of a Replacement Target to add the relevant terms and conditions of any new Upstream License Agreement and to delete the terms and conditions of any agreement which is no longer an Upstream License Agreement.”

12. Section 4.6(d) of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“(d) If, based on results obtained from the activities set forth in the Research Plan and the criteria set forth above in Section 4.6(a), the JRDC or Servier as the case may be determines that the microRNA-15/195 target family, the microRNA-208/199 target family or the Third Target is not suitable as a Target, then the microRNA-15/195 target family and/or the microRNA-208/199 target family and/or the Third Target, as applicable, shall no longer be deemed a Target hereunder, and the JRDC shall select a microRNA target family from the Target List -which may be amended from time to time by the JRDC in accordance with Section 4.5 for so long as a Target can be replaced- as a replacement for such target (such replacement, the “Replacement Target”), provided however that in the case the JRDC cannot reach an agreement as to such selection from the Target List, Servier shall have the final say. Upon selection of the Replacement Target:

(i) Servier’s licenses and rights under this Agreement pertaining to the microRNA-15/195 target family and/or to the microRNA-208/199 target family and/or the Third Target, as applicable, shall terminate;

(ii) such Replacement Target(s) shall be deemed Target(s) hereunder;

(iii) the Parties shall update and amend the Research Plan and the Development Plan to exclude the research and Development activities related to the microRNA-15/195 target family and/or to the microRNA-208/199 target family and/or the Third Target, as applicable, and to include the research and Development activities related to such Replacement Target(s);

(iv) Servier hereby assigns to Miragen, effective as of such JRDC determination, all right, title and interest in and to any and all Inventions related to the microRNA-15/195 target family and/or to the microRNA-208/199 target family and/or the Third Target, as applicable, as well as any and all data and results generated by Servier in the course of any work performed pursuant to this Agreement with respect to the microRNA-15/195 target family and/or to the microRNA-208/199 target family and/or the Third Target, as applicable;

(v) all such Inventions, data and results shall be deemed Confidential Information of Miragen;

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(vi) Servier shall promptly transfer all tangible and electronic embodiments of such Inventions, data and results to Miragen;

(vii) Servier shall comply with the terms of the Santaris Agreement with respect to the replaced target (microRNA-15/195 target family and/or to the microRNA-208/199 target family and/or the Third Target, as applicable) as set forth in clause (16) of the part of Exhibit F that relates to the Santaris Agreement, provided that Servier shall not be required to assign or license to Santaris the Inventions, data and results that are assigned to Miragen pursuant to clause (iv) above;

(viii) as between Miragen and Servier, Miragen shall have the right to research, develop and/or commercialize any product pertaining to the microRNA-15/195 target family and/or the microRNA-208/199 target family and/or the Third Target, as applicable, or any component therein in any field and anywhere, either by itself or in collaboration with a Third Party, without any further obligation to Servier; and

(ix) The Parties shall decide whether they wish to incorporate Santaris’ LNA technology into Licensed Products directed to the selected Replacement Target or whether they wish to utilize, in lieu of Santaris’ LNA technology, an alternative chemistry having drug-like properties which could be incorporated into Licensed Products directed to the selected Replacement Target. If the Parties decide that they wish to incorporate Santaris’ LNA technology into Licensed Products directed to such Replacement Target, then Miragen shall use Commercially Reasonable Efforts to obtain a license from Santaris for such purpose (whether pursuant to the Santaris Agreement or an amendment thereof or pursuant to a separate license agreement with Santaris), which license can be sublicensed to Servier, without further payment by Servier, under the terms of this Agreement. If the Parties decide that they wish to incorporate such alternative technology into Licensed Products directed to such Replacement Target, then Miragen shall use Commercially Reasonable Efforts to enter into a Third Party agreement to obtain a license to such alternative technology with respect to such Replacement Target, which license can be sublicensed to Servier, without further payment by Servier, under the terms of this Agreement. For clarity, (i) if Miragen fails to obtain a license from Santaris to Santaris’ LNA technology with respect to such Replacement Target and the Parties then decide that they wish to incorporate the alternative technology into Licensed Products directed to such Replacement Target, then Miragen shall use Commercially Reasonable Efforts to enter into a Third Party agreement to obtain a license to such alternative technology with respect to such Replacement Target, which license can be sublicensed to Servier, without further payment by Servier, under the terms of this Agreement or (ii) if Miragen fails to obtain a Third Party license to the alternative technology that covers the Replacement Target and the Parties then decide that they wish to incorporate Santaris’ LNA technology into Licensed Products directed to such Replacement Target, then Miragen shall use Commercially Reasonable Efforts to obtain a license from Santaris for such purpose (whether pursuant to the Santaris Agreement or an amendment thereof or pursuant to a separate license agreement with Santaris), which license can be sublicensed to Servier, without further payment by Servier, under the terms of this Agreement. For further clarity, it shall not be a breach of this Agreement if Miragen, after using Commercially Reasonable Efforts, fails to obtain a license from Santaris to Santaris’ LNA technology with respect to such Replacement Target and/or a Third Party license to the alternative technology that covers the Replacement Target, as applicable.”

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Section 9.4(a) of the Collaboration Agreement is hereby deleted and replaced, retroactively as of the date of selection of the Third Target, in its entirety with the following:

“(a) Designation and Maintenance of Third Target.

(i) In consideration for the successful gate-keeping and selection of the Third Target, Servier shall pay to Miragen a one-time non-refundable, non-creditable payment of [*] within [*] days after the receipt of an invoice for such amount from Miragen, which invoice shall not be submitted to Servier earlier than the First Amendment Effective Date.

(ii) No later than [*] Servier shall notify Miragen if it wishes to maintain its license to the Third Target and shall pay to Miragen a one-time non-refundable, non-creditable payment of [*] within [*] days after the receipt of an invoice for such amount from Miragen. If Miragen does not receive such notification from Servier by [*], then Servier shall be deemed to have terminated this Agreement for convenience with respect to the Third Target in all countries across the Territory pursuant to Section 12.2(a), effective on [*]. If Miragen receives such notification from Servier by [*] but does not receive the [*] payment from Servier within [*] days after Servier’s receipt of Miragen’s invoice, then if Miragen does not receive such payment within [*] days after its notice to Servier concerning such non-payment, then Servier shall be deemed to have terminated this Agreement for convenience with respect to the Third Target in all countries across the Territory pursuant to Section 12.2(a), effective at the end of such [*]-day period.”

14. The following is hereby added to the end of Section 11.1(d) of the Collaboration Agreement:

“, and (iii) with respect to any Miragen Confidential Information that is confidential information of Glasgow, shall remain in force indefinitely”

15. Section 13.3(f) of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“(f) [“

16. The Parties hereby amend Exhibit F (Certain Terms of Upstream Licenses) of the Collaboration Agreement by deleting the provisions therein relating to Santaris Agreement and adding the provisions set forth in Exhibit 3 hereto relating to the Santaris Agreement as amended and restated and the Glasgow Agreement.

17. This First Amendment amends the terms of the Collaboration Agreement as expressly provided above, and the Collaboration Agreement, as so amended and including all of its other terms and provisions that are not amended, remains in full force and effect and sets

[“] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
forth the complete, final and exclusive agreement and all the covenants, promises, agreements, warranties, representations, conditions and understandings between the Parties hereto with respect to the subject matter of the Collaboration Agreement and supersedes, as of the First Amendment Effective Date, all prior and contemporaneous agreements and understandings between the Parties with respect to the subject matter of the Collaboration Agreement. There are no covenants, promises, agreements, warranties, representations, conditions or understandings, either oral or written, between the Parties other than as set forth in the Collaboration Agreement (as amended by this First Amendment).

18. The validity, performance, construction, and effect of this First Amendment shall be governed by and construed under the laws of Germany, without giving effect to any choice of law principles that would require the application of the laws of a different state.

19. This First Amendment may be executed in one (1) or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
IN WITNESS WHEREOF, the Parties intending to be bound have caused this First Amendment to be executed by their duly authorized representatives as of the First Amendment Effective Date.

**Miragen Therapeutics, Inc.**

By: /s/ William S. MARSHALL  
Name: William S. MARSHALL  
Title: President and CEO

**Les Laboratoires Servier**

By: /s/ Christian BAZANTAY  
Name: Christian BAZANTAY  
Title: Proxy

**Institut de Recherches Servier**

By: /s/ Emmanuel CANET  
Name: Emmanuel CANET  
Title: President Research and Development

---

**[SIGNATURE PAGE OF THE FIRST AMENDMENT OF THE LICENSE AND COLLABORATION AGREEMENT BY AND BETWEEN MIRAGEN THERAPEUTICS, INC. AND LES LABORATOIRES SERVIER]**

[= Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.]

8
miRBase Name: [*]

miRBase Accession Number: [*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Research Plan

The aims of year 2 and 3 of the Research Collaboration are to [*].

Servier and miRagen have developed the following Research Plan outline which includes:

I. [*]
   A. [*]
   B. [*]
   C. [*]

II. [*]
   A. [*]
   B. [*]
   C. [*]

III. [*]
   A. [*]

I. [*]
   A. [*]

[*]

B. [*]

[*]

C. [*]

[*]

II. [*]
   A. [*]

[*]

B. [*]

[*]

C. [*]

[*]

III. [*]
   A. [*]
   B. [*]

[*]:

[*]

[*]:

[*]

[*]

[*]

[*]

[*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1. The licenses granted by Miragen to Servier pursuant to Section 2.1(a) of this Agreement [*]. Servier acknowledges that [*] any Know-How within the LNA Platform Technology (as defined in the Santaris Agreement) that pertains to [*].

2. The licenses granted by Miragen to Servier pursuant to Section 2.1(a) of this Agreement, are, with respect to the intellectual property licensed to Miragen pursuant to the Santaris Agreement (the “Santaris IP”), sublicenses of the license granted to Miragen pursuant to Section 3.2 of the Santaris Agreement (the “Product License”) and are limited to the scope of such Product License. The Product License is limited to research (other than to Discover), Development, Manufacture and Commercialization (as such terms are defined in the Santaris Agreement) of Products for the treatment, prevention or mitigation of any disease, disorder or medical condition in humans, wherein the term “Product” means a pharmaceutical product that contains at least one single-stranded oligonucleotide that (a) contains at least one 2’-O, 4’-C methylene ribonucleoside that is claimed in a Santaris patent, (b) is [*] as such terms are defined in Section 1.26 of the Santaris Agreement, (c) [*] and (d) is designed or being developed to exert its biological effect through binding to such Miragen Target.

3. Unless a [*] Target (as defined in the Santaris Agreement) is selected as a Replacement Target and accepted by Santaris, Miragen does not have a license from Santaris to the [*] Patents (as defined in the Santaris Agreement) and the licenses granted by Miragen to Servier pursuant to Section 2.1(a) of this Agreement do not include a sublicense to the [*] Patents. In the event that a [*] Target is selected as a Replacement Target and accepted by Santaris:
   a. Servier shall [*] necessary for [*] the [*] Divisional Patents and Miragen Target Specific [*] Divisional Patents (both as defined in the Santaris Agreement) pursuant to Section 5.6(c)(i) of the Santaris Agreement with respect to the Territory; and
   b. notwithstanding the patent enforcement provisions set forth in Section 10.3 of this Agreement, neither Miragen nor Servier shall have any right to enforce any [*] Patents or [*] Divisional Patents that claim LNA Compounds Targeting (as defined in the Santaris Agreement) [*] or a Target (as defined in the Santaris Agreement) that is not a Miragen Target but was an Excluded Target (as defined in the Santaris Agreement) at the time of Miragen’s nomination of the Replacement Target, if Santaris or its third party licensee is, at the time of such enforcement, then actively developing or commercializing any such LNA Compounds Targeting [*] or such other Target pursuant to a bona fide development or commercialization program.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
4. The licenses granted by Miragen to Servier pursuant to Section 2.1(b) of this Agreement [*] because [*] and [*] or [*] and [*].

5. Miragen’s grant of a sublicense to Servier under the Product License, and Servier’s grant of any subsequent sublicense thereof, is contingent upon such sublicense being in writing and being subject and subordinate to, and consistent with, the terms of the Santaris Agreement that apply to such sublicense, which terms and conditions are set forth in this Exhibit F. Servier hereby agrees to comply with, and agrees to cause its sub-sublicensees to comply with, those terms of the Santaris Agreement set forth in this Exhibit F, including the following terms of the Santaris Agreement, (a) keeping books and records with respect to sales of Products for a period of [*] years after the year in which they were generated, (b) permitting Santaris to audit (through an independent auditor and consistent with Section 4.12(b) of the Santaris Agreement) such books and records for the sole purpose of verifying Net Sales-based payments (as defined in Section 1.42 of the Santaris Agreement) made by Miragen pursuant to Section 4.9 of the Santaris Agreement, and (c) indemnifying Santaris from and against any and all liability, loss, damage, expense and cost that Santaris, its Affiliates (as defined in the Santaris Agreement) licensors and assignors and each of their respective employees, officers, directors and agents (collectively, the “Santaris Indemnitees”), incurs or suffers resulting from or arising out of any third party claims arising out of Servier’s (or its sub-sublicensee’s, as applicable) development, manufacture, or commercialization of any Product or a single-stranded oligonucleotide described above as being contained therein, including any patent infringement or the personal injury or death of any person as a result of use of any such Product or oligonucleotide, except to the extent caused by (i) the gross negligence or willful misconduct of Santaris or any Santaris Indemnitee, (ii) any Santaris representation set forth in the Santaris Agreement as being untrue when made, or (iii) any breach by Santaris of any of its covenants under the Santaris Agreement.

6. Miragen, Servier (for so long as Servier has a sublicense under the Santaris IP pursuant to this Agreement), and Servier’s sub-sublicensees of the Santaris IP shall not [*] until the earliest of: (a) [*], or (b) [*]. The Parties shall agree upon a Development Plan that allows Miragen and Servier to comply with such obligation.

7. Miragen, Servier and Servier’s sub-sublicensees of the Santaris IP shall not use in humans any LNA Raw Materials (as defined in the Santaris Agreement) procured by Miragen pursuant to Section 3.7(d) of the Santaris Agreement. Servier hereby acknowledges that such LNA Raw Materials are experimental in nature and shall secure the equivalent acknowledgement from its sub-sublicensees, if any. The Parties shall agree upon a Development Plan that allows Miragen and Servier to comply with such obligation.

8. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to the Miragen Know-How, Servier Know-How and other Know-How disclosed by Servier concerning its Development activities and plans for Licensed Products, Miragen shall have the right to fulfill its obligations pursuant to (a) Section 2.8 of the Santaris Agreement to provide the JRC (as defined in the Santaris Agreement) with reports concerning Miragen’s research activities with respect to each Existing Target (as defined [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.)
9. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to the existence or terms of this Agreement, Miragen shall have the right to fulfill its obligations (a) pursuant to the last sentence of Section 3.2 of the Santaris Agreement with respect to providing Santaris with a redacted copy of this Agreement after having given Servier the opportunity to review and approve the portions of the Agreement not to be redacted, provided that Servier shall not unreasonably withhold or delay such approval and further provided that it would be unreasonable for Servier to withhold or delay its approval on account of its desiring Miragen to redact information that Miragen is not permitted, pursuant to the Santaris Agreement, to redact; and (b) pursuant to Section 4.11 of the Santaris Agreement to provide quarterly reports concerning consideration received by Miragen from Servier on account of Miragen’s grant of a sublicense to the Santaris IP (provided that such consideration also satisfies the definition of “Sublicense Revenue” set forth in the Santaris Agreement) and calculation of the payments owed to Santaris on account of such consideration.

10. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to Confidential Information of Servier included in the royalty reports provided by Servier pursuant to Section 9.5(d) of this Agreement or disclosed to Miragen pursuant to Section 9.9 of this Agreement, Miragen shall have the right to fulfill its obligations pursuant to Section 4.11 of the Santaris Agreement to provide quarterly reports concerning sales of Licensed Product (provided that such Licensed Product also satisfies the definition of “Product” set forth in the Santaris Agreement) and calculation of the royalties owed to Santaris on account of such sales, Servier acknowledges that the definition of “Net Sales” and the mechanisms for adjusting Net Sales to account for sales of a Combination Product, for reducing royalty payments on account of lack of a Valid Claim (as defined in the Santaris Agreement) within the Santaris IP that claims the composition of matter of, or method of using, such Licensed Product in the country of sale, for reducing royalty payments on account of sales of a generic version of such Licensed Product and for currency conversions in the Santaris Agreement are different from the corresponding provisions of this Agreement, and Servier agrees to provide, at least five (5) days before Miragen’s deadline for submitting its royalty report to Santaris, all information available to Servier and reasonably requested by Miragen for the purpose of facilitating Miragen’s compliance with its royalty reporting obligations to Santaris.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
11. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to the Miragen Know-How, Servier Know-How and other Inventions disclosed by Servier pursuant to Section 10.1 of this Agreement, Miragen shall have the right to fulfill its obligations pursuant to Section 5.3(a) of the Santaris Agreement to disclose to Santaris any and all Improvements to LNA Platform Technology (as defined in the Santaris Agreement).

12. Servier hereby grants to Santaris a worldwide, non-exclusive, irrevocable and fully paid-up license, with the right to sublicense, to exploit for any purpose any and all Improvements to LNA Platform Technology made by Servier and its Affiliates. Servier and its Affiliates shall take appropriate steps to ensure that their employees, consultants and all other personnel are obligated to grant such license to Santaris.

13. Notwithstanding the patent prosecution provisions set forth in Section 10.2 of this Agreement, Santaris has the sole right to prepare, file, prosecute and maintain any patent within the Santaris Technology (as defined in the Santaris Agreement) and such right is only subject to Santaris’ obligations pursuant to Section 5.4(b) of the Santaris Agreement.

14. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to Confidential Information of Servier regarding the infringement or alleged infringement of Miragen Patents, Miragen shall have the right to fulfill its obligations pursuant to Section 5.5(a) of the Santaris Agreement to promptly provide Santaris with written notice of any alleged infringement of Miragen Patents (as defined in the Santaris Agreement) or patents within the Santaris IP.

15. Notwithstanding the patent enforcement provisions set forth in Section 10.3 of this Agreement, Santaris has the sole right to enforce all patents within the LNA Platform Technology (as defined in the Santaris Agreement) and the first right to enforce all patents within the Santaris Technology (as defined in the Santaris Agreement), provided that if a third party infringes any patents within the LNA Platform Technology or the Santaris Technology by selling any product comprising a Miragen Compound (as defined in the Santaris Agreement) for use in the Field (as defined in the Santaris Agreement), then Santaris shall: (a) enforce such patents within the LNA Platform Technology or the Santaris Technology against such third party at Santaris’ sole cost and expense and in its sole discretion, or (b) if Santaris does not bring an enforcement action or take other action to terminate such infringement of such patents within the Santaris Technology within [*] days of notice of such infringement, permit Miragen to enforce such patents within the Santaris Technology (but not patents within the LNA Platform Technology, [*] Patents or any [*] Divisional Patents that satisfy the conditions set forth in clause (3)(b) above) at Miragen’s cost and expense, as provided in Section 5.5(c) of the Santaris Agreement. If Santaris so enforces such patent, Miragen shall assist and cooperate with Santaris with respect such suit and Santaris has the right to retain, after reimbursement of Santaris’ and Miragen’s expenses incurred in connection with such enforcement action, [*] of all recoveries it receives from such enforcement. If Miragen so enforces such patent, (i) Santaris may participate, at its own expense and with its own counsel, in any proceedings relating to the validity of such patent, (ii) Miragen is obligated to keep Santaris reasonably informed of all material developments relating to such enforcement action, (iii) Santaris shall not be bound by any offer of settlement or compromise without its prior written consent (which shall not be unreasonably withheld), and (iv) Miragen is [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
obligated to pay to Santaris, after reimbursement of Santaris’ and Miragen’s expenses incurred in connection with such enforcement action, [*] of all recoveries it receives from such enforcement, except to the extent that such payment would otherwise [*].

16. The Santaris Agreement will terminate with respect to a particular Target [*] if Santaris terminates it in accordance with Section 8.2 of the Santaris Agreement on account of Miragen’s uncured material breach with respect to such Target [*] or if Miragen terminates the Santaris Agreement at will with respect to such Target [*] in accordance with Section 8.4 of the Santaris Agreement or if Miragen replaces such Target Family in accordance with Section 2.3 of the Santaris Agreement. The Santaris Agreement will terminate with respect to one or more Target [*] if Santaris terminates it in accordance with Section 8.2 of the Santaris Agreement on account of Miragen’s uncured material breach with respect to its negative covenant under Section 3.1(f) of the Santaris Agreement. The Santaris Agreement will terminate in its entirety if Santaris terminates it in accordance with Section 8.2 or 8.3 of the Santaris Agreement on account of (x) Miragen’s uncured material breach of an obligation that is not directed only to a particular Target [*] (y) Miragen’s involvement in [*] or (z) on account of Miragen’s insolvency, or if Miragen terminates the Santaris Agreement at will with respect to all Target [*] in accordance with Section 8.4 of the Santaris Agreement. In the event of termination of the Santaris Agreement in its entirety, all Target [*] will be deemed to be terminated Target [*]. Upon any such termination described in this paragraph:

   a. Servier’s sublicense to the Santaris IP with respect to the terminated Target [*] shall [*]
   b. Servier shall assign to Santaris any and all right, title and interest in and to (i) [*] and (ii) [*]
   c. Miragen shall assign to Santaris any and all right, title and interest in and to (i) [*] and (ii) [*]
   d. Subject to (p) below, Miragen shall grant to Santaris a [*] pursuant to (b) or (c) above, to [*]
   e. Notwithstanding the patent prosecution provisions set forth in Section 10.2 of this Agreement, if Miragen decides to [*] then Miragen is obligated to offer Santaris the opportunity to [*]
   f. Notwithstanding the patent enforcement provisions set forth in Section 10.3 of this Agreement, if a third party infringes a [*]
   g. Notwithstanding Miragen’s confidentiality obligations under this Agreement, Miragen shall have the right to [*]
   h. Upon Santaris’ request [*] Servier shall [*] unless Santaris elects to [*]
   i. Upon Santaris’ request [*] Miragen shall grant to Santaris [*]
   j. If Santaris elects to [*] Miragen shall [*]
   k. If Santaris elects to [*] Miragen and Servier shall [*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1. If Santaris elects to [*], then Miragen and Servier shall (A) [*], (B) [*], and (C) [*]

m. [*]

n. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to the Miragen Know-How and Servier Know-How, Miragen shall have the right to fulfill its obligations pursuant to [*]

o. [*]

p. [*]

provided however that, in the event that the Santaris Agreement is terminated by Santaris in accordance with Section 8.2 or 8.3 of the Santaris Agreement and such termination did not arise directly or indirectly from any acts or omissions of Servier, Servier shall have the right to [*]

provided further that, in the event that the Santaris Agreement is terminated by Santaris in accordance with Section 8.2 or 8.3 and Servier does not [*] then Santaris shall (x) [*] and (y) [*]

Glasgow Agreement

1. Notwithstanding the exclusive sublicenses granted by Miragen to Servier pursuant to Section 2.1 of this Agreement with respect to intellectual property licensed to Miragen pursuant to the Glasgow Agreement (such intellectual property, the “Licensed Technology”, as defined in the Glasgow Agreement), Miragen’s license to the Licensed Technology is not completely exclusive because:

   a. Glasgow retains the right to (i) [*] and (ii) [*]

   b. Cambridge Enterprise Limited[*] retains the right to [*]

2. The sublicenses granted by Miragen to Servier pursuant to Section 2.1 of this Agreement with respect the Licensed Technology is limited to the use and/or modulation of [*] as a target for the treatment or prevention of pulmonary arterial hypertension [*] and the licenses granted by Miragen to Servier pursuant to Section 2.1(b) of this Agreement do not include a sublicense with respect to any Licensed Technology[*].

3. Notwithstanding the obligations of the Parties pursuant to Section 11.1 of this Agreement to keep Miragen Know-How confidential and the obligations of the Parties pursuant to Section 11.4 of this Agreement with respect to scientific publications, Glasgow retains the right to [*]

4. Notwithstanding the patent prosecution provisions set forth in Section 10.2 of this Agreement, Miragen has the obligations [*] with respect to [*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
5. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 [*] Miragen shall have the right to [*]

6. Notwithstanding the patent enforcement provisions set forth in Section 10.3 of this Agreement, Miragen shall have the right to [*]

7. Notwithstanding the patent enforcement provisions set forth in Section 10.3 of this Agreement, Miragen shall have the right to [*] Miragen and Servier acknowledge that Glasgow has agreed to [*] Miragen and Servier acknowledge that Glasgow has agreed to [*]

8. If the Glasgow Agreement is terminated at a time when Servier holds a sublicense to the Licensed Technology and Servier is in good standing at the time of such termination, then:
   a. during the Company Notice Period or the Post Termination Period (both as defined in the Glasgow Agreement), as applicable, Glasgow will use reasonable endeavors to [*] If Glasgow and Servier do not [*] during such time period, (i) [*]; (ii) [*]; and (iii) [*]
   b. when Servier’s sublicense to the Licensed Technology continues in force and effect during the Post Termination Period, Servier shall [*]
   c. Miragen and Servier acknowledge that Glasgow has agreed that, notwithstanding Clause 15.3.3 of the Glasgow Agreement, in the event of a termination by Glasgow pursuant to Clause 14.2 of the Glasgow Agreement, Glasgow will: (i) [*]; and (ii) upon Servier’s request, [*] For clarity, Servier’s [*] obligations pursuant to the direct license will be to [*] and Servier’s [*] obligations to Glasgow pursuant to the direct license will be to (i) [*], (ii) [*], (iii) [*], (iv) [*]; and (v) [*]

9. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to [*] Miragen shall have the right (a) to [*] and (b) to [*]

10. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to [*] Miragen shall have the right to [*]

11. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to [*] Miragen shall have the right to [*]

12. Notwithstanding Miragen’s confidentiality obligations pursuant to Article 11 with respect to [*] Miragen shall have the right to [*]

13. In relation to its role or rights under the Glasgow Agreement, Servier shall, and shall procure its employees and authorized agents (including its Affiliates and further sublicensees) to, (a) [*] and (b) [*]

14. In using the Licensed Technology and in selling Licensed Products [*] Servier shall comply, and shall ensure that its Affiliates, employees, subcontractors and further sublicensees comply, fully with (a) [*] and (b) [*]

15. Servier shall [*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
SECOND AMENDMENT OF
THE LICENSE AND COLLABORATION AGREEMENT

This SECOND AMENDMENT OF THE LICENSE AND COLLABORATION AGREEMENT (this “Second Amendment”) is made and effective as of April 10, 2014 (the “Second Amendment Effective Date”) by and between Miragen Therapeutics, Inc., a corporation organized and existing under the laws of Delaware, having its principal place of business at 6200 Lookout Rd., Suite 100, Boulder, CO 80301, USA (“Miragen”) on the first part, and Les Laboratoires Servier, a corporation organized and existing under the laws of France, having offices at 50 rue Carnot, 92284 Suresnes cedex France and Institut de Recherches Servier, a corporation organized and existing under the laws of France, having offices at 3 rue de la République, 92150 Suresnes, France (these two entities jointly referred to as “Servier”) on the second part. Servier and Miragen are referred to in this Agreement individually as a “Party” and collectively as the “Parties.”

WHEREAS, Miragen and Servier are parties to that certain License and Collaboration Agreement, dated October 13, 2011, as amended by First Amendment dated May 13, 2013 (the “Collaboration Agreement”), pursuant to which the Parties established a collaboration for the research, development and commercialization of products directed at miRNA targets for the treatment of cardiovascular diseases;

WHEREAS, the Parties have determined that the current Third Target ([*]) is no longer suitable as a Target under the Collaboration Agreement, and decided to terminate the Collaboration Agreement with respect to [*] on May 31, 2014, and to provide additional time for the selection of Replacement Target;

WHEREAS, the Parties also wish to extend the Research Term under the Collaboration Agreement for two (2) years;

WHEREAS, in connection with the termination of miR-145 and the extension of the Research Term, the Parties now desire to amend certain terms and conditions of the Collaboration Agreement, all as set forth below.

NOW THEREFORE, in consideration of the foregoing premises and the mutual promises, covenants and conditions contained in this Second Amendment, the Parties agree as follows:

1. Unless otherwise indicated, capitalized terms used but not defined herein shall have the meanings set forth in the Collaboration Agreement.

2. The Parties acknowledge that, pursuant to Section 4.6(c) of the Collaboration Agreement, the JRDC has determined that the miR-145 (the current Third Target) is no longer suitable as a Target. Therefore, the Parties agree that, as of the May 31, 2014 Effective Date of the letter of termination sent to Miragen by Servier on March 28th with respect to the current
Third Target [*], [*] shall no longer be deemed a Target under the Collaboration Agreement. As a consequence, the Parties shall comply with Sections 4.6(d)(i) through (vii) of the Collaboration Agreement (as amended below by this Second Amendment) with respect to the termination of [*].

3. The Parties will amend and restate Exhibit C (the Research Plan) of the Collaboration Agreement following additional discussions. The Research Plan will be amended and restated by a future amendment to the Collaboration Agreement.

4. The Parties hereby amend Exhibit F (Certain Terms of Upstream Licenses) of the Collaboration Agreement by deleting the provisions therein relating to the Glasgow Agreement.

5. Section 1.70 of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

   “1.70 “Miragen Therapeutic IP” means all Patent Rights and Know-How that are (a) Controlled by Miragen or its Affiliates (subject to Section 15.2) as of the Effective Date or during the Term and (b) reasonably necessary or useful for the development, manufacture, use, importation and/or sale of Licensed Oligos and/or Licensed Products in the Field. Miragen Therapeutic IP shall include Miragen’s rights to Joint IP that satisfies “(b),” but, notwithstanding the foregoing, shall exclude (i) all Patent Rights and Know-How that satisfy “(a)” and “(b)” and arose from Un sponsored Work performed by Miragen unless and until Servier reimburses Miragen for such work in accordance with Section 5.4(c) and (ii) all Patent Rights and Know-How licensed to Miragen or its Affiliate pursuant to a license agreement entered into after the Effective Date that is not an Additional Third Party Therapeutic License.”

6. Section 1.120 of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

   “1.120 “Upstream License Agreements” means, as of the Second Amendment Effective Date, the Santaris Agreement, UNC Agreement (with respect to the know-how only, and notwithstanding anything to the contrary in this Agreement, Patent Rights licensed to Miragen under the UNC Agreement shall be excluded from Miragen Companion Diagnostic IP and Miragen Therapeutic IP), and UT Southwestern Agreements. Upon the selection of a Replacement Target, the Parties shall amend this definition as necessary to add all additional license agreements between Miragen and a Third Party entered into before the Effective Date pursuant to which Miragen has a sublicenseable license to Miragen Therapeutic IP that covers such Replacement Target or Licensed Oligos that directly and selectively modulate such Replacement Target. Upon the termination of a Target, the Parties shall amend this definition to remove all license agreements between Miragen and a Third Party pursuant to which Miragen has a sublicenseable license to intellectual property that is no longer Miragen Therapeutic IP because it covers a member of the microRNA target family that was terminated or Licensed Oligos that directly and selectively modulate such member.”

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
7. Section 1.121 of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“1.121 “Upstream Licensors” means, as of the Second Amendment Effective Date, Santaris, University of North Carolina at Chapel Hill, and University of Texas System. The Parties shall amend this definition together with the amendment of the definition of “Upstream License Agreements” so that the entities included in this definition are the Third Parties that granted licenses to Miragen under the agreements that are then included in the definition of Upstream License Agreements.”

8. Section 2.1(c)(iii) of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“(iii) such sublicenses are subject and subordinate to the terms and conditions of the applicable Upstream License Agreements described in Exhibit F, which exhibit shall be amended upon the selection of a Replacement Target to add the relevant terms and conditions of any new Upstream License Agreement and upon termination of a Target to delete the terms and conditions of any agreement which is no longer an Upstream License Agreement;”

9. Section 2.1(c)(iv) of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“(iv) Servier shall comply only with those terms of the Upstream License Agreements which are specifically described in Exhibit F, which exhibit shall be amended upon the selection of a Replacement Target to add the relevant terms and conditions of any new Upstream License Agreement and upon termination of a Target to delete the terms and conditions of any agreement which is no longer an Upstream License Agreement.”

10. Section 4.2 of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“4.2 Research Term. The term of the Research Collaboration (“Research Term”) shall be the five (5) year period after the Effective Date.

11. Section 4.6(d) of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“(d) If, based on results obtained from the activities set forth in the Research Plan and the criteria set forth above in Section 4.6(a), the JSC or Servier as the case may be determines that the microRNA-15/195 target family, the microRNA-208/199 target family or the Third Target is not suitable as a Target, then upon such determination by JSC or Servier, the microRNA-15/195 target family and/or the microRNA-208/199 target family and/or the Third Target, as applicable, shall no longer be deemed a Target hereunder, and

(i) Servier’s licenses and rights under this Agreement pertaining to the microRNA-15/195 target family and/or the microRNA-208/199 target family and/or the Third Target, as applicable, shall terminate;

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

3
(ii) the Parties shall update and amend the Research Plan and the Development Plan to exclude the research and Development activities related to the microRNA-15/195 target family and/or to the microRNA-208/199 target family and/or the Third Target, as applicable;

(iii) Servier hereby assigns to Miragen, effective as of such determination by JSC or Servier, all right, title and interest in and to any and all Inventions related to the microRNA-15/195 target family and/or to the microRNA-208/199 target family and/or the Third Target, as applicable, as well as any and all data and results generated by Servier in the course of any work performed pursuant to this Agreement with respect to the microRNA-15/195 target family and/or to the microRNA-208/199 target family and/or the Third Target, as applicable;

(iv) all such Inventions, data and results shall be deemed Confidential Information of Miragen;

(v) Servier shall promptly transfer all tangible and electronic embodiments of such Inventions, data and results to Miragen;

(vi) Servier shall comply with the terms of the Santaris Agreement with respect to the replaced target (microRNA-15/195 target family and/or to the microRNA-208/199 target family and/or the Third Target, as applicable) as set forth in clause (16) of the part of Exhibit F that relates to the Santaris Agreement, provided that Servier shall not be required to assign or license to Santaris the Inventions, data and results that are assigned to Miragen pursuant to clause (iii) above: and

(vii) as between Miragen and Servier, Miragen shall have the right to research, develop and/or commercialize any product pertaining to the microRNA-15/195 target family and/or the microRNA-208/199 target family and/or the Third Target, as applicable, or any component therein in any field and anywhere, either by itself or in collaboration with a Third Party, without any further obligation to Servier.

After microRNA-15/195 target family and/or the microRNA-208/199 target family and/or the Third Target, as applicable, has been terminated as set forth above, the JSC may select a microRNA target family from the Target List (which may be amended from time to time by the JRDC in accordance with Section 4.5 for so long as a Target can be replaced) as a replacement for such target (such replacement, the "Replacement Target"), provided however that in the case the JSC cannot reach an agreement as to such selection from the Target List, Servier shall have the final say. Upon selection of the Replacement Target:

(viii) such Replacement Target(s) shall be deemed Target(s) hereunder;

(ix) the Parties shall update and amend the Research Plan and the Development Plan to include the research and Development activities related to such Replacement Target(s); and

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
The Parties shall decide whether they wish to incorporate Santaris' LNA technology into Licensed Products directed to the selected Replacement Target or whether they wish to utilize, in lieu of Santaris' LNA technology, an alternative chemistry having drug-like properties which could be incorporated into Licensed Products directed to the selected Replacement Target. If the Parties decide that they wish to incorporate Santaris' LNA technology into Licensed Products directed to such Replacement Target, then Miragen shall use Commercially Reasonable Efforts to obtain a license from Santaris for such purpose (whether pursuant to the Santaris Agreement or an amendment thereof or pursuant to a separate license agreement with Santaris), which license can be sublicensed to Servier, without further payment by Servier, under the terms of this Agreement. If the Parties decide that they wish to incorporate such alternative technology into Licensed Products directed to such Replacement Target, then Miragen shall use Commercially Reasonable Efforts to enter into a Third Party agreement to obtain a license to such alternative technology with respect to such Replacement Target, which license can be sublicensed to Servier, without further payment by Servier, under the terms of this Agreement. For clarity, (A) if Miragen fails to obtain a license from Santaris for Santaris' LNA technology with respect to such Replacement Target and the Parties then decide that they wish to incorporate the alternative technology into Licensed Products directed to such Replacement Target, then Miragen shall use Commercially Reasonable Efforts to enter into a Third Party agreement to obtain a license to such alternative technology with respect to such Replacement Target, which license can be sublicensed to Servier, without further payment by Servier, under the terms of this Agreement. For clarity, (B) if Miragen fails to obtain a Third Party license to the alternative technology that covers the Replacement Target and the Parties then decide that they wish to incorporate Santaris' LNA technology into Licensed Products directed to such Replacement Target, then Miragen shall use Commercially Reasonable Efforts to obtain a license from Santaris for such purpose (whether pursuant to the Santaris Agreement or an amendment thereof or pursuant to a separate license agreement with Santaris), which license can be sublicensed to Servier, without further payment by Servier, under the terms of this Agreement. For further clarity, it shall not be a breach of this Agreement if Miragen, after using Commercially Reasonable Efforts, fails to obtain a license from Santaris to Santaris’ LNA technology with respect to such Replacement Target and/or a Third Party license to the alternative technology that covers the Replacement Target, as applicable.

Section 4.6(e) of the Collaboration Agreement is hereby deleted and replaced in its entirety with the following:

“(e) The Parties’ right to evaluate suitability of each of the microRNA-15/195 target family, the microRNA-208/199 target family and the Third Target as a Target and, if either of them is decided pursuant to Section 4.6(a) or 4.6(c) to not be suitable as a Target, to replace it with a Replacement Target pursuant to Section 4.6(d) shall expire at the end of the [*] year period immediately following the Effective Date (or a longer period as may be agreed in writing by the Parties). For clarity, the Replacement Target(s) may not be replaced.”

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
13. This Second Amendment amends the terms of the Collaboration Agreement as expressly provided above, and the Collaboration Agreement, as so amended and including all of its other terms and provisions that are not amended, remains in full force and effect and sets forth the complete, final and exclusive agreement and all the covenants, promises, agreements, warranties, representations, conditions and understandings between the Parties hereto with respect to the subject matter of the Collaboration Agreement and supersedes, as of the Second Amendment Effective Date, all prior and contemporaneous agreements and understandings between the Parties with respect to the subject matter of the Collaboration Agreement. There are no covenants, promises, agreements, warranties, representations, conditions or understandings, either oral or written, between the Parties other than as set forth in the Collaboration Agreement (as amended by this Second Amendment).

14. The validity, performance, construction, and effect of this Second Amendment shall be governed by and construed under the laws of Germany, without giving effect to any choice of law principles that would require the application of the laws of a different state.

15. This Second Amendment may be executed in one (1) or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
IN WITNESS WHEREOF, the Parties intending to be bound have caused this Second Amendment to be executed by their duly authorized representatives as of the Second Amendment Effective Date.

Miragen Therapeutics, Inc.
By: /s/ William S. MARSHALL
Name: William S. MARSHALL
Title: President and CEO

Les Laboratoires Servier
By: /s/ Christian BAZANTAY
Name: Christian BAZANTAY
Title: Proxy

Institut de Recherches Servier
By: /s/ Emmanuel CANET
Name: Emmanuel CANET
Title: President Research and Development

[SIGNATURE PAGE OF THE SECOND AMENDMENT OF THE LICENSE AND COLLABORATION AGREEMENT BY AND BETWEEN MIRAGEN THERAPEUTICS, INC. AND LES LABORATOIRES SERVIER]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

7
This License Agreement (“Agreement”) is made as of the 10th day of May, 2016 (“Effective Date”), by and between Miragen Therapeutics, Inc., a Delaware corporation, having a principal place of business at 6200 Lookout Road, Suite 100, Boulder CO 80301 (“Company”) and The Brigham and Women’s Hospital, Inc., a not-for-profit Massachusetts corporation, with a principal place of business at 75 Francis Street, Boston, Massachusetts 02115 (“Hospital”), each referred to herein individually as a “Party” and collectively as the “Parties”.

RECITALS

Hospital, as a center for patient care, research and education, is the owner of certain Patent Rights (defined below) and desires to grant a license of those Patent Rights to Company in order to benefit the public by disseminating the results of its research via the commercial development, manufacture, distribution and use of Licensed Products (defined below).

Company has the capability to commercially develop, manufacture, distribute and use Licensed Products for public use and benefit and desires to license such Patent Rights.

Hospital and Company entered into that certain Option Letter, dated October 9, 2013, pursuant to which Hospital granted Company an option to obtain an exclusive license to such Patent Rights, and Company now wish to exercise such option and to obtain such a license.

For good and valuable consideration, the sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

1. CERTAIN DEFINITIONS

As used in this Agreement, the following terms shall have the following meanings, unless the context requires otherwise.

1.1 “Affiliate” with respect to either Party shall mean any corporation or other legal entity other than that Party in whatever country organized, controlling, controlled by or under common control with that Party. The term “control” shall mean (i) in the case of Company, direct or indirect ownership of fifty percent (50%) or more of the voting securities having the right to elect directors, and (ii) in the case of Hospital, the power, direct or indirect, to elect or appoint fifty percent (50%) or more of the directors or trustees, or to cause direction of management and policies, whether through the ownership of voting securities, by contract or otherwise.

1.2 “Claim” shall mean any (a) pending claim of any Patent Right; or (b) issued and unexpired claim of any Patent Right, which claim (in each case of (a) and (b)) has not been permanently
revoked, nor held unenforceable or invalid by a decision of a court or other governmental agency of competent jurisdiction that is unappealable or unappealed in the time allowed for appeal, and has not been disclaimed, denied or admitted to be invalid or unenforceable through reissue, re-examination, disclaimer or otherwise.

1.3 “Combination Product” shall mean a Therapeutic Product that combines one or more pharmacologically active ingredients (which term excludes, for clarity, excipients, controlled-release compositions, materials to increase bioavailability, solubility, and/or stability) not covered by or that do not infringe the Patent Rights (“Other Components”) with one or more pharmacologically active ingredients covered by or that would infringe the Patent Rights (but for the license hereunder) in a single formulation or final package presentation for Sale as a single unit.

1.4 “Commercially Reasonable Efforts” shall mean, with respect to a party’s obligations under this Agreement, the carrying out of such obligations with a level of efforts and resources consistent for a similarly situated company in the applicable industry for the research, development and/or commercialization of a similarly situated therapeutic or diagnostic product as a Licensed Product at a similar stage of development and/or commercialization, taking into account the anticipated value of the commercial opportunity, the prevailing regulatory environment and competitive market conditions.

1.5 “Cost” shall mean cost of goods sold including direct unit cost of manufacturing and preparing the Product for Sale exclusive of selling, general and administrative expense, research and development expense and distribution costs as recorded pursuant to U.S. Generally Accepted Accounting Principles, the International Financial Reporting Standards or equivalent foreign regulations.

1.6 “Diagnostic Product” shall mean any Product or Process that is or uses an IVD Kit or LDT designed to diagnose or monitor the progression of a disease or condition (including response to treatment).

1.7 “Distributor” shall mean any third party entity to whom Company, a Company Affiliate or a Sublicensee has granted, express or implied, the right to distribute any Licensed Product pursuant to Section 2.1(b)(ii).

1.8 “First Commercial Sale” shall mean the initial Sale anywhere in the applicable License Territory of a Licensed Product.

1.9 “IND” shall mean investigational new drug application, clinical trial application, clinical trial exemption or similar or equivalent application or submission for approval to conduct human clinical investigation filed with or submitted to the applicable regulatory authority.

1.10 “Initiation” of a clinical trial shall mean the dosing of the first patient enrolled in such clinical trial.

1.11 “IVD Kit” shall mean a kit for use in in-vitro diagnostic testing.

1.12 “LDT” shall mean a laboratory developed test performed in a medical and/or clinical laboratory that is operating in compliance with the Clinical Laboratory Improvement Amendments of 1988 (“CLIA”), or its foreign equivalent, said test being performed on clinical specimens for the diagnosis, treatment and/or prevention of disease.

1.13 “License Field” shall mean all uses.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.14 “License Territory” shall mean worldwide.

1.15 “Licensed Product” shall mean any Therapeutic Product or Diagnostic Product.

1.16 “Marketing Approval” shall mean all approvals, including pricing and reimbursement approvals, necessary for the commercial Sale of a Licensed Product in the License Field in a given country or regulatory jurisdiction in the License Territory. Marketing Approval in EU shall be deemed achieved only if Marketing Approval (including pricing and reimbursement approval) has been obtained in at least two (2) of the following countries: France, Germany, Italy, Spain and United Kingdom.

1.17 “Net Sales” shall be calculated as set forth in this Section 1.17.

(a) Subject to the conditions set forth below, “Net Sales” shall mean:

   (i) the gross amount received by Company and its Affiliates and Sublicensees for or on account of Sales of Licensed Products;

   (ii) less the following amounts:

      (A) to the extent separately stated on the bill or invoice, actually paid by Company and its Affiliates and Sublicensees in effecting such Sale:

         1. amounts repaid or credited by reason of rejection or return or recall of applicable Licensed Products;

         2. reasonable and customary trade, quantity or cash rebates or discounts or chargebacks to the extent allowed and taken;

         3. amounts for outbound transportation, insurance, handling and shipping, but only to the extent separately invoiced in a manner that clearly specifies the charges applicable to the applicable Products; and

         4. taxes, customs duties and other governmental charges levied on or measured by Sales of Licensed Products, to the extent separately invoiced, whether paid by or on behalf of Company, its Affiliates or Sublicensees so long as the amount received by Company, its Affiliates or Sublicensees is reduced thereby, but not franchise or income taxes of any kind whatsoever.

      (B) the gross amount received by Company and its Affiliates and Sublicensees for or on account of Sales of Licensed Products to Hospital and Hospital’s Affiliates.

(b) Specifically excluded from the definition of “Net Sales” are amounts attributable to any Sale of any Licensed Product between or among Company and any Company Affiliate and/or Sublicensee, unless the transferee is the end purchaser, user or consumer of such Licensed Product. Net

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Sales shall also exclude any amounts received for the Sales of any Licensed Product at Cost for research and product development (including in clinical trials) and for compassionate use.

(c) No deductions shall be made for any commissions paid to any individuals or for any costs or expenses of collections.

(d) Net Sales shall be deemed to have occurred and the applicable Product “Sold” on the date upon which the proceeds from the Sale of the Licensed Product are recorded by Company and its Affiliates and Sublicensees (as applicable) pursuant to U.S. Generally Accepted Accounting Principles, the International Financial Reporting Standards or equivalent foreign regulations.

(e) If any Licensed Product is Sold at a discounted price that is lower than the reasonable and customary discount as set forth in Section 1.16(ii)(A)(2), or for non-cash consideration (whether or not at a discount), Net Sales shall be calculated based on the average non-discounted cash amount charged to an independent third party for the Licensed Product during the same Reporting Period in the same country or, in the absence of such transaction, on the fair market value of the Licensed Product.

(f) Net Sales to be used for the calculation and payment of royalties and Commercial Sales Milestone #8 in Section 4.4(a) due on Combination Products shall be an adjusted “Net Sales” figure determined by applying the following formula to the actual “Net Sales” resulting from the Sales of such Combination Product. For the purposes of calculating the amount of Net Sales generated upon Sales of the Combination Product, the Parties shall use the following formula:

\[
\frac{A}{A+B} \times \text{Net Sales of Combination Product (as calculated using the above definition)} = \text{adjusted Net Sales}
\]

Where:

(i) “A” equals the Standard Sales Price (as defined below) of the Licensed Product of the same strength as contained in the Combination Product, where such Licensed Product is sold separately (i.e., not as part of a Combination Product) in the applicable country of sale and during the applicable time period;

(ii) “B” equals the Standard Sales Price(s) of the Other Components when sold separately (i.e., not as part of a Combination Product) in the applicable country of Sale and during the applicable time period; and

(iii) “Standard Sales Price” shall mean, with respect to a product (whether the standalone Licensed Product or Other Component) and a country, the [*] (in the case of product [*]) or the [*] (in the case of product [*]), as such terms are commonly understood in the pharmaceutical industry, for such product in such country, where such price is the price at which product is sold [*] in such country [*] over the applicable period.

If the calculation of Net Sales of a Combination Product is reduced by virtue of the formula set forth above, then any royalty or other payment obligation due to a third party for an Other Component within such Combination Product shall be excluded from the royalty offset in Section 4.5(b) for the purposes of calculating royalties in accordance with this Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.18 “Patent Rights” shall mean, inclusively, the PCT Patent Application number [*], and/or the equivalent of such application including any division, continuation (including continuation-in-part), foreign patent application, Letters Patent, and/or the equivalent thereof issuing thereon, and/or reissue, reexamination or extension thereof, as may be further described in Appendix A.

1.19 “Phase II Clinical Trial” shall mean a clinical study of the Licensed Product in human patient in any country that would satisfy the requirements of 21 C.F.R. 312.21(b), as amended from time to time, or the equivalent foreign regulations.

1.20 “Phase III Clinical Trial” shall mean a clinical study of the Licensed Product in human patient in any country that would satisfy the requirements of 21 C.F.R. 312.21(c), as amended from time to time, or the equivalent foreign regulations.

1.21 “Process” shall mean any process, method or service the use or performance of which, in whole or in part: absent the license granted hereunder would infringe, or is covered by, one or more Claims of Patent Rights.

1.22 “Product” shall mean any article, device, or composition, the manufacture, use, or sale of which, in whole or in part: absent the license granted hereunder would infringe, or is covered by, one or more Claims of Patent Rights.

1.23 “Reporting Period” shall mean each calendar year ending December 31.

1.24 “Sell” (and “Sale” and “Sold” as the case may be) shall mean to sell or have sold, to lease or have leased, to import or have imported or otherwise to transfer or have transferred a Licensed Product for valuable consideration (in the form of cash or otherwise), and further in the case of a Process to use or perform such Process for the benefit of a third party,

1.25 “Sublicense Income” shall mean consideration in any form received by Company and/or Company’s Affiliate(s) from a third party to the extent attributable to a grant of a sublicense or any other right, license, privilege or immunity (regardless of whether such third party is a “Sublicensee” as defined in this Agreement, but for clarity excluding the assignment of this Agreement in accordance with Section 12.5) under the Patent Rights to make, have made, use, have used, Sell or have Sold Licensed Products, but excluding consideration included within Net Sales. Sublicense Income shall include without limitation any license signing fee, license maintenance fee, unearned portion of any minimum royalty payment in excess of royalty payment received that is based on actual Net Sales, distribution or joint marketing fee, success payments, milestone payments pursuant to the sublicense agreements. Sublicense Income shall exclude: (i) reimbursement for the cost and expense of filing, prosecuting and maintaining Patent Rights; (ii) arm’s length equity investments or loans; (iv) payment for the supply of goods and services (such as for the supply of the Licensed Product) and research and development funding paid to Company in support of the research and/or development of Product at industry standard value as supported by appropriate written documents; provided however, that any excess above such documented amounts shall be considered Sublicense Income.

1.26 “Sublicensee” shall mean any sublicensee of rights granted in accordance with Section 2.1(a)(iii). For purpose of this Agreement, a Distributor of a Licensed Product shall not be included in the definition of Sublicensee unless such Distributor (i) is granted any right to make, have made, use or have used Licensed Products in accordance with Section 2.1(a)(iii), or (ii) has agreed to pay to Company or its Affiliate(s) royalties on such Distributor’s sales of Licensed Products, in which case such Distributor shall be a Sublicensee for all purposes of this Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
1.27 "Therapeutic Product" shall mean any Product or Process that contains or uses any pharmaceutically active compound administered for the treatment, amelioration or prevention of a disease or condition.

1.28 "Technological Information" shall mean research data, designs, formulae, process information and other information pertaining to the invention(s) claimed in the Patent Rights, which information is created by Dr. Howard Weiner and/or Dr. Oleg Butovskie ("Inventors") and is owned or controlled by Hospital as of the Effective Date and is not otherwise obligated to any third party necessary or reasonably useful for Company to use the licenses granted hereunder, as further described in Appendix B. Company agrees to treat all Technological Information in accordance with the provisions of Appendix D.

2. LICENSE

2.1 Grant of License.

(a) Subject to the terms of this Agreement and Hospital rights in Patent Rights, Hospital hereby grants to Company in the License Field in the License Territory:

(i) an exclusive, royalty-bearing license under its rights in the Patent Rights to make, have made, use, have used, Sell and have Sold Licensed Products; and

(ii) the nonexclusive right to use Technological Information disclosed by Hospital to Company hereunder in accordance with this Agreement.

(iii) the right to grant sublicenses (through multiple tiers and without requiring Hospital’s prior approval) under the rights granted in Section 2.1(a)(i) and Section 2.1(a)(ii) to Sublicensees, provided that in each case Company shall be responsible for the performance of any obligations of Sublicensees relevant to this Agreement as if such performance were carried out by Company itself, including, without limitation, the payment of any royalties or other payments provided for hereunder, regardless of whether the terms of any sublicense provide for such amounts to be paid by the Sublicensee directly to Hospital.

(b) The license granted in Section 2.1(a) above includes:

(i) the right to grant to the final purchaser, user or consumer of Licensed Products the right to use such purchased Licensed Products in a method coming within the scope of Patent Rights within the License Field and License Territory; and

(ii) the right to grant a Distributor the right to Sell (but not to make, have made, use or have used) such Licensed Products for or on behalf of Company, its Affiliates and Sublicensees in a manner consistent with this Agreement.

(c) The foregoing license grant shall include the grant of such license to any Affiliate of Company, provided that such Affiliate shall assume the same obligations as those of Company and be subject to the same terms and conditions hereunder; and further provided that Company shall be responsible for the performance of all of such obligations and for compliance with all of such terms and conditions by Affiliate. Company shall provide to Hospital a copy of each fully executed agreement with each Affiliate that assumes the aforesaid obligations, including all exhibits, attachments and related documents and any amendments, within thirty (30) days of request by Hospital. Company may not redact any terms (including, without limitation, financial terms) reasonably necessary for Hospital to verify the Company and Affiliate’s compliance with the terms of this Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
2.2 Sublicenses. Each sublicense granted hereunder shall (a) be consistent with and comply with all applicable terms of this Agreement, (b) shall include a provision that requires the Sublicensee (in all tiers) to indemnify Hospital and maintain insurance coverage to the same extent that Company is so required under Section 8.1 of this Agreement; (b) shall include a provision that grants Hospital the right to audit the Sublicensee’s records to the same extent that Hospital has the right to audit Company under Section 5.5 of this Agreement; (c) shall incorporate terms and conditions sufficient to enable Company to comply with this Agreement, and (d) shall provide that Hospital is a third party beneficiary thereof. Company shall provide to Hospital a copy of all executed sublicense agreements and amendments thereto, including all exhibits, attachments and related documents, within thirty (30) days of executing the same. Company may not redact any terms (including, without limitation, financial terms) reasonably necessary for Hospital to verify the Company and Sublicensees’ compliance with the terms of this Agreement and such copy would contain a complete list of the Patent Rights related to such sublicense. Upon termination of this Agreement or any license granted hereunder for any reason, any sublicenses shall be addressed in accordance with Section 10.7. Any sublicense that is not in accordance with the foregoing provisions shall be null and void.

2.3 Retained Rights; Requirements. Any and all licenses granted hereunder are subject to:

(a) the right of Hospital and Hospital’s Affiliates and academic, government and not-for-profit institutions to make and to use the subject matter described and/or claimed in the Patent Rights for research and educational purposes only to the extent such use by academic, government and not-for-profit institutions does not conflict with the provision of this Agreement; and

(b) for Patent Rights supported by federal funding, the rights, conditions and limitations imposed by U.S. law (see 35 U.S.C. § 202 et seq. and regulations pertaining thereto), including without limitation:

(i) the royalty-free non-exclusive license granted to the U.S. government; and

(ii) the requirement that any Products used or sold in the United States shall be manufactured substantially in the United States.

2.4 No Additional Rights. It is understood that nothing in this Agreement shall be construed to grant Company or any of its Affiliates a license, express or implied, under any patent owned solely or jointly by Hospital other than the Patent Rights expressly licensed hereunder. Hospital shall have the right to license any Patent Rights to any other party for any purpose outside of the License Field or the License Territory.

2.5 Disclosure of Technological Information. At Company’s request prior to execution of this Agreement, Hospital (through Inventors) shall use reasonable efforts to disclose in confidence within thirty (30) days after execution of this Agreement the Technological Information licensed hereunder.

3. DUE DILIGENCE OBLIGATIONS

3.1 Diligence Requirements. Company shall use, and shall cause its Affiliates and Sublicensees, as applicable, to use, Commercially Reasonable Efforts to develop and make available to the public Licensed Products throughout the License Territory in the License Field. Such efforts shall

{Page 7 of 28}

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
include achieving the following objectives within the time periods designated below following the Effective Date:

(a) During the time period [*] and [*], Company shall [*], including [*].

(b) Company shall [*] within [*] years after the Effective Date.

(c) Within twelve (12) months after the Effective Date, Company shall submit to Hospital a research and development plan for all Therapeutic Products and Diagnostic Products. Thereafter, Company shall prepare annual updates to such research and development plan and submit such annual updates to Hospital.

Achievement of the foregoing objectives shall be deemed to satisfy Company’s obligations to use best efforts under this Section 3.1.

3.2 Diligence Failures. If Company has failed to fulfill any of its obligations under Section 3.1, then Hospital may treat such failure as a default and may terminate this Agreement and/or any license granted hereunder in accordance with Section 10.5 (subject to Company’s right to cure such default as set forth therein).

3.3 Diligence Reports. Company shall provide all reports with respect to its obligations under Section 3.1 as set forth in Section 5.

4. PAYMENTS AND ROYALTIES

4.1 License Issue Fee. Company shall pay Hospital a non-refundable license issue fee in the amount of [*]; as follows: [*] within [*] days after the execution of this Agreement and (b) [*] upon [*].

4.2 Patent Cost Reimbursement. Company shall reimburse Hospital for all costs associated with the preparation, filing, prosecution and maintenance of all Patent Rights (“Patent Costs”). As of the Effective Date, Hospital has incurred approximately [*] in Patent Costs, and to the extent such amount was not previously reimbursed, Company shall pay such amount to Hospital within [*] days after the later of the execution of this Agreement. As set forth in Section 6.1, Company shall be responsible for the cost of the outside patent counsel jointly selected by the Parties in connection with Patent Costs. Company agrees to indemnify, defend and hold Hospital harmless from and against any and all third party liabilities, damages, costs and expenses arising from the failure of Company to timely pay such invoices and Patent Costs. Hospital shall instruct patent counsel to provide copies to Hospital for Hospital’s administrative files of all invoices detailing Patent Costs which are sent directly to Company. If Company pays any Patent Costs directly, Company shall advise patent counsel that Hospital is and shall remain patent counsel’s client.

4.3 Annual License Fee.

(a) Company shall pay to Hospital the following non-refundable amounts as an annual license fee within [*] days after each of the following anniversaries of the Effective Date:

   (i) the first through [*] anniversaries of the Effective Date: [*];

   [Page 8 of 28]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(ii) the [*] through [*] anniversaries of the Effective Date: [*];

(iii) the [*] anniversary and on each subsequent anniversary of the Effective Date thereafter: [*].

(b) The annual license fee is non-refundable, and shall be credited against milestone payments and royalties subsequently due on milestone achieved or Net Sales made during the same calendar year, if any, but shall not be credited against milestone payments or royalties due on milestone achieved or Net Sales made in any other year.

4.4 Milestone Payments.

(a) In addition to the payments set forth in Sections 4.1 through 4.3 above and subject to the remainder of this Section 4.4, Company shall pay Hospital milestone payments set forth in the table below within [*] days of the achievement of the applicable milestone events, as follows:

<table>
<thead>
<tr>
<th>Milestone Event</th>
<th>Milestone Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Development and Regulatory Milestones For Therapeutic Products:</strong></td>
<td></td>
</tr>
<tr>
<td>1) [*]</td>
<td>[*]</td>
</tr>
<tr>
<td>2) [*]</td>
<td>[*]</td>
</tr>
<tr>
<td>3) [*]</td>
<td>[*]</td>
</tr>
<tr>
<td>4) [*]</td>
<td>[*]</td>
</tr>
<tr>
<td>5) [*]</td>
<td>[*]</td>
</tr>
<tr>
<td>6) [*]</td>
<td>[*]</td>
</tr>
<tr>
<td><strong>Development and Regulatory Milestones For Diagnostic Products:</strong></td>
<td></td>
</tr>
<tr>
<td>7) [*]</td>
<td>[*]</td>
</tr>
<tr>
<td><strong>Commercial Sales Milestone for all Licensed Products:</strong></td>
<td></td>
</tr>
<tr>
<td>8) Cumulative Net Sales of all Licensed Products first reach $[*]</td>
<td>$250,000</td>
</tr>
</tbody>
</table>

(b) Each milestone payment shall be payable only once for each unique and distinguishable Licensed Product, regardless of the number of times such milestone event has been achieved by such Licensed Product, except that the sales milestone (number 8) shall be paid only once for all Licensed Products. For the avoidance of doubt a unique and distinguishable Therapeutic Product will be determined [*].

(c) Milestone events numbers 1, 2, 3 and 4 are intended to be successive such that if any such milestone event is achieved at a time when a prior milestone event (i.e., milestone with a lower number) has not been achieved, then such prior milestone event shall be deemed achieved and all such prior milestone payments shall become due with the next occurring milestone payment for such Product.

(d) If milestone event number 1 [*] is achieved before [*], then the corresponding milestone payment shall be reduced from [*] to [*]. For clarity, this reduction shall not affect any other milestone payments.
If a milestone event set forth above is achieved by a Sublicensee and Company receives Sublicense Income for the achievement of such milestone event, then Company shall pay to Hospital the higher of (but not both): (i) the corresponding milestone payment set forth in the table above; or (ii) a share (at the percentage set forth in Section 4.5(c) below) of such Sublicense Income. For clarity, Company’s payment of such higher amount shall satisfy both (x) Company’s obligation to pay the milestone payment for the achievement of such milestone under this Section 4.4, and (y) Company’s obligation to pay the share of such Sublicense Income under Section 4.5(c).

4.5 Royalties and Sublicense Income.

(a) On a Licensed Product-by-Licensed Product and on a country by country basis, beginning with the First Commercial Sale of any Licensed Product in any country in the Licensed Territory and ending on the expiration of the last to expire Claim of Patent Rights that claims such Licensed Product in such country (the “Royalty Term”), Company shall pay Hospital a royalty of [*] of the Net Sales of such Licensed Products in such country.

(b) In the event that Company obtains a license(s) from a third party or additional license(s) from Hospital in order to develop, manufacture, use, or sell a Licensed Product, and the total royalty payment (i.e., royalty payment due for Licensed Product under such license(s) plus the royalty payment due to Hospital under Section 4.5(a) of this Agreement) exceeds [*] of the Net Sales of such Licensed Product, then the royalty payment due to Hospital under this Agreement shall be reduced by [*] of the total royalty payment that exceeds such [*] threshold, provided that in no event shall the royalties paid by Company to Hospital under this Agreement be reduced to less than [*]. By way of example, if Company obtains such a license that has a [*] royalty rate, then the total royalty is [*] (i.e., [*]) of the[*] threshold, so the royalty due to Hospital under this Agreement will be reduced by [*] (i.e., [*] of such [*] excess) to [*]. To further clarify, notwithstanding anything to the contrary in this Agreement, in no event shall the royalties paid by Company to Hospital under this Agreement when aggregated with any other credits or offsets allowed under this Agreement be reduced to less than [*].

(c) Company shall pay Hospital [*] of any and all Sublicense Income.

(d) All payments due to Hospital under this Section 4.5 shall be due and payable by Company within [*] days after the end of each Reporting Period except for, Sublicense Income; which is due within [*] days of Company receipt of such Sublicense Income; and shall be accompanied by a report as set forth in Sections 5.3 and 5.4.

4.6 Form of Payment. All payments due under this Agreement shall be drawn on a United States bank and shall be payable in United States dollars. Each payment shall reference this Agreement and its Agreement Number and identify the obligation under this Agreement that the payment satisfies. Conversion of foreign currency to U.S. dollars shall be made at the conversion rate existing in the United States, as reported in The Wall Street Journal, (i) on the date a milestone event occurred or Sublicense Income was received by Company; and (ii) the arithmetic average for each calendar month for the purposes of calculating royalties on annual Net Sales. Such payments shall be without deduction of exchange, collection or other charges, and, specifically, without deduction of withholding or similar taxes or other government imposed fees or taxes, except as permitted in the definition of Net Sales or otherwise required by applicable laws.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Checks for all payments due to the Hospital under this Agreement shall be made payable to the Hospital and addressed as set forth below:

**Brigham and Women’s Hospital**
BOA-Lockbox Services
PCSR Lockbox[*]
[*]
2 Morrissey Blvd
Dorchester, MA 02125

Reference Agreement #: A223064

Payments via wire transfer should be made as follows:

- ACH Credit: [*]
- Federal Reserve Wire: [*]
- SWIFT Code: [*]N
- Account [*]

**Brigham and Women’s Hospital**
Bank of America
100 Federal Street
Boston, MA 02110

Reference Agreement #: A223064

4.7 **Overdue Payments.** The payments due under this Agreement shall, if overdue, bear interest beginning on the first day following the Reporting Period to which such payment was incurred and until payment thereof at a per annum rate equal to [*] above the prime rate in effect on the due date as reported by *The Wall Street Journal*, such interest rate being compounded on the last day of each Reporting Period, not to exceed the maximum permitted by law. Any such overdue payments when made shall be accompanied by all interest so accrued. Said interest and the payment and acceptance thereof shall not preclude Hospital from exercising any other rights it may have as a consequence of the lateness of any payment.

5. **REPORTS AND RECORDS**

5.1 **Diligence Reports.** Within [*] days after the end of each calendar year, Company shall report in writing to Hospital on progress made toward the objectives set forth in Section 3.1 during such preceding twelve (12) month period, including, without limitation, progress on research and development, status of applications for regulatory approvals, manufacturing, sublicensing and the number of sublicenses entered into and marketing.

5.2 **Milestone Achievement Notification.** Company shall report to Hospital the dates on which it achieves the milestones set forth in Section 4.4 within [*] days of each such occurrence (in the case of the Commercial Sales Milestone (number 8), [*] days after the end of the calendar quarter during which the Net Sales threshold amount is first reached).

5.3 **Sales Reports.** Company shall report to Hospital the date on which it achieves the First Commercial Sale in each country of the License Territory within [*] days of each such occurrence. Following the First Commercial Sale, Company shall deliver reports to Hospital within [*] days after the end of each Reporting Period. Each report under this Section 5.3 shall have substantially the format

[Page 11 of 28]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
outlined in Appendix B, shall be certified as correct by an officer of Company and shall contain at least the following information as may be pertinent to a royalty accounting hereunder for the immediately preceding Reporting Period:

(a) the number of Licensed Products Sold by Company, its Affiliates and Sublicensees in each country;
(b) the Net Sales recorded by Company, its Affiliates and Sublicensees for each Licensed Product, in each country, and total Net Sales for all Licensed Products;
(c) calculation of Net Sales in each country, including an itemized listing of permitted offsets and deductions; and
(d) total royalties payable on Net Sales in U.S. dollars, together with the exchange rates used for conversion.
(e) Any other payments due to Hospital under this Agreement

If no amounts are due to Hospital for any Reporting Period the report shall so state.

5.4 Sublicense Income Reports. Company shall, along with delivering payment as set forth in Section 4.5(c), within [*] days after the end of each Reporting Period report to Hospital the amount of all Sublicense Income received by Company, and Company’s calculation of the amount due and paid to Hospital from such income, including an itemized listing of the source of income comprising such consideration, and the name and address of each entity making such payments in substantially the format outlined in Appendix C.

5.5 Audit Rights. Company shall maintain, and shall cause each of its Affiliates and Sublicensees to maintain, complete and accurate records relating to the rights and obligations under this Agreement and any amounts payable to Hospital in relation to this Agreement, which records shall contain sufficient information to permit Hospital and its representatives to confirm the accuracy of any payments and reports delivered to Hospital and compliance in all other respects with this Agreement. Company shall retain and make available, and shall cause each of its Affiliates and Sublicensees to retain and make available, such records for at least [*] years following the end of the calendar year to which they pertain, to an independent nationally recognized public accounting firm selected by Hospital and reasonably acceptable to Company, upon at least fifteen (15) days’ advance written notice, for inspection during normal business hours, to verify any reports and payments made and/or compliance in other respects under this Agreement. Such audit shall be conducted at Hospital’s cost and expense, not more than once per calendar year, and no more than once for any particular record. If any examination conducted by such accounting firm pursuant to the provisions of this Section show an underreporting or underpayment of [*] or more in the payment due to Hospital hereunder for the audited time period, Company shall bear the full cost of such audit and shall remit any amounts due to Hospital (including interest due in accordance with Section 4.7) within [*] days of receiving the audit report from such accounting firm.

6. PATENT PROSECUTION AND MAINTENANCE

6.1 Prosecution. Company and Hospital shall jointly select an outside patent counsel to manage the preparation, filing, prosecution and maintenance of all patent applications and patents included in Patent Rights. If a party is dissatisfied with the work of such outside patent counsel, the parties shall discuss and jointly select a new outside patent counsel and transfer the preparation, filing,
prosecution and maintenance of the Patent Rights to such newly selected counsel. Company shall be responsible for the cost of such outside counsel in connection with the preparation, filing, prosecution and maintenance of the Patent Rights. Company shall direct the work of the outside patent counsel selected by the parties under Section 6.1 and shall provide Hospital with a copy of all instruction provided to such outside counsel with sufficient time to review and comment, but in any case no later than thirty (30) days prior to any applicable deadlines. If Hospital disagrees with such instruction, Hospital shall promptly notify Company, and the parties shall meet and attempt to resolve such disagreement through good faith negotiation. If an agreement cannot be reached within fifteen (15) days of notification by Hospital, such disagreement shall be referred to the Parties’ senior management of their in-house intellectual property or legal department for resolution. In the event such senior management cannot reach agreement within fifteen (15) days of such referral, any such decision shall be made solely by Hospital at its discretion, which shall have sole final authority in such matter.

6.2 Copies of Documents. With respect to any Patent Right licensed hereunder, Company shall instruct the outside patent counsel selected by the parties to (i) copy Hospital on patent prosecution documents that are received from or filed with the United States Patent and Trademark Office and foreign equivalent, as applicable; (ii) provide Hospital with copies of draft submissions to the USPTO prior to filing; and (iii) give consideration to the comments and requests of Hospital or its patent counsel; as further set forth in Section 6.1.

6.3 Company’s Election Not to Proceed. Company may elect to surrender any patent or patent application in Patent Rights in any country upon sixty (60) days advance written notice to Hospital. Such notice shall relieve Company from the obligation to pay for future Patent Costs but shall not relieve Company from responsibility to pay Patent Costs incurred prior to the expiration of the sixty (60) day notice period. Such U.S. or foreign patent application or patent shall thereupon cease to be a Patent Right hereunder, Company shall have no further rights therein and Hospital shall have the right to prosecute and maintain that particular patent application or patent at Hospital’s own cost and expense and shall be free to license its rights to that particular U.S. or foreign patent application or patent to any other party on any terms.

6.4 Confidentiality of Prosecution and Maintenance Information. Parties agree to treat all information related to prosecution and maintenance of Patent Rights as Confidential Information in accordance with the provisions of Appendix D.

7. THIRD PARTY INFRINGEMENT AND LEGAL ACTIONS

7.1 Company Right to Prosecute. Each party shall promptly notify the other party of any alleged or threatened infringement of any Patent Rights of which it becomes aware of. Company shall have the first right, but not the obligation, to enforce the claims of the Patent Rights in the Licensed Field in the Licensed Territory against any infringement and prosecute infringers when, in its sole judgment, such action may be reasonably necessary, proper and justified. If Hospital shall have supplied Company with written evidence demonstrating to Company’s reasonable satisfaction prima facie infringement of a claim of a Patent Right in the License Field in the License Territory by a third party which poses a material threat to Company’s rights under this Agreement, Company shall notify Hospital within [*] months of the receipt of such notice whether Company intends to prosecute the alleged infringement. If Company notifies Hospital that it intends to so prosecute, Company shall, within [*] months of its notice to Company either (i) take reasonable actions to cause such infringement to terminate, or (ii) initiate legal proceedings against the infringer. Before commencing any such action, Company and, as applicable, any Affiliate, shall consult with Hospital, concerning, among other things, Company’s standing to bring suit, the advisability of bringing suit, the selection of counsel and the jurisdiction for such action (provided [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.)
Company must have Hospital’s prior written consent, which shall not be unreasonably withheld, with respect to selection of jurisdiction for any action in which Hospital may be joined as a party-plaintiff) and shall use reasonable efforts to accommodate the views of Hospital regarding the proposed action, including without limitation with respect to potential effects on the public interest. Company shall be responsible for all costs, expenses and liabilities in connection with any such action and shall indemnify and hold Hospital harmless therefrom, regardless of whether Hospital is a party-plaintiff, except for the expense of any independent counsel retained by Hospital in accordance with Section 7.5 below.

7.2 Hospital Right to Prosecute. In the event Company notifies Hospital that Company does not intend to prosecute infringement identified under Section 7.1, Hospital may, upon notice to Company, initiate legal proceedings against the infringer at Hospital’s expense with respect to a claim of a Patent Right in the License Field in the License Territory. Before commencing such action, Hospital and, as applicable, any Affiliate, shall consult with Company, concerning the advisability of bringing suit, the selection of counsel and the jurisdiction for such action and shall use reasonable efforts to accommodate the views of Company regarding the proposed action, including without limitation with respect to potential effects on the public interest.

7.3 Hospital Joined as Party-Plaintiff. If Company elects to commence an action as described in Section 7.1 above, Hospital shall, in its sole discretion, the option to join such action as a party-plaintiff. If it is necessary for Hospital to join such action as a party-plaintiff in order for Company to proceed with such enforcement action under applicable laws, Hospital may either, in its sole discretion, permit itself to be joined as a party-plaintiff at the sole expense of Company, or assign to Company all of Hospital’s right, title and interest in and to the Patent Right which is the subject of such action (subject to all of Hospital’s obligations to the government under law and any other rights that others may have in such Patent Right). If Hospital makes such an assignment, such action by Company shall thereafter be brought or continued without Hospital as a party; provided, however, that Hospital shall continue to have all rights of prosecution and maintenance with respect to Patent Rights and Company shall continue to meet all of its obligations under this Agreement as if the assigned Patent Right were still licensed to Company hereunder.

7.4 Notice of Actions; Settlement. Each party shall promptly inform the other party of any action or suit relating to Patent Rights and shall not enter into any settlement, consent judgment or other voluntary final disposition of any action admitting the invalidity or enforceability of any Patent Rights without the prior written consent of the other party, not to be unreasonably withheld or delayed.

7.5 Cooperation. Each Party agrees to cooperate reasonably in any action under Section 7 which is controlled by the other Party, provided that the controlling party reimburses the cooperating party for any costs and expenses incurred by the cooperating party in connection with providing such assistance, except for the expense of any independent counsel retained by the cooperating party in accordance with this Section 7.5. Such controlling party shall keep the cooperating party informed of the progress of such proceedings and shall make its counsel available to the cooperating party. The cooperating party shall also be entitled to independent counsel in such proceedings but at its own expense, said expense to be offset against any damages received by the Party bringing suit in accordance with Section 7.6.

7.6 Recovery. Any award paid by third parties as the result of such proceedings (whether by way of settlement or otherwise) shall first be applied to reimbursement of any legal fees and expenses incurred by either Party and then the remainder shall be divided between the Parties as follows:

(a) if Company is the enforcing party, then the remainder shall be [*];

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
8. INDEMNIFICATION AND INSURANCE

8.1 Indemnification.

(a) Company shall indemnify, defend and hold harmless Hospital and its Affiliates and their respective trustees, directors, officers, medical and professional staff, employees, and agents and their respective successors, heirs and assigns (the “Indemnitees”), against any liability, damage, loss or expense (including reasonable attorney’s fees and expenses of litigation) incurred by or imposed upon the Indemnitees or any one of them in connection with any third party claims, suits, actions, demands or judgments arising out of any theory of product liability (including, but not limited to, actions in the form of contract, tort, warranty, or strict liability) concerning any product, process or service made, used, or sold or performed pursuant to any right or license granted under this Agreement; provided, however, that the above indemnification shall not apply to any liability, damage, loss or expense to the extent that it is directly attributable to the negligence, reckless or intentional misconduct of any Indemnitee.

(b) Hospital shall promptly notify Company of any claim or action for which it seeks indemnification hereunder and shall give Company the authority to control the investigation and defense of such claim or action. Hospital and Indemnitee shall not settle or compromise any such claim or action without Company’s express prior written consent. Company agrees, at its own expense, to provide attorneys reasonably acceptable to the Hospital to defend against any actions brought or filed against any party indemnified hereunder with respect to the subject of indemnity contained herein, whether or not such actions are rightfully brought; provided, however, that any Indemnitee shall have the right to retain its own counsel, at the expense of Company, if representation of such Indemnitee by counsel retained by Company would be inappropriate because of an actual conflict of interests between such Indemnitee and Company in such action. Company agrees to keep Hospital informed of the progress in the defense and disposition of such claim and to consult with Hospital prior to any proposed settlement.

(c) This section 8.1 shall survive expiration or termination of this Agreement.

8.2 Insurance.

(a) Beginning at such time as any Licensed Product is being commercially distributed, sold, leased or otherwise transferred, or performed or used (other than for the purpose of obtaining regulatory approvals), by Company, an Affiliate or Sublicensee, Company shall, at its sole cost and expense, procure and maintain commercial general liability insurance in amounts not less than $2,000,000 per incident and $2,000,000 annual aggregate and naming the Indemnitees as additional insureds. Such commercial general liability insurance shall provide (i) product liability coverage and (ii) broad form contractual liability coverage for Company’s indemnification under Section 8.1 of this Agreement. If Company elects to self-insure all or part of the limits described above (including deductibles or retentions which are in excess of $250,000 annual aggregate) such self-insurance program must be acceptable to the Hospital and the Risk Management Foundation. The minimum amounts of insurance coverage required under this Section 8.2 shall not be construed to create a limit of Company’s liability with respect to its indemnification under Section 8.1 of this Agreement.

(b) Company shall provide Hospital with written evidence of such insurance upon request of Hospital. Company shall provide Hospital with written notice at least fifteen (15) days prior to the cancellation, non-renewal or material change in such insurance; if Company does not obtain replacement insurance providing comparable coverage prior to the expiration of such fifteen (15) day
period, Hospital shall have the right to terminate this Agreement effective at the end of such fifteen (15) day period without notice or any additional waiting periods.

(c) Company shall maintain such commercial general liability insurance beyond the expiration or termination of this Agreement during (i) the period that any such product, process, or service is being commercially distributed, sold, leased or otherwise transferred, or performed or used (other than for the purpose of obtaining regulatory approvals), by Company or by a licensee, affiliate or agent of Company and (ii) a reasonable period after the period referred to in (c) (i) above which in no event shall be less than fifteen (15) years.

(d) This section 8.2 shall survive expiration or termination of this Agreement.

9. DISCLAIMER OF WARRANTIES; LIMITATION OF LIABILITY

9.1 Title to Patent Rights. Hospital represents that as of the Effective date, to the best of its actual knowledge without investigation that: (i) Hospital is the sole and exclusive owner by assignment from Dr. Howard Weiner and Dr. Oleg Butovskie, the Inventors of the Patent Rights and has the authority to enter into this Agreement and license the Patent Rights to Company hereunder, (ii) the Hospital has no obligations that would prevent the execution and performance of this, and (iii) Hospital has not granted any license or other right under the Patent Rights in the Field in the Territory to any third party except as set forth in Section 2.3.

9.2 No Warranties. EXCEPT AS EXPRESSLY SET FORTH HEREIN, HOSPITAL MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING THE PATENT RIGHTS AND THE RIGHTS GRANTED HEREUNDER, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, VALIDITY OF PATENT RIGHTS CLAIMS, WHETHER ISSUED OR PENDING, AND THE ABSENCE OF LATENT OR OTHER DEFECTS, WHETHER OR NOT DISCOVERABLE, AND HEREBY DISCLAIMS THE SAME. SPECIFICALLY, AND NOT TO LIMIT THE FOREGOING, HOSPITAL MAKES NO WARRANTY OR REPRESENTATION (i) REGARDING THE VALIDITY OR SCOPE OF ANY OF THE CLAIM(S), WHETHER ISSUED OR PENDING, OF ANY OF THE PATENT RIGHTS, AND (ii) THAT THE EXPLOITATION OF THE PATENT RIGHTS OR ANY PRODUCT WILL NOT INFRINGE ANY PATENTS OR OTHER INTELLECTUAL PROPERTY RIGHTS OF HOSPITAL OR OF ANY THIRD PARTY.

9.3 Limitation of Liability. EXCEPT FOR DAMAGES AVAILABLE FOR BREACH OF CONFIDENTIALITY OBLIGATIONS SET FORTH IN APPENDIX D, IN NO EVENT SHALL EITHER PARTY OR ANY OF ITS AFFILIATES, SUBLICENSEES, DISTRIBUTORS OR ANY OF THEIR RESPECTIVE TRUSTEES, DIRECTORS, OFFICERS, MEDICAL OR PROFESSIONAL STAFF, EMPLOYEES AND AGENTS BE LIABLE TO THE OTHER PARTY OR ANY OF ITS AFFILIATES, SUBLICENSEES OR DISTRIBUTORS OR ANY OF THEIR RESPECTIVE TRUSTEES, DIRECTORS, OFFICERS, MEDICAL OR PROFESSIONAL STAFF, EMPLOYEES AND AGENTS FOR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND ARISING IN ANY WAY OUT OF THIS AGREEMENT OR THE LICENSE OR RIGHTS GRANTED HEREUNDER, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, INCLUDING WITHOUT LIMITATION ECONOMIC DAMAGES OR INJURY TO PROPERTY OR LOST PROFITS, REGARDLESS OF WHETHER SUCH PARTY SHALL BE ADVISED, SHALL HAVE OTHER REASON TO KNOW, OR IN FACT SHALL KNOW OF THE POSSIBILITY OF THE FOREGOING; PROVIDED HOWEVER, NOTHING IN THIS SECTION 9.3 SHALL BE CONSTRUED

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
10. TERM AND TERMINATION

10.1 Term. The term of this Agreement shall commence on the Effective Date and shall remain in effect until the date on which all issued patents and filed patent applications within the Patent Rights have expired or been abandoned, and unless this Agreement is terminated earlier in accordance with any of the other provisions of Section 10. On a Licensed Product-by-Licensed Product and country-by-country basis, after the expiration (but not earlier termination) of the Royalty Term for a Licensed Product in a country, the license granted under Section 2.1(a)(ii) shall become fully paid, royalty free, perpetual and irrevocable with respect to such Licensed Product in such country.

10.2 Termination for Failure to Pay. If Company fails to make any payment due hereunder (unless such payment is the subject of a reasonable dispute), Hospital shall have the right to terminate this Agreement upon [*] days written notice, unless Company makes such payments plus any interest due, as set forth in Section 4.7, within said [*] day notice period. If payments are not made, Hospital may immediately terminate this Agreement at the end of said [*] day period.

10.3 Termination for Insurance and Insolvency.

(a) Insurance. Hospital shall have the right to terminate this Agreement in accordance with Section 8.2(b) if Company fails to maintain the insurance required by Section 8.2.

(b) Insolvency and other Bankruptcy Related Events. Hospital shall have the right to terminate this Agreement immediately upon written notice to Company with no further notice obligation or opportunity to cure if Company: (i) shall become insolvent; (ii) shall make an assignment for the benefit of creditors; or (iii) shall have a petition in bankruptcy filed for or against it under Chapter 7 of U.S. Bankruptcy Code (or equivalent foreign bankruptcy laws) and the petition is not dismissed within [*] days.

10.4 Termination for Non-Financial Default. If Company, any of its Affiliates or any Sublicensee shall materially default in the performance of any of its other obligations under this Agreement not otherwise covered by the provisions of Section 10.2 and 10.3, and if such default has not been cured within [*] days after notice by Hospital in writing of such default, Hospital may immediately terminate this Agreement (if such default pertains to the entire License Territory, or any license granted hereunder with respect to the country or countries in which such default has occurred (if such default pertains only to such country or countries), at the end of said [*] day cure period; provided however, that if such default is not reasonably subject to cure within said [*] day period, then Company shall have such additional [*] day time period as reasonably necessary effect such cure if it is undertaking reasonable efforts to cure such default and have provided Hospital with a reasonable plan that is reasonably acceptable to Hospital to cure such breach.

10.5 Termination by Company. Company shall have the right to terminate this Agreement by giving [*] days advance written notice to Hospital and upon such termination Company’s license shall immediately cease, subject to Section 10.7.

10.6 Effect of Termination on Sublicenses. Any sublicenses granted by Company or a Sublicensee (to a sublicensee) under this Agreement shall have the right to be converted into a direct license from Hospital upon termination of this Agreement or upon termination of any license hereunder under which such sublicense has been granted, provided that (i) the Sublicensee under the sublicense is

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
not in default thereunder, (ii) such assignment shall impose no obligations on the Hospital other than the continuation of the sub-license under Patent Rights and/or Technological Information granted to the Sublicensee, (iii) the Sublicensee enters into agreement directly with Hospital to fulfill all the responsibilities of the Company and comply with all the terms and conditions of this Agreement as if Sublicensee were Company; and (iv) the sublicense to such Sublicensee is for at least one of the following territories within the Licensed Territory: US, Europe, or Japan. If the Sublicensee does not enter into such written license agreement with the Hospital within [*] days of the termination of this Agreement, then such sublicense shall immediately terminate.

10.7 Effects of Termination of Agreement. Upon termination of this Agreement or any of the licenses hereunder for any reason, final reports in accordance with Section 5 shall be submitted to Hospital and all royalties and other payments, including without limitation any unreimbursed Patent Costs, accrued or due to Hospital as of the termination date shall become immediately payable. Company shall cease, and shall cause its Affiliates and Sublicensees to cease under any sublicense granted by Company, all Sales and uses of Licensed Products upon such termination, subject to Section 10.6 and 10.8. The termination or expiration of this Agreement or any license granted hereunder shall not relieve Company, its Affiliates or Sublicensees of obligations arising before such termination or expiration.

10.8 Inventory. Upon early termination of this Agreement other than for Company uncured default, Company, Company Affiliates and Sublicensees may complete and sell any work-in-progress and inventory of Licensed Products that exist as of the effective date of termination provided that (i) Company pays Hospital the applicable running royalty or other amounts due on such Net Sales in accordance with the terms and conditions of this Agreement, and (ii) Company, Company Affiliates and Sublicensees shall complete and sell all work-in-progress and inventory of Products within [*] months after the effective date of termination. After expiration of such [*] month period, Company shall pay to Hospital the royalties set forth in Section 4.5(a) for Sales of any Licensed Product that was in inventory or was a work-in-progress on the date of expiration of the Agreement.

11. COMPLIANCE WITH LAW

11.1 Compliance. Company shall have the sole obligation for compliance with, and shall ensure that any Affiliates and Sublicensees comply with, all government statutes and regulations that relate to Licensed Products, including, but not limited to, those of the Food and Drug Administration and the Export Administration, as amended, and any applicable laws and regulations of any other country in the License Territory. Company agrees that it shall be solely responsible for obtaining any necessary licenses to export, re-export, or import Licensed Products covered by Patent Rights and/or Confidential Information. Company shall indemnify and hold harmless Hospital for any breach of Company’s obligations under this Section 11.1.

11.2 Patent Numbers. Company shall cause all Products sold in the United States to be marked with all applicable U.S. Patent Numbers, to the full extent required by United States law. Company shall similarly cause all Products shipped to or sold in any other country to be marked in such a manner as to conform with the patent laws and practices of such country.

12. MISCELLANEOUS

12.1 Entire Agreement. This Agreement constitutes the entire understanding between the Parties with respect to the subject matter hereof.

12.2 Notices. Any notices, reports, waivers, correspondences or other communications required under or pertaining to this Agreement shall be in writing and shall be delivered by hand, or sent

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
by a reputable overnight mail service (e.g., Federal Express), or by first class mail (certified or registered), or by facsimile confirmed by one of the foregoing methods, to the other party. Notices will be deemed effective (a) three (3) working days after deposit, postage prepaid, if mailed, (b) the next day if sent by overnight mail, or (c) the same day if sent by facsimile and confirmed as set forth above or delivered by hand.

Unless changed in writing in accordance with this Section, the notice address for Hospital shall be as follows:

VP, Innovation,
Partners Healthcare/Brigham and Women’s Hospital
215 First Street
Cambridge MA 02142

Unless changed in writing in accordance with this Section, the notice address for Company shall be as follows:

Miragen Therapeutics, Inc.
6200 Lookout Road, Suite, 100
Boulder, CO 80301
Attn: Chief Business Officer
Fax: 303-531-5094

12.3 Amendment; Waiver. This Agreement may be amended and any of its terms or conditions may be waived only by a written instrument executed by an authorized signatory of the Parties or, in the case of a waiver, by the Party waiving compliance. The failure of either Party at any time or times to require performance of any provision hereof shall in no manner affect its rights at a later time to enforce the same. No waiver by either Party of any condition or term shall be deemed as a further or continuing waiver of such condition or term or of any other condition or term.

12.4 Binding Effect. This Agreement shall be binding upon and inure to the benefit of and be enforceable by the Parties hereto and their respective permitted successors and assigns.

12.5 Assignment. Company shall not assign this Agreement or any of its rights or obligations under this Agreement without the prior written consent of Hospital; provided, however, no such consent will be required to assign this Agreement to an Affiliate or a successor of substantially all of the Company’s business to which this Agreement pertains or to a purchaser of substantially all of the Company’s assets related to this Agreement, whether by merger, acquisition, consolidation, sale of assets, change of control or other transaction, so long as such successor or purchaser shall agree in a writing with the Hospital to be bound by all of the terms and conditions hereof prior to such assignment. Company shall notify Hospital in writing of any such assignment, including the identity of the assignee or transferee, thirty (30) days after such assignment. Failure of an assignee to agree to be bound by the terms hereof shall be grounds for termination of this Agreement for default. In the event that Company proposes to assign or transfer this Agreement that requires Hospital’s consent, Hospital and Company shall negotiate in good faith the terms of such assignment or transfer and Hospital shall not unreasonably withhold or delay such consent.

12.6 Force Majeure. Neither Party shall be responsible for delays resulting from causes beyond the reasonable control of such Party, including without limitation fire, explosion, flood, war, sabotage, strike or riot, provided that the nonperforming Party uses commercially reasonable efforts to

{Page 19 of 28}

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
# Avoid or Remove Causes of Nonperformance
Avoid or remove such causes of nonperformance and continues performance under this Agreement with reasonable dispatch whenever such causes are removed.

## Use of Name
Neither Party shall use the name of the other Party or of any trustee, director, officer, staff member, employee, student or agent of the other Party or any adaptation thereof in any advertising, promotional or sales literature, publicity or in any document employed to obtain funds or financing without the prior written approval of the Party or individual whose name is to be used. For Hospital, such approval shall be obtained from Hospital’s VP of Public Affairs.

## Governing Law
This Agreement shall be governed by and construed and interpreted in accordance with the laws of [\*], excluding with respect to conflict of laws, except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent shall have been granted.

(a) Any dispute or issue relating to or in connection with this Agreement (a “Dispute”) shall initially be referred to Hospital’s Director of Innovation and Company’s CEO to resolve the Dispute. However, notwithstanding any of the terms of this Section 12.8 and without limiting any other remedies that may be available, each Party shall have the right to seek immediate injunctive relief and other equitable relief from any court of competent jurisdiction to enjoin any breach or violation of this Agreement concerning confidential information or any other intellectual property licensed under this Agreement, without any obligation to undertake extra-judicial dispute resolution of any such Dispute or claim or otherwise to comply with this Section 12.8.

(b) If the Director of Innovation and Company’s CEO are unable to resolve the Dispute within thirty (30) days after such referral, then such Dispute shall be referred to a mediator who has been mutually selected by the Parties. If the Parties are unable to agree upon a mediator, then either Party may petition the [\*] to appoint an independent mediator with relevant experience and sufficient qualifications to provide mediation services to the Parties.

(c) If the Parties are unable to resolve the Dispute with the assistance of a mediator within sixty (60) business days of the selection or appointment thereof, the Dispute shall be referred to arbitration. The Dispute shall be finally settled by binding arbitration in accordance with this Agreement and the substantive laws of [\*], following the [\*]. The venue for any arbitration hereunder shall be [\*], and each Party waives the defense of forum non conveniens and any other defense to personal jurisdiction on grounds of inconvenient forum or otherwise. The award of the arbitration shall be final and binding upon the Parties, and may be entered and enforced in any court of competent jurisdiction. Without limiting the foregoing, each Party consents to the jurisdiction of the state and federal courts in the [\*] for purposes of any suit to compel mediation or arbitration and any suit to confirm and enforce an arbitration award.

(d) If a Party believes that it will be irreparably harmed during the arbitration process, such Party may seek injunctive relief in any [\*] court having competent jurisdiction over the parties and the subject matter to enjoin any breach or violation pending an adjudication on the merits in arbitration. Further, without limiting such Party’s right to seek injunctive relief from a court of competent jurisdiction, either Party may apply to the arbitral tribunal of the [\*] seeking injunctive relief until the arbitration award is rendered or the controversy is otherwise resolved.

(e) Each Party shall bear its own costs in obtaining the dispute resolution, as outlined above.

\[*\] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
12.9 **Hospital Policies.** Company acknowledges that Hospital’s employees and medical and professional staff members and the employees and staff members of Hospital’s Affiliates are subject to the applicable policies of Hospital and such Affiliates, including, without limitation, policies regarding conflicts of interest, intellectual property and other matters. Company shall provide Hospital with any agreement it proposes to enter into with any employee or staff member of Hospital or any of Hospital’s Affiliates for Hospital’s prior review and shall not enter into any oral or written agreement with such employee or staff member which conflicts with any such policy. Hospital shall provide Company, at Company’s request, with copies of any such policies applicable to any such employee or staff member.

12.10 **Severability.** If any provision(s) of this Agreement are or become invalid, are ruled illegal by any court of competent jurisdiction or are deemed unenforceable under then current applicable law from time to time in effect during the term hereof, it is the intention of the parties that the remainder of this Agreement shall not be effected thereby. It is further the intention of the parties that in lieu of each such provision which is invalid, illegal or unenforceable, there be substituted or added as part of this Agreement a provision which shall be as similar as possible in economic and business objectives as intended by the parties to such invalid, illegal or enforceable provision, but shall be valid, legal and enforceable.

12.11 **Survival.** In addition to any specific survival references in this Agreement, Sections 1, 2.4, 4.2, 4.6, 4.7, 5.3, 5.4, 5.5, 6.4, 8.1, 8.2, 9.2, 0, 10.5, 10.6, 10.7, 12.1, 12.2, 12.3, 12.4, 12.7, 12.8, 12.9, 12.10, 12.11, 12.12 and 12.13 shall survive termination or expiration of this Agreement. Any other rights, responsibilities, obligations, covenants and warranties which by their nature should survive this Agreement shall similarly survive and remain in effect.

12.12 **Interpretation.** The parties hereto are sophisticated, have had the opportunity to consult legal counsel with respect to this transaction and hereby waive any presumptions of any statutory or common law rule relating to the interpretation of contracts against the drafter.

12.13 **Headings.** All headings are for convenience only and shall not affect the meaning of any provision of this Agreement.

12.14 **Confidentiality.** The Parties hereby acknowledge and agree that the Confidentiality Terms and Conditions set forth in Appendix D apply to this Agreement and to information disclosed hereunder, and are hereby incorporated by reference into this Agreement.

{Remainder of page intentionally left blank.}

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives as of the Effective Date first written above.

**MIRAGEN THERAPEUTICS**

BY: /s/ Christopher J. Morl  
Name:  
TITLE: Chief Business Officer  
DATE: May 10, 2016

**THE BRIGHAM AND WOMEN’S HOSPITAL, INC.**

BY: /s/ Jim Roberts  
Name: Jim Roberts  
TITLE: Assoc. Director  
DATE: May 10, 2016

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
## Appendix A

### DESCRIPTION OF PATENT RIGHTS

<table>
<thead>
<tr>
<th>Country</th>
<th>Type</th>
<th>Serial number</th>
<th>File date</th>
<th>Patent #</th>
<th>status</th>
<th>Publication #</th>
<th>Publication date</th>
</tr>
</thead>
<tbody>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td></td>
<td>[*]</td>
<td>[*]</td>
</tr>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
</tr>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
</tr>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
</tr>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
</tr>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
</tr>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
</tr>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
</tr>
<tr>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
</tr>
</tbody>
</table>

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
AGREEMENT INCOME REPORT

Royalty Income

[MGH][BWH] Agreement # -
Licensee -
Sub-Licensee -

Separate reports must be filed for:

1. Each product sold.

2. Each country of sale, if different deductions or royalty rates apply.

Product Name:__
Report Time Period:
From __/__/____
To __/__/____

<table>
<thead>
<tr>
<th>Country of Sale</th>
<th>Quantity Sold</th>
<th>Gross Sales (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$_________ $_________ $_________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exchange Rate</th>
</tr>
</thead>
</table>

Deductions (Itemize)
Please list each deduction separately. Use same definition as appears in Agreement and include the contract paragraph as a reference (Std Section 1.17(a)(ii) line item deductions listed below).

A1. ____________________________ ____________________________ ____________________________
A2. ____________________________ ____________________________ ____________________________
A3. ____________________________ ____________________________ ____________________________
A4. ____________________________ ____________________________ ____________________________
B. ____________________________ ____________________________ ____________________________

Total Deductions (__________) (__________) (__________) 

<table>
<thead>
<tr>
<th>Net Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>__________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Royalty Percentage</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Credits (Itemize)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(<strong><strong><strong><strong><strong>) (</strong></strong></strong></strong></strong>) (__________)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Royalties Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>$_________ $_________ $_________</td>
</tr>
</tbody>
</table>

PLEASE ATTACH DETAIL SALES REPORTS AS REQUIRED
AGREEMENT INCOME REPORT

Sublicense Income

[MGH][BWH] Agreement # - ________________________________
Licensee - __________
Sub-Licensee - __________

Separate reports must be filed for Payments associated with each Product:

Product Name: ___

Report Time Period:

From mm/dd/yyyy___
To mm/dd/yyyy___

<table>
<thead>
<tr>
<th>Detailed Explanation of Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required for “Other Payment”</td>
</tr>
</tbody>
</table>

| Annual Fees/Minimum Royalties         | $_________________________ |
| Milestone Payments                   | $_________________________ |
| Sublicense Fees and Royalties         | $_________________________ |
| Other Payment                        | $_________________________ |
| Other Payment                        | $_________________________ |
| Other Payment                        | $_________________________ |
| TOTAL                                | $_________________________ |

PLEASE ATTACH DETAIL AS REQUIRED

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
APPENDIX D
CONFIDENTIALITY TERMS AND CONDITIONS

1. **Definition of Confidential Information.** “Confidential Information” shall mean any information, including but not limited to data, techniques, protocols or results, or business, financial, commercial or technical information, disclosed by one Party (each a “Discloser” as applicable) to the other Party (each a “Recipient” as applicable) in connection with the terms of that certain Exclusive Patent License Agreement to which this Appendix is attached (the “License Agreement”) and, if disclosed in writing, marked as confidential, if disclosed orally, identified as confidential at the time of disclosure and summarized and confirmed in a writing to the Recipient within thirty (30) days of the oral disclosure. Hospital’s Confidential Information shall also include all information disclosed by Hospital to Company in connection with the Patent Rights. Capitalized terms used in this Appendix that are not otherwise defined herein have the meanings ascribed in the License Agreement to which this Appendix is attached and made a part thereof.

2. **Exclusions.** “Confidential Information” shall not include any information that (i) is or becomes publicly available through no wrongful act of Recipient; (ii) was known by Recipient prior to disclosure by Discloser, as evidenced by tangible records; (iii) becomes known to Recipient without any obligations of confidence after disclosure from a third party having an apparent bona fide right to disclose it; (iv) is independently developed or discovered by Recipient without use of Discloser’s Confidential Information, as evidenced by tangible records.

3. **Permitted Purpose.** Recipient shall have the right to, and agrees that it will, use and disclose Discloser’s Confidential Information only to the extent such use and disclosure is reasonably necessary in any of the following situations (the “Purpose”):
   
   (a) in order for Recipient to fulfill its obligations or exercise its rights under the License Agreement, including filing and prosecuting patents as permitted by the License Agreement, regulatory filings and other filings with governmental authorities or regulatory authorities.

   (b) disclosure to any bona fide potential or actual licensee, sublicensee, investor, acquirer and other commercial or financial partner for the purpose of evaluating or carrying out an actual or potential license, investment, acquisition or collaboration related to this License Agreement or Patent Rights; provided that each such disclosee is informed of the confidential nature of such information and is bound by obligations of confidentiality and non-use consistent with those set forth herein; and further provided Recipient shall be responsible for compliance by disclosee’s with the terms of this Agreement and any breach thereof.

   (c) disclosure required to comply with applicable laws and regulations, including regulations promulgated by security exchanges, court order and administrative subpoena or orders; provided that the Recipient shall promptly inform the Discloser of such required disclosure and shall use reasonable efforts to assist Discloser to obtain a protective order preventing or limiting the disclosure and preserving the confidentiality of the information.

4. **Restrictions.** From the date of disclosure and a period of [*] years thereafter (and indefinitely with respect to any individually identifiable health information disclosed by Hospital to Company, if any),

   [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
each Recipient agrees that: (i) it will not use or disclose such Confidential Information for any purpose other than as specified herein, including
without limitation for its own benefit or the benefit of any other person or entity; and (ii) it will use reasonable efforts (but no less than the
efforts used to protect its own confidential and/or proprietary information of a similar nature) to protect the confidentiality and avoid
unauthorized use or disclosure of such Confidential Information. Recipient may, however, disclose Discloser’s Confidential Information only
on a need-to-know basis to its and its Affiliates employees, staff members and agents ("Receiving Individuals") who are directly participating
in the Purpose and who are informed of the confidential nature of such information, provided Recipient shall be responsible for compliance by
Receiving Individuals with the terms of this Agreement and any breach thereof. Each party further agrees not to use the name of the other party
or any of its Affiliates or any of its respective trustees, directors, officers, staff members, employees, students or agents in any advertising,
promotional or sales literature, publicity or in any document employed to obtain funds or financing without the prior written approval of the
party or individual whose name is to be used, in the case of Hospital such approval to be given by the Public Affairs Department. This Section
4 shall survive termination or expiration of this Agreement.

5. **Right to Disclose.** Discloser represents that to the best of its knowledge it has the right to disclose to each Recipient all of Discloser’s
Confidential Information that will be disclosed hereunder.

6. **Ownership.** All Confidential Information disclosed pursuant to this Agreement, including without limitation all written and tangible
forms thereof, shall be and remain the property of the Discloser. Upon termination of this Agreement, if requested by Discloser, Recipient shall
return or destroy at Discloser’s discretion all of Discloser’s Confidential Information, provided that Recipient shall be entitled to keep one copy
of such Confidential Information in a secure location solely for the purpose of determining Recipient’s legal obligations hereunder.

7. **No License.** Nothing in this Agreement shall be construed as granting or conferring, expressly or impliedly, any rights by license or
otherwise, under any patent, copyright, or other intellectual property rights owned or controlled by Discloser relating to Confidential
Information, except as specifically set forth in the License Agreement.

8. **Remedies.** Each party acknowledges that any breach of this Agreement by it may cause irreparable harm to the other party and that each
party is entitled to seek injunctive relief and any other remedy available at law or in equity.

9. **General.** These Confidentiality Terms and Conditions are hereby incorporated by reference into the License Agreement and, along with
the License Agreement, contain the entire understanding of the parties with respect to the subject matter hereof, and supersede any prior oral or
written understandings between the parties relating to confidential treatment of information. Sections 1, 2, 4, 6, 8, and 9 of these Confidentiality
Terms and Conditions shall survive any expiration or termination of the License Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to
Rule 406 of the Securities Act of 1933, as amended.
FIRST LOAN MODIFICATION AGREEMENT

This First Loan Modification Agreement (this “Loan Modification Agreement”) is entered into as of December 22, 2016, by and between SILICON VALLEY BANK, a California corporation (“Bank”), and MIRAGEN THERAPEUTICS, INC., a Delaware corporation (“Borrower”).

1. DESCRIPTION OF EXISTING INDEBTEDNESS AND OBLIGATIONS. Among other indebtedness and obligations which may be owing by Borrower to Bank, Borrower is indebted to Bank pursuant to a loan arrangement dated as of April 30, 2015, evidenced by, among other documents, a certain Loan and Security Agreement, dated as of April 30, 2015, between Borrower and Bank (as amended, the “Loan Agreement”). Capitalized terms used but not otherwise defined herein shall have the same meaning as in the Loan Agreement.

2. DESCRIPTION OF COLLATERAL. Repayment of the Obligations is secured by the Collateral as described in the Loan Agreement (together with any other collateral security granted to Bank, the “Security Documents”). Hereinafter, the Loan Agreement, together with all other documents executed in connection therewith evidencing, securing or otherwise relating to the Obligations shall be referred to as the “Existing Loan Documents”.

3. DESCRIPTION OF CHANGE IN TERMS.

A. Modifications to Loan Agreement.

1. The Loan Agreement shall be amended by deleting the following definition appearing in Section 13.1 thereof:

“Availability Trigger” is, at any time after the Effective Date, the date on which (i) Borrower provides Bank evidence reasonably satisfactory to Bank that Borrower has achieved mechanistic proof of concept for Borrower’s MRG-106 Phase I clinical trial; and (ii) Bank receives a satisfactory update from Borrower’s investors, in form and substance reasonably acceptable to Bank.

“Draw Period” is the period of time commencing on the date the Availability Trigger occurs through the earlier to occur of (a) December 31, 2016 or (b) an Event of Default.

“Prime Rate” is the rate of interest per annum from time to time published in the money rates section of The Wall Street Journal or any successor publication thereto as the “prime rate” then in effect; provided that if such rate of interest, as set forth from time to time in the money rates section of The Wall Street Journal, becomes unavailable for any reason as determined by Bank, the “Prime Rate” shall mean the rate of interest per annum announced by Bank as its prime rate in effect at its principal office in the State of California (such Bank announced Prime Rate not being intended to be the lowest rate of interest charged by Bank in connection with extensions of credit to debtors).

and inserting in lieu thereof the following:

“Availability Trigger” is, at any time after the First Loan Modification Effective Date, the date on which Borrower provides Bank evidence reasonably satisfactory to Bank that Borrower has received net proceeds from the issuance of additional equity of Borrower of at least Thirty Five Million Dollars ($35,000,000), issued to investors of similar character and quality as the investors in existence as of the Effective Date and otherwise reasonably acceptable to Bank.

“Draw Period” is the period of time commencing on the date the Availability Trigger occurs through the earlier to occur of (a) July 31, 2017 or (b) an Event of Default.

“Prime Rate” is the rate of interest per annum from time to time published in the money rates section of The Wall Street Journal or any successor publication thereto as the
“prime rate” then in effect; provided that, in the event such rate of interest is less than zero, such rate shall be deemed to be zero for purposes of this Agreement; and provided further that if such rate of interest, as set forth from time to time in the money rates section of The Wall Street Journal, becomes unavailable for any reason as determined by Bank, the “Prime Rate” shall mean the rate of interest per annum announced by Bank as its prime rate in effect at its principal office in the State of California (such Bank announced Prime Rate not being intended to be the lowest rate of interest charged by Bank in connection with extensions of credit to debtors); provided that, in the event such rate of interest is less than zero, such rate shall be deemed to be zero for purposes of this Agreement.

2 The Loan Agreement shall be amended by inserting the following new definitions in Section 13.1 thereof, in its applicable alphabetical order:

“First Loan Modification Effective Date” is December 22, 2016.

4. CONDITIONS PRECEDENT. Borrower hereby agrees that the following documents shall be delivered to the Bank prior to or concurrently with the execution of this Loan Modification Agreement, each in form and substance satisfactory to the Bank (collectively, the “Conditions Precedent”):

A. copies, certified by a duly authorized officer of Borrower, to be true and complete as of the date hereof, of each of (i) the governing documents of Borrower as in effect on the date hereof (but only to the extent modified since last delivered to the Bank), (ii) the resolutions of Borrower authorizing the execution and delivery of this Loan Modification Agreement, the other documents executed in connection herewith and Borrower’s performance of all of the transactions contemplated hereby (but only to the extent required since last delivered to Bank), and (iii) an incumbency certificate giving the name and bearing a specimen signature of each individual who shall be so authorized on behalf of Borrower (but only to the extent any signatories have changed since such incumbency certificate was last delivered to Bank);

B. a duly executed copy of the update Perfection Certificate;

C. updated evidence of insurance; and

D. such other documents as Bank may reasonably request.

5. FEES. Borrower shall reimburse Bank for all legal fees and expenses incurred in connection with the Existing Loan Documents and this Loan Modification Agreement.

6. ADDITIONAL COVENANTS. Borrower hereby certifies that, other than as disclosed in the Perfection Certificate, no Collateral with a value greater than Fifty Thousand Dollars ($50,000) in the aggregate is in the possession of any third party bailee (such as at a warehouse). In the event that Borrower, after the date hereof, intends to store or otherwise deliver the Collateral with a value in excess of Fifty Thousand Dollars ($50,000) in the aggregate to such a bailee, then Borrower shall first receive, the prior written consent of Bank and such bailee must acknowledge in writing that the bailee is holding such Collateral for the benefit of Bank.

7. CONSISTENT CHANGES. The Existing Loan Documents are hereby amended wherever necessary to reflect the changes described above.

8. RATIFICATION OF LOAN DOCUMENTS. Borrower hereby ratifies, confirms, and reaffirms all terms and conditions of the Loan Agreement and each other Loan Document, and of all security or other collateral granted to the Bank, and confirms that the indebtedness secured thereby includes, without limitation, the Obligations.

9. NO DEFENSES OF BORROWER. Borrower hereby acknowledges and agrees that Borrower has no offsets, defenses, claims, or counterclaims against Bank with respect to the Obligations, or otherwise, and that if Borrower now has, or ever did have, any offsets, defenses, claims, or counterclaims against Bank, whether known or unknown, at law or in equity, all of them are hereby expressly WAIVED and Borrower hereby RELEASES Bank from any liability thereunder.
10. **CONTINUING VALIDITY.** Borrower understands and agrees that in modifying the existing Obligations, Bank is relying upon Borrower’s representations, warranties, and agreements, as set forth in the Existing Loan Documents. Except as expressly modified pursuant to this Loan Modification Agreement, the terms of the Existing Loan Documents remain unchanged and in full force and effect. Bank’s agreement to modify certain terms and conditions pursuant to this Loan Modification Agreement in no way shall obligate Bank to make any future modifications to the Obligations. Nothing in this Loan Modification Agreement shall constitute a satisfaction of the Obligations. It is the intention of Bank and Borrower to retain as liable parties all makers of Existing Loan Documents, unless the party is expressly released by Bank in writing. No maker will be released by virtue of this Loan Modification Agreement.

11. **JURISDICTION/VENUE.** Section 11 of the Loan Agreement is hereby incorporated by reference.

12. **COUNTERSIGNATURE.** This Loan Modification Agreement shall become effective only when it shall have been executed by Borrower and Bank.

[Signature page follows.]
This Loan Modification Agreement is executed as of the date first written above.

BORROWER:

MIRAGEN THERAPEUTICS, INC.

By /s/ Jason A. Leverone
Name: Jason A. Leverone
Title: CFO

BANK:

SILICON VALLEY BANK

By /s/ Tom Hertzberg
Name: Tom Hertzberg
Title: Director
This Subcontract Agreement for the development of promiR-29 for the treatment of patients with Pulmonary Fibrosis (the "Subcontract") is entered into on the 1st day of October, 2014 (the "Effective Date") by and between Yale University, a nonprofit corporation, organized and existing under and by virtue of a special charter granted by the General Assembly of the Colony and State of Connecticut ("Yale"), located at 47 College Street, Suite 203, New Haven, CT 06510 ("Yale") and MiRagen Therapeutics, Inc. ("MiRagen"), a Delaware corporation with offices at 6200 Lookout Rd., Suite 100, Boulder, CO 80301. Yale and MiRagen may be referred to herein individually as a "Party" and collectively, as "Parties."

RECITALS

WHEREAS, MiRagen is a biopharmaceutical company discovering and developing innovative microRNA (miRNA)-targeting therapies to improve human health, specifically in disease areas of high unmet medical need;

WHEREAS, Yale is a university engaged to advance scientific and medical knowledge, with a due regard for patient safety, and will further the instructional and research objectives of institution in a manner consistent with its status as a professional organization, together with MiRagen, in the research in the area of pulmonary fibrosis;

WHEREAS, the Parties have previously entered into that certain Materials Transfer Agreement, effective as of September 2, 2013, as amended as of July 31, 2014 (the "MTA"), pursuant to which MiRagen transferred certain materials to Yale, and Yale conducted research;

WHEREAS, the Parties have applied for and received from the National Institutes of Health ("NIH"), Centers for Advanced Diagnostics and Experimental Therapeutics ("CADET") in Lung Diseases Stage II grant (the "Grant") issued on September 22, 2014, Grant Number 1UH2JHL123886-01 in order to carry out the research activities specified therein, and as hereinafter mutually agreed by the Parties and/or required by relevant United States federal government administrative agencies and their divisions, including NIH (the "Research"); and

WHEREAS, Yale now desires to engage MiRagen to perform work under the Grant in support of the Research as a subcontractor, pursuant to the terms and conditions of this Subcontract.

1.
NOW, THEREFORE, in consideration of the mutual promises and covenants set forth below, Yale and MiRagen mutually agree as follows:

AGREEMENT

ARTICLE 1. DEFINITIONS

Capitalized terms shall have the meanings set forth below, or in the body of this Subcontract:

1.1 “cGLP” means current Good Laboratory Practices required by the FDA and set forth in the U.S. Food, Drug & Cosmetics Act or FDA regulations, policies or guidelines.

1.2 “cGMP” means current Good Manufacturing Practices required by the FDA and set forth in the U.S. Food, Drug & Cosmetics Act or FDA regulations, policies or guidelines.

1.3 “FDA” means the U.S. Food and Drug Administration.

1.4 “Grant Requirements” means all conditions of the Grant award imposed by NIH or otherwise by the USG, including but not limited to the requirements that: (1) awardee must conduct at least 40% of the research in the therapeutic development plan at the grantee institution(s), (2) any inventions which result from CADET funded research will be reported to the Division of Extramural Inventions & Technology Resources, NIH, within 2 months of the inventor’s initial report to the grantee/contractor organization, (3) the reporting of inventions will be accomplished electronically through the NIH Interagency Edison Invention Reporting System, (4) the awardee will retain custody of and have primary rights to the data and software developed under the award, subject to USG rights of access and requirements for dissemination consistent with current DHHS, PHS, and NIH policies, (5) when multiple years are involved, awardees will be required to submit the annual Non-Competing Progress Report (PHS 2590 or RPPR) and financial statements as required in the NIH Grants Policy Statement, (6) a final progress report, invention statement, and the expenditure data portion of the Federal Financial Report are required for closeout of an award, as described in the NIH Grants Policy Statement, and (7) the Federal Funding Accountability and Transparency Act of 2006 (Transparency Act), includes a requirement for awardees of Federal grants to report information about first-tier subawards and executive compensation under Federal assistance awards issued in FY2011 or later, such that all awardees of applicable NIH grants and cooperative agreements are required to report to the Federal Subaward Reporting System (FSRS) available at www.fsrs.gov on all subawards over $25,000.

1.5 “Invention(s)” means any and all tangible materials, works of authorship, discoveries, technology, results, information, data, concepts, ideas, improvements or other inventions, whether or not patentable, conceived or made as a result of the work conducted under the Grant, including without limitation the Research and Services, together with all intellectual property rights relating thereto.

1.6 “MiRagen Materials” means the materials set forth on Exhibit A, which have been transferred to Yale prior to the Effective Date hereof pursuant to the MTA and will continue to be transferred to Yale in accordance with the Statement of Work.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

2.
1.7 “Services” means the activities of MiRagen performed in support of the Statement of Work, which will include certain Chemistry, Manufacturing and Control (“CMC”) services.

1.8 “Statement of Work” the summary of the Services to be provided by MiRagen, attached hereto as Exhibit B.

1.9 “Third Party” means a person or entity other than the Parties.

1.10 “USG” means the United States federal government, and any of its administrative agencies and their divisions, including but not limited to, the NIH.

ARTICLE 2. SCOPE OF WORK

2.1 Statement of Work. The Statement of Work hereby incorporated into this Subcontract by reference, sets forth a detailed description of the scope and manner in which MiRagen shall provide Services to Yale subject to the limitations set forth in Section 4 of this Subcontract. The maximum amount for which MiRagen shall be reimbursed or otherwise compensated for Services provided under this Subcontract is $1,056,651.76. MiRagen shall use commercially reasonable efforts to perform all Services in compliance with the protocols, standards, specifications, timing and other requirements of the Statement of Work, in accordance with the terms of this Subcontract, and as otherwise mutually agreed to in writing by the Parties.

2.2 Compliance with Laws and Grant Requirements.

(a) Applicable Laws. The Parties shall comply in all material respects with all applicable present and future orders, regulations, requirements and laws of any and all United States federal, state, provincial and local authorities and agencies, including NIH (“Applicable Laws”) in the case of MiRagen, in the performance of its obligations under this Subcontract and, in the case of Yale, in the performance of its obligations under the Grant and Grant Requirements.

(b) Grant Requirements. Yale shall remain primarily responsible for compliance with the Grant Requirements as the awardee thereunder, and MiRagen shall comply with Grant Requirements in the performance of its obligations under this Subcontract as specified in the Statement of Work. MiRagen shall participate in the preparation and review of project plans and timelines, and provide appropriate support in contributing to communications and reports between Yale and NIH and the satisfaction of the Grant Requirements.

(c) Manufacture of cGMP Material. Pursuant to the Statement of Work, MiRagen shall, if required, manufacture or have manufactured Materials in accordance with cGMP. MiRagen shall promptly notify Yale in writing of all suspected or confirmed deviations from cGMP.

(d) Yale Supervision. Yale shall have the right to have representatives present at MiRagen’s laboratory and manufacturing facilities during normal business hours to review MiRagen’s laboratory testing and manufacturing operations and to assess MiRagen’s compliance with Applicable Law, Grant Requirements, cGMP if applicable, and any specifications and protocols set forth in the Statement of Work.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

3.
MiRagen’s testing, manufacturing and management personnel shall be reasonably available to discuss any related issues with Yale representatives. Yale shall comply with all reasonable MiRagen rules and regulations regarding conduct, security and safety established by MiRagen for access to and activities in and around its properties/facilities. Yale shall ensure that its employees and agents entering MiRagen’s facilities shall comply with the confidentiality obligations set forth in Article 7.

(e) Documentation; FDA and Regulatory Support. MiRagen shall keep complete, accurate and authentic accounts, notes, data and records (“Data”) of the Services it performs. All Data prepared or originated by MiRagen in the performance of Services under this Subcontract shall be owned by MiRagen.

2.3 Reserved Rights. The provision of the Material to Recipient shall not alter any preexisting rights in the Materials. Subject to the rights granted to Recipient in this Agreement, any pre-existing rights held by others and obligations to the federal government, MiRagen retains all right to grant exclusive or non-exclusive commercial licenses to others, or to sell or assign all or part of the rights in the Materials to any third parties.

ARTICLE 3. MATERIALS TRANSFER

3.1 Materials Transfer. MiRagen shall transfer to Yale the Materials. Upon receipt of the Materials, Yale shall use such Materials solely in the performance of the Research for no other purpose, including without limitation any commercial purpose or research, other than any such purpose described in protocol for the Research (the “Protocol”). Yale shall not: (a) attempt to reverse engineer, deconstruct or in any way determine the structure or composition of the Materials; (b) commingle the Materials with any other active drug compounds except as and to the extent provided in the Protocol; or (c) make any modifications or derivations of the Material without MiRagen’s prior written consent. Yale shall not sell, transfer, disclose or otherwise provide access to the Materials, any method or process relating thereto or any material that could not have been made but for the foregoing to any person or entity without the prior written consent of MiRagen, except that Yale may allow access to the Materials to its employees and agents who require such access in order to conduct the Research according to the Protocol; provided that such employees and agents acknowledge and agree to use the Materials in a manner that is consistent with the terms of this Subcontract. When the Research is completed, any remaining Materials will be returned by Yale to MiRagen, or otherwise disposed of as mutually agreed by MiRagen and Yale.

3.2 Deliveries to Yale. Unless otherwise agreed to by the Parties in writing, all shipments of Materials to Yale shall be shipped from Ex-Works MiRagen’s facility (Incoterms 2010) to Yale.

3.3 Acceptance and Rejection.

(a) Yale shall have the right to reject any Services or Materials that are not in compliance with the requirements and specifications set forth in the Statement of Work and other terms and conditions of this Subcontract, as reasonably determined by Yale, or if for any reason the USG rejects such Services or Materials.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Unless otherwise agreed by the Parties in writing, MiRagen, to the extent the non-compliance is a direct result of MiRagen’s performance of this Subcontract, shall correct any and all deficiencies as a result of such non-compliance within [*] calendar days after being notified of the non-compliance. If MiRagen has a reasonable basis to believe that such deficiencies cannot be corrected within the specified time period, MiRagen shall immediately notify Yale of the reason for the belief and provide a proposed corrective action plan within [*] working days of such notification. Failure of MiRagen to provide such a plan within this time frame, or to properly correct such deficiencies, shall be considered a material breach of this Subcontract and subject termination in accordance with Section 8.3 herein; provided that if MiRagen has provided a corrective action plan in accordance with the foregoing, during the time MiRagen is using commercially reasonable efforts to follow such plan, Yale shall not be permitted to give its [*] days’ notice of termination for material breach in accordance with Section 8.3 with respect to the non-compliance that is the subject of such corrective action plan.

ARTICLE 4. PAYMENT

4.1 Payment. Yale shall compensate MiRagen for its provision of Materials and performance of the Services, in accordance with the Budget set forth as Exhibit B hereto, and conditional on annual grant funding as it is awarded to Yale. The maximum amount for which MiRagen shall be reimbursed or otherwise compensated under this Subcontract is $1,055,851.76. MiRagen shall use commercially reasonable efforts to complete the work as set forth in the Statement of Work hereunder. In no event shall MiRagen be obligated or required to incur any charges or costs in excess of the amount set forth for such charges and costs in the Budget, and any amendments thereto. If MiRagen identifies any additional costs or charges required for performance of the work that are not yet approved in the Budget, Yale and MiRagen will discuss in good faith the compensation of MiRagen for such additional costs and charges, and if agreed, shall amend the Budget accordingly, in compliance with the Grant’s terms. Yale may also elect to provide additional funding in an amount mutually agreed upon by the Parties in writing.

4.2 Invoices and Payment.

(a) MiRagen shall submit invoices for costs incurred in its performance of the Services and provision of the Materials on a regular basis.

(b) The Parties recognize and understand that payment by Yale to MiRagen is intended to come from the Grant funds provided to Yale. Yale shall take all reasonable actions to obtain timely payment from NIH in this regard and shall promptly notify MiRagen if for any reason it believes it will not be able to continue to meet any portion of its ongoing payment obligations to MiRagen for performance of Services and provision of Materials hereunder.

(c) Travel. If any travel is required by MiRagen for the performance of its Services, reasonable costs for travel, lodging, meals, and incidental expenses incurred by MiRagen personnel shall be allowable as allowed by the Grant funds.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
5.1 Inventions.

(a) As soon as a Party reasonably believes an Invention has been conceived or reduced to practice hereunder, such Party shall disclose such Invention confidentially in writing to the other Party in sufficient detail to allow such Party to evaluate its significance. Inventorship of Inventions will be determined in accordance with principles of U.S. patent law. “MiRagen Inventions” means all: (i) Inventions that are conceived or made solely by MiRagen, or its employees, agents or independent contractors; and (ii) Inventions that relate to the composition, manufacture, formulation, method of use, or administration of the Materials and that are conceived or made by employees, agents or independent contractors of a Party (either solely or jointly with MiRagen’s employees, agents or independent contractors). MiRagen shall solely own all right, title and interest in and to all MiRagen Inventions. “Yale Invention(s)” means all Inventions that are not MiRagen Inventions and that are conceived or reduced to practice solely by employees, agents, independent contractors and related personnel of Yale (including, but not limited to, researchers, postgraduate students and other students). Yale shall solely own all right, title and interest in and to all Yale Inventions. “Joint Inventions” shall mean all Inventions that are not MiRagen Inventions and that are jointly conceived or made by employees, agents or independent contractors of the Parties. MiRagen and Yale shall each jointly own such Joint Inventions without any duty of accounting to the other Party. Each Party and its employees and agents shall, upon the other Party’s reasonable written request and at MiRagen’s expense, execute such documents and take such other actions as the requesting Party deems necessary to obtain the ownership rights set forth in this Section and to apply for, secure, and maintain patent or other proprietary protection of such Inventions.

(b) Yale shall grant, and hereby does grant, to MiRagen: (i) a nonexclusive royalty-free license to Yale’s interest in any Yale Invention to use such Yale Invention for internal research purposes; and (ii) an exclusive option to negotiate in good faith for an exclusive, royalty-bearing license to Yale’s interest in any Yale Invention or Joint Invention to research, develop and/or commercialize products or services incorporating such Yale Invention and/or Joint Invention. The option to negotiate with respect to a specific Yale Invention and/or Joint Invention will be valid and exercisable for [*] days after MiRagen receives written notification from Yale of such Yale Invention or Joint Invention (the “Option Period”). If MiRagen exercises the option within the Option Period, then MiRagen and Yale will have [*] days after such exercise to negotiate in good faith the commercially reasonable terms of an agreement governing such license (the “Negotiation Period’’). The Negotiation Period may be extended by mutual agreement of Yale and MiRagen, if, with respect to any such Yale Invention and/or Joint Invention, either MiRagen does not exercise its option within the Option Period for that Yale Invention and/or Joint Invention, or Yale and MiRagen are unable to agree on the terms of a license within the Negotiation Period, then Yale shall be free to negotiate with a third party.

(c) Except as expressly stated herein, nothing in this Agreement shall be construed as conferring on Yale any express or implied license or option to license the Materials, Confidential Information, or any patents, patent applications, trade secrets or other proprietary rights of MiRagen in connection thereto. In particular, no rights are provided to use the Materials and any related patents of MiRagen for commercial purposes.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Yale shall be responsible at its expense and direction, and if necessary with the cooperation of MiRagen, for filing, prosecuting and maintaining foreign and domestic patent applications and patents on all Joint Inventions.

Each Party agrees to cooperate with the other Party and to take all reasonable actions and to execute such instruments and documents as may be reasonably required to perfect the other Party’s interest in accordance with the intent of this Subcontract.

ARTICLE 6. USG INTERFACE AND PUBLICATIONS

6.1 Interaction with the USG. All contacts with the USG concerning the work to be performed under the Grant, including MiRagen’s Services under this Subcontract, shall be the responsibility of Yale. MiRagen shall not contact the USG except as authorized by Yale. MiRagen shall promptly report to Yale any communications initiated by the USG directly with MiRagen concerning the work hereunder. Unless otherwise directed by the USG and agreed to in writing by Yale (such agreement not to be unreasonably withheld), all meetings and other contacts involving MiRagen personnel and/or their representatives with representatives of the USG relative to the effort herein, shall be prearranged through Yale.

6.2 Publications. Pursuant to the following conditions, Yale may publish the results of the Research in accordance with commonly accepted scientific standards and this Section 6.2. Yale shall first furnish MiRagen with a confidential copy of any proposed publication or release at least forty-five (45) days in advance of the proposed submission or presentation date. Within this forty-five (45) day period, MiRagen shall review such proposed publication or release to determine whether it contains any Confidential Information of MiRagen, or whether MiRagen desires to file patent applications on subject matter contained therein. Upon receiving any notification from MiRagen requesting deletion of MiRagen’s Confidential Information, or requesting a delay in publication for a period of one hundred and twenty (45) days to allow the filing of patent applications before publication or release, Yale shall take the requested action. During the review period, MiRagen may also request that Yale correct any inaccuracies, which request Yale shall consider in good faith. The Parties acknowledge and agree that Yale is solely responsible for the editorial content of any publication or release. Notwithstanding the foregoing, MiRagen shall be acknowledged on any publication by Yale in accordance with customary scientific practices.

ARTICLE 7. CONFIDENTIALITY

7.1 Definition. As used in this Subcontract, the term “Confidential Information” shall mean any information, either enabling or disabling, including the terms of this Subcontract, knowledge, know-how, practices, processes, inventions, ideas and other information, any batch record, trade secret, research, data, process, technique, algorithm, program, design, drawing, formula, experimental design or test data relating to any research project, work in progress, future development, scientific, manufacturing, marketing, business plan, financial or personnel matter relating to the disclosing Party (the “Disclosing Party”), its present or future products, sales, employees, investors or business, whether in oral, written, graphic or electronic form.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
7.2 **Non-Disclosure; Non-Use.** The receiving Party (the “Receiving Party”) shall maintain in confidence all Confidential Information, and shall not use, disclose or grant use of such Confidential Information except as expressly authorized by this Subcontract or the Protocol. The Receiving Party may disclose Confidential Information, as authorized hereunder, only to those employees, officers, agents, and researchers of the Receiving Party who agree to be bound by the terms of this Article 7. The Receiving Party shall use the strictest standard of care which is practical to ensure that such employees, officers, agents, and researchers do not disclose or make any unauthorized use of Confidential Information, and shall promptly notify the Disclosing Party upon discovery of any unauthorized use or disclosure of the Confidential Information.

7.3 **Exclusions.** The term “Confidential Information” shall be deemed not to include information which the Receiving Party can demonstrate by competent written proof: (i) is now, or hereafter becomes, through no act or failure to act on the part of the Receiving Party, generally known or available in the public domain; (ii) is known by the Receiving Party at the time of receiving such information as evidenced by its contemporaneous written records; (iii) is hereafter furnished to the Receiving Party by a Third Party, as a matter of right and without restriction or disclosure; or (iv) is the subject of a written permission to disclose provided by the Disclosing Party. Further, the obligations of non-disclosure under this Article 7 shall not apply to the extent that the Receiving Party is required to disclose information by the Grant, by NIH, or by an order or regulation of the USG or in the course of litigation, provided that in all cases the Receiving Party shall give the providing Party (“Providing Party”) prompt prior written notice of the pending disclosure and provides reasonable assistance to the Disclosing Party, at the Disclosing Party’s expense, to obtain a protective order to maintain the confidentiality of the information.

7.4 **Permitted Disclosure.** Notwithstanding Section 7.2, Receiving Party may disclose certain Confidential Information, without violating the obligations of this Agreement, to the extent the disclosure is required by a valid order of a court or other governmental body having jurisdiction, required by the Grant or NIH, or required in the course of litigation, provided that Receiving Party gives reasonable prior written notice to Providing Party of such required disclosure and makes a reasonable effort to obtain, or to assist Providing Party in obtaining, a protective order preventing or limiting the disclosure and/or requiring that the Confidential Information so disclosed be used only for the purposes for which the law or regulation requires, or for which the order was issued.

7.5 **Return of Confidential Information.** Except as otherwise provided in the Subcontract, in the event this Subcontract is terminated for any reason, all Confidential Information provided by the Parties or their representatives shall be promptly returned to the providing Party (or destroyed at request of the providing Party), and neither Party, without the prior written consent of the other Party, shall use any of the Confidential Information of the other Party for any purpose other than as expressly permitted in this Subcontract.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
7.6 **Injunctive Relief.** The Parties expressly acknowledge and agree that any breach or threatened breach of this Article 7 may cause immediate and irreparable harm to the Disclosing Party which may not be adequately compensated by damages. Each Party therefore agrees that in the event of such breach or threatened breach and in addition to any remedies available at law, the Disclosing Party shall have the right to secure equitable and injunctive relief in connection with such a breach or threatened breach.

**ARTICLE 8. TERM AND TERMINATION**

8.1 **Term.** The term of this Subcontract shall be from the Effective Date until the date upon which the final reports of the Research are delivered to NIH, unless earlier terminated in accordance with this Subcontract (the “Term”). In the event the NIH or USG provides additional grant funding in connection with the Research, the Parties agree to discuss in good faith the possibility of extending the Term of this Subcontract as appropriate, or entering into a new agreement, to perform the services and activities required to support the additional work or in consideration of the additional grant funding.

8.2 **Termination For Lack of Funding.** This Subcontract may be terminated in whole or in part by either Party, upon [*] days’ prior written notice, in the event that the Grant funding is reduced or terminated.

8.3 **Termination for Breach.** Either Party may, upon [*] days’ prior written notice, terminate all or any part of this Subcontract for the other Party’s material breach of its obligations hereunder. In the event of such breach, the notifying Party will allow the other Party the opportunity to cure the alleged default within the period of [*] business days after receipt of written notice of any such breach or failure.

8.4 **Remedies.** The rights and remedies of the Parties provided in this Article 8 shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, or otherwise under this Subcontract.

**ARTICLE 9. REPRESENTATIONS AND CERTIFICATIONS; DEBARMENT CERTIFICATION**

9.1 **Mutual Representations and Certifications.**

(a) **Existence and Power.** Each Party represents and certifies that such Party: (a) is duly organized, validly existing and in good standing under the laws of the state in which it is organized; (b) has the power and authority and the legal right to own and operate its property and assets, to lease the property and assets it operates under lease, and to carry on its business as it is now being conducted; and (c) is in material compliance with all requirements of Applicable Law, except to the extent that any noncompliance would not materially adversely affect such Party’s ability to perform its obligations under the Subcontract.

(b) **Authorization and Enforcement of Obligations.** Each Party represents and certifies that such Party: (a) has the power and authority and the legal right to enter into the Subcontract and to perform its obligations hereunder; and (b) has taken all necessary action on its part to authorize the execution and delivery of the Subcontract and the performance of its obligations hereunder. The Subcontract has been duly executed and delivered on behalf of such Party, and constitutes a legal, valid, binding obligation, enforceable against such Party in accordance with its terms.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
(c) **No Consents.** Each Party represents and warrants that all necessary consents, approvals and authorizations of all governmental authorities and other persons required to be obtained by such Party in connection with the Subcontract have been obtained.

(d) **No Conflict.** Each Party represents and warrants that the execution and delivery of the Subcontract and the performance of such Party’s obligations hereunder: (a) do not conflict with or violate any material requirement of Applicable Laws or regulations or any material contractual obligation of such Party; and (b) do not materially conflict with, or constitute a material default or require any consent under, any material contractual obligation of such Party. Neither Party shall enter into any agreement or arrangement with any other Party that would prevent or in any way interfere with such Party’s obligations pursuant to this Subcontract.

9.2 **MiRagen Representations and Warranties.** MiRagen represents and certifies that: (i) it shall perform the Services in a manner consistent with industry standards reasonably applied to the performance of such Services; (ii) the Materials provided to Yale shall conform in all material respects to the specifications for such items included in this Subcontract; (iii) MiRagen is able to perform the Services and provide the Materials specified in this Subcontract and MiRagen does not have any agreement with any Third Party which would restrict its ability to perform under this Subcontract; and (iv) it shall comply with all Applicable Laws in its performance of this Subcontract.

9.3 **Yale Representations and Warranties.** Yale represents and certifies that: (i) it shall perform its obligations under the Grant in a manner consistent with academic standards reasonably applied to the performance of such Research; (ii) Yale is able to perform the work and obligations specified in the Grant and this Subcontract and Yale does not have any agreement with any Third Party which would restrict its ability to perform under the Grant or this Subcontract; and (iv) it shall comply with all Applicable Laws in its performance of this Subcontract.

9.4 **Certification of No Debarment.** Each Party hereby certifies that such Party and/or any of its officers, directors, owners, partners, researchers, students, agents, employees and persons having primary management or supervisory responsibilities, or involved in the work under the Grant, are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any federal agency. Each Party shall provide immediate written notice to the other Party upon the occurrence of any of the offenses enumerated above.

**ARTICLE 10. INDEMNIFICATION/LIMITATION OF LIABILITY**

10.1 **Indemnity.**

(a) Yale agrees to indemnify, hold harmless and defend MiRagen and MiRagen’s directors, officers, employees and agents, and the directors, officers, employees and agents of any MiRagen parent, subsidiary or related company (the “MiRagen Indemnitees”) from and against any and all Third Party claims, suits, losses,

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

10.
damages, costs, fees and expenses resulting from or arising out of: (i) (ii) the negligence, recklessness or willful misconduct of Yale in performing its obligations under the Grant or Protocol; and (iii) the possession or use of Materials by Third Parties, including without limiting the generality of the foregoing any damages, losses or liabilities whatsoever with respect to death or injury to person or damage to property; provided that MiRagen provides Yale with prompt notice of any such claim and the exclusive ability to defend (with the reasonable cooperation of MiRagen) or settle any such claim. Yale shall have no obligation under this Section 10.1(a) to the extent that such claims, suits, losses, damages, costs, fees or expenses arises or results from any negligent or wrongful act or omission of MiRagen for which MiRagen has agreed to indemnify pursuant to Section 10.1(b). Notwithstanding anything to the contrary, a MiRagen Indemnitee shall have the right to retain its own counsel, with fees and expenses of such counsel to be paid by the MiRagen Indemnitee.

(b) MiRagen agrees to indemnify, hold harmless and defend Yale and Yale’s directors, officers, employees and agents, and the directors, officers, employees and agents of any Yale parent, subsidiary or related company (the “Yale Indemnitees”) from and against any and all Third Party claims, suits, losses, damages, costs, fees and expenses resulting from or arising out of (i) the negligence, recklessness or willful misconduct of Yale in performing its obligations under the Grant or Protocol; and (ii) the possession or use of Materials by Third Parties, including without limiting the generality of the foregoing any damages, losses or liabilities whatsoever with respect to death or injury to person or damage to property, provided that Yale provides MiRagen with prompt notice of any such claim and the exclusive ability to defend (with the reasonable cooperation of Yale) or settle any such claim. MiRagen shall have no obligation under this Section 10.1(b) to the extent that such claims, suits, losses, damages, costs, fees or expenses arises or results from any negligent or wrongful act or omission of MiRagen for which MiRagen has agreed to indemnify pursuant to Section 10.1(b). Notwithstanding anything to the contrary, a Yale Indemnitee shall have the right to retain its own counsel, with fees and expenses of such counsel to be paid by the Yale Indemnitee.

(c) In the event that the Parties cannot agree as to the application of Sections 10.1(a) and (b) above to any particular loss or claim, the Parties may conduct separate defenses of such claim. Each Party further reserves the right to claim indemnity from the other in accordance with Sections 10.1(a) and (b) above upon resolution of the underlying claim, notwithstanding the provisions of Sections 10.1(a) and (b) above requiring the indemnified Party to tender to the indemnifying Party the exclusive ability to defend such claim or suit.

10.2 Disclaimer. YALE UNDERSTANDS AND AGREES THAT THE MATERIALS ARE UNTESTED AND MAY HAVE UNPREDICTABLE AND UNKNOWN BIOLOGICAL AND/OR CHEMICAL PROPERTIES. ACCORDINGLY, SUCH MATERIALS ARE TO BE USED WITH CAUTION AND ARE NOT TO BE USED FOR TESTING IN OR TREATMENT OF HUMANS. RECIPIENT WILL USE SUCH MATERIALS IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS, INCLUDING, BUT NOT LIMITED TO, ANY APPLICABLE LAWS OR REGULATIONS [*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
RELATING TO THE RESEARCH, TESTING, PRODUCTION, STORAGE, TRANSPORTATION, EXPORT, PACKAGING, LABELING OR OTHER AUTHORIZED USE OF THE MATERIALS, AND ONLY AS PERMITTED IN THIS SUBCONTRACT. SUCH MATERIALS ARE PROVIDED “AS IS” WITH NO WARRANTIES EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, NO WARRANTIES OF EITHER MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF NON-INFRINGEMENT.

10.3 **Liability Limitation.** IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER FOR ANY INCIDENTAL, INDIRECT, CONSEQUENTIAL, PUNITIVE, OR SPECIAL DAMAGES OR LOST REVENUE OR PROFITS, WHETHER OR NOT EITHER HAS BEEN NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES. THE FOREGOING SHALL NOT LIMIT THE INDEMNIFICATION OBLIGATIONS OF THE PARTIES UNDER THIS ARTICLE 10 AND SHALL NOT APPLY IN THE EVENT OF BREACHES OF ARTICLE 7.

10.4 **Excusable Delays.** Neither Party shall be liable to the other for its failure to perform any of its obligations under this Subcontract if the failure arises from causes beyond the control and without the fault or negligence of such Party. Examples of such causes include, but are not limited to: (1) acts of God or of the public enemy; (2) acts of the USG in either its sovereign or contractual capacity; (3) fires; (4) floods; (5) epidemics; (6) quarantine restrictions; (7) strikes; (8) freight embargoes; (9) national threat levels; (10) terrorist activities; and (11) unusually severe weather.

**ARTICLE 11. MISCELLANEOUS**

11.1 **Grant Requirements.** All performance of the Parties hereunder will be in compliance with the Grant Requirements. To the extent of a conflict between the terms of this Subcontract and those in the Grant Requirements, the Parties will negotiate a substitute and reasonable payment provision that reflects as nearly as possible the intent of the Parties set forth in this Subcontract.

11.2 **Entire Subcontract and Amendments.** This Subcontract, including all attachments whether incorporated by reference or otherwise, constitutes the entire Subcontract and supersedes all other agreements and understandings whether oral or written between the Parties with respect to the subject matter hereof. This Subcontract may not be modified or altered except as agreed to between both Parties in writing.

11.3 **Order of Precedence.** In the event of inconsistency among the provisions of this Subcontract, the inconsistency shall be resolved by giving precedence as follows: (a) the textual provisions of the body of this Subcontract; (b) the Statement of Work; and (c) the MTA.

11.4 **Headings and Interpretations.** The article and section headings used in this Subcontract are for reference and convenience only and shall not enter into the interpretation thereof.

11.5 **Severability.** If any of the provisions of this Subcontract or part of such provisions are or become invalid or unenforceable, the remaining provisions shall continue to be effective.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
11.6 Waivers. No waiver shall be deemed effective unless given in writing and signed by the authorized representative of the Party granting such waiver. No waiver by a Party of any of its rights or remedies hereunder shall be construed as a waiver by such Party of any other rights or remedies that such Party may have under this Subcontract.

11.7 Disputes.

(a) Grant Disputes. MiRagen acknowledges and agrees that disputes arising under the Grant shall be resolved in accordance with the Grant Requirements, including that any disagreements that may arise in scientific or programmatic matters (within the scope of the award) between award recipients and the NIH may, if applicable, be brought to dispute resolution as described in the then-current procedure for the Grant Requirements. If Yale is required to file a response or claim within a specified period and such claim or response concerns MiRagen or MiRagen’s performance under the Subcontract, MiRagen shall use commercially reasonable efforts to submit relevant information or evidence of such response or claim to Yale within a reasonable period in order to allow for Yale’s timely reply. Yale shall permit MiRagen to participate in the disputes process to the extent necessary to protect MiRagen’s rights and to the extent permitted by the USG.

(b) Disputes between the Parties.

(i) If any dispute arises between the Parties under this Subcontract that is not settled promptly in the ordinary course of business, the Parties shall seek to resolve such dispute between them first by negotiating promptly with each other in good faith negotiations. These negotiations shall commence upon the written request of either Party and shall be conducted by the designated senior management representative of each Party.

(ii) In the event that such good faith negotiations do not result in a solution of a dispute between the Parties in [*] days after receipt of the written request, either Party may resort to the judicial process to pursue its claims. Any such action shall be filed in a competent court in [*].

(c) Performance during Dispute Resolution. Each Party shall proceed diligently with performance of this Subcontract, including performance of Services, pending final resolution of any request for relief, claim, appeal or action arising under this Subcontract.

11.8 Notice Requirements. All notices, including notices of address change, required or permitted to be given under this Subcontract shall be in writing and deemed to have been received: (a) when received if hand delivered; (b) four (4) days after being sent by first class U.S. mail, postage prepaid; (c) one (1) business day after being sent by overnight courier; or (d) when received if sent by confirmed telecopy, in each case addressed to the below persons, or such as a Party may hereinafter designate upon notice to the other Party:

If to Yale:
Yale University
Attn: [*]
47 College Street, Suite 203
Phone: 203-785-4907
[*]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
11.9 **Choice of Law.** The Parties [*].

11.10 **Surviving Provisions.** The provisions of [*], shall survive any expiration or termination of this Subcontract, as well as [*] or [*] that by its nature should survive.

11.11 **Assignment.** Neither this Subcontract nor any duty or right under it shall be delegated or assigned, nor shall any other obligation under the Grant or Protocol be delegated or assigned, without the prior written consent of both Parties, which will not be unreasonably withheld.

11.12 **Use of Name.** No right, express or implied, is granted by this Subcontract to either Party to use in any manner the name of the other or any other trade name or trademark of the other in connection with the performance of this Subcontract.

11.13 **Independent Parties.** The Parties are not employees nor legal representatives of the other Party for any purpose. Neither Party shall have the authority to enter into any contracts in the name of or on behalf of the other Party.

11.14 **Counterparts.** This Subcontract may be executed in counterparts with the same force and effect as if each of the signatories had executed the same instrument. For purposes of executing this agreement, a .pdf, facsimile or electronic copy of this Agreement, including the signature pages, will be deemed an original.

[Signature Pages Follow]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
IN WITNESS WHEREOF, the Parties hereto have each caused this Subcontract to be signed and delivered by its duly authorized officer or representative as of the date first set forth above.

YALE UNIVERSITY

By: /s/ [*]  
Name: [*]  
Title: Lead Contract Manager

MiRAGEN THERAPEUTICS, INC.

By: /s/ Jason A. Leverone  
Name: Jason A. Leverone  
Title: Chief Financial Officer

[Signature Page to Subcontract]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Exhibit A
MiRagen Materials

MicroRNA 29 mimic and non-targeting control at quantities to be agreed upon

Exhibit B
Statement of Work and Budget

miRagen has developed proprietary compounds that target microRNA-29 (miR-29), a well validated target in fibrosis. The activities to be performed by miRagen, Yale School of Medicine, and others we hope will lead to an Investigational New Drug Application (IND) for miR-29 mimic as an anti-fibrotic therapy in Idiopathic Pulmonary Fibrosis patients.

miRagen will synthesis quantities of its proprietary oligonucleotides targeting miR-29 in support of IND-enabling activities. Miragen will also provide services in the design and evaluation of the studies contemplated in the grant.

miRagen will also be responsible for the scale up of material for IND-enabling toxicology studies and also for designing such studies that will support the filing of an IND for this program and will contract directly with a qualified contract manufacturing organization for this work.

The following initial budget has been established.

A. Personnel Requested Funds: [*]

B. Not included

C. Not included

D. Travel: A total of [*] for [*] at a cost of [*] is requested.

Requested Funds: [*]

E. Not included

F. Other Direct Costs:

F.1 Materials and Supply costs Costs include [*].

Costs also include [*] Requested Funds: [*]

F.3 Consulting

This project will involve the use of a consultant [*]. The budget includes [*] for [*]. Requested Funds: [*]

F.5 Contractual Costs [*].

Requested funds: [*]

Total Costs $1,055,651.76

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Notice of Award

EXPLORATORY/DEVELOPMENT COOPERATIVE AGREEMENT
Department of Health and Human Services
National Institutes of Health
NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

Federal Award Date: 08/22/2015

Grant Number: 5UH2HL123886-02
FAIN: UH2HL123886

Principal Investigator(s):
[*], MD

Project Title: Mir-29 mimicry as a therapy for pulmonary fibrosis

[*]
Administrative Official
Yale University
47 College Street
P.O. Box 208047
New Haven, CT 065103209

Award e-mailed to: grantsmd@yale.edu

Period Of Performance:
Budget Period: 07/01/2015 — 06/30/2016
Project Period: 09/22/2014 — 06/30/2016

Dear Business Official:

The National Institutes of Health hereby awards a grant in the amount of [*] (see “Award Calculation” in Section I and “Terms and Conditions” in Section III) to YALE UNIVERSITY in support of the above referenced project. This award is pursuant to the authority of 42 USC 241 31 USC 6305 42 CFR 52 and is subject to the requirements of this statute and regulation and of other referenced, incorporated or attached terms and conditions.

Acceptance of this award including the “Terms and Conditions” is acknowledged by the grantee when funds are drawn down or otherwise obtained from the grant payment system.

Each publication, press release, or other document about research supported by an NIH award must include an acknowledgment of NIH award support and a disclaimer such as “Research reported in this publication was supported by the National Heart, Lung, And Blood Institute of the National Institutes of Health under Award Number UH2HL123886. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.” Prior to issuing a press release concerning the outcome of this research, please notify the NIH awarding IC in advance to allow for coordination.

Award recipients must promote objectivity in research by establishing standards that provide a reasonable expectation that the design, conduct and reporting of research funded under NIH awards will be free from bias resulting from an Investigator’s Financial Conflict of Interest (FCOI), in accordance with the 2011 revised regulation at 42 CFR Part 50 Subpart F. The Institution shall submit all FCOI reports to the NIH through the eRA Commons FCOI Module. The regulation does not apply to Phase I Small Business Innovative Research (SBIR) and Small Business Technology Transfer (STTR) awards. Consult the NIH website http://grants.nih.gov/grants/policy/coi/ for a link to the regulation and additional important information.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
If you have any questions about this award, please contact the individual(s) referenced in Section IV.

Sincerely yours,

Anthony Agresti
Grants Management Officer
NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

Additional information follows

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
**SECTION I — AWARD DATA — 5UH2HL123886-02**

**Award Calculation (U.S. Dollars)**

<table>
<thead>
<tr>
<th>YR</th>
<th>THIS AWARD</th>
<th>SUMMARY TOTALS FOR ALL YEARS</th>
<th>CUMULATIVE TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>[*]</td>
<td>[*]</td>
<td>[*]</td>
</tr>
</tbody>
</table>

**Fiscal Information:**

- **CFDA Name:** [*]
- **CFDA Number:** [*]
- **EIN:** [*]
- **Document Number:** [*]
- **PMS Account Type:** [*]
- **Fiscal Year:** [*]

**NIH Administrative Data:**

- **PCC:** LLC N / OC: 414P / Released: AGRESTIA 08/20/2015
- **Award Processed:** 06/15/2015 11:31:44 PM

**SECTION II — PAYMENT/HOTLINE INFORMATION — 5UH2HL123886-02**

For payment and HHS Office of Inspector General Hotline information, see the NIH Home Page at http://grants.nih.gov/grants/policy/awardconditions.htm

**SECTION III — TERMS AND CONDITIONS — 5UH2HL123886-02**

This award is based on the application submitted to, and as approved by, NIH on the above-titled project and is subject to the terms and conditions incorporated either directly or by reference in the following:

- a. The grant program legislation and program regulation cited in this Notice of Award.
- b. Conditions on activities and expenditure of funds in other statutory requirements, such as those included in appropriations acts.
- c. 45 CFR Part 75.
- d. National Policy Requirements and all other requirements described in the NIH Grants Policy Statement, including addenda in effect as of the beginning date of the budget period.
- e. Federal Award Performance Goals: As required by the periodic report in the RPPR or in the final progress report when applicable.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
This award notice, INCLUDING THE TERMS AND CONDITIONS CITED BELOW.

(See NIH Home Page at http://grants.nih.gov/grants/policy/awardconditions.htm for certain references cited above.)

**Research and Development (R&D):** All awards issued by the National Institutes of Health (NIH) meet the definition of “Research and Development” at 45 CFR Part § 75.2. As such, auditees should identify NIH awards as part of the R&D cluster on the Schedule of Expenditures of Federal Awards (SEFA). The auditor should test NIH awards for compliance as instructed in Part V, Clusters of Programs. NIH recognizes that some awards may have another classification for purposes of indirect costs. The auditor is not required to report the disconnect (i.e., the award is classified as R&D for Federal Audit Requirement purposes but non-research for indirect cost rate purposes), unless the auditee is charging indirect costs at a rate other than the rate(s) specified in the award document(s).

This institution is a signatory to the Federal Demonstration Partnership (FOP) Phase VI Agreement which requires active institutional participation in new or ongoing FDP demonstrations and pilots.

Carry over of an unobligated balance into the next budget period requires Grants Management Officer prior approval.

This award is subject to the requirements of 2 CFR Part 25 for institutions to receive a Dun & Bradstreet Universal Numbering System (DUNS) number and maintain an active registration in the System for Award Management (SAM). Should a consortium/subaward be issued under this award, a DUNS requirement must be included. See http://grants.nih.gov/arants/policy/awardconditions.htm for the full NIH award term implementing this requirement and other additional information.

This award has been assigned the Federal Award Identification Number (FAIN) UH2HL123886. Recipients must document the assigned FAIN on each consortium/subaward issued under this award.

Based on the project period start date of this project, this award is likely subject to the Transparency Act subaward and executive compensation reporting requirement of 2 CFR Part 170. There are conditions that may exclude this award; see http://grants.nih.gov/grants/policy/awardconditions.com for additional award applicability information.

In accordance with P.L. 110-161, compliance with the NIH Public Access Policy is now mandatory. For more information, see NOT-OD-08-033 and the Public Access website: http://publicaccess.nih.gov

This award represents the final year of the competitive segment for this grant. See the NIH Grants Policy Statement Section 8.6 Closeout for complete closeout requirements at: http://grants.nih.gov/grants/policy/policy.htm#gps.

A final expenditure Federal Financial Report (FFR) (SF 425) must be submitted through the eRA Commons (Commons) within 120 days of the expiration date; see the NIH Grants Policy Statement Section 8.6.1 Financial Reports, http://grants.nih.gov/gov/grants/policy/policy.htm#gps, for additional information on this submission requirement. The final FFR must indicate the exact balance of unobligated funds and may not reflect any unliquidated obligations. There must be no discrepancies between the final FFR expenditure data and the Payment Management System’s (PMS) quarterly cash transaction data. A final quarterly federal cash transaction report is not required for awards in PMS B subaccounts (i.e., awards to foreign entities and to Federal agencies). NIH will close the awards using the last recorded cash drawdown level in PMS for awards that do not require a final FFR on expenditures or quarterly federal cash transaction reporting. It is important to note that for financial closeout, if a grantee fails to submit a required final expenditure FFR, NIH will close the grant using the last recorded cash drawdown level. If the grantee submits a final expenditure FFR but does not reconcile any discrepancies between expenditures reported on the final expenditure FFR and the last cash report to PMS, NIH will close the award at the lower amount. This could be considered a debt or result in disallowed costs.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
A Final Invention Statement and Certification form (HHS 568), (not applicable to training, construction, conference or cancer education grants) must be submitted within 120 days of the expiration date. The HHS 568 form may be downloaded at: http://grants.nih.gov/grants/forms.htm. This paragraph does not apply to Training grants, Fellowships, and certain other programs—i.e., activity codes C06, R13, R25, S10.

Unless an application for competitive renewal is submitted, a final progress report must also be submitted within 120 days of the expiration date. Instructions for preparing a Final Progress Report are at: http://grants.nih.gov/grants/funding/finalprogressreport.pdf. Any other specific requirements set forth in the terms and conditions of the award must also be addressed in the final progress report. Institute/Centers may accept the progress report contained in competitive renewal (type 2) in lieu of a separate final progress report. Contact the awarding IC for IC-specific policy regarding acceptance of a progress report contained in a competitive renewal application in lieu of a separate final progress report.

NIH strongly encourages electronic submission of the final progress report and the final invention statement through the Closeout feature in the Commons, but will accept an email or hard copy submission as indicated below.

Email: The final progress report and final invention statement may be e-mailed as PDF attachments to: NIHCloseoutCenter@mail.nih.gov.

Hard copy: Paper submissions of the final progress report and the final invention statement may be faxed to the NIH Division of Central Grants Processing, Grants Closeout Center, at 301-480-2304, or mailed to:

National Institutes of Health
Office of Extramural Research
Division of Central Grants Processing
Grants Closeout Center
6705 Rockledge Drive
Suite 5016, MSC 7986 Bethesda, MD 20892-7986 (for regular or U.S. Postal Service Express mail)
Bethesda, MD 20817 (for other courier/express deliveries only)

NOTE: If this is the final year of a competitive segment due to the transfer of the grant to another institution, then a Final Progress Report is not required. However, a final expenditure FFR is required and should be submitted electronically as noted above. If not already submitted, the Final Invention Statement is required and should be sent directly to the assigned Grants Management Specialist.

Treatment of Program Income:
Additional Costs

SECTION IV - HL Special Terms and Conditions - 5UH2HL123886-02

Special Award Condition: Annual Progress Report / Administrative Review

The -03 Progress Report, due on 05/01/16 shall be submitted on a PHS 398 application in PDF format to the Grants Management Specialist listed on this award. Failure to submit by that date may result in not being considered for the UH3.

The application shall include, in appendix form, the following Special Reporting Requirement: a description of the progress related to the mutually agreed upon negotiated milestones (Recipient concurrence dated 08/17/15). In addition, the appendix should include proposed milestones for a proposed UH3 Project Period.

Administrative Review

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Page- 5
The External Advisory Board (EAB) per the FOA section VI.2. [Link to RFA-HL-14-001] will assist in the review and provide a determination as to whether the agreed upon milestones were achieved and make a recommendation as to whether sufficient progress was achieved to transition to the UH3 phase of this award. Those applicants that are not successful will be permitted to extend the existing budget and project periods up to one year without prior NHLBI approval. If considered for funding, the NHLBI will begin negotiations with the Recipient for formal milestones prior to the issuance of the UH3 award.

Failure to adhere to this Annual Progress Report Special Award Condition may result in enforcement actions as described by the NIH GPS, including requiring the submission of a close-out plan for early phase-out of the award if adequate progress is not achieved.

Special Award Condition: Milestones NHLBI

support of this award is contingent on adequate progress based on these mutually agreed upon milestone(s). The grantee is expected to demonstrate best effort in compliance with the below milestone(s). Future milestones will be incorporated into this award once the mutually agreed upon Milestone Plan has been reviewed and accepted by the NHLBI.

[*]

3. [*]

* [*]

* [*]

* [*]

4. [*]

* [*]

* [*]

Failure to adhere to this Milestones Special Award Condition may result in enforcement actions as described by the NIH GPS, including requiring the submission of a close-out plan for early phase-out of the award if adequate progress is not achieved.

NHLBI OPERATING GUIDELINES

This award is being reduced due to current budgetary constraints in accordance with the NHLBI FY 2015 Operating Guidelines, which can be found at: [Link to guidelines]

CONSORTIUM/CONTRACTUAL COSTS

This award includes funds awarded for consortium activity with Miragen Therapeutics, Inc. and Lovelace Biomedical and Environment Research Institute (LBER). The grantee, as the direct and primary recipient of NIH grant funds, is accountable to NIH for the performance project, the appropriate expenditures of grant funds by all parties, and all other obligations of the grantee, as specified in the NIH Grants Policy Statement. In general, the requirements that apply to the grantee, including the intellectual property requirements also apply to consortium participant(s).

RFA NOTICE

The Terms and Conditions of this award incorporate the operating guidelines in the RFA-HL-14-001, Centers for Advanced Diagnostics and Experimental Therapeutics in Lung Diseases Stage II (CADET II)(UHS/UH3), which can be found at: [Link to RFA]

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Cooperative Agreement Terms and Conditions of Award

The following special terms of award are in addition to, and not in lieu of, otherwise applicable U.S. Office of Management and Budget (OMB) administrative guidelines, U.S. Department of Health and Human Services (DHHS) grant administration regulations at 45 CFR Parts 74 and 92 (Part 92 is applicable when state and local governments are eligible to apply), and other HHS, PHS, and NIH grant administration policies.

The administrative and funding instrument used for this program will be the cooperative agreement, an “assistance” mechanism (rather than an “acquisition” mechanism), in which substantial NIH programmatic involvement with the awardees is anticipated during the performance of the activities. Under the cooperative agreement, the NIH purpose is to support and stimulate the recipients’ activities by involvement in and otherwise working jointly with the award recipients in a partnership role; it is not to assume direction, prime responsibility, or a dominant role in the activities. Consistent with this concept, the dominant role and prime responsibility resides with the awardees for the project as a whole, although specific tasks and activities may be shared among the awardees and the NIH as defined below.

Definitions

External Advisory Board (FAB): The EAB will be composed of six to ten senior scientists with relevant expertise who are not PDs/PIs of any of the funded applications in CADET who will assist NHLBI staff in the oversight of this program. See more about the EAB below under this topic.

Awardee Rights and Responsibilities

• The awardee will have primary responsibility for all aspects of the proposed research, including any modifications to the product development plan, selection and conduct of the studies to be performed, the plan for who will conduct the necessary research, quality control, data analysis and interpretation, preparation of Regulatory submissions and publications, and compliance with local IRB requirements.
• The awardee must conduct at least 40% of the research in the therapeutic development plan at the grantee institution(s). This generally means that at least 40% of the direct costs over the funding period will be used for research at the investigators’ institution(s).
• The awardee agrees to address the recommendations from NHLBI Staff based on assessments of the EAB.
• The awardee agrees to accept close coordination, cooperation, and participation of NIH CADET staff in those aspects of scientific and technical management of the project as described under “NH Program Staff Responsibilities.”
• The awardee will act as needed to protect intellectual property that may result from work conducted with support of this grant. Any inventions which result from CADET funded research will be reported to the Division of Extramural Inventions & Technology Resources, NIH, within 2 months of the inventor’s initial report to the grantee/contractor organization.
• The reporting of inventions will be accomplished electronically through the NIH Interagency Edison Invention Reporting System.
• The awardee will retain custody of and have primary rights to the data and software developed under these awards, subject to Government rights of access and requirements for dissemination consistent with current DI-HS, PHS, and NIH policies.

NHLBI Staff Responsibilities

• One NIH Program Staff member will be assigned to each grantee, but significant decisions will involve a committee of Program Staff members.
• The primary assigned NHLBI Program Staff member will be responsible for the normal scientific and programmatic stewardship of the award.
• NHLBI Program Staff will participate in the continuous monitoring and coordination of research activities.
• NHLBI Program Staff will serve a liaison function for sharing of information among the awardees with regard to methods, best practices, and regulatory issues germane to the development of therapeutics for lung diseases.
• NHLBI Program Staff will assist the PD(s)/PI(s) in accessing research resources, especially those needed in response to recommendations from the External Advisory Board (see below).

[⁎] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Page- 7
• NHLBI Program Staff will negotiate milestones with the awardee as necessary, serving as a liaison between the awardee and appropriate NIH committees and Institute and Center National Advisory Councils.

• The NHLBI reserves the right to withhold funding for the UH3 project if the milestones for the UH2 project have not been successfully completed.

• The NHLBI will constitute an External Advisory Board (EAB) to ensure routine access to expert advice on issues of drug development for pulmonary and sleep disorders. NHLBI Program Staff will:
  • Establish the charge to the EAB
  • Convey materials submitted to the NHLBI by the grantee and establish provisions for assuring the confidentiality of these materials
  • Facilitate discussions on the progress reports submitted by awardees on an annual basis, the product development plans and milestones submitted by awardees and any changes to these plans or milestones as requested by the awardee on an annual basis.
  • Communicate recommendations and modifications suggested by the EAB to the awardee for development plans and milestones, including whether milestones have been achieved.
  • The EAB recommendations will be based on standard requirements for product development as well as the expected time and resources needed to achieve milestones.

Collaborative Responsibilities

• The awardee and NHLBI staff will work collaboratively to adjust the research plan and schedule in response to emerging data.

• The awardee and NHLBI staff will work cooperatively to coordinate research activities to be performed through NHLBI programs such as SMARTT, GTRP, and PACT.

External Advisory Board Responsibilities

The EAB will assist NHLBI staff in the scientific oversight of the program and may be asked to:

• Discuss the product development plans and milestones submitted by awardees and any changes to these plans or milestones as requested by the awardee on an annual basis.

• Propose recommended modifications to development plans and milestones based on standard requirements for product development and expected time and resources needed to achieve milestones.

• Discuss the progress reports submitted by awardees on an annual basis.

• Indicate their assessment of whether agreed milestones have been successfully met.

Dispute Resolution:

Any disagreements that may arise in scientific or programmatic matters (within the scope of the award) between award recipients and the NIH may be brought to Dispute Resolution. A Dispute Resolution Panel composed of three members will be convened. It will have three members: a designee of the awardee, one NIH designee, and a third designee with expertise in the relevant area who is chosen by the other two. This special dispute resolution procedure does not alter the awardee’s right to appeal an adverse action that is otherwise appealable in accordance with PHS regulation 42 CFR Part 50, Subpart D and DHHS regulation 45 CFR Part 16. Although a decision to fund or not to fund the UH3 portion of the study will be based in part on scientific issues, Dispute Resolution will not be used to resolve disagreements regarding funding decisions for the UH3 award, since NHLBI retains full authority for this intrinsically governmental function.

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
STAFF CONTACTS

The Grants Management Specialist is responsible for the negotiation, award and administration of this project and for interpretation of Grants Administration policies and provisions. The Program Official is responsible for the scientific, programmatic and technical aspects of this project. These individuals work together in overall project administration. Prior approval requests (signed by an Authorized Organizational Representative) should be submitted in writing to the Grants Management Specialist. Requests may be made via e-mail.

Grants Management Specialist: Dianna Jessee
Email: jessee@nhlbi.nih.gov Phone: 301-435-0154

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Pass-through Entity (PTE)

PTE: Yale University
Address: 25 Science Park, 3rd Floor, PO Box 208327
City, State, Zip+4 (Country): New Haven, CT 06520-8327
PTE Principal Investigator (PI): [*], MD
PTE Federal Award No: 5UH2HL123886
FAIN: UH2HL123886

Subrecipient

Subrecipient: Miragen Therapeutics, Inc.
Address: 6200 Lookout Road
City, State, Zip+4 (Country): Boulder CO 80301
Subrecipient Principal Investigator (PI): Rusty Montgomery, MD

Project Title: Mir-29 mimicry as a therapy for pulmonary fibrosis

Subaward Period of Performance:
Start Date: 7/1/2015 End Date: 6/30/2016
Effective Date of Amendment:
July 1, 2015

Amendment(s) to Original Terms and Conditions
This Amendment revises the above-referenced Research Subaward Agreement as follows:

Action: This Subaward is hereby revised to include any and all applicable changes required by the implementation of 2 C.F.R. § 200 UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS.

Actions:
- Subaward period of performance extended to June 30, 2016.
- Authorized Funding for Budget Period: [*]
- Carryover is not automatic and requires prior approval.
- Special Award Conditions: [*]

Modifications:
Attachment 2 to the Research Subaward Agreement, under the section entitled “Special terms and conditions”, item 1, is hereby deleted in its entirety.

The Parties entered into a subsequent Subcontract Agreement ("Agreement") dated October 1, 2014, to set forth additional Terms and Conditions in addition to those set forth in Cost Reimbursement Subaward Research Agreement. The Parties hereby agree that the specific Terms and Conditions of the Agreement, as set forth herein in more detail, shall be applicable to this Amendment and any subsequent amendments. The remainder of the Agreement shall be terminated and of no further force and effect.

FDP Version 02.09.2015

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Attached as Attachment A to this Amendment is the Subcontract Agreement. The following Terms and Conditions of Attachment A shall apply to this Amendment and any other subsequent amendments:

1. Article 1, DEFINITIONS.
   a. Section 1.1
   b. Section 1.2
   c. Section 1.3
   d. Section 1.5
   e. Section 1.6
   f. Section 1.8
   g. Section 1.9
   h. Section 1.10.

2. Article 2, SCOPE OF WORK.
   a. Section 2.2, Compliance with Laws, subsections c., d., e.
   b. Section 2.3, Reserved Rights.

3. Article 3, MATERIALS TRANSFERS.
   a. Section 3.1, Materials Transfer.
   b. Section 3.2, Deliveries to Yale.

4. Article 5, INTELLECTUAL PROPERTY
   a. Section 5.1, Inventions.

5. Article 6, USG INTERFACE AND PUBLICATIONS
   a. Section 6.1, Interaction with USG.
   b. Section 6.2, Publications.

6. Article 7, CONFIDENTIALITY
   a. Section 7.1, Definition
   b. Section 7.2, Non-Disclosure, Non-Use
   c. Section 7.3, Exclusions.
   d. Section 7.4, Permitted Disclosure
   e. Section 7.5, Return of Confidential Information.
   f. Section 7.6, Injunctive Relief

   All other terms and conditions of this Subaward Agreement remain in full force and effect.

By an Authorized Official of Pass-through Entity: [Signature]
Name: [Name]
Title: [Title]

By an Authorized Official of Subrecipient: [Signature]
Name: Jason A. Leverone
Date: 2/17/16
Title: CFO

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.
Research Subaward Agreement

Amendment

Pass-through Entity (PTE)

PTE: Yale University
Address: Office of Sponsored Projects
25 Science Park – 3rd Floor
150 Munson Street
P.O. Box 208327
City, State, Zip+4 (Country): New Haven, CT 06520-8327
PTE Principal Investigator (PI): [*], MD
PTE Federal Award No: 5UH2HL123886-02
REVISED

FAIN: UH2HL123886

Subrecipient

Subrecipient: Miragen Therapeutics, Inc.
Address: 6200 Lookout Road
City, State, Zip+4 (Country): Boulder CO 80301
Subrecipient Principal Investigator (PI): Rusty Montgomery, MD

Project Title: Mir-29 mimicry as a therapy for pulmonary fibrosis

Subaward Period of Performance:
Start Date: 7/1/2015        End Date: 6/30/2016

Amount Funded This Action: [*] Amendment No: 2
Subaward No: M15A12064(A10373)

Amendment(s) to Original Terms and Conditions
This Amendment revises the above-referenced Research Subaward Agreement as follows:

• Carry over from Year 1 to Year 2 is authorized in the amount of [*].
• Carry over is not automatic and requires prior approval.

All other terms and conditions of this Subaward Agreement remain in full force and effect.

By an Authorized Official of Pass-through Entity: By an Authorized Official of Subrecipient:

/s/ [*] [*] /s/ Jason A. Leverone 11/18/16
Name: [*] Date Name Jason A. Leverone Date
Title: Award Manager Title: CFO

[*] = Certain confidential information contained in this document, marked by brackets, is filed with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.