



Dealdoc

Collaboration agreement for drug discovery

Schrodinger
Morphic Therapeutic

Jun 10 2015

Collaboration agreement for drug discovery

Companies:	Schrodinger Morphic Therapeutic
Announcement date:	Jun 10 2015
Deal value, US\$m:	n/d

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Details

Announcement date:	Jun 10 2015
Start date:	Jun 10 2015
Industry sectors:	Biotech Pharmaceutical Research tools
Exclusivity:	Exclusive
Asset type:	Technology Cardiovascular
Therapy areas:	Immunology » Other autoimmune Metabolic Oncology
Technology types:	Software tools Collaborative R&D
Deal components:	Licensing Research
Stages of development:	Discovery

Financials

Deal value, US\$m:	n/d
Milestones, US\$m:	n/d : milestone payments
Royalty rates, %:	n/d : royalties in low single digits on sales
Semi-quant royalties:	Low single digit
Funding, US\$m:	n/d : research funding

Termsheet

August 2019

Schrödinger announced an expansion of its computational design collaboration with Morphic Therapeutic.

The expanded agreement, signed in May 2019, extends the partnership to discover and design therapeutic compounds leveraging Schrödinger's industry-leading computational platform.

Under the terms of the amended agreement, Schrödinger will receive research funding as well as , and licensing royalties on candidate compounds that emerge from the collaboration.

Through their partnership, Morphic and Schrödinger have accelerated the discovery and design of potent and selective integrin inhibitors and activators targeting serious chronic diseases, including autoimmune, cardiovascular, and metabolic diseases, fibrosis, and cancer.

Schrödinger technology informs Morphic's integrin technology, or MInT Platform, which leverages Morphic's unique understanding of integrin structure and biology to develop a broad pipeline of novel product candidates designed to achieve the potency, high selectivity, and pharmaceutical properties required for oral administration.

June 2015

Morphic entered into a collaboration agreement (as amended) with Schrödinger, or Schrödinger Agreement, to explore drug targets selected by us.

Schrödinger will use its technology platform to perform virtual screens, and we and Schrödinger will collaborate to facilitate prioritization of targets, perform target validation and analysis, identify leads and perform lead optimization.

Schrödinger will exclusively work with us on integrin targets during the term of the agreement.

In consideration for its performance of activities under the collaboration, Schrödinger received approximately 3.4 million units of Series Seed preferred units.

In addition, with respect to compounds identified as part of the collaboration, Schrödinger may be eligible to receive certain payments from us related to development milestones, not to exceed in the aggregate, on a target-by-target basis, a low six-figure payment upon initiation of lead optimization and on a compound-by-compound basis, \$3.1 million, as well as royalties in the low single digits on sales of products containing such compounds.

In addition, we have agreed to pay Schrödinger a percentage, in the mid-single digits, of certain payments we receive from third parties in connection with the licensing or transfer of the rights to exploit such compounds to such third parties, including a one-time fee of \$1.0 million paid in 2019.

Schrödinger may terminate the Schrödinger Agreement under certain circumstances, including if a certain number of developmental milestones have not been achieved by us within a certain timeframe.

Press Release

August 2019

Schrödinger Expands Drug Discovery Partnership with Morphic Therapeutic

Aug. 13, 2019 11:00 UTC

NEW YORK--(BUSINESS WIRE)-- Schrödinger Inc today announced an expansion of its computational design collaboration with Morphic Therapeutic ("Morphic"), a biotechnology company focused on developing a new class of oral small-molecule integrin-targeted therapeutics that Schrödinger co-founded with Harvard Professor Timothy Springer, Ph.D., and Polaris Partners. The expanded agreement, signed in May 2019, extends the partnership to discover and design therapeutic compounds leveraging Schrödinger's industry-leading computational platform. Under the terms of the amended agreement, Schrödinger will receive research funding as well as milestone payments and licensing royalties on candidate compounds that emerge from the collaboration.

Through their partnership, Morphic and Schrödinger have accelerated the discovery and design of potent and selective integrin inhibitors and activators targeting serious chronic diseases, including autoimmune, cardiovascular, and metabolic diseases, fibrosis, and cancer. Schrödinger technology informs Morphic's integrin technology, or MInT Platform, which leverages Morphic's unique understanding of integrin structure and biology to develop a broad pipeline of novel product candidates designed to achieve the potency, high selectivity, and pharmaceutical properties required for oral administration.

"This collaboration brings together Morphic's unparalleled insights into integrins and our proven, computational physics-based approaches to discovering and optimizing compound design. We're excited to keep building on the momentum of our partnership, and we've seen tremendous validation for this approach through Morphic's continued maturation, including its collaborations with large pharmaceutical companies and its recent initial public offering," said Ramy Farid, Ph.D., Schrödinger's Chief Executive Officer. "Extending our partnership will allow us to broaden our pipeline as we work together to tackle serious diseases with high unmet need."

About Schrödinger Schrödinger's industry-leading computational platform to accelerate drug discovery and materials design is deployed by leading pharmaceutical, biotechnology, chemical, and electronics companies worldwide. In addition to this substantial and growing global business, Schrödinger has built a robust pipeline of therapeutic assets, held both internally and in partnerships, and has co-founded leading biotech companies, including Nimbus Therapeutics and Morphic Therapeutic. Schrödinger's significant and ongoing investment in basic research continues to drive advances in its computational platform. Founded in 1990, Schrödinger has nearly 400 employees in its New York City headquarters and around the world. Visit schrodinger.com for more information.

Filing Data

In June 2015, we entered into a collaboration agreement (as amended) with Schrödinger, or Schrödinger Agreement, to explore drug targets selected by us. Under the collaboration, Schrödinger will use its technology platform to perform virtual screens, and we and Schrödinger will collaborate to facilitate prioritization of targets, perform target validation and analysis, identify leads and perform lead optimization. Under the terms of the agreement, Schrödinger will exclusively work with us on integrin targets during the term of the agreement. In consideration for its performance of activities under the collaboration, Schrödinger received approximately 3.4 million units of Series Seed preferred units. In addition, with respect to compounds identified as part of the collaboration, Schrödinger may be eligible to receive certain payments from us related to development milestones, not to exceed in the aggregate, on a target-by-target basis, a low six-figure payment upon initiation of lead optimization and on a compound-by-compound basis, \$3.1 million, as well as royalties in the low single digits on sales of products containing such compounds. In addition, we have agreed to pay Schrödinger a percentage, in the mid-single digits, of certain payments we receive from third parties in connection with the licensing or transfer of the rights to exploit such compounds to such third parties, including a one-time fee of \$1.0 million paid in 2019. Schrödinger may terminate the Schrödinger Agreement under certain circumstances, including if a certain number of developmental milestones have not been achieved by us within a certain timeframe.

Contract

Collaboration Agreement

This COLLABORATION AGREEMENT ("Agreement"), dated as of June 10, 2015, is made by and between Morphic Rock Therapeutic, Inc. ("Client"), a Delaware corporation with offices at 1000 Winter Street, Suite 3350, Waltham, MA 02451 and SCHRÖDINGER, LLC ("Schrödinger"), a Delaware limited liability company, with offices at 120 West 45th Street, 17th Floor, New York, New York 10036.

WHEREAS, Schrödinger has developed proprietary software programs that are used in preclinical drug discovery projects including target validation, hit identification, hit-to-lead, and lead optimization;

WHEREAS, Schrödinger, through its Drug Discovery Group, enters into scientific collaborations with research teams in biotechnology and pharmaceutical companies and academic labs, pursuant to which the Drug Discovery Group applies the Schrödinger Technology (defined below) and its expertise in drug design to specific targets;

WHEREAS, Client is engaged in research into agents that target members of the integrin family of cell adhesion molecules for the purpose of the discovery, design, development and commercialization of such agents; and

WHEREAS, the parties wish to enter into this Agreement to set forth the terms on which Schrödinger will perform drug design services for the Target(s) defined in Section 1 below;

NOW, THEREFORE, in consideration of the mutual promises set forth herein, the sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Definitions.

a. "Client Improvements" shall mean any improvement, modification, or enhancement of the Client Confidential Information (as defined in Section 5 below), Client Intellectual Property or Work Product made by either party during the Collaboration, collectively with the Intellectual Property embodied therein.

b. "Client Intellectual Property" shall mean (i) Intellectual Property (as defined in Section 1.d.) owned or licensed by Client prior to or independent of this

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Agreement; (ii) the Intellectual Property embodied in the Client Confidential Information (as defined in Section 5.b.); and (iii) the Intellectual Property embodied in the Work Product (as defined in Section 1.j.). The Client Intellectual Property excludes Schrödinger Intellectual Property (as defined in Section 1.e.).

c. "Collaboration" shall mean the responsibilities specified for each party in Exhibit A.

d. "Computer-Generated Model" shall mean the ligand- or structure-based models of the compounds or Targets that are prepared and used by Schrödinger in the evaluation and design of compounds under this Collaboration.

e. "Effective Date" shall mean April 21, 2015.

f. "Intellectual Property" shall mean all rights in any property now known or hereafter recognized anywhere in the world, including the following: (i) patents, inventions (whether or not patentable), and all applications or registrations in any jurisdiction pertaining to the foregoing, including all provisional applications, reissues, continuations, divisions, continuations-in-part, utility models, renewals or extensions thereof; (ii) trade secrets,

including confidential and other non-public information with respect to business or scientific activities, and the right in any jurisdiction to limit the use or disclosure thereof; (iii) copyrights or similar rights in writings, designs, mask works, or other works of authorship, and registrations or applications for registrations of copyrights in any jurisdiction; (iv) trademarks and service marks (registered or unregistered), trade dress, trade names, and other names and slogans embodying business or product goodwill or indications of origin, and all applications or registrations in any jurisdiction pertaining to the foregoing; and all goodwill associated therewith; and (v) Internet Web sites, domain names and registrations or applications for registration thereof. Examples of property that typically embody Intellectual Property include without limitation software programs (in source and object code forms), algorithms, methods, computer-generated models based on the analysis of structure-activity relationships, and proprietary databases.

g. "Schrödinger Improvements" shall mean any improvement, modification, or enhancement of the Schrödinger Confidential Information (as defined in Section 5 below), Schrödinger Technology, Schrödinger Knowhow, Schrödinger Library or Schrödinger Intellectual Property made by either party, collectively with the Intellectual Property embodied therein; provided, however, that no Client Intellectual Property, Client Improvements or Work Product will be added to the Schrödinger Library or otherwise considered Schrödinger Improvements.

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h. "Schrödinger Intellectual Property" shall mean the Intellectual Property embodied in the Schrödinger Technology, Schrödinger Knowhow, and Schrödinger Library.

i. "Schrödinger Knowhow" shall mean the proprietary techniques, methods, workflows and knowhow of Schrödinger and its licensors, and employed by Schrödinger to perform its services under the Collaboration. "Schrödinger Knowhow" excludes the Work Product, which the parties acknowledge is a tangible output of Schrödinger's application of the Schrödinger Knowhow to this Collaboration.

j. "Schrödinger Library" shall mean the compilation prepared by Schrödinger of lead- and drug-like compounds that are offered commercially by third party suppliers.

k. "Schrödinger Technology" shall mean the proprietary software, programs, tools and technology owned or controlled by Schrödinger.

l. "Target(s)" shall mean a member of the target class of human integrins.

m. "Work Product" shall mean the work product delivered by Schrödinger to Client in connection with its performance of services under the Collaboration, including the Computer-Generated Models. The "Work Product" excludes the Schrödinger Technology, Schrödinger Knowhow, Schrödinger Library, Schrödinger Improvements, Schrödinger Confidential Information and the Schrödinger Intellectual Property.

2. Obligations of Each Party.

a. General Obligations. Each party shall use reasonable efforts, exercised in good faith, to perform its responsibilities under this Agreement, in accordance with the customary standards of professional conduct in such party's field, and in compliance in all material respects with the requirements of applicable laws and regulations. Client acknowledges and agrees that Schrödinger's ability to perform its obligations depends upon Client's fulfillment of its obligations as set forth in this Agreement, including reasonably cooperating with Schrödinger and providing Schrödinger with accurate information and data in a reasonable and timely manner during the Collaboration. Schrödinger will not be responsible for any deficiency or delay in performing its obligations as set forth in this Agreement to the extent such deficiency or delay results from Client's failure to fulfill its obligations as set forth in this Agreement. Each party shall communicate with the other party regularly and in a timely fashion, and shall meet on a regular basis at such times and locations as may be mutually agreed (whether in person or by telephone) to provide

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progress reports and to solicit input. Each party shall provide reasonable assistance to the other party in connection with the other party's performance of its obligations hereunder. Notwithstanding the foregoing, the parties acknowledge the experimental nature of the Collaboration, and neither party shall have any liability to the other with respect to such party's failure to produce a specific substantive result.

b. Other Research Projects. The parties acknowledge and agree that Schrödinger may use the Schrödinger Technology, Schrödinger Knowhow, Schrödinger Library, Schrödinger Improvements, Schrödinger Confidential Information and Schrödinger Intellectual Property for other research projects for third parties so long as:

(i) no Client Confidential Information or Client Intellectual Property is used in connection with such research project; and

(ii) during the Term (as defined in Section 9.a.), Schrödinger's Drug Discovery Group does not perform drug discovery services substantially similar to those provided hereunder by the Drug Discovery Group for any research project that involves any Target (the restriction set forth in this clause (ii), the "Exclusivity Restriction"). For clarity, the Exclusivity Restriction does not apply where Schrödinger is developing its own technology, performing technical support, applications science services, professional IT services or technology development work, or software sales and other IT services in regard to a third party licensee's use of the Schrödinger Technology (collectively, "Unrestricted Activities"), provided, however, that in no event shall Schrödinger, in the course of conducting such Unrestricted Activities, knowingly design compounds directed at the Targets.

c. Joint Steering Committee. Within three (3) weeks after the execution of this Agreement, the parties shall form a joint steering committee (the "JSC") comprised of four individuals designated as set forth below, which JSC shall be responsible for the general oversight of the research carried out hereunder, including without limitation: (i) reviewing the goals, strategy, Milestone Events (as defined in Exhibit B), and results of the Work Plan (set forth in Exhibit A) and the activities performed thereunder; (ii) recommending and approving changes to the Work Plan; (iii) assigning relative priorities in the Work Plan; (iv) terminating any specific activities under the Work Plan; (v) determining whether a Milestone Event has occurred; and (vi) resolving any disagreements between the parties concerning the research and development activities carried out under this Agreement. Each party shall designate two (2) individual representatives as members of the JSC, each of whom shall be authorized to make decisions on behalf of the designating party (subject to the terms and conditions of this Section 2.c.) and shall have significant experience and expertise in the research and development of pharmaceutical compounds. Each party shall

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have the right, at any time, to designate by written notice to the other Party, a replacement for any of such party's representatives on the JSC. The JSC shall endeavor to work by consensus. Decisions of the JSC shall be made by unanimous written consent and shall be included in amendments to the Work Plan, if applicable. Where unanimity cannot be achieved in respect of any matter following good faith, commercially reasonable efforts on the part of the members of the JSC, such disputed matter shall be referred to the relevant senior management of the parties who shall promptly meet and endeavor to come to an agreement in a timely manner. The JSC will determine, subject to the terms and conditions of this Section 2.c., whether any Milestone Event has occurred. The JSC will notify the relevant senior management of each party in writing that any such Milestone Event has occurred no later than [***] after such a determination.

d. Project Scope. Unless otherwise agreed by the JSC pursuant to and in accordance with the terms and conditions of Section 2.c., the parties agree that Schrödinger shall, during the Term, perform virtual screens on up to [***] Targets per year of the Term. For clarity, the parties agree that Schrödinger will perform more than [***] on a single Target, as reasonably required. The parties agree further that Schrödinger shall not be obligated to perform Hit to Lead activities (as set forth in the Work Plan) or Lead Optimization activities (as set forth in the Work Plan) on more than [***] Targets simultaneously.

3. Payment and Expenses. Client shall remunerate Schrödinger as set forth in Exhibit B. All payments shall be made by check, electronic funds transfer or wire transfer payable to Schrödinger at the address designated in Exhibit B, or such other address provided to Client by Schrödinger. Client shall be responsible for paying any sales or other related taxes, if any, that are applicable to the cash payments hereunder for the services received from Schrödinger, but shall not be responsible for taxes on Schrödinger's income. Schrödinger shall be responsible for all taxes on its income, including in respect of any equity interest in Client received by Schrödinger in connection with this Agreement. All payments hereunder shall be made without deduction for withholding taxes unless otherwise required by law. At no time may Client withhold payment of fees that are not subject to a good faith dispute.

4. Proprietary Rights.

a. Ownership. As between Client and Schrödinger, Client shall own all right, title, and interest in the Client Confidential Information, Work Product, Client Intellectual Property, and any Client Improvements. As between Schrödinger and Client, Schrödinger shall own all right, title, and interest in the Schrödinger Confidential Information, Schrödinger Technology, Schrödinger Knowhow, Schrödinger Library, Schrödinger

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Intellectual Property, and any Schrödinger Improvements. Client will assign and does hereby assign all right title and interest in and to all Schrödinger Improvements, and will promptly disclose to Schrödinger all Schrödinger Improvements. Client hereby assigns and, to the extent any such assignment cannot be made at the present time, agrees to assign to Schrödinger, without any additional consideration from Schrödinger, any and all copyrights, patents and other proprietary rights Client may have in any such Schrödinger Improvements, together with the right to file and/or own wholly without restrictions applications for United States and foreign patents, trademark registration and copyright

registration and any patent, or trademark or copyright registration issuing thereon. Client agrees to waive, and hereby does waive, all moral rights or proprietary rights in or to any Schrödinger Improvements and, to the extent that such rights may not be waived, agrees not to assert such rights against Schrödinger or its licensees, successors or assigns. Schrödinger will assign and does hereby assign all right title and interest in and to all Work Product and Client Improvements, and will promptly disclose to Client all Work Product and Client Improvements. For purposes of the copyright laws of the United States, Work Product and Client Improvements constitute "works made for hire" under the copyright laws of the United States and Schrödinger hereby assigns and, to the extent any such assignment cannot be made at the present time, agrees to assign to Client, without any additional consideration from Client, any and all copyrights, patents and other proprietary rights Schrödinger may have in any such Work Product and Client Improvements, together with the right to file and/or own wholly without restrictions applications for United States and foreign patents, trademark registration and copyright registration and any patent, or trademark or copyright registration issuing thereon. Schrödinger agrees to waive, and hereby does waive, all moral rights or proprietary rights in or to any Work Product and Client Improvements and, to the extent that such rights may not be waived, agrees not to assert such rights against Client or its licensees, successors or assigns.

b. Protection and Enforcement. Each party will have the responsibility, in its sole discretion and at its sole expense, to protect and enforce its Intellectual Property rights.

c. Cooperation. Each party shall provide such assistance as may reasonably be required for the other party to secure, perfect, maintain and enforce the other party's Intellectual Property rights in connection with this Agreement. Reasonable assistance includes executing and delivering the documents reasonably necessary for the other party to secure, perfect, maintain or enforce its rights in such Intellectual Property (including documents to assign rights, to apply for patent protection, or to register a copyright), and responding to reasonable requests for information pertinent thereto; provided, however, that in each case, the party requesting the assistance shall be required to reimburse the assisting party's reasonable out-of-pocket expenses incurred in connection therewith. In addition, each party hereby appoints the other party, in the event that such other party is

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unable after reasonable inquiry to obtain such party's (or its employee's or agent's) signature on such a document, as its attorney-in-fact to sign such documents as such other party deems necessary to secure, perfect, maintain or enforce such other party's rights as contemplated by this Section 4.

d. License Grant by Schrödinger. Subject to the terms and conditions of this Agreement, Schrödinger will grant and does grant to Client a limited, non-exclusive, internal-use-only, non-transferable, non-assignable, non-sublicensable license to use and disclose to its employees with a need to know for purposes of performing this Agreement, the Schrödinger Technology known as LiveDesign and/or Seurat during the Term as reasonably useful for facilitating the objectives of the Work Plan, including a number of seats for Client users who are contributing to the Collaboration, which number of seats shall initially be [***], and which number shall be increased or decreased without the payment of additional consideration hereunder upon written notification by Client to Schrödinger of any changes to the number of Client users who are contributing to the Collaboration. In addition, Client's use of LiveDesign and Seurat are subject to the terms and conditions set forth in Schrödinger's End User Agreement for Hosted Software ("EUA") attached as Exhibit C hereto. In the event of any inconsistency between the terms of the EUA and this Agreement, the terms of this Agreement shall control.

e. No Implied Licenses. All rights in and to Intellectual Property not expressly granted by Client or Schrödinger under this Agreement are reserved to its owner. Nothing in this Agreement will be deemed to weaken or waive any rights of either party related to the protection of trade secrets.

5. Confidentiality.

a. Client hereby acknowledges that the Schrödinger Technology, Schrödinger Knowhow, Schrödinger Library, Schrödinger Improvements and Schrödinger Intellectual Property (collectively, "Schrödinger Confidential Information") are proprietary and confidential to Schrödinger. Client agrees not to disclose the Schrödinger Confidential Information (or any portion thereof) to any third party, except as permitted by this Agreement. Client agrees (i) to protect the Schrödinger Confidential Information in the same manner that it protects its own confidential information (but no less than reasonable care); (ii) to permit access to the Schrödinger Confidential Information only to employees, officers, directors, agents, contractors, consultants and advisors (each, a "Representative") of Client and its affiliates who reasonably have a need to know for the purposes authorized under this Agreement (including purposes reasonably related to its performance or enforcement) and who are bound by obligations of confidentiality substantially similar to those set forth herein, and will inform such Representatives who will have access to

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Schrödinger Confidential Information of the obligations of confidentiality under this Agreement; and (iii) not to copy or use the Schrödinger Confidential Information other than as permitted by this Agreement for the purposes authorized hereunder, or as required by applicable law or regulation.

b. Schrödinger hereby acknowledges that the Client Improvements, Work Product and the Client Intellectual Property (collectively, "Client Confidential Information") are proprietary and confidential to Client. Schrödinger agrees not to disclose the Client Confidential Information (or any portion thereof) to any third party, except as permitted by this Agreement. Schrödinger agrees (i) to protect the Client Confidential Information in the same manner that it protects its own confidential information (but no less than reasonable care); (ii) to permit access to the Client Confidential Information only to the Representatives of Schrödinger and its affiliates who reasonably have a need to know for the purposes authorized under this Agreement (including purposes reasonably related to its performance or enforcement) and who are bound by obligations of confidentiality substantially similar to those set forth herein, and will inform such Representatives who will have access to Client Confidential Information of the obligations of confidentiality under this Agreement; and (iii) not to copy or use the Client Confidential Information other than as permitted by this Agreement for the purposes authorized hereunder, or as required by applicable law or regulation.

c. The receiving party's obligations of confidentiality are not applicable to any materials of the disclosing party if and to the extent that such materials: (i) were known to the receiving party prior to disclosure hereunder, as evidenced by written documentation or other reasonable evidentiary means; (ii) are in the public domain at the time of disclosure or later enter the public domain through no fault of the receiving party; (iii) were disclosed to the receiving party by a third party not known by the receiving party to be bound by any obligation of confidentiality or prohibition of disclosure; (iv) were independently developed by the receiving party as evidenced by written documentation or other reasonable evidentiary means, or (v) are required to be disclosed by applicable law, regulation, or court order as evidenced by written documentation or other reasonable evidentiary means.

d. It is understood that the parties may have performed, and may continue to perform, independent development relating to the confidential or proprietary information received hereunder. The parties hereto agree that, except as set forth in Section 2.b., neither this Agreement nor the receipt of any confidential or proprietary information shall limit either party's independent development; provided, however, that in connection with such independent development, (i) Schrödinger shall not use Client Confidential Information, and (ii) Client shall not use Schrödinger Confidential Information.

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6. Representations and Warranties.

Each party represents and warrants that (i) it has all rights to enter into this Agreement; (ii) it is and will remain a corporation or company duly organized, validly existing and in good standing under the laws of its jurisdiction of organization and (iii) it shall comply with all applicable laws with respect to its rights and obligations under this Agreement. EXCEPT AS EXPRESSLY SET FORTH HEREIN, NEITHER PARTY MAKES ANY OTHER WARRANTIES, EXPRESS OR IMPLIED (INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, ACCURACY, TITLE, AND NON-INFRINGEMENT).

7. Publicity.

a. Client and Schrödinger may each publish, disseminate or otherwise disclose any information received or generated under this Agreement (subject to the limitations on use of Schrödinger Confidential Information or Client Confidential Information, as applicable and Schrödinger Intellectual Property and Client Intellectual Property, as applicable); provided, however, all such publications and presentations shall (i) bear appropriate acknowledgment of each party's contributions and (ii) be subject to the prior written approval of each party, which consent shall, in each case, not be unreasonably withheld or delayed.

b. Except as provided in Section 7(a) above and in this Section 7(b), neither party will use the name of the other party in any material intended for public disclosure without such other party's prior express written consent. Notwithstanding the foregoing, either party may disclose the fact that it is, or has been, in a scientific collaboration with the other party (i) on its external website, (ii) in written or verbal communications with such party's Representatives, investors, potential investors, customers, and potential customers, and (iii) in a press release agreed upon by the parties and which shall be distributed when and as agreed by the parties, in each case without disclosing any Client Confidential Information or Schrödinger Confidential Information, as the case may be.

8. LIMITATION OF LIABILITY.

TO THE MAXIMUM EXTENT PERMITTED BY LAW, NEITHER PARTY SHALL BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT (INCLUDING WITHOUT LIMITATION DAMAGES FOR LOST

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BUSINESS OR PROFITS, LOSS OF DATA OR COSTS OF PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES), EVEN IF ADVISED OF THE POSSIBILITY THEREOF. THE ENTIRE AGGREGATE LIABILITY OF EACH OF SCHRÖDINGER OR CLIENT UNDER OR RELATING TO THIS AGREEMENT, FOR ANY REASON(S) AND UPON ANY CAUSE(S) OF ACTION WHATSOEVER, SHALL NOT EXCEED THE GREATER OF (A) THE AMOUNT OF ANY CASH MILESTONE PAYMENTS AS SET FORTH IN EXHIBIT B ACTUALLY RECEIVED BY SCHRÖDINGER FROM CLIENT UNDER THIS AGREEMENT PRIOR TO THE EVENT GIVING RISE TO SUCH LIABILITY OR (B) [***].

9. Term; Termination.

a. The term of this Agreement shall commence on the Effective Date and shall continue for a period of three (3) years immediately thereafter, or until the effective date of any earlier termination in accordance with the terms of this Section 9 (such period, the "Term"). The parties may agree to extend the Term from time to time, pursuant to a written amendment to this Agreement.

b. A party may terminate this Agreement (i) by giving notice in writing to the other party in the event the other party materially breaches this Agreement and shall have failed to cure such breach within [***] of receipt of written notice thereof from the first party, or (ii) at any time by giving notice in writing to the other party, which notice shall be effective upon dispatch, should the other party file a petition of any type as to its bankruptcy, be declared bankrupt, become insolvent, make an assignment for the benefit of creditors, go into liquidation or receivership. Any termination of this Agreement by Client pursuant to the foregoing clauses (i) or (ii) shall be referred to as a "Client Termination for Cause".

c. Client shall remain liable for payment to Schrödinger of all payment obligations under Section 3, including Exhibit B, subject to and in accordance with the terms and conditions thereof.

d. The rights and obligations of the parties under the following sections shall survive the expiration or earlier termination of this Agreement: Sections 3 (including any outstanding payment obligation under Exhibit B), 4, 5, 7, 8, 9, 10 and 11.

10. Notices.

a. Any notice under this Agreement shall be in writing and shall be deemed properly delivered, given and received when delivered (by hand, by registered mail, or by

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courier or express delivery service during business hours) to the address set forth beneath the name of such party below, unless such party has given a notice of a change of address in writing:

If to Schrödinger:

Schrödinger, LLC

120 West 45th Street, 17th Floor

New York, NY 10036

USA

Attention: President

with a copy to "Attention: General Counsel" at the same address;

If to Client:

Morphic Rock Therapeutic, Inc.

1000 Winter Street, Suite 3350

Waltham, MA 02451

Attention: Kevin Bitterman

with a copy (which shall not constitute notice) to:

Foley Hoag LLP

155 Seaport Boulevard

Boston, MA 02210

Attention: Mark A. Haddad, Esq.

11. Miscellaneous.

a. Each party acknowledges and agrees that such party's services hereunder are performed on a non-exclusive basis, except as set forth in Section 2(b). Each party shall have the right to perform similar services for, or undertake similar collaborations with, parties other than the other party.

b. This Agreement does not provide, and shall not be construed to provide, any third parties with any remedy, claim, cause of action or privilege. Nothing in this Agreement shall be construed as creating an employer-employee or agency relationship, or a partnership or a joint venture between the parties.

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c. This Agreement and its enforcement shall be governed by, and construed in accordance with, the laws of The Commonwealth of Massachusetts, without regard to conflicts-of-law principles. The exclusive venue for any action relating to this Agreement shall be the state and federal courts situated in The Commonwealth of Massachusetts, and each party expressly consents to the jurisdiction of such courts.

d. Each party to this Agreement recognizes that money damages alone may not adequately compensate the other party in the event of breach by the such party of Sections 4 and 5 of this Agreement, and each party agrees that, in addition to all other remedies available at law, in equity or otherwise, each party shall be entitled to seek injunctive relief for the enforcement thereof without the requirement of posting any bond in connection therewith. All rights and remedies hereunder are cumulative and are in addition to and not exclusive of any other rights and remedies available at law, in equity, by agreement or otherwise.

e. This Agreement may not be assigned, in whole or in part, by either party without the prior written consent of the other party, except that a party may assign this Agreement without consent in the event of a merger, acquisition, sale of all or substantially all of the assets or corporate reorganization of such party.

f. Neither party shall be deemed in default hereunder, nor shall it hold the other party responsible for, any cessation, interruption or delay in the performance of its obligations hereunder due to earthquake, flood, fire, storm, natural disaster, act of God, war, armed conflict, terrorism, labor strike, lockout, or boycott, provided, however, that the party relying upon this Section 11.e. shall be required (i) to give the other party prompt written notice thereof and, in any event, within [***] following discovery thereof, and (ii) to take all steps reasonably necessary under the circumstances to mitigate the effects of the force majeure event upon which such notice is based.

g. The parties agree that the terms of this Agreement (including all exhibits hereto) are confidential between the parties and shall not be disclosed to third parties. For clarity, the foregoing does not prohibit disclosure of the terms of this Agreement to (i) Representatives and affiliates of each party who reasonably have a need to know for the purposes of this Agreement; or (ii) auditors, investors, potential investors, potential acquirors, attorneys, advisors and similar persons of each party who have a need to know for purposes of corporate and legal compliance, diligence, audits and similar activities; provided however that any such persons are bound by obligations of confidentiality in connection with any disclosure of the terms of this Agreement.

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h. This Agreement, including all exhibits hereto, constitutes the entire agreement between the parties concerning the subject matter hereof and supersedes any prior agreements, representations, statements, negotiations, understandings, proposals or undertakings, oral or written, with respect to the subject matter expressly set forth herein. The parties agree that references to the word "including" mean "including, but not limited

to", references to the phrase "third party" mean parties other than Client, Schrödinger or their respective affiliates, and references to exhibits mean such exhibits as they may be amended from time to time pursuant to this Agreement. Headings used in this Agreement are for the purpose of reference only and are not to be considered in construction or interpretation of this Agreement. In the event of any conflict between the terms of this Agreement and any exhibit, the terms of this Agreement shall take precedence. No provisions of this Agreement may be modified, waived or discharged unless a written modification, waiver or discharge has been signed by both parties. If any provision of this Agreement shall be held to be illegal, invalid or unenforceable, each party agrees that such provision shall be enforced to the maximum extent permissible so as to effect the intent of the parties, and the validity, legality and enforceability of the remaining provisions of this Agreement shall not in any way be affected or impaired thereby. The failure by any party to exercise any right or remedy provided for herein shall not be deemed a waiver, partial or complete, of any right or remedy hereunder. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall be deemed one and the same instrument.

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IN WITNESS WHEREOF, the parties have caused this Agreement to be duly executed as of the date first set forth above.

SCHRÖDINGER, LLC, by its sole member,

SCHRÖDINGER, INC.

By:

/s/ Ramy Farid

Ramy Farid, Ph.D.

President

MORPHIC ROCK THERAPEUTIC, INC.

By:

/s/ Kevin Bitterman

Name: Kevin Bitterman

Title: CEO

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Exhibit B

Payments and Fees

I. In addition to the fees payable to Schrödinger under this Agreement, Schrödinger's parent company, Schrödinger Inc., (the "Schrödinger Parent") will receive, upon the effective date of the Operating Agreement (as defined below), as consideration for Schrödinger's performance of the Services hereunder, 2,962,050 Preferred Units (the "Preferred Units") of Morpnic Rock Holding, LLC (the "Client Parent"), as defined in that certain Amended and Restated Operating Agreement of the Client Parent, dated as of June 10, 2015 (the "Operating Agreement"). Upon a Client Termination for Cause on or before [***], in addition to any remedies available under applicable law, the following proportion of the Preferred Units shall be immediately forfeited by the Schrödinger Parent to the Client Parent without further action by or compensation from Client or the Client Parent, and in such case neither Client nor the Client Parent shall have any further obligations with respect to such forfeited Preferred Units:

(a) [***]; and

(b) [***]

II. Milestone Payments

All fees set forth herein are non-refundable, non-proratable, and payable in United States dollars.

The Milestone 1 Payment, Milestone 2 Payment and Milestone 3 Payment set forth below (collectively, the "Milestone Payments") shall be payable by Client to Schrödinger upon the achievement of the applicable event for each agreed upon Target (each, a "Milestone Event") as described below.

MILESTONE 1

Milestone Event 1:

[***]

Milestone 1 Payment

[***]

MILESTONE 2

2

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Milestone Event 2:

[***]

Milestone 2 Payment

[***]

MILESTONE 3

Milestone Event 3:

[***]

Milestone 3 Payment

[***]

Payment Procedure

1. If paying by check, payments should be mailed to Schrödinger at the following address:

Schrödinger, L.L.C.

101 SW Main Street, Suite 1300

Portland, Oregon 97204

Phone: 503-299-1150

Fax: [***]

E-mail: orders@schrodinger.com

2. If paying by wire transfer, payments should be wired to Schrödinger as follows:

[***]

[***]

Account name: [***]

Account number: [***]

Bank routing number: [***]

3. Client shall be responsible for applicable sales taxes on any cash payments hereunder.

Schrödinger, LLC FEIN (Tax Number): [***]

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Confidential — Execution Copy

MORPHIC THERAPEUTIC, INC.

March 9, 2018

Schrödinger, LLC

120 West 45th Street, 17th Floor

New York, NY 10036

Attention: President

Re: Amendment to Collaboration Agreement, dated as of June 10, 2015, by and between Morpich Therapeutic, Inc. (f/k/a Morpich Rock Therapeutic, Inc.) and Schrödinger, LLC (the "Agreement")

Ladies and Gentlemen:

As you know, Morpich Therapeutic, Inc. (f/k/a Morpich Rock Therapeutic, Inc.), a Delaware corporation ("Client", "we" or "us"), and Schrödinger, LLC, a Delaware limited liability company ("Schrödinger") are parties to the above-referenced Agreement pursuant to which, among other things, Schrödinger agreed to perform certain drug design services set forth therein.

This letter ("Letter Agreement") confirms our mutual understanding and agreement to amend and extend the Agreement, by incorporating the provisions set forth below, each of which shall be incorporated into the Agreement notwithstanding anything to the contrary set forth therein. All capitalized terms used in this Letter Agreement but not otherwise defined shall have the definitions assigned to them in the Agreement.

1. Extension of Term. The parties hereby confirm that the Term of the Agreement shall be and hereby is extended for an additional period of ten (10) years, commencing on April 21, 2018 ("Renewal Term Commencement Date") and concluding on April 21, 2028, unless sooner terminated as provided in the Agreement, as amended by this Letter Agreement (the "Renewal Term"). All references to the "Term" in the Agreement shall be deemed to include and apply to the Renewal Term.

2. Termination. Section 9 of the Agreement is hereby amended by deleting subsections b. and c. thereof in their entirety and replacing them with the following:

"b. Without prejudicing any other rights or remedies which may be available to a Party under this Agreement, at law or in equity,

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(1) A party may terminate this Agreement (i) by giving notice in writing to the other party in the event the other party materially breaches this Agreement and shall have failed to cure such breach within [***] of receipt of written notice thereof from the first party, or (ii) at any time by giving notice in writing to the other party, which notice shall be effective upon dispatch, should the other party file a petition of any type as to its bankruptcy, be declared bankrupt, become insolvent, make an assignment for the benefit of creditors, go into liquidation or receivership. Any termination of this Agreement by Client pursuant to the foregoing clauses (i) or (ii) shall be referred to as a "Client Termination for Cause".

(2) Either party may terminate this Agreement, by written notice to the other party in accordance with the penultimate sentence of this subsection (2), following any (a) transaction or series of related transactions in which any individual or entity, or a group of related individuals and/or entities, acquires voting securities of the Client from the holders thereof which securities represent more than fifty percent (50%) of the total outstanding voting power of all outstanding equity securities of the Client; (b) merger (including a reverse triangular merger), reorganization, consolidation, share exchange, or similar transaction involving the Client in which the holders of voting securities of the Client outstanding immediately prior thereto cease to hold voting securities that represent at least fifty percent (50%) of the combined voting power of the surviving entity immediately after such merger, reorganization, consolidation, share exchange, or similar transaction.; or (c) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Client or any subsidiary of the Client of all or substantially all the assets of the Client and its subsidiaries (if any) taken as a whole, unless the Client is retaining a substantial portion of the proceeds from such sale to continue its operations. Client shall notify Schrödinger of the occurrence of any transaction described in clauses (a), (b) or (c) above within [***] following the closing of such transaction (such notice, a "Sale Notice"). A party electing to terminate this Agreement pursuant to this

subsection (2) must provide written notice to the other party of its election, if at all, within [***] after the issuance of a Sale Notice. Termination of the Agreement will be deemed to occur immediately upon the date of issuance of any such termination notice by a party.

(3) Schrödinger may terminate this Agreement pursuant to written notice provided to the Client on or after the fifth anniversary of the Renewal Term Commencement Date (as defined in that certain Letter Agreement, dated March 9, 2018, between the parties ("Letter Agreement")) if, during the initial five-year period of the Renewal Term (as defined in the Letter Agreement), fewer than two Milestone

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3 Payments have become payable to Schrödinger by Client pursuant to Exhibit B of the Agreement.

c. Client (or its successors or permitted assigns, as applicable) shall remain liable and obligated to pay to Schrödinger all past and future payment obligations under Section 3 following any termination or expiration of this Agreement, including all milestone and royalty payments under Exhibit B that have accrued prior to the effective date of any termination or expiration of this Agreement or that accrue after the effective date of any termination or expiration of this Agreement, in each case subject to and in accordance with the terms and conditions hereof."

3. Assignment. Section 11.e of the Agreement is hereby deleted in its entirety and replaced with the following:

"e. This Agreement may not be assigned, in whole or in part, by either party without the prior written consent of the other party, except that a party may assign this Agreement without consent in the event of a merger, acquisition, sale of all or substantially all of the assets or corporate reorganization of such party. Any attempted assignment, transfer or sale in violation of this Section 11.e shall be void and of no effect. All validly assigned rights and obligations of the parties hereunder shall be binding upon and inure to the benefit of and be enforceable by and against the successors and permitted assigns of Client or Schrödinger, as the case may be. The permitted assignee or transferee shall assume all obligations of its assignor or transferor under this Agreement."

4. Royalties. Exhibit B to the Agreement (Payments and Fees) is hereby amended by adding the new Section III attached hereto as Appendix B-III following the existing Section II thereof.

5. Notices. We hereby notify Schrödinger pursuant to Section 10.a. of the Agreement that notices to be delivered to Client pursuant to the Agreement shall be sent to the Client's address as follows:

Morphic Therapeutic, Inc.

35 Gatehouse Drive

Waltham, MA 02451

Attention: CEO

6. Single Agreement. Except as otherwise set forth in this Letter Agreement, all of the terms and conditions of the Agreement shall remain in full force and effect. This Letter Agreement together with the Agreement and all exhibits, schedules and attachments thereto constitute the entire agreement among the parties with respect to the subject matter hereof and thereof and supersede all previous written or oral understandings between the parties.

This Letter Agreement is not valid or binding unless and until it is fully executed by Schrödinger and the Client. Please confirm your acknowledgement and agreement to the foregoing by countersigning where indicated below and return one original countersigned letter to us.

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Very truly yours,

MORPHIC THERAPEUTIC, INC.

By:

/s/ Praveen Tipirneni

Name:

Praveen Tipirneni

Title:

Chief Executive Officer

Agreed and accepted:

SCHRÖDINGER, LLC, by its sole member,

SCHRÖDINGER, INC.

By:

/s/ Ramy Farid

Name:

Ramy Farid

Title:

President and Chief Executive Officer

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Appendix B-III

III. Royalty Payments

A. Certain Definitions.

1. "Affiliate" means any company or other legal entity controlling, controlled by or under common control with a party. For purposes of the definition of "Affiliate" the term "control" shall mean: (i) the ownership of at least a majority of the ordinary voting power necessary to effect the election of a majority of the board directors or other governing board, or in the case of a for-profit entity, direct or indirect ownership of at least a majority of the stock or participating shares entitled to vote for the election of directors of that entity; or (ii) in the case of a partnership, the power customarily held by a managing partner to direct the management and policies of such partnership; or (iii) in the case of a joint venture, whether in corporate, partnership or other legal form, a prevailing joint economic interest coupled with a managerial role entailing active direction, control and accountability with respect to the business and affairs of the entity.

2. "Derived Compound" means any chemical compound identified, generated, developed or discovered by Client or its Affiliates or on behalf of Client or any of its Affiliates, including by Schrödinger, during the Term in connection with the Collaboration, as well as all salts, hydrates, solvates, esters, metabolites, intermediates, stereoisomers, polymorphs, and any derivatives or modifications of any of the foregoing which are identified, generated or discovered by or on behalf of Client or its Affiliates at any time during or after the Term.

3. "Covered Product" means any product comprising or containing any Derived Compound, alone or in combination with one or more other active ingredients in any and all forms, in current and future formulations, indications, dosage forms, strengths and delivery modes, including any improvements thereto.

4. "Net Sales" means, as determined under U.S. generally accepted accounting principles, the gross amounts billed or invoiced for sales, leases or other transfers of Covered Products by or on behalf of Client or its Affiliates or any of their respective Third Party licensees or sublicensees (each, an "Invoicing Entity"), less (to the extent actually allowed or incurred and directly related to such sale of Covered Products and not previously deducted from the gross invoice price) the following amounts:

- a. allowances and credits on account of rejection, or damaged, recalled or returned Covered Products previously sold;
- b. customary rebates, price reductions (including shelf stock adjustments), chargebacks, administrative fee arrangements, reimbursements, quantity

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and cash discounts to purchasers allowed and taken, including without limitation, with respect to institutions and health care organizations and in respect of Medicare, Medicaid or similar programs;

c. customary amounts for third party transportation, insurance, handling or shipping charges to purchasers; and

d. to the extent separately stated on purchase orders, invoices or other documents of sale, any taxes, duties and other governmental charges levied on or measured by the sale of Covered Products that are paid by or on behalf of an Invoicing Entity, but not franchise or income taxes of any kind whatsoever.

Net Sales shall also include the fair market value of any non-cash consideration received by any Invoicing Entity in connection with the sale, lease, or other transfer of Covered Products. Transfer of a Covered Product within Client or between any of Client and its Affiliates or contractors for sale by the transferee shall not be considered a Net Sale for purposes of ascertaining royalty charges owed to Schrödinger under this Agreement. Notwithstanding anything to the contrary herein, the sale, disposal or use of any Covered Product for marketing, regulatory, development or charitable purposes, such as clinical trials, preclinical trials, compassionate use, named patient use, or indigent patient programs, in each case without consideration, shall not be deemed a sale hereunder. If a Covered Product is sold in combination with another product, device, service or active ingredient, only the amounts allocable to the Covered Product, as determined using practices consistently applied by Client and approved by Schrödinger such approval to not unreasonably be withheld, shall be counted as Net Sales.

B. Royalty Payments.

1. For Covered Products, Client shall pay (or cause its Affiliates to pay) to Schrödinger a royalty as follows:

a. [***] of Net Sales for the first [***] of Net Sales of all Covered Products in each calendar year during or after the Term, and thereafter

b. [***] of Net Sales for all Net Sales of all Covered Products in excess of [***] in each calendar year during or after the Term.

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MORPHIC THERAPEUTIC, INC.

May 30, 2019

Schrödinger, LLC

120 West 45th Street, 17th Floor

New York, NY 10036

Attention: President

Re: Second Amendment to the Collaboration Agreement, dated as of June 10, 2015, by and between Morpnic Therapeutic, Inc. (f/k/a Morpnic Rock Therapeutic, Inc.) and Schrödinger, LLC, as amended March 9, 2018 (the "Agreement")

Ladies and Gentlemen:

As you know, Morpnic Therapeutic, Inc. (f/k/a Morpnic Rock Therapeutic, Inc.), a Delaware corporation ("Client", "we" or "us"), and Schrödinger, LLC, a Delaware limited liability company ("Schrödinger") are parties to the above-referenced Agreement pursuant to which, among other things, Schrödinger agreed to perform certain drug design services set forth therein.

This Letter Agreement ("Second Amendment") confirms our mutual understanding and agreement to amend the Agreement, by incorporating the provisions set forth below, each of which shall be incorporated into the Agreement notwithstanding anything to the contrary set forth therein. All capitalized terms used in this Letter Agreement but not otherwise defined shall have the definitions assigned to them in the Agreement.

1. Section 1 of the Agreement (Definitions) is amended by deleting Section c. (Collaboration) in its entirety and replacing it with the following:

c. "Collaboration" shall mean the responsibilities specified for each party in the Work Plan under Exhibit A or under the Research Plan of a Stage 1 Program or Stage 2 Program.

2. Section 1 of the Agreement (Definitions) is amended by adding new definitions n. through fff. after the end thereof:

n. "Affiliate" means any company or other legal entity controlling, controlled by or under common control with a party. For purposes of the definition of "Affiliate" the term "control" shall mean: (i) the ownership of at least a majority of the ordinary voting power necessary to effect the election of a majority of the board directors or other governing board, or in the case of a for profit entity, direct or indirect ownership of at least a majority of the stock or participating shares entitled to vote for the election of directors of that entity; or (ii) in the case of a partnership, the power customarily held by a managing partner to direct the management and policies of such partnership; or (iii) in the case of a joint venture, whether in corporate, partnership or other legal form, a prevailing joint economic interest

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coupled with a managerial role entailing active direction, control and accountability with respect to the business and affairs of the entity.

o. "Backup Development Candidate" means a Development Candidate that was identified in the performance of a Backup Search and designated by Client as suitable for post-Lead Optimization development.

p. "Backup Search" has the meaning given in Section 2.d.

q. "Calendar Year" means a one-year period beginning on January 1st and ending on December 31st.

r. "Change of Control" means an event under Section 9(b)(2)(a)-(c).

s. "Control" means, with respect to any Patent, the possession (whether by ownership or license) by a party or its Affiliates of the ability to enforce such Patent against a Third Party infringer of such Patent without violating the terms of any agreement or other arrangement with any other Third Party.

t. "Collaboration Compound" means (i) any chemical compound identified, generated, developed or discovered by Client or its Affiliates or on behalf of Client or any of its Affiliates, including by Schrödinger, during the Term in connection with the conduct of the Collaboration, and (ii) all salts, hydrates, solvates, esters, metabolites, intermediates, stereoisomers, polymorphs, and any derivatives or modifications of (i) which are identified, generated or discovered by or on behalf of Client or its Affiliates at any time during or after the Term, in each of cases (i) and (ii) that are Primarily Active against a Target designated by Client under Section 2.f or a Work Plan under Section 2.f.

u. "Collaboration Product" means, on a country-by-country basis, any product comprising or containing any Collaboration Compound, alone or in combination with one or more other active ingredients in any and all forms, in current and future formulations, indications, dosage forms, strengths and delivery modes, including any improvements thereto.

v. "Combination Product" means any product (a) containing (i) as a single formulation, two or more APIs as components, one of which is a Collaboration Product or (ii) in a single package or container and intended for coordinated use, two or more products as components including a Collaboration Product and one or more other products (where such other product may include a device or another API) for therapeutic administration or diagnostic use or (b) defined as a "combination product" by the FDA pursuant to 21 C.F.R. §3.2(e) or its foreign equivalent.

w. "Data" all data, including raw data, processed data, notebook records, documents, reports, presentations, computer models, deliverables, written, printed, graphic, video and audio recorded information contained in any computer database or computer readable form and other results supplied to or generated by or on behalf of Schrödinger or its Affiliates as the result of performing any research activities under this Agreement.

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x. "Development Candidate" means a Collaboration Compound that was identified during the performance of a Stage 1 Program or Stage 2 Program and designated by Client as suitable for post-Lead Optimization development.

y. "EUA" has the meaning given in Section 4.d.

z. "Exploit" or "Exploitation" means any and all activities directed to researching, developing, improving, making, importing, exporting, transporting, distributing, using, selling, offering for sale, commercializing, holding or keeping (whether for disposal or otherwise), seeking Regulatory Approval, promoting, marketing, or otherwise disposing of any product or service and having Third Parties perform such activities on one's behalf as well as interacting with Regulatory Authorities with regard to any of the foregoing. When used as a verb, "to Exploit" and "Exploiting" means to engage in Exploitation, and "Exploited" has a corresponding meaning.

aa. "FTE" means a qualified fulltime person, or more than one person working the equivalent of a full-time person, where "full time" is based upon a total of [***] per Calendar Year of scientific or technical work carried out by a duly qualified employee of Schrödinger. Overtime and work on weekends, holidays and the like shall not be counted with any multiplier (e.g. time-and-a-half or double time) toward the number of hours that are used to calculate the FTE contribution.

bb. "FTE Costs" means, for any period, the FTE Rate multiplied by the number of FTEs in such period. FTEs will be pro-rated on a daily basis if necessary.

cc. "FTE Rate" means, a rate of [***] per FTE per calendar year.

dd. "Hit to Lead" has the meaning given in Section 2.d.

ee. "Hit Identification" has the meaning given in Section 2.d.

ff. "Indication" means any use of a Collaboration Compound to treat a specified human disease or condition, or sign or symptom of a human disease or condition, the approval of which requires a dedicated pivotal clinical study by the applicable regulatory authority. For clarity, lines of therapy (e.g., first line, second line etc.) and separate uses of a Collaboration Compound to treat subsets of a disease or condition will not be separate Indications.

gg. "Lead Optimization" has the meaning given in Section 2.d.

hh. "License or Sale Agreement" means an arm's length written agreement between Client and a Third Party granting such Third Party a license, or sublicense to Exploit (or assigning such Third Party the right to Exploit) at least one product that would constitute a Collaboration Product (including, without limitation, the grant of a license to practice under (or assignment of) any patent rights claiming any Collaboration Product). For clarity, a Change of Control event and agreements solely for contractors to perform work on Client's behalf do not constitute License or Sale Agreements.

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ii. "Licensee Net Sales" means, with respect to any License or Sale Agreement, Net Sales (as defined in such License or Sale Agreement) resulting from sales made by or on behalf of a Licensee of any product that would constitute a Collaboration Product hereunder and reported by such Licensee to Client or as determined by Client from an audit of Licensee. For the avoidance of doubt, and without limitation, Licensee Net Sales exclude: (i) Licensee upfront payments; (ii) contingent payments of any amounts received in connection with the achievement of a milestone not based on Net Sales; (iii) amounts received for the receipt, exercise, or non-exercise by a Third Party of any option; (iv) amounts received as reimbursement for services including research and development services performed on behalf of a Third Party; and (v) amounts attributable to (a) sales, leases or other transfers of products or services other than Collaboration Products or (b) a license or sublicense to exploit products or services other than Collaboration Products.

jj. "Licensee Payment" means the amounts received by Client or its Affiliates after the Second Amendment Effective Date from a Third Party pursuant to a License or Sale Agreement as consideration for: (I) an exclusive (including as to Client) license to Exploit any Collaboration Product; or (II) the transfer or assignment of Client's entire right to Exploit any Collaboration Product to such Third Party (including, without limitation, assigning patent rights claiming such Collaboration Product) (each an "Option"); but (i) only to the extent that such amounts are directly attributable to such Option and (ii) excluding any other consideration received by Client in connection with such License or Sale Agreement including (A) contingent payments for any amounts received in connection with the achievement of any milestone; (B) amounts received as reimbursement for services research and development services performed on behalf of a Third Party on an FTE basis; (C) amounts attributable to a license or sublicense to exploit products or services other than Collaboration Products; and (D) Licensee Net Sales. For clarity, Licensee Payments do not include any amounts received by Client in connection with a Change of Control.

kk. "Licensee" means a Third Party to whom Client grants a license or sublicense to Exploit (or assigns the right to Exploit) at least one product that would constitute a Collaboration Product.

ll. "Morphic Net Sales" means, as determined in accordance with U.S. generally accepted accounting principles (GAAP) and Client's internal policies, the gross amounts billed or invoiced for sales of Collaboration Products by or on behalf of Client or its Affiliates (each, an "Invoicing Entity"), less (to the extent actually allowed or incurred and directly related to such sale of Collaboration Products and not previously deducted from the gross invoice price) the following amounts:

- i. allowances and credits on account of rejection, or damaged, recalled or returned Collaboration Products previously sold;
- ii. customary rebates, price reductions (including shelf stock adjustments), chargebacks, administrative fee arrangements, reimbursements, trade, quantity and cash discounts to purchasers allowed and taken, including without limitation, with

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respect to institutions and health care organizations and in respect of Medicare, Medicaid or similar programs;

iii. any invoiced amounts that are not collected and are written off, including bad debts, unless otherwise recovered;

iv. customary amounts for third party transportation, insurance, handling or shipping charges to purchasers; and

v to the extent separately stated on purchase orders, invoices or other documents of sale, any taxes, duties and other governmental charges levied on or measured by the sale of Collaboration Products that are paid by or on behalf of an Invoicing Entity, but not franchise or income taxes of any kind whatsoever.

Morphic Net Sales shall also include the fair market value of any non-cash consideration received by any Invoicing Entity in connection with the sale of Collaboration Products. Transfer of a Collaboration Product within Client or between any of Client and its Affiliates or contractors for sale by the transferee shall not be considered a Net Sale for purposes of ascertaining royalty charges owed to Schrödinger under this Agreement. Notwithstanding anything to the contrary herein, the sale, disposal or use of any Collaboration Product for marketing, regulatory, development or charitable purposes, such as clinical trials, preclinical trials, compassionate use, named patient use, or indigent patient programs, in each case without consideration, shall not be deemed a sale hereunder.

If one or more Collaboration Product(s), is sold in combination with another product, device, service or active ingredient in each case that does not constitute a Collaboration Product, only the amounts allocable to the Collaboration Product(s), as determined using practices consistently applied by Client and approved by Schrödinger such approval to not unreasonably be withheld, shall be counted as Net Sales.

For clarity, Licensee Net Sales are not Morphic Net Sales.

If a Collaboration Product is sold as part of a Combination Product in a given country, then Morphic Net Sales for such Collaboration Product in such country will be determined as follows:

(i) If the Collaboration Product is sold separately and all other products in such Combination Product are sold separately, then Morphic Net Sales will be calculated by multiplying Morphic Net Sales of such Combination Product by the fraction $A/(A+B)$ where A is the Average Net Selling Price of the Collaboration Product component contained in the Combination Product in the applicable country and B is the sum of the Average Net Selling Prices of all other product components included in the Combination Product in the applicable country.

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(ii) If the Collaboration Product is sold separately, but not all other products in a Combination Product are sold separately, then Morphic Net Sales will be calculated by multiplying Morphic Net Sales of such Combination Product by the fraction A/C where A is the Average Net Selling Price of the Collaboration Product component in the Combination Product in the applicable country and C is the Average Net Selling Price of the entire Combination Product in the applicable country.

(iii) If the Collaboration Product is not sold separately, but all other products in a Combination Product are sold separately, then Morphic Net Sales will be calculated by multiplying actual Morphic Net Sales of such Combination Product by the fraction $(C-B)/C$ where B is the sum of the Average Net Selling Prices of all other product components included in the Combination Product in the applicable country and C is the Average Net Selling Price of the entire Combination Product in the applicable country.

(iv) If Net Sales of a Collaboration Product cannot be determined using the methods above ((i)-(iii)), then the Parties will negotiate in good faith, at the latest six (6) months before the expected launch of such Combination Product, an allocation of Morphic Net Sales of such Combination Product to the respective API components or product components thereof, as the case may be, based on the fair market value of such components for the purposes of determining a product specific allocated Morphic Net Sales, and if the Parties are unable to agree on such a reasonable allocation no later than three (3) months prior to the estimated launch date of such Combination Product, then Morphic Net Sales of such Collaboration Product will be calculated based on Client's good faith estimate of the fair market value of the Collaboration Product and each of the other product components included in such Combination Product when sold in such country.

As used herein, "Average Net Selling Price" means on a product-by-product basis, for a given product, Calendar Year and country, the aggregate Morphic Net Sales (expressed in the applicable local currency) of such product in such Calendar Year in such country, divided by the number of units of such product for which revenue has been recognized by Client in accordance with GAAP in such Calendar Year in such country.

mm. "Morphic Patents" means any Patents Controlled by Morphic.

nn. "Non-Collaboration Compound" means any chemical compound other than a Collaboration Compound. For clarity, Non-Collaboration Compound includes any chemical compound identified, generated, developed or discovered by Client or any

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permitted sublicensee or their respective Affiliates other than Collaboration Compounds.

oo. "Non-Collaboration Product" means any product having a Non-Collaboration Compound as an active pharmaceutical ingredient but excluding any product having a Collaboration Compound as an active pharmaceutical ingredient.

pp. "Patents" means any and all (a) patents, (b) pending patent applications, including, all 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, (e) any other form of government-issued right substantially similar to any of the foregoing and (f) all U.S. and foreign counterparts of any of the foregoing.

qq. "Phase II Clinical Trial" means a clinical trial generally consistent with 21 CFR §312.21(b) that the FDA permits to be conducted under an open IND and that is prospectively designed to generate sufficient data (if successful) to commence a Phase III Clinical Trial for such product

and that is conducted to evaluate the effectiveness and the appropriate dose range of a product for a particular indication or indications in patients with the disease or condition under study and to determine the common short-term side effects and risks.

rr. "Primarily Active" means, with respect to a Collaboration Compound and a Target, that the Collaboration Compound meets the (a) potency and (b) affinity with selectivity criteria in each case as set forth in the Lead Optimization planning documents approved by the JSC with respect to such Target and included in the applicable Work Plan or Research Plan.

ss. "Research Plan" has the meaning given in Section 2.g.

tt. "Royalty Term" means, on a Collaboration Product-by-Collaboration Product and country-by-country basis, the period beginning on the date of the first commercial sale of a Collaboration Product in such country, and ending upon the later of: (a) expiration, invalidation or abandonment of the last Valid Claim that covers the composition of matter of the Collaboration Compound of such Collaboration Product in such country; and (b) the [***] anniversary of such first commercial sale in such country.

uu. "Stage 1 Notice" has the meaning given in Section 2.e.

vv. "Stage 2 Notice" has the meaning given in Section 2.f.

ww. "Stage 1 Program" has the meaning given in Section 2.d.

xx. "Stage 2 Program" has the meaning given in Section 2.d.

yy. "Stage 2 Program Term" for a Stage 2 Program means the period commencing on the date Client approves the Research Plan for such Stage 2 Program pursuant to Section 2.f and ending on the date that such Stage 2 Program becomes a Terminated Program.

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zz. "Sub-Stage" means, with respect to a Stage 1 Program, Target Analysis and Hit Identification and, with respect to a Stage 2 Program, Hit to Lead, Lead Optimization, and Backup Search.

aaa. "Target(s)" shall mean (1) a member of the target class of human integrins and/or (2) any other target mutually agreed by the Parties to be a Target under this Agreement.

bbb. "Target Analysis" has the meaning given in Section 2.d.

ccc. "Terminated Program" has the meaning given in Section 2.j.

ddd. "Terminated Sub-Stage" has the meaning given in Section 2.j.

eee. "Valid Claim" means a claim of (a) any issued and unexpired patent which has not been held unenforceable or invalid by a decision of a court or other governmental agency of competent jurisdiction, unappealable or unappealed within the time allowed for appeal, and which has not been admitted to be invalid or unenforceable through abandonment, reissue, disclaimer or otherwise; or (b) a pending patent application that is filed and prosecuted in good faith and no more than [***] have elapsed from its earliest priority date.

fff. "Work Plan" has the meaning given in Section 2.c.

3. Section 2 of the Agreement (Obligations of the Parties) is amended by deleting subsections c. and d. in their entireties and replacing them with the following:

"2.c Joint Steering Committee. Within [***] after the execution of this Agreement, the parties shall form a joint steering committee (the "JSC") comprised of [***] designated as set forth below, which JSC shall be responsible for the general oversight of the research carried out hereunder, including without limitation: (i) reviewing the goals, strategy, Milestone Events (as defined in Exhibit B), and results and deliverables of the Work Plan (as set forth in Exhibit A, the "Work Plan") or any Research Plan and the activities performed thereunder; (ii) recommending and approving changes to the Work Plan or any Research Plan; (iii) assigning relative priorities in the Work Plan or any Research Plan; (iv) terminating any specific activities under the Work Plan or any Research Plan; (v) determining whether a Milestone Event has occurred; and (vi) resolving any disagreements between the parties concerning the research and development activities carried out under this Agreement. Each party shall designate [***] individual representatives as members of the JSC, each of whom shall be authorized to make decisions on behalf of the designating party (subject to the terms and conditions of this Section 2.c.) and shall have significant experience and expertise in the research and development of pharmaceutical compounds. Each party shall have the right, at any time, to designate by written notice to the other Party, a replacement for any of such party's representatives on the JSC. The JSC shall endeavor to work by consensus. Decisions of the JSC shall be made by unanimous written consent and shall be included in amendments to the Work Plan, if applicable. Where unanimity cannot be achieved in respect of any matter following good faith, commercially reasonable efforts on the part of the members of the JSC, such disputed matter shall be referred

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to the relevant senior management of the parties who shall promptly meet and endeavor to come to an agreement in a timely manner. The JSC will determine, subject to the terms and conditions of this Section 2.c., whether any Milestone Event has occurred. The JSC will notify the relevant senior management of each party in writing that any such Milestone Event has occurred no later than [***] after such a determination.

2.d Schrödinger Research Activities. Under the Collaboration, Schrödinger shall perform research and development activities Stage 1 Programs and Stage 2 Programs. Schrödinger shall use commercially reasonable efforts, including by use of any applicable Schrödinger Intellectual Property, to prepare and deliver all deliverables and results for each Stage 1 Program and Stage 2 Program in accordance with this Agreement. As set forth below, each Stage 1 and Stage 2 Program shall have [***] or more Sub-Stages each consistent with activities under the Work Plan.

Stage 1 Programs. Stage 1 Programs means programs that include the following Sub-Stages with respect to an applicable Target: (a) Target analysis and validation activities, which may include protein construct design, protein refinement, binding pose prediction, FEP validation, WaterMap analysis and other activities consistent with the Target Class Analysis and Target Analysis and Validation activities of the Work Plan (collectively, "Target Analysis"); (b) hit identification, which may include ligand-based virtual screening, and structure-based virtual screening and other activities consistent with the Lead Identification activities of the Work Plan (collectively, "Hit Identification"); or (c) such other activities, but, in the case of (c), only to the extent mutually agreed between Schrödinger and Client. Unless otherwise agreed by the Parties, this Agreement does not obligate Schrödinger to perform activities under more than [***] Stage 1 Programs hereunder per Calendar Year, prorated for any portion thereof.

Stage 2 Programs. Stage 2 Programs shall include the following Sub-Stages with respect to a designated Target: (a) pre-lead optimization to identify a lead series of compounds and other activities consistent with the Hit to Lead activities of the Work Plan (collectively, "Hit to Lead"); (b) lead optimization to identify compounds that meet criteria for nomination of a Development Candidate or Backup Development Candidate for post-lead optimization development and other activities consistent with the Lead Optimization activities of the Work Plan (collectively, "Lead Optimization"); or (c) search for a Backup Development Candidate as an alternative to a Development Candidate ("Backup Search"). Unless otherwise agreed by the Parties, this Agreement does not obligate Schrödinger to perform activities under more than [***] Stage 2 Programs hereunder."

4. Section 2 of the Agreement (Obligations of the Parties) is amended by adding new subsections e. — p. following the end thereof:

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2.e Designating Stage 1 Programs. From time to time, Client may designate, by written notice ("Stage 1 Notice"), Stage 1 Programs so long as the total number of Stage 1 Programs in the then [***] would not then exceed [***] or such other number agreed to in writing by the Parties. Following the delivery of a Stage 1 Notice, the parties will develop a Research Plan for the Target designated therein. Upon approval by Client of a Research Plan, Schrödinger shall commence the activities set forth therein.

2.f Designating Stage 2 Programs and Sub-Stages. From time to time, Client may designate, by written notice ("Stage 2 Notice"), Stage 2 Programs so long as the number of concurrent Stage 2 Programs would not then exceed [***] or such other number agreed to in writing by the Parties. Each Stage 2 Notice shall designate the Sub-Stage activities to be performed: Pre-Lead Op, Lead Optimization, or Backup Search and, if applicable, the Collaboration Compounds or other compounds that are to be the subject of such activities.

Following the delivery of a Stage 2 Notice, the parties will develop a Research Plan for the designated Sub-Stage. Upon approval by Client of such Research Plan, Schrödinger shall commence the activities set forth under the Research Plan.

2.g Research Plan. Each Research Plan for a Stage 1 Program or Stage 2 Program or Sub-Stage thereof shall: (i) have a scope and content consistent with Section 2.d or as otherwise agreed by the Parties, (ii) set forth the results and deliverables expected to be required for each Sub-Stage, (iii) the protocols and plans to be performed by Schrödinger under the Research Plan, and (iv) the estimated timeline for providing such results and deliverables ("Research Plan"). Client shall have the final decision, in its sole discretion, to approve or disapprove of any Research Plan.

2.h Updates to Research Plan. The parties may, from time to time, update each Research Plan (whether under a Stage 1 Program or Stage 2 Program or Sub-Stage thereof) upon (and only upon) mutual written agreement.

2.i Research Reports. During the term of each Research Plan, Schrödinger shall, upon Client's reasonable request, provide Client with reports regarding the status and progress of Schrödinger's research activities thereunder. For each Research Plan, the reports will include the characteristics of any Collaboration Compound identified and the selection of any Collaboration Compound for further study (including those for which Client may determine to commence post-Lead Optimization activities). The parties shall confer regarding relevant deliverables and results generated under each Research Plan and consider any technical or budgetary issues that may arise.

2.j Terminating Stage 1 or Stage 2 Programs or Sub-Stages. Client may terminate, by written notice ("Program Termination Notice"), a Stage 1 Program or Stage 2 Program in its entirety (each a "Terminated Program") or a given Sub-Stage of a Program (each a "Terminated Sub-Stage"). Upon receipt of the Program Termination Notice: (1) all research and development activities under a Terminated Program shall cease and all Research Plans under such Terminated Program shall terminate in accordance with Section 2.k of this Agreement. For a Terminated Sub-

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Stage, only the research and development activities under the applicable Research Plan shall terminate and the applicable Stage 1 or Stage 2 Program shall continue in accordance with any remaining Research Plans. Notwithstanding the termination of a Stage 1 or Stage 2 Program in its entirety, the Target that was the subject of such Terminated Program shall remain a Target for all purposes hereunder, unless such Target is not a member of the target class of human integrins in which case such Target shall cease to be a Target for any purposes hereunder. Schrödinger has no obligation to undertake any other Stage 2 Programs for the Target of any Stage 2 Program that becomes a Terminated Program.

2.k Term of Research Plan. The term of each Research Plan shall begin on the date of receipt by Schrödinger of Client's written notice approving the Research Plan. The term of each Research Plan shall end on the earlier of: (i) the date of receipt by Schrödinger of a Program Termination Notice terminating the applicable Stage 1 or Stage 2 Program or Sub-Stage, (ii) the date of determination by the JSC that all results and deliverables under such Research Plan have been achieved, or (iii) the termination of this Agreement.

2.l Research Plan Costs. For each Stage 1 Program, Client shall pay Schrödinger an up-front total of [***] in full payment of Schrödinger's costs and expenses in performing such Stage 1 Program. For each Stage 2 Program, during the corresponding Stage 2 Program Term, Client shall pay Schrödinger a flat rate of a total of [***] per Calendar Year, prorated for any portion thereof. During the term of each Stage 2 Program, Schrödinger will provide Client a quarterly invoice specifying the amount due in connection with the performance of the corresponding Research Plan during the prior calendar quarter. For all purposes of this Section 2.1, each of the three (3) programs existing as of the current date (i.e. the programs for the avb6 Target, a4b7 Target, and avb1/avb6 dual Target, respectively) (the "Existing Programs") shall be deemed Stage 2 Programs.

2.m Payment of Research Plan Costs. Client will pay all amounts (other than those amounts that Client disputes in good faith in accordance with the terms and conditions of this Agreement) set forth in each invoice under Section 2.l within [***] of the receipt of each invoice in accordance with Appendix B.IV.

2.n Research Plan Records. Schrödinger will, for [***] after the termination of each Stage 1 Program or Stage 2 Program (the "Retention End Date"), maintain records of its activities under the Research Plan applicable thereto in accordance with applicable good research practices. Schrödinger shall keep a written or electronic notebook record of its recorded activity associated with the performance of services under this Agreement and such records shall be separate from other research projects Schrödinger may perform in accord with Section 2.b. All Data must be made available either as an original or as an electronic copy by Schrödinger to Client at mutually agreed upon time points during the term of a Research Plan. Data which were generated or modified in electronic format must be transferred to Client in electronic format and in a format reasonably accessible to Client representing the Data. Prior to the Retention End Date, Schrödinger will not destroy Data without the prior written approval of Client. During and up to [***] after the completion of each Research Plan under this Agreement, Schrödinger will

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ensure that representatives of Client have access to Schrödinger's and its Affiliates' premises, upon reasonable advance notice during regular business hours, for the purpose of reviewing Data under this Agreement. Schrödinger will seek to resolve any identified quality or data integrity issues with the Data generated under this Agreement, within a mutually agreed upon time period.

2.o Performance by Schrödinger of Research Plan Activities. Schrödinger will (a) use commercially reasonable efforts to perform all research activities assigned to Schrödinger under a Research Plan and (b) perform all such activities with reasonable care and skill in accordance with all applicable laws and the terms of this Agreement. During the term of each Research Plan, Schrödinger shall devote the efforts of suitably qualified and trained employees and research assistants capable of carrying out the activities thereunder to a professional, workmanlike standard and will provide all necessary materials and facilities therefor."

5. Section 4 of the Agreement (Proprietary Rights) is amended by adding new subsections f. — g. following the end thereof:

4.f Software Access. During the Term, Schrödinger agrees to provide Client and its Affiliates, and Client's current collaborator as identified in the Client press release dated [***] and its Affiliates (the "Collaborator"), (i) access to the Service (as such term is defined in the Schrödinger End User Agreement for Hosted Software Service located at <https://www.schrodinger.com/schrodinger-eua-hosted-software/> (the "EUA")) subject to the terms of the EUA, and (ii) a license grant to its current suite of software applications subject to the terms of the End User License Agreement located at <https://www.schrodinger.com/salesagreements/>, in each case of (i) and (ii), for (and only for) use in the performance of the current

collaboration agreement between Client and the Collaborator.

4.g Schrödinger Assistance. The Parties understand and agree that it may be necessary for Client from time to time to seek training or guidance from Schrödinger in order for Client and its Collaborator to use the Services (as such term is defined in the EUA) to conduct research and development activities both: (a) under the collaboration agreement; and (b) corresponding generally to Target Analysis, Hit Identification, Hit to Lead, Lead Optimization, and Backup Search. Schrödinger hereby agrees to provide Client and its Collaborator reasonable training and guidance in connection with such activities as a consultant. Schrödinger shall invoice Client for its documented reasonable FTE Costs and out-of-pocket expenses reasonably incurred in connection with providing such training and guidance, and Client shall pay Schrödinger all undisputed amounts due under this Section 4.g within [***] of the receipt of each invoice in accordance with Appendix B.IV.

6. Section 5 of the Agreement (Confidentiality) is amended by adding new subsection e. following the end thereof:

"5.e Client may use and disclose Schrödinger Confidential Information, including this Agreement, if, in the reasonable opinion of the Client's legal counsel and to the extent that, a disclosure is required by applicable law, including any securities law or regulation or the

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rules of a securities exchange."

7. Milestones. Section II (Milestone Payments) of Exhibit B (Payments and Fees) to the Agreement is deleted in its entirety and replaced with the new Section II (Milestone Payments) attached hereto as Appendix B-II. For clarity, such new Section II applies to Collaboration Products relating to the Existing Programs.

8. Royalties. Section III (Royalties) of Exhibit B (Payments and Fees) to the Agreement is deleted in its entirety and replaced with the new Section III (Royalties and Upfront Payment Sharing) attached hereto as Appendix B-III. For clarity, such new Section III applies to Collaboration Products relating to the Existing Programs.

9. Payment Procedure. Exhibit B to the Agreement (Payments and Fees) is amended by adding the new Section IV (Payment Procedure) attached hereto as Appendix B-IV following Section III (Royalties and Upfront Payment Sharing) thereof.

10. Single Agreement. Except as otherwise set forth in this Second Amendment, all of the terms and conditions of the Agreement shall remain in full force and effect. This Second Amendment together with the Agreement and all exhibits, schedules and attachments thereto constitute the entire agreement among the parties with respect to the subject matter hereof and thereof and supersede all previous written or oral understandings between the parties.

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This Second Amendment is not valid or binding unless and until the date on which it is fully executed by Schrödinger and Client ("Second Amendment Effective Date"). Please confirm your acknowledgement and agreement to the foregoing by countersigning where indicated below and return one original countersigned letter to us.

Very truly yours,

MORPHIC THERAPEUTIC, INC.

By:

/s/ Praveen Tipirneni

Name:

Praveen Tipirneni

Title:

Chief Executive Officer

Agreed and accepted:

SCHRÖDINGER, LLC, by its sole member,

SCHRÖDINGER, INC.

By:

/s/ Ramy Farid, Ph.D.

Name:

Ramy Farid, Ph.D.

Title:

President

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Appendix B-II

Milestones

All fees set forth herein are non-refundable, non-proratable, and payable in United States dollars.

The Milestone 1 Payment, Milestone 2 Payment, Milestone 3 Payment, and Milestone 4 Payment set forth below (collectively, the "Milestone Payments") shall be payable by Client to Schrödinger only upon the achievement of the applicable event (each, a "Milestone Event") as set forth herein. Milestone 1 Payment shall be payable, on a Target-by-Target basis, only once the first time such Milestone Event is achieved by such Target. Milestone 2 Payment, Milestone 3 Payment, and Milestone 4 Payment shall be payable, on a Target-by-Target basis, (i) the first time such Milestone Event is achieved by a first Collaboration Compound Primarily Active against such Target for a first Indication, and (ii) each time such Milestone Event is subsequently achieved by a different Collaboration Compound Primarily Active against such Target for a different Indication. For clarity, for a Target, Milestone 2 Payment, Milestone 3 Payment, and Milestone 4 Payment shall be payable (x) only once with respect to an Indication regardless of the number of times Collaboration Compounds Primarily Active against such Target achieve such Milestone Event for such Indication, and (y) only once with respect to a Collaboration Compound Primarily Active against such Target regardless of the number of times it achieves such Milestone Event. No Milestone Payment shall be due for any Non-Collaboration Compound or Non-Collaboration Product.

MILESTONE 1

Milestone Event 1:

Initiation of Lead Optimization, as determined by the JSC in accordance with Sections 2.c.; provided that (i) except in the case of an avb1/avb6 dual Target, Milestone Event 1 will not be achieved and will not be payable with respect Collaboration Compounds Primarily Active against either of the following Targets: avb6 or a4b7 and (ii) any Milestone 1 Payment owed for an avb1/avb6 dual Target shall be discounted by any Milestone Payment for such dual Target previously paid to Schrödinger by Client upon initiation of Lead Optimization for such dual Target (if any).

Milestone 1 Payment

[***]

MILESTONE 2

Milestone Event 2:

Initiation of IND enabling studies with respect to a Collaboration Compound (as defined by initiation by Client, its Affiliates of GLP-tox studies)

Milestone 2 Payment

[***]

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MILESTONE 3

Milestone Event 3:

First subject dosed in a human trial of a Collaboration Product.

Milestone 3 Payment

[***]

MILESTONE 4

Milestone Event 4:

First subject dosed in a Phase II Clinical Trial of a Collaboration Product; provided that Milestone Event 4 will not be achieved and will not come due with respect to a Collaboration Product containing a Collaboration Compound Primarily Active against avb6 (and not containing any other Collaboration Compound).

Milestone 4 Payment

[***]

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Appendix B-III

Royalties and License Payments

1. Royalties. During the Royalty Term, on a Collaboration Product-by-Collaboration Product basis, Client shall pay (or cause its Affiliates to pay) to Schrödinger a percentage ("Royalty Rate") of Morphic Net Sales and Licensee Net Sales of such Collaboration Product as applicable and set forth in the below table. The term "Total Net Sales" means, with respect to any given Collaboration Product, the total of Morphic Net Sales and Licensee Net Sales for such Collaboration Product in a Calendar Year. Notwithstanding anything to the contrary herein, royalties payable by Client to Schrödinger for any Licensee Net Sales shall not exceed [***] of the amounts actually received by Client as royalties for such Licensee Net Sales from the associated Licensee under the applicable License or Sale Agreement. Client shall pay Schrödinger the foregoing royalties within [***] after the end of the calendar quarter to which the applicable Morphic Net Sales and Licensee Net Sales relate. For clarity, no royalties shall be owed for any Non-Collaboration Compound or Non-Collaboration Product.

Applicable Products

Royalty Tier

Royalty Rate

Collaboration Products that do not include a Collaboration Compound Primarily Active against at least one of avb6 or a4b7

First [***] of Total Net Sales

[***]

Collaboration Products that do not include a Collaboration Compound Primarily Active against at least one of avb6 or a4b7

Total Net Sales in excess of [***]

[***]

All Collaboration Products including at least one Collaboration Compound Primarily Active against avb6 or a4b7

N/A

[***]

2. Option Exercise Payment Sharing. Client shall pay Schrödinger a one-time payment of [***] of each Licensee Payment within [***] of receipt by Morphic of such Licensee Payment. For clarity, no payment under this Section 2 of Appendix B-III shall be owed to the extent attributable to any Non-Collaboration Compound or Non-Collaboration Product. In the event that no Licensee Payment becomes due and payable to Schrödinger prior to December 15, 2019, Client shall pay Schrödinger a one-time, non-refundable payment of one million dollars (\$1,000,000) on December 15, 2019 and no Licensee Payment shall be due for any Licensee Payment relating to a Collaboration Product Primarily Active against avb6. A

Licensee Payment will be due only once per Collaboration Compound.

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