

SPONSORED RESEARCH AGREEMENT

This Sponsored Research Agreement (“Agreement”), effective as of November 14, 2016 (“Effective Date”), is made and entered into by and between **Roche Sequencing Solutions, Inc.** with offices located at 4300 Hacienda Drive, Pleasanton, CA 94588 (“Sponsor”), and **Institute of Analytical Chemistry, CAS, v.v.i.** with offices located at Veveri 97, 602 00 Brno, Czech Republic (“Institution”). Each of Sponsor and Institution are referred to herein as a “Party” and together they are the “Parties”.

WHEREAS, Sponsor and Institution are interested in collaborating to perform certain research related to enhanced nucleic acid sequencing sample preparation protocols;

WHEREAS, Sponsor is willing to provide funding to Institution as set out in this Agreement in consideration for the rights granted by Institution to Sponsor under this Agreement;

NOW THEREFORE, in consideration of the promises and undertakings set forth above and hereinafter, the Parties agree as follows:

1. DEFINITIONS

1.1. “Affiliate” means: (a) an organization which directly or indirectly controls a Party to this Agreement; (b) an organization which is directly or indirectly controlled by a Party to this Agreement; or (c) an organization which is controlled, directly or indirectly, by the ultimate parent company of a Party. Control as per (a) to (c) is defined as owning more than fifty percent (50%) of the voting stock of a company or having otherwise the power to govern the financial and the operating policies or to appoint the management of an organization. With respect to Sponsor the term “Affiliate” shall not include Chugai Pharmaceutical Co. Ltd., 1-1, Nihonbashi-Muromachi 2-chome, Chuo-ku Tokyo, 103-8324, Japan (“Chugai”) and Foundation Medicine, Inc., 150 Second Street, Cambridge, MA 02141, USA (“Foundation”), unless Sponsor opts for such inclusion of Chugai or Foundation by giving written notice to Institution.

1.2. “Institution Background Intellectual Property Rights” means: (a) the claims of any patents or patent applications owned or controlled by Institution as of the Effective Date that relate to any Invention, to the extent such claims have not been exclusively licensed to a Third Party as of the Effective Date, and in addition any patent or patent application that claims priority to or shares common priority with any such claims (including any patents issuing on any of the foregoing and any foreign counterparts of any of the foregoing); and (b) trade secret and know-how rights owned or controlled by Institution as of the Effective Date that relate to any Invention.

1.3. “Institution Inventions” means any Invention conceived solely by one or more Project Participants.

1.4. “Intellectual Property Rights” means all intellectual property rights throughout the world, whether arising under statutory or common law or otherwise, including without limitation patent rights, utility models, industrial designs, trade secret rights, know-how rights, rights in confidential information, copyrights, and any analogous rights.

1.5. “Invention” means any invention, trade secret, or know-how that is conceived in the performance of the Research Project.

1.6. “Joint Invention” means any Invention conceived jointly by one or more Project Participants and one or more of Sponsor’s or Sponsor’s Affiliates’ employees or Third Party agents or contractors.

1.7. “Principal Investigator” means Dr. František Foret, employed by Institution.

1.8. “Project Participants” means all agents and employees of Institution who may participate in the Research Project, including the Principal Investigator, and any of Institution’s faculty, staff, post-doctoral fellows, students, technicians, personnel, and consultants.

1.9. “Research Materials” means the materials, if any, that Sponsor transfers to Institution, as specified in Exhibit B.

1.10. “Research Project” means the research project described on Exhibit A and any other research conducted by Sponsor and Institution relating to the design, development, or manufacture of materials to function as membrane alternatives to lipid bilayers for use in nucleic acid sequencing or other characterization.

1.11. “Sponsor Invention” means any Invention conceived solely by one or more of Sponsor’s or Sponsor’s Affiliates’ employees or Third Party agents or contractors.

1.12. “Third Party” means a person or entity other than the Parties or Affiliates of the Parties.

2. RESEARCH PROJECT

2.1. General. Institution shall conduct the Research Project in accordance with Exhibit A. Principal Investigator shall serve as the primary contact for the Research Project. Sponsor’s primary contact shall be as specified in Exhibit A, as may be updated from time to time in Sponsor’s reasonable discretion. In the event that the Principal Investigator ceases his or her affiliation with Institution or otherwise becomes unwilling or unable to perform hereunder, Institution shall use reasonable efforts to replace such person with another person of reasonably comparable ability and training who is reasonably acceptable to Sponsor. If Institution and Sponsor are unable to agree on such a replacement within two (2) weeks, Sponsor may terminate this Agreement on written notice to Institution, pursuant to Section 10.7.

2.2. Reports. During the Term (as defined below), Principal Investigator shall submit to Sponsor, within thirty (30) days after the end of each calendar quarter beginning with the Effective Date, reports detailing progress under the Research Project. Each of such progress reports shall include at least the information required pursuant to Exhibit A. In addition, a comprehensive final report summarizing all work conducted under the Research Project shall be submitted within two (2) months following the termination of this Agreement.

2.3. Raw Data and Analysis. Principal Investigator shall submit, or electronically transmit if possible, to Sponsor all raw data and data analysis from the Research Project.

2.4. Records. Principal Investigator and other Project Participants shall keep accurate scientific records in sufficient detail and in good scientific manner relating to the Research Project. Principal Investigator shall make such records reasonably available to Sponsor during normal business hours upon reasonable notice. It is understood that such records shall include detailed laboratory notebooks sufficient to document any Inventions. Upon request by Sponsor and at Sponsor’s expense, Principal Investigator agrees to promptly provide copies of all such records to Sponsor.

2.5. Purposes; No Guarantee of Results. Sponsor acknowledges that the primary mission of Institution is education and the advancement of knowledge and consequently the Research Project shall be performed in a manner best suited to carry out that mission. Specifically, the Principal Investigator

shall determine the manner of performance of the Research, as long as the manner of performance is in compliance with this Agreement. Institution does not guarantee specific results of the Research Project.

3. SPONSOR RESEARCH MATERIALS; COMPENSATION

3.1. Research Materials. In support of Institution conducting the Research Project, Sponsor may supply Principal Investigator with the Research Materials as set forth on Exhibit B. Institution agrees that the Research Materials shall: (a) be used solely in the performance of the Research Project; (b) not be used in human subjects, in clinical trials, or for diagnostic purposes involving human subjects; (c) be used only at Institution and only in the Principal Investigator's laboratory under the direction of the Principal Investigator or others working under his/her direct supervision; and (d) will not be transferred to anyone else within or outside Institution without the prior written consent of Sponsor.

3.2. Ownership of Research Materials. Sponsor shall retain title to all Research Materials. Institution will act as Sponsor's bailee for all Research Materials received by Institution, and Institution will maintain the Research Materials free of any security interests, liens, attachments, and other encumbrances. At the end of the Term Institution shall return all remaining Research Materials to Sponsor.

3.3. Compensation. In consideration of Institution's performance of the tasks, deliverables, projects and milestones set forth in the Research Project and the rights granted by Institution to Sponsor under this Agreement, Sponsor shall provide compensation up to a total amount not to exceed one-hundred thousand US dollars (\$100,000 USD), subject to the remaining provisions of this Section 3.3. On completion of each phase of the Research Project described in Exhibit A (including without limitation the associated deliverables) in accordance with the specifications, schedule, and other requirements of this Agreement, Institution will invoice Sponsor for the amounts specified in Exhibit C. Payments by Sponsor will be due and payable within sixty (60) days after receipt by Sponsor of an undisputed invoice, subject to the services and deliverables conforming to the specifications, schedule, and other requirements of this Agreement. Institution's calculation of the actual costs that form the basis of such compensation is attached herein under Exhibit C. Sponsor may request Institution to perform additional work under the Research Project. If Institution agrees to perform work resulting in additional costs, the Parties shall discuss such costs, which if mutually agreed shall be amended in Exhibit C and payable under the terms of this Section 3.3.

4. INTELLECTUAL PROPERTY RIGHTS

4.1. Ownership and Assignment of Inventions. Sponsor will solely own all right, title, and interest in and to all Sponsor Inventions. Institution hereby assigns and agrees to assign to Sponsor all ownership right, title, and interest (including all intellectual property rights) in and to all Institution Inventions and Institution's right, title, and interest in and to all Joint Inventions. Institution will render all reasonable assistance to Sponsor (at Sponsor's cost) in securing, maintaining, and defending such intellectual property rights assigned by Institution to Sponsor. Each Party shall promptly disclose to the other Party any Joint Inventions of which it becomes aware, and Institution shall promptly disclose any Institution Inventions to Sponsor.

4.2. License of Inventions. Sponsor hereby grants and agrees to grant to Institution a non-exclusive, royalty-free, non-transferable license, without the right to sublicense, under the rights in the Institution Inventions and Joint Inventions assigned by Institution to Sponsor under this Agreement solely to conduct internal non-commercial, non-profit academic research.

4.3. Invention Disclosure; Patent Prosecution and Maintenance. Institution shall promptly (but in no event later than thirty (30) days after disclosure of the same to Institution by any Project Participant) disclose in writing to Sponsor in reasonable detail (sufficient to file a patent application) any Invention arising under this Agreement having an inventor that is a Project Participant, whether such Invention is or was an Institution Invention or a Joint Invention. Institution shall in its sole discretion control and determine whether and how to prosecute, maintain and enforce all Intellectual Property Rights in and to all Inventions. Sponsor shall reimburse Institution for all reasonable costs incurred by Institution that are associated with the assignment of rights in the Institution Inventions and Joint Inventions from Institution to Sponsor.

4.4 License of Institution Background Intellectual Property Rights. Institution hereby grants and agrees to grant to Sponsor and its Affiliates a non-exclusive, royalty-free, irrevocable, worldwide, transferable license, including the right to sublicense, under the Institution Background Intellectual Property Rights to make, have made, use, sell, offer to sell, import and otherwise exploit any products, services, machines, articles of manufacture, compositions of matter, or processes.

4.5 Reservation of Rights. Except as expressly provided in this Agreement, each Party retains all of its rights, title and interest in and to such Party's Intellectual Property Rights in existence as of to the Effective Date of this Agreement and in and to any of its future Intellectual Property Rights that are conceived, reduced to practice, developed or acquired independently of any Research Project and does not grant the other Party any rights, covenants, licenses, or other authorizations (whether by implication, estoppel, statute, operation of law, or otherwise) under such retained Intellectual Property Rights.

5. CONFIDENTIAL INFORMATION

5.1. The parties have entered into the Mutual Non-Disclosure Agreement with an effective date of April 28, 2016 ("NDA"). Institution will protect Confidential Information (as defined in the NDA) of Sponsor and its Affiliates received by Institution pursuant to this Agreement in accordance with the terms and conditions of the NDA, except that notwithstanding any provision of the NDA: (i) Institution may only use and disclose such Confidential Information of Sponsor and its Affiliates for the purposes of performing the Research Project; and (ii) the use and disclosure obligations of the NDA with respect to Confidential Information of Sponsor and its Affiliates that constitutes trade secrets will continue for so long as such Confidential Information continues to constitute trade secrets. Without limiting the foregoing, the following constitute Sponsor Confidential Information: (a) the fact that Sponsor is in discussions with Institution and the subject matter of such discussions and interactions; and (b) the terms and conditions of this Agreement. This Agreement will control to the extent of any conflict between this Agreement and the NDA.

6. PUBLICATION AND ACADEMIC RIGHTS

6.1. Use of Information. Sponsor shall have the right to use, disclose, and exploit the data and information obtained in the course of the Research Project in accordance with the rights held by Sponsor pursuant to this Agreement.

6.2. Publication of Information. Institution and Principal Investigator shall have the right to publish or otherwise publicly disclose the results of the Research Project only in accordance with this Section 6.2. To avoid loss of patent rights (for example, as a result of premature public disclosure of patentable subject matter), Principal Investigator and Institution agree to submit to Sponsor, at least ninety (90) days prior to submission for publication or disclosure, any and all materials intended for publication or disclosure relating to technical reports, data, or information developed by Principal Investigator or any other Project Participants in the course of the Research Project. If Sponsor has reason to believe that any

proposed publication or disclosure reveals a potential Invention or Sponsor's Confidential Information, Sponsor shall notify Institution in writing within a forty-five (45) day period after receipt of such intended publication or disclosure. In such case, Principal Investigator and Institution agree to delay the relevant publication or disclosure until the earlier of: (a) the filing of appropriate patent applications that claim all patentable subject matter disclosed in such proposed publication or disclosure; or (b) Institution and Sponsor have agreed that no patentable subject matter is disclosed in such proposed publication or disclosure. Notwithstanding the foregoing, if Sponsor reports to Institution or Principal Investigator that such proposed publication or disclosure contains Confidential Information of Sponsor, Institution and Principal Investigator shall promptly remove such Confidential Information from the proposed publication or disclosure, and in no event will Institution or Principal Investigator make any publication or disclosure that contains any Confidential Information of Sponsor. In connection with any publication by Institution or Principal Investigator of any results of the Research Project, Institution and Principal Investigator shall include an appropriate acknowledgment of Sponsor's sponsorship of the Research Project in such publication or disclosure.

6.3. Use of Names. Neither Party nor its employees shall use the name or any trademark of the other Party or any of its Affiliates or any of their respective directors, officers, employees, contractors, collaborators or agents, or any variation or combination thereof, for any purpose whatsoever without the other Party's prior written consent, provided that any publication permitted under Section 6.2 may reference Sponsor's support of the Research Project.

7. TERM AND TERMINATION

7.1. Term. The term of this Agreement shall commence on the Effective Date and continue in full force and effect until, unless terminated earlier (in accordance with Section 2.1, this Section 7 or Section 10.4), the later of: (a) the expiration of one (1) year from the Effective Date; or (b) the completion of the Research Project ("Term").

7.2. Termination for Breach. If either Party materially breaches this Agreement and fails to remedy such material breach within thirty (30) days after receipt of written notice of such material breach from the other Party, the non-breaching Party, at the non-breaching Party's option and in addition to any other remedies that the non-breaching Party may have in law or in equity, may terminate this Agreement by sending written notice of termination to the breaching Party.

7.3. Termination for Convenience. Sponsor, upon thirty (30) days' prior written notice to Institution, may terminate this Agreement in its sole discretion.

7.4. Survival. Termination or expiration of this Agreement shall be without prejudice to any rights or obligations that have accrued prior to or as a result of such termination or expiration. Without limiting the foregoing, the following sections of this Agreement shall survive expiration or any termination of this Agreement, together with any accrued payment obligations: Sections 1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 4.1, 4.2, 4.3, 4.4, 4.5, 5, 6, 7.4, 8.1, 8.2, 8.3, 9 and 10.

8. REPRESENTATIONS AND WARRANTIES

8.1. Representations, Warranties, and Covenants of Institution. Institution represents, warrants, and covenants to Sponsor that: (a) Institution has not granted and will not grant any right or interest in or to Institution Inventions, Joint Inventions, or Institution Background Intellectual Property Rights that is inconsistent with the grants (including assignments) of rights to Sponsor hereunder; (b) Institution has the legal right, authority and power to enter into this Agreement and meet the obligations set forth herein; and (c) the Principal Investigator and each of the other Project Participants: (i) are employed or otherwise

engaged by the Institution to perform the obligations of Institution under this Agreement; and (ii) are bound in writing to assign to Institution all right, title and interest that they may have in and to any Invention.

8.2. Representations and Warranties of Sponsor. Sponsor represents and warrants to Institution that Sponsor has the legal right, authority and power to enter into this Agreement and meet the obligations set forth herein.

8.3. Limitations on Representations and Warranties. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO PARTY TO THIS AGREEMENT MAKES ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, BY STATUTE OR OTHERWISE, AND EACH PARTY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, OR VALIDITY OF ANY INTELLECTUAL PROPERTY RIGHTS OR CLAIMS, WHETHER ISSUED OR PENDING.

9. LIMITATION OF LIABILITY

9.1. Limitation of Liability. TO THE EXTENT PERMITTED BY LAW, EXCEPT FOR THE PAYMENT OBLIGATIONS IN THIS AGREEMENT OR A BREACH OF THE CONFIDENTIALITY OR INTELLECTUAL PROPERTY PROVISIONS IN THIS AGREEMENT OR ANY MISAPPROPRIATION OR INFRINGEMENT BY A PARTY OF THE OTHER PARTY'S INTELLECTUAL PROPERTY RIGHTS, IN NO EVENT WILL EITHER PARTY BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, EXEMPLARY, OR INDIRECT DAMAGES, OR LOST PROFITS, ARISING IN ANY WAY OUT OF THIS AGREEMENT, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY. THIS LIMITATION WILL APPLY EVEN IF THE OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

10. GENERAL PROVISIONS

10.1. Independent Contractors. The relationship of Sponsor and Institution established by this Agreement is that of independent contractors, and nothing contained in this Agreement shall be construed to: (a) give either Party hereto the power to direct or control the day-to-day activities of the other Party; (b) create a relationship between the Parties as partners, joint venturers, co-owners or otherwise as participants in a joint or common undertaking; or (c) allow either Party to create or assume any obligation on behalf of the other Party for any purpose whatsoever.

10.2. Assignment. This Agreement shall be binding upon and inure to the benefit of the Parties and their permitted respective successors, assigns, legal representatives and heirs. Sponsor may assign, delegate or transfer Sponsor's rights and obligations under this Agreement to an Affiliate or a successor to all or substantially all of Sponsor's assets or business relating to this Agreement, whether by sale, merger, operation of law or otherwise, upon written notice to Institution. This Agreement is personal to Institution and may not be transferred, assigned, delegated, or subcontracted by Institution at any time without the prior written consent of Sponsor. Any attempted transfer, assignment, delegation, or subcontracting in violation of the foregoing shall be null and void and of no force or effect.

10.3. Dispute Resolution. Any controversy, claim or other dispute arising out of or relating to this Agreement shall be first referred to a senior officer of Institution or a senior officer of Sponsor, or his or her designee, for resolution. Thereafter if the Parties are unable to resolve the dispute, the Parties submit to the exclusive jurisdiction of the State Courts of the State of New York and the United States Federal Court for the Southern District of New York. Nothing in this Section 10.3 shall prevent a Party

from seeking injunctive or other equitable relief that such Party deems necessary with respect to any dispute.

10.4. Force Majeure. Neither Party shall be liable for any event beyond its reasonable control, which causes such Party to be unable to perform its obligations under this Agreement. In the event of the occurrence of such a force majeure event, the Party unable to perform shall promptly notify the other Party within ten (10) days of the start of the force majeure event. It shall further use its reasonable efforts to resume performance as quickly as possible and shall suspended performance only for such period of time as is necessary as a result of the force majeure event. If a Party is so delayed and such failure or omission is not cured within thirty (30) days, the other Party may terminate this Agreement on written notice to the delayed Party.

10.5. Governing Law. This Agreement shall be construed and enforced in accordance with state and federal laws applicable in the State of New York, without regard to any choice or conflict of laws, rules or principles.

10.6. Entire Agreement. This Agreement constitutes the complete and exclusive agreement between the Parties relating to the subject matter hereof, and supersedes all prior and contemporaneous proposals, agreements, understandings, negotiations, representations, warranties, conditions, and communications, oral or written, between the Parties relating to the same subject matter.

10.7. Notices. Any notice or other communication required or permitted under this Agreement other than routine business communications shall be in writing and will be deemed delivered: (a) as of the date such notice is hand delivered; (b) five (5) days after such notice is mailed, postage prepaid, first class, certified mail, return receipt requested; or (c) one (1) business days after such notice is sent, shipping prepaid, receipt requested by overnight national courier service (*e.g.*, Federal Express), to the Party at the address listed in the preamble above or at such other addresses as may be given from time to time in accordance with this Section 10.7.

10.8. Modification; No Waiver. No modification or amendment to this Agreement shall be effective unless in writing signed by both Parties. No waiver of any rights shall be effective unless assented to in writing by the Party to be charged and the waiver of any breach or default shall not constitute a waiver of any other right hereunder or any subsequent breach or default.

10.9. Construction. The Parties agree that they have participated equally in the formation of this Agreement and that the language contained herein should not be presumptively construed against either of the Parties. The headings of this Agreement are intended for convenience of reference only and are not intended to be a part of, or to affect the meaning or interpretation of, this Agreement. Except where the context otherwise requires, (a) the terms “including” or “includes” mean “including without limitation” or “includes without limitation”, respectively; (b) the word “or” shall be understood in its inclusive sense (*i.e.*, and/or); (c) the words “herein”, “hereof” and hereunder”, and words of similar import, refer to this Agreement in its entirety and not to any particular provision or exhibit hereof; (d) use of either gender includes any other gender; and (e) use of the singular includes the plural and vice versa.

10.10. Severability. The Parties intend that if a court holds that any provision or part of this Agreement is invalid or unenforceable under applicable law, the court will modify the provision or part to the minimum extent necessary to make it valid and enforceable, or if it cannot be made valid and enforceable, the Parties intend that the court will sever and delete the provision or part from this Agreement. Any change to or deletion of a provision or part of this Agreement under this Section 10.10 will not affect the validity or enforceability of the remainder of this Agreement, which will continue in full force and effect.

10.11. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

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