AMENDMENT #1 TO MEMORANDUM OF UNDERSTANDING FOR THE TRANSFER OF INTERNAL RESEARCH FUNDS

BETWEEN

THE CHILDREN'S HOSPITAL OF PHILADELPHIA

And,

THE PERELMAN SCHOOL OF MEDICINE

This Amendment #1 ("Amendment"), effective as of the last date signed below (the "Effective Date") is intended to and does amend the Memorandum of Understanding for the Transfer of Internal Research Funds ("MOU") executed on the 1st day of July 2017 by and between The Children's Hospital of Philadelphia ("CHOP") and The Perelman School of Medicine ("Penn PSOM") of the Trustees of the University of Pennsylvania. CHOP and Penn PSOM are each a "Party" and collectively, the "Parties".

WHEREAS, the purpose of the Amendment is to amend the MOU to rename Articles 13, 14, 15, 16, and 17, to 14, 15, 16, 17, and 18, respectively, replace Article 18 with Article 19, add new §15.04, and insert new Article 13.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, and other good and valuable considerations, the receipt and sufficiency of which is hereby acknowledged, the Parties agree to the following:

1. AMENDMENT:
   a. **Article 13: Use of Name** is renamed **Article 14: Use of Name** and §13.01 renamed §14.01.

   b. **Article 14: Audits, Inspections, and Records** is renamed **Article 15: Audits, Inspections, and Records**. Sub-sections §14.01, §14.02, and §14.03 are renamed §15.01, §15.02, and §15.03, respectively. The following new sub-section is added:

      i. §15.04 Records pertaining to audits, appeals, litigation or settlement of claims arising out of the performance of this Agreement, or any Award Letter executed hereunder, will be retained until such audits, appeals or litigation or claims have been settled.

   c. **Article 15: Liability** is renamed **Article 16: Liability** and §15.01 renamed §16.01.

   d. **Article 16: Notice** is renamed **Article 17: Notice** and §16.01 renamed §17.01.

   e. **Article 17: FCOI** is renamed **Article 18: FCOI** and §17.01 renamed §18.01.

   f. **Article 18: Survival** is deleted in its entirety and the following new article is inserted:
i. **Article 19: Survival**  
§19.01 Articles 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 shall survive any expiration or termination of this MOU for a period of five (5) years or other timeframe as determined by the parties and memorialized through a signed, written modification to this MOU.

g. The following new article is inserted:

i. **Article 13: Reporting**

1. §13.01 Reports of all programmatic findings related to any Internally-Funded Collaborative Project, or Award Letter executed hereunder, will be sent by the Recipient Party PI (Principal Investigator) to the Funding Party PI when requested. Reports should be in the format requested by the Funding Party PI.

2. §13.02 Recipient Party will provide Funding Party with documentation necessary to complete any additional reports required by Funding Party (such as regulatory approvals and assurances) for any Internally-Funded Collaborative Project, or Award Letter executed hereunder.

3. §13.03 Each Party is responsible for making full and complete reports to the other Party on anything that requires reporting pursuant to statutes, regulations, and federal government guidelines including any Internally-Funded Collaborative Project, or Award Letter executed hereunder.

2. General Provisions:

a. All terms and conditions of the MOU not expressly amended in this Amendment shall remain in full force and effect.

b. All capitalized undefined terms used in this Amendment shall have the meaning assigned to such term in the MOU.

c. This Amendment may be executed in counterparts, each of which shall be deemed an original instrument, and all of which shall constitute a single agreement. The Parties may execute this Amendment by facsimile or electronically transmitted signature, and such facsimile or electronically transmitted document, including the signatures thereon, shall be treated in all respects as an original instrument bearing an original signature.

d. The Parties agree that upon being signed and delivered by the Parties, this Amendment shall become effective and binding and that such signed copies will constitute evidence of the existence of this Amendment.

(The rest of this page left intentionally blank)
IN WITNESS WHEREOF, the Parties hereto have executed this Amendment #1 to be effective as of the date of last signature below.

<table>
<thead>
<tr>
<th>THE PERELMAN SCHOOL OF MEDICINE</th>
<th>THE CHILDREN'S HOSPITAL OF PHILADELPHIA</th>
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<tr>
<td>Signature:</td>
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<tr>
<td>[Signature]</td>
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</tr>
<tr>
<td>Name: Marianne Achenbach</td>
<td>Name: Michelle A. Lewis</td>
</tr>
<tr>
<td>Institutional Official</td>
<td>Institutional Official</td>
</tr>
<tr>
<td>Title: Executive Director, Research Support</td>
<td>Vice President, Research Administration and Operations</td>
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<tr>
<td>Email: <a href="mailto:achenbac@pennmedicine.upenn.edu">achenbac@pennmedicine.upenn.edu</a></td>
<td>Email: <a href="mailto:lewism8@email.chop.edu">lewism8@email.chop.edu</a></td>
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<tr>
<td>Phone/Fax: 215-573-8798 (phone) 215-573-8802 (fax)</td>
<td>Phone/Fax: (267) 426-3006 (phone) (215) 590-3804 (fax)</td>
</tr>
<tr>
<td>Address: Perelman School of Medicine Research Support Services Room 328 Anatomy Chemistry Building 36th Street &amp; Hamilton Walk Philadelphia, PA 19104</td>
<td>Address: Children's Hospital of Philadelphia Roberts Center for Pediatric Research 2716 South Street, Room 17123 Philadelphia, PA 19146</td>
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<td>Date: 5/16/19</td>
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MEMORANDUM OF UNDERSTANDING FOR THE TRANSFER OF INTERNAL RESEARCH FUNDS

BETWEEN

THE CHILDREN'S HOSPITAL OF PHILADELPHIA

And,

THE PERELMAN SCHOOL OF MEDICINE

This Memorandum of Understanding ("MOU") is made as of the 1st day of July 2017 (the "Effective Date") by and between The Children's Hospital of Philadelphia ("CHOP") and The Perelman School of Medicine ("Penn PSOM") of the Trustees of the University of Pennsylvania. CHOP and Penn PSOM are each a “Party” and collectively are “Parties” to this MOU.

WHEREAS, from time to time one or more Penn PSOM investigators and one or more CHOP investigators desire to collaborate on a research project that is wholly supported by internal funding of one of the Parties (the "Funding Party");

WHEREAS, the Parties desire to create an efficient and compliant mechanism for transferring funds from the Funding Party to support the work of investigator(s) of the other Party (the “Recipient Party”) who are participating in an Internally-Funded Collaborative Project (as defined below).

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

Article 1: Scope of the MOU.

§1.01 This MOU, and corresponding Award Letter executed hereunder, is to be carried out in accordance with the pilot and/or institutional award terms and conditions as specified in the Award Letter executed hereunder.

§1.02 This MOU applies only to the transfer of internal funds of the Funding Party to the Recipient Party to support the work of the Recipient Party on a collaborative research project involving investigators of both Parties described in an approved Project Proposal and Award Letter (an “Internally-Funded Collaborative Project”). Internal funds are funds that are not provided to the Funding Party by any external sponsor. Transfer of funds received from any external sponsor (government, corporation, foundation or other entity) must be accomplished via a separate sub-award agreement between the Parties specific to that sponsored activity and not through this MOU.
§1.03 No Party shall transfer, assign or in any other way convey any rights, or delegate any duties or obligations, under this MOU, or any Award Letter executed hereunder, without the other Party’s prior written consent.

§1.04 Nothing contained in this MOU, or any Award Letter executed hereunder, shall be construed to create the relationship of principal and agent or employer and employee between any employees, affiliates, agents of the Parties. No Party nor its employees, affiliates, agents or independent contractors shall have any authority to act on behalf of or to bind any other Party in any manner whatsoever unless expressly authorized in a separate, written agreement signed by the Parties intending to be bound.

§1.05 Each Party shall be solely responsible for those duties imposed on it by this MOU and any Award Letter executed hereunder.

Article 2: Conditions.

§2.01 Except as may be stated elsewhere in this MOU, the administrative policies of each of the Parties shall govern individual site administration regarding, but not limited to, travel, salary and fringe benefit policies applicable to the performance of this MOU or any Award Letter issued hereunder provided that such policies do not conflict with any applicable federal, state or local regulations.

Article 3: Term and Termination.

§3.01 This MOU shall remain in force until termination as provided herein. Either Party may terminate this MOU for any reason or no reason upon thirty (30) days’ written notice to the other Party. This MOU, and any attachments or appendices, may only be modified through a written notice signed by all Parties. No Party is under any obligation now or in the future to renew this Agreement, or to execute any amendment.

Article 4: Award Letters and Financial Support.

§4.01 If the Parties desire to transfer funds from a Funding Party to a Recipient Party to support the Recipient Party’s efforts on an Internally-Funded Collaborative Project, the Funding Party shall first issue an Award Letter. The Award Letter shall identify the Funding Party, the Recipient Party, the name of the Internally-Funded Collaborative Project, the principal investigators for each Party, the amount of funding to be provided to the Recipient Party, the schedule of payments, and the time period covered by such funding. Each Award Letter shall include any special terms and conditions applicable to the Internally-Funded Collaborative Project and shall include an attached description of the Internally-Funded Collaborative Project with the anticipated activities of the Recipient Party as well as a budget that specifies the categories of expenses for which the funds transferred to the Recipient Party may be used. The submitted research proposal is permissible as the attachment.
§ 4.02 The Parties agree that the funds (i) shall be used only for the purposes described in a funding-specific Award Letter; and, (ii) shall be used in accordance with all applicable statutes, regulations, and federal government guidelines.

§ 4.03 The funds transferred under this MOU shall be for direct costs only. A Recipient Party will not charge and will not be entitled to receive F&A costs on any Award Letter executed hereunder.

**Article 5: Intellectual Property.**

§ 5.01 Intellectual property rights arising from participation in an Internally-Funded Collaborative Project, including those governing use and ownership, will be governed by the Intellectual Property Agreement Between The Trustees of the University of Pennsylvania and The Children’s Hospital of Philadelphia, executed on December 12, 1994, as amended from time to time.

**Article 6: Governing Law.**

§ 6.01 This MOU and any Award Letter executed hereunder shall be governed by and construed in accordance with the substantive laws of the Commonwealth of Pennsylvania, United States of America, without regard to principles of conflicts of law, and any action shall be initiated and maintained in a forum of competent jurisdiction in the Commonwealth of Pennsylvania, United States of America.

**Article 7: Dispute Resolution.**

§ 7.01 Any dispute that cannot be amicably resolved shall be escalated and determined by the Executive Vice Dean and Chief Scientific Officer for the Perelman School of Medicine [EVD&CSO Penn PSOM], and the Executive Vice President and Chief Scientific Officer for CHOP [EVP&CSO CHOP].

**Article 8: Force Majeure and Delay.**

§ 8.01 Non-compliance by a Party with the obligations of this Agreement or any Award Letter executed hereunder due to “force majeure” (laws or regulations of any government, war, civil commotion, destruction of production facilities and materials, fire, flood, earthquake or storm, labor disturbances, shortage of materials, failure of public utilities or common carriers), or any other causes beyond the reasonable control of the applicable Party, shall not constitute breach of this MOU and such Party shall be excused from performance hereunder to the extent and for the duration of such prevention, provided it first notifies the other Parties in writing of such prevention and that it uses its best efforts to cause the event of the “force majeure” to terminate, be cured or otherwise ended.
Article 9: Representations, Assurances, and Certifications (Regulatory).

§ 9.01 Each Party represents and certifies that it has the right to enter into this MOU, that the terms of this MOU are valid and binding obligations, and are not inconsistent with any other contractual and/or legal obligations that the Party may have.

§ 9.02 If any provision of this MOU is determined to be invalid or void, the remaining provisions shall remain in effect. In such a case the invalid provision will be replaced by a provision being legally acceptable and in compliance with the objective of the invalid provision and existing regulatory approvals.

§ 9.03 Each institution is responsible for the oversight and use of animals and/or humans at the respective institution. The recipient institution agrees that animal and/or human use will comply with all applicable Federal, state and local laws and regulations. Animal and human subjects research will not be initiated until the appropriate regulatory approvals are in place.

§ 9.04 Transfer of materials between the Parties will follow the material transfer policies and procedures of the transferring Party.

Article 10: Integration.

§ 10.01 This MOU and all attachments hereto and any Award Letter(s) executed hereunder constitute the entire agreement between the Parties with respect to the subject matter included herein and no variation, modification or waiver of any terms or conditions hereof shall be deemed valid unless made in writing and signed by the Parties hereto. This MOU supersedes any and all prior agreements and understandings, whether oral or written, between the parties with respect to the subject matter included herein.

Article 11: Publications.

§ 11.01 Parties shall each be free to publish, present or otherwise disclose the results, other information, or material resulting from the conduct of its work under an Internally-Funded Collaborative Project contemplated under this MOU and/or any Award Letter executed hereunder, provided, however, that an Award Letter may provide for a publication plan that specifies that the first publication of results of an Internally-Funded Collaborative Project will be a joint publication of the Parties. Each of CHOP and Penn PSOM and its respective investigator will be credited in such publications as deemed appropriate in accordance with standard academic practices for publication.

Article 12: Data.

§12.01 Each Party maintains the right to use data and other information generated or created directly and indirectly through the performance of this MOU and/or any Award Letter fully executed under it to the extent required to meet Party’s obligations to the Federal Government, if applicable, and/or for all other purposes consistent with applicable laws, regulations and institutional policies.
Article 13: Use of Name.

§ 13.01 Neither Party will use the name, insignia, logo, trademark or other identifying terms or mark of the other Party, its affiliates, employees or staff in any manner without the express written consent of the other Party, except as required for publication in a peer-reviewed journal or as required on a grant application.

Article 14: Audits, Inspections, and Records.

§ 14.01 Each Party, or any of their duly authorized representatives shall have the right, upon reasonable notice, of timely and access to any books, documents or papers or other records of the other Party that are pertinent to this MOU and/or any Award Letter fully executed under it, in order to make audits, examinations, excerpts, transcripts and copies of the documents. Access to the applicable records of the other Party shall occur at mutually-agreeable times and shall be subject to applicable laws and regulations, including but not limited to privacy laws.

§ 14.02 Each Party agrees to allow, upon reasonable notice, access to records necessary to support its incurred costs. Such records may include, but are not limited to, labor hour or effort reporting records, invoices from third parties, contracts with third parties and payments to third parties relating to the work performed under this MOU and/or any fully-executed Award Letter hereunder.

§ 14.03 Each Party should follow its respective institutional records retention policies. Each Party shall have right of access as long as records are retained.

Article 15: Liability.

§ 15.01 Each Party shall be responsible for its negligent acts or omissions and the negligent acts or omissions of its employees, officers, or directors, to the extent allowed by law.

Article 16: Notice.

§ 16.01 Any notice or communication required or permitted to be given hereunder shall be in writing and, except as otherwise expressly provided in this MOU and/or fully executed Award Letter hereunder, shall be deemed given and effective (i) when delivered personally, or (ii) when received if sent by overnight express or regular mail, postage prepaid, addressed to a Party at its address set forth herein:

To CHOP:
Attention:
Sponsored Projects and Research Business Management
The Children’s Hospital of Philadelphia Research Institute
Abramson Research Center, Suite 142
3615 Civic Center Boulevard
Philadelphia, PA 19104-4318
Attention: Sara Dubberly, Director
Article 17: FCOI.

§ 17.01 The financial conflicts of interest policy of each Party will apply to the work being conducted by that Party. Each party certifies that its policy complies with 42 CFR Part 50.

Article 18: Survival.

§18.01 Articles 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18 shall survive any expiration or termination of this MOU for a period of five (5) years or other timeframe as determined by the parties and memorialized through a signed, written modification to this MOU.

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<tr>
<td><strong>Name:</strong> Marianne Achenbach</td>
<td><strong>Name:</strong> Sara Dubberly</td>
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<tr>
<td><strong>Institutional Official</strong></td>
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<tr>
<td><strong>Title:</strong> Executive Director, Research Support</td>
<td><strong>Title:</strong> Senior Director, Sponsored Projects and Research Business Management</td>
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<td><strong>Email:</strong> <a href="mailto:achenbac@mail.med.upenn.edu">achenbac@mail.med.upenn.edu</a></td>
<td><strong>Email:</strong> <a href="mailto:dubberly@email.chop.edu">dubberly@email.chop.edu</a></td>
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<tr>
<td><strong>Phone/Fax:</strong> 215-573-8798 (phone) 215-573-8802 (fax)</td>
<td><strong>Phone:</strong> 215-590-6162 215-590-4933</td>
</tr>
<tr>
<td><strong>Address:</strong> Room 328 Anatomy Chemistry Building 36th Street &amp; Hamilton Walk Philadelphia, PA 19104</td>
<td><strong>Address:</strong> 3615 Civic Center Blvd, ARC 129 Philadelphia, PA 19104-4318</td>
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<tr>
<td><strong>Date:</strong> 6/23/17</td>
<td><strong>Date:</strong> 6/26/17</td>
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AWARD LETTER TEMPLATE

Description of Collaborative Project: [insert brief description of the project]

Activities of Recipient Party to be supported by the Funding Support: [insert brief description of the activities that the Recipient Party will be carrying out on the project]

Budget for Recipient Party's activities: [e.g., salary support for investigators and technicians, purchase of equipment, performing assays, etc.]