The Department of Energy has opted to utilize the following agreement, which is uniform across the Departmental facilities, for small value transactions. Except for minor modifications to the terms of this agreement made by THE CONTRACTOR, most changes will require approval by the DOE Contracting Officer, WHICH WILL LIKELY DELAY THE START DATE OF THE PROJECT.

STEVENSON-WYDLER (15 USC 3710a)

SHORT-FORM COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT (hereinafter "CRADA") NO. _____

BETWEEN

UCHICAGO ARGONNE LLC AS OPERATOR OF ARGONNE NATIONAL LABORATORY

under its U.S. Department of Energy Contract No. DE-AC02-06CH11357 (hereinafter as the "Contractor")

AND

(hereinafter a	s the "Partici	 pant'')

both being jointly referred to hereinafter as the "Parties"

ARTICLE I: DEFINITIONS

- A. "Government" means the United States of America and agencies thereof.
- B. "DOE" means the Department of Energy, an agency of the United States of America.
- C. "Contracting Officer" means the DOE employee administering the Contractor's DOE contract.
- D. "Generated Information" means information produced in the performance of this CRADA.
- E. "Proprietary Information" means information which is developed at private expense outside of this CRADA, is marked as Proprietary Information, and embodies (i) trade secrets or (ii) commercial or financial information which is considered privileged or confidential under the Freedom of Information Act (5 USC 552 (b)(4)).
- F. "Protected CRADA Information" means Generated Information which is marked as being Protected CRADA Information by a Party to this CRADA and which would have been Proprietary Information had it been obtained from a non-federal entity.
- G. "Subject Invention" means any invention of Contractor or Participant conceived of or first

actually reduced to practice in the performance of work under this CRADA.

- H. "Intellectual Property" means patents, trademarks, copyrights, mask works, Protected CRADA Information and other forms of comparable property rights protected by Federal law and other foreign counterparts.
- I. "Computer Software" means (i) computer programs that comprise a series of Instructions, rules, routines, or statements, regardless of the media in which recorded, that allow or cause a computer to perform a specific operation or series of operations; and (ii) recorded information comprising source code listings, design details, algorithms, processes, flow charts, formulas, and related material that would enable the computer program to be produced, created, or compiled.
- J. "Funds-In" means cash contribution provided by the Participant to Contractor to fund this CRADA.
- K. "In-Kind" means non-cash contributions provided by the Participant to Contractor to support this CRADA. In-Kind contributions must include collaboration in the research and development efforts of the CRADA and may also include personnel, services, facilities, equipment, intellectual property and other resources.

ARTICLE II: STATEMENT OF WORK, TERM, FUNDING AND COSTS

- A. Annex A contains the Statement of Work.
- B. The effective date of this CRADA shall be the latter date of (1) the date on which it is signed by the last of the Parties or (2) the date on which it is approved by DOE, or (3) the date on which the advance funding referred to in Paragraph D is received by Contractor. The work to be performed under this CRADA shall be completed within ____ months/years from the effective date.

Notwithstanding the above, the Contractor may elect to temporarily authorize use of its own funds to enable the start of work prior to the receipt of Participant's advance payment required in this Article. The temporary use of the Contractor's funds does not relieve the Participant's requirement to provide the advance payment on a timely basis as required in this Article and any costs charged to the Contractor's temporary funds shall be allowable and reimbursable by the Participant under this CRADA. If the Contractor's funds are used, the effective date shall be the date the funds are approved.

C. The Participant's estimated contribution is \$____ that includes \$___ funds-in and \$___ inkind. The Government's estimated contribution provided through the Contractor's contract with DOE is \$____, subject to available funding. The Lab Embedded Entrepreneurship Program (LEEP) does not initially anticipate any funds-in contributions from the Participant, and any change will be reflected in an amendment to this CRADA. Furthermore, if the Participant accounts for its Background Intellectual Property as part of its contribution to this CRADA, such accounting does not transfer any rights in such Background Intellectual Property to either the Government or Contractor.

ARTICLE III: PERSONAL PROPERTY

Any tangible personal property produced or acquired in conducting the work under this CRADA shall be owned by the Party paying for it. There will be no jointly funded personal property. Personal property shall be disposed of as directed by the owner at the owner's expense.

ARTICLE IV: DISCLAIMER:

THE GOVERNMENT, THE PARTICIPANT, AND THE CONTRACTOR MAKE NO EXPRESS OR IMPLIED WARRANTY AS TO THE CONDITIONS OF THE RESEARCH OR ANY INTELLECTUAL PROPERTY, GENERATED INFORMATION, OR PRODUCT MADE OR DEVELOPED UNDER THIS CRADA, OR THE OWNERSHIP, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE RESEARCH OR RESULTING PRODUCT. NEITHER THE GOVERNMENT, THE PARTICIPANT, NOR THE CONTRACTOR SHALL BE LIABLE FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES.

ARTICLE V: PRODUCT LIABILITY

Except for any liability resulting from any negligent acts, or willful misconduct or omissions of the Contractor or Government, Participant agrees to hold harmless the Government and the Contractor for all damages, cost and expenses, including attorney's fees, arising from personal injury or property damage as a result of the making, using, or selling of a product, process or service by or on behalf of the Participant, its assignees or licensees, which was derived from the work performed under this CRADA.

ARTICLE VI: RIGHTS TO SUBJECT INVENTIONS

The Parties agree to promptly disclose in writing to each other every Subject Invention in sufficient detail to comply with the provisions of 35 USC §112 well before any statutory bars may arise under 35 USC §102. Each Party shall have the first option to retain title to any of its Subject Inventions. If a Party elects not to retain title to any of its Subject Inventions, then the other Party shall have the option of electing to retain title to such Subject Inventions under this CRADA. The Participant has the option for a period of 6 months after disclosure to choose an exclusive license, for reasonable compensation, in a pre-negotiated field of use to the Contractor's Subject Inventions.

The Parties acknowledge that the DOE may obtain title to each Subject Invention reported under this Article for which a patent application is not filed, a patent application is not prosecuted to issuance, or any issued patent is not maintained by either Party to this CRADA. The Government shall retain a nonexclusive, non-transferable, irrevocable, paid-up license to practice, or to have practiced, for or on its behalf all Subject Inventions throughout the world.

For Subject Inventions conceived or first actually reduced to practice under this CRADA which are joint Subject Inventions made by the Contractor and the Participant, title to such Subject Inventions

shall be jointly owned by the Contractor and the Participant.

The Parties acknowledge that the DOE has certain march-in rights to any Subject Inventions in accordance with 48 CFR 27.304-1(g) and 15 USC 3710a(b)(1)(B) and (C).

ARTICLE VII: RIGHTS IN DATA

A. The Parties and the Government shall have unlimited rights and each of them shall have a right to use all Generated Information produced by, or information provided to, the Parties under this CRADA which is not marked as being Protected CRADA Information or Proprietary Information.

B. <u>Proprietary Information</u>:

Each Party agrees to not disclose properly marked Proprietary Information provided by the other Party to anyone other than the providing Party without the written approval of the providing Party, except to Government employees who are subject to 18 USC 1905.

C. Protected CRADA Information:

Each Party may designate and mark as Protected CRADA Information (PCI) any qualifying Generated Information produced by its employees. However, the Contractor does not intend to mark any of its Generated Information as PCI (see Article IX: Export Control.) For a period of five (5) years from the date it is produced, the Parties agree not to further disclose such PCI except as necessary to perform this CRADA or as requested by the DOE Contracting Officer to be provided to other DOE facilities for use only at those DOE facilities with the same protection in place and marked accordingly. <u>Government employees</u> who are subject to 18 USC 1905 may have access to PCI.

D. Cessation of Obligations Regarding PCI and Proprietary Information:

The obligations relating to the disclosure or dissemination of Protected CRADA Information and Proprietary Information shall end if any such information becomes known without fault of either party, or if such information is developed independently by a Party's employees who had no access to the PCI or Proprietary Information.

E. Copyright:

The Parties may assert copyright in any of their Generated Information. The Parties hereby acknowledge that the Government or others acting on its behalf shall retain a nonexclusive, royalty-free, worldwide, irrevocable, non-transferable license to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government, all copyrightable works produced in the performance of this CRADA, subject to the restrictions this CRADA places on publication of Proprietary Information and Protected CRADA Information.

[This paragraph can be deleted if no software is produced] If a Party copyrights computer software produced in the performance of this CRADA, the Party will provide the source

code, object code, and expanded abstract, and the minimum support documentation needed by a competent user to understand and use the software to DOE's Energy Science and Technology Software Center (ESTSC) via www.osti.gov/estsc. The Party shall inform ESTSC when it abandons or no longer commercializes the computer software. Until such notice to ESTSC, the Government has for itself and others acting on its behalf, a royalty-free, nontransferable, nonexclusive, irrevocable worldwide copyright license to reproduce, prepare derivative works, and perform publicly and display publicly, by or on behalf of the Government. (narrow license) After the Party owning the Computer Software abandons or no longer commercializes the Computer Software, the Government has for itself and others acting on its behalf, a royalty-free, nontransferable, nonexclusive, irrevocable worldwide copyright license to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government. (broad license)

ARTICLE VIII: U.S. COMPETITIVENESS

The Parties agree that a purpose of this CRADA is to provide substantial benefit to the U.S. economy.

A. In exchange for the benefits received under this CRADA, the Participant therefore agrees to the following:

The Participant agrees that any products embodying any intellectual property or produced through the use of any intellectual property developed under this CRADA will be manufactured substantially in the United States for any use or sale in the United States, unless the Participant can show to the satisfaction of DOE that it is not commercially feasible to do so. The Participant further agrees to make the above condition binding on any assignee or licensee of, or any entity acquiring rights to, any intellectual property developed under this CRADA, including subsequent owners of Participant acquiring a controlling interest, and including subsequent assignees and licensees.

In support of using this modified US Competiveness Clause, the DOE Program approval is attached hereto as Annex B.

- B. If the Participant later finds that it cannot meet the requirements listed in Paragraph A above, the Participant will submit a revised plan to provide net benefit to the US economy to DOE. If such a revised plan is approved by DOE, it shall be incorporated into this CRADA by an amendment to be executed by the Parties. If the CRADA is completed or terminated and DOE approves of the plan, the DOE Contracting Officer shall issue an approval letter.
- C. The Contractor agrees to a U.S. Industrial Competitiveness clause in accordance with its prime contract with respect to any licensing and assignments of its Intellectual Property arising from this CRADA, except that any licensing or assignment of its intellectual property rights to the Participant shall be in accordance with the terms of paragraph A of this Article.

ARTICLE IX: EXPORT CONTROL

EACH PARTY IS RESPONSIBLE FOR ITS OWN COMPLIANCE WITH EXPORT CONTROL LAWS AND REGULATIONS. EXPORT LICENSES OR OTHER AUTHORIZATIONS FROM THE U.S. GOVERNMENT MAY BE REQUIRED FOR THE EXPORT OF GOODS, TECHNICAL DATA OR SERVICES UNDER THIS AGREEMENT. THE PARTIES ACKNOWLEDGE THAT EXPORT CONTROL REQUIREMENTS MAY CHANGE AND THAT THE EXPORT OF GOODS, TECHNICAL DATA OR SERVICES FROM THE U.S. WITHOUT AN EXPORT LICENSE OR OTHER APPROPRIATE GOVERNMENTAL AUTHORIZATION MAY RESULT IN CRIMINAL LIABILITY.

The Participant agrees that the Contractor will conduct this project as fundamental research with no restrictions on publication. Accordingly, the Contractor does not intend to mark any of its Generated Information as Protected CRADA Information and the Participant agrees not to direct the Contractor to create export controlled information and not to transfer to Principal Investigator or to other employees or students of the Contractor any Proprietary Information or Protected CRADA Information that is export controlled under the Export Administration Regulations or the International Traffic in Arms Regulations.

ARTICLE X: REPORTS AND ABSTRACTS

The Parties agree to produce the following deliverables: an initial abstract suitable for public release; and a final report, to include a list of Subject Inventions. It is understood that the Contractor has the responsibility to provide this information at the time of its completion to the DOE Office of Scientific and Technical Information. The Participant agrees to provide the above information to the Contractor to enable full compliance with this Article.

The Parties agree to submit, for a period of five years from the expiration of this CRADA and, upon request of DOE, a non-proprietary report no more frequently than annually on the efforts to utilize any Intellectual Property arising under the CRADA.

Use of the name of a Party or its employees in any promotional activity, with reference to this CRADA, requires written approval of the other Party.

ARTICLE XI: FORCE MAJEURE

Neither Party will be liable for unforeseeable events beyond its reasonable control.

ARTICLE XII: DISPUTES

The Parties shall attempt to jointly resolve all disputes arising from this CRADA. In the event a dispute arises under this CRADA, the Participant is encouraged to contact the Contractor's Technology Partnership Ombudsman in order to further resolve such dispute before pursuing third-party mediation or other remedies. If the Parties are unable to jointly resolve a dispute within a reasonable period of time, they agree to submit the dispute to a third-party mediation process that is mutually agreed upon by the Parties. To the extent that there is no applicable U.S. Federal law, this CRADA and performance thereunder shall be governed by the laws of the State of Illinois, without

reference to that state's conflict of laws provisions. The Parties agree that jurisdiction resides before the United States District Court for the Northern District of Illinois and hereby agree to such venue and waive any objections or challenges to that venue, including those for forum non conveniens.

ARTICLE XIII: BACKGROUND INTELLECTUAL PROPERTY

Work under this project may be divided into two phases: 1) a scope and planning phase followed by 2) a research and development (R&D) phase. No hard R&D will be performed by the Parties during the scope and planning phase, as the Participant will work at the Laboratory and will undertake paper-based analysis such as performing market studies, refining the scope of their research project with Contractor personnel, surveying the intellectual property landscape of their technology, and other activities designed to increase the chance of success in the subsequent R&D Phase. Participants are expected to develop an Intellectual Property (IP) Management Plan as part of the Scope and Planning phase, subject to the appropriate DOE Technology Manager's approval with concurrence from DOE Patent Counsel, before proceeding to the R&D phase. The IP Management Plan should identify and provide a path for obtaining any background IP rights, if necessary, that may be needed to perform R&D work under the CRADA and commercialize their technology.

Once the Scope and Planning phase has been completed (or if it is not needed), the R&D Phase of the project can proceed (subject to DOE approval). A Participant's failure to abide by its DOE approved IP Management Plan could result in delayed work, deferment or removal from the program. The Participant does not have any rights to Contractor or third party background IP by virtue of selection or participation in this CRADA or corresponding program. If a Participant requires any Contractor background IP, they should reach out to the Contractor's technology transfer office.

The Contractor and the Participant have identified in Annex C Background Intellectual Property that may be used in the performance of work under this CRADA and may be needed to practice the results of this CRADA.

The Contractor has marked in Annex C the identified Background Intellectual Property that is available for licensing as of the effective date of this CRADA.

Each Party may use the other Party's Background Intellectual Property solely in performance of research under the Statement of Work. This CRADA does not grant to either Party any option, grant, or license to commercialize, or otherwise use the other Party's Background Intellectual Property. Licensing of Background Intellectual Property, if agreed to by the Parties, shall be the subject of separate licensing agreements between the Parties.

Each Party has used reasonable efforts to list all relevant Background Intellectual Property, but Background Intellectual Property may exist that is not identified. Neither Party shall be liable to the other Party because of failure to list Background Intellectual Property.

ARTICLE XIV: CONTRACTOR FACILITIES AND SITE ACCESS DOCUMENTS

As a precondition to performing work at Contractor's Laboratory, Participant must complete all Contractor's Site Access documents and requirements. Participant shall take all reasonable precautions in activities carried out under this Agreement to protect the safety and health of others and to protect the environment. Participant must comply with all applicable safety, health, access to information, security and environmental regulations and the requirements of the Department and

Contractor, including the specific requirements of the Laboratory. Full responsibility for the conduct and safety of Participant's personnel at Contractor's sites during the performance of the CRADA Work shall be and remain with Participant. Environmental health and safety orientation and training shall be obtained by Participant's personnel at the earliest possible time upon arrival at Contractor's site and in all cases before they work unsupervised or are exposed to any special hazards. In the event that the Participant fails to comply with said regulations and requirements, Contractor may, without prejudice to any other legal or contractual rights, issue an order stopping all or any part of Participant's activities at the Laboratory.

ARTICLE XV: ENTIRE CRADA, MODIFICATIONS AND TERMINATION

This CRADA with its annexes contains the entire agreement between the Parties in performing the research described in the Statement of Work (Annex A) and becomes effective on the later date of either the date the last Party signs the document or receipt of advance funding, if any. Any agreement to materially change any terms or conditions of the CRADA and annexes shall be valid only if the change is made in writing, executed by the Parties hereto, and approved by DOE.

This CRADA may be terminated by either Party with sixty-day's written notice to the other Party. If Article II provides for advance funding, this CRADA may also be terminated by the Contractor in the event of failure by the Participant to provide the necessary advance funding. Each Party will be responsible for its own costs arising out of or as a result of this termination. The obligations of any clause of this CRADA that were intended to survive the expiration of the period of performance, for example, confidentiality, use and/or non-disclosure obligations, shall also survive any termination of this CRADA.

FOR CONTRACTOR: UCHICAGO ARGONNE LLC AS OPERATOR OF ARGONNE NATIONAL LABORATORY	FOR PARTICIPANT:
BY	BY
TITLE	TITLE
DATE	DATE

ANNEX A: STATEMENT OF WORK

e e e e e e e e e e e e e e e e e e e	by the Participant and Contractor in connection with Agreement (CRADA) No The
terms and conditions of CRADA are applicab approved and executed amendments attached.	le and binding to this Statement of Work as well as any
BACKGROUND	
	c]. have been competitively selected for support under ed on an EERE AMO approved merit review process.
Participant Name:	
1. Participant Business Contact:	
Name:	E-Mail:
Telephone:	Fax:
2. Participant Technical Contact:	
Name:	E-Mail:
Telephone:	Fax:
Participant will collaborate with the following Investigators under this Statement of Work.	g Contractor Project and Technical Principal
Contractor Name:	
1. Project Principal Investigator:	
Name:	E-Mail:
Telephone:	Fax:
2. Technical Principal Investigator:	
Name:	E-Mail:
Telephone:	Fax:

EXPECTED ACCOMPLISHMENTS AND GOALS

The proposed project is aimed at developing a disruptive prototyping paradigm for [INSERT description, e.g, biomanufacturing, allowing rapid discovery of novel biological pathways to advanced materials and chemicals through cell-free systems]. If successful, this project could drastically alter materials discovery and development with the potential for sweeping impacts on manufacturing capabilities, energy efficiency, and enabling materials and chemicals-based technologies.

TECHNICAL OBJECTIVES

[Directions for Participant: Briefly describe or outline the technical activities you plan to undertake, and the goals you plan to accomplish by the end of the work. Begin with what you will do under the initial \$100k scope.

This project will

- [OBJECTIVE 1]
- [OBJECTIVE 2]
- [OBJECTIVE 3]

If Participant receives third party funding to continue the project, this CRADA will be amended to include the new funding profile and additional tasks.

TASKS, RESPONSIBILITIES, AND SCHEDULE

[Directions for Participant: Fill the table below, adding key tasks and milestones for this scope of work. If there are any specific tasks you expect a collaborator to be contributing, mark those as work done by Argonne ("ANL").]

Task/Milestone	Work D	one By:		Completion, Quarters After Start of Project														
T ask/Willestolle	ANL	[INC]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Project management relative to Chain Reaction Innovations program objectives.	X		X	X	X	X	X	X	X	X								
2. Equipment training and maintenance	X		X	X	X	X	X	X	X	X								
3. [Technical PI project management]																		
4. [INSERT TASK]																		

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DELIVERABLES

Quarterly updates on progress against this Statement of Work will be presented to the cognizant Chain Reaction Innovations PI. A final report will be due upon conclusion of CRADA, including a list of intellectual property arising under this SOW, including Subject Inventions and tangible research products, and an abstract suitable for public release containing brief description of project accomplishments and the impact of the Chain Reaction Innovations program on the technical and tech-to-market progress of the project.

TOTAL FUNDING SUMMARY

For this Statement of Work, the Participant's estimated contribution is \$_____that includes \$0 funds-in. The Government's estimated contribution, which is provided through the Contractor's contract with DOE, is \$100,000, subject to available funding.

FIELD OF USE

Field of use for the Participant's option to negotiate an exclusive license in Contractor's Subject inventions:

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ANNEX B: PROGRAM MEMO

Insert Executed Program Memo (May 2016)

ANNEX C: BACKGROUND INTELLECTUAL PROPERTY

BACKGROUND INTELLECTUAL PROPERTY

Each Party has used reasonable efforts to list all relevant Background Intellectual Property below.
Contractor's Background Intellectual Property:
Participant's Background Intellectual Property: