

MEMORANDUM OF UNDERSTANDING

THIS Memorandum of Understanding (MOU), entered into by and between the University of Notre Dame (“Notre Dame” or “Lead University”), Indiana University (“IU”), and Purdue University (“Purdue”), (collectively “Universities”, individually “University”).

WITNESSETH THAT:

WHEREAS, the Universities desire to promote the enrichment of their research mission; and

WHEREAS, the Universities desire to strengthen and expand the mutual contacts among the Universities via continued mutual participation in the National Science Foundation (NSF) Industry-University Cooperative Research Center named “Center for Bioanalytic Metrology (CBM) (hereinafter “CBM”); and

WHEREAS, each University will continue to operate a CBM Research Site at their location, led by a University Principal Investigator acting as Director of CBM Research Site. Notre Dame will serve as the Lead University with its Principal Investigator acting as Director of CBM;

WHEREAS, the Universities desire to provide for a collaborative environment for faculty and students under the CBM on the terms and conditions hereinafter set forth;

NOW THEREFORE, it is mutually agreed as follows:

- I. **Scope of MOU** – This MOU is intended to establish the desires of the Universities regarding the continuation of the CBM and certain general terms regarding its governance.
- II. **Period of MOU** – This MOU shall be effective upon the date of the last signature and will remain in force until the completion of Phase II of the CBM grant award.
- III. **Activities Under This MOU** – The Universities will continue to advance the CBM for the purpose of engaging NSF, other federal agencies and laboratories, industry, and other entities in basic research related to current, emerging, and industry–relevant challenges in measurement science and technology. The Universities will continue to collaborate on the development and submission of research proposals to various agencies, conduct research using funds contributed by members of the CBM, meet regularly to conduct the business of the CBM, and to engage in other activities mutually deemed beneficial to the development of the CBM.
- IV. **Funding of Activities:**
 - a. CBM Administration for Phase II/II+ (second 5-year award period) - It is anticipated that the Universities will fund allowable administrative costs consistent with the respective NSF Phase II/II+ proposals submitted by each of the Universities through the resources provided by NSF CBM Awards.
 - i. Site Directors will coordinate the center-funded research at their site, interact with the CBM Industry Advisory Board (IAB) to identify key

technology areas and establish short- and long-range goals and planning necessary for the overall research program, and provide to the Director of the CBM regular reports of research activities and programmatic and fiscal matters associated with the center. Sites may use NSF funds from their award for any administrative support needed to fulfill these tasks.

- ii. Notre Dame will be the Lead Institution and will be responsible for collecting and administering member fees, dispersing funds to projects approved by the IAB at all institutions, and providing center-wide reporting and fiscal management. The Lead Institution may be changed upon mutual MOU of the Universities and a modification to this MOU. The former Lead Institution will transfer unallocated membership fees to the new Lead Institution for administration.
- iii. The Universities will adhere to the budget of the CBM, as submitted to and finalized by the NSF. The Lead Institution will provide annually to all member sites a certification of membership listing all membership fees received for the IUCRC, including their sources and levels of membership.
- iv. NSF funds should first be strictly dedicated for the management and operations of the Research Sites. Any unspent funds should go into the pool of funds allocated by the Industry Advisory Board (IAB) and therefore only go towards a project voted/approved by the IAB.
- v. As in Phase I, each University will not charge overhead on Center membership fees or subcontracts. A bi-directional funding MOU will continue between the Universities at zero percent (0%) overhead rate in order to facilitate the transfer of CBM Research Site research project funds from one University to another when needed.
- vi. Should additional universities be added to CBM in equal standing to the Universities specified herein, these Universities will be also expected to cover their own management and operating costs, as discussed above.

b. CBM Meetings

- i. Universities agree to host and use NSF funds to bear the costs of IAB meetings, to be held twice a year at sites chosen by the CBM leadership. The location of the meetings will continue to rotate between the campuses of the Universities and other appropriate venues.
- ii. Universities will be responsible for covering the travel expenses of their own faculty, staff, and students to CBM meetings required by NSF or otherwise agreed to among the Directors of the Research Sites.

- c. CBM Research Projects – CBM will continue to fund research projects with membership dues contributed by industrial partners.
 - i. By signing this MOU each Research Site acknowledges the terms and conditions of the CBM standard industry Membership Agreement attached hereto as Exhibit I. The Research Sites agree that funds obtained via collecting the membership dues will be distributed to fund research projects selected and approved by the CBM IAB.
 - ii. Directors of CBM Research Sites agree to be responsible for proper management of the research data and, as warranted, sharing the data with the Lead University for public dissemination and storage.

V. Intellectual Property:

- a. The Universities agree to function as an NSF I-UCRC partnership where all members are guaranteed uniform rights and responsibilities to intellectual property developed in the process of CBM research regardless of the CBM Research Site where the research was executed.
- b. Intellectual property created solely by the personnel of one University will be managed and title held by that University.
- c. Each CBM Research Site agrees to provide copies of pertinent invention disclosures to the other CBM Research Sites within thirty (30) days of receipt by the inventing University's intellectual property management office, and the receiving University agrees to maintain those disclosures in confidence until the earliest of:
 - i. The receiving University is released in writing from a duty of confidentiality by the disclosing University;
 - ii. The disclosing University makes the disclosure public;
 - iii. The issuance of a patent.

The Lead Institution will include information on these disclosures in its regular reports to members.

- d. Intellectual property created jointly by personnel of multiple Universities will be jointly owned. When joint intellectual property arises, then the following terms apply.
 - i. The directors of the CBM Research Sites involved will elect one university as the managing university for that particular intellectual property. If the directors fail to agree on a managing university, then the joint inventors, with one vote each and by a simple majority, will be asked to elect one

university as the managing university. In the event the parties do not elect a University to manage the joint intellectual property, Notre Dame shall select the institution to manage the intellectual property. The managing university will be responsible for the timely notification of all members that joint intellectual property has arisen, and for protecting, marketing, and licensing that joint intellectual property, all at the sole expense of the managing university unless otherwise agreed by the jointly inventing Universities.

ii. The Joint Intellectual Property must be managed so as to provide to all CBM members, regardless of the CBM Research Site, those rights specified in the CBM standard industry Membership Agreement attached hereto as Exhibit I.

iii. The parties' technology property management offices shall negotiate an inter-university agreement (IUA) that specifies the terms of the management of the jointly owned intellectual property. Each University will be responsible for internal distribution of its share of any license revenue according to its respective policies, as set forth in its CBM standard industry Membership Agreement.

e. The rights, duties, and obligations of members and the respective Universities to CBM Center technology as set forth in the CBM standard industry Membership Agreement attached hereto as Exhibit I will continue to be applicable to all CBM Center technology developed through all CBM Research Sites.

VI. **Termination** - Any University may terminate the partnership established by this MOU upon ninety (90) days written notice to the other Universities. Termination shall not affect any intellectual property rights acquired by the members at any University prior to the effective date of the termination notice.

VII. **Nondiscrimination** - the Universities agree that no person shall on the grounds of race, color, national origin, gender, sexual orientation, or creed be excluded from participation under the terms of this MOU.

VIII. **Modification** – The terms of this MOU may be changed or modified only by written amendment signed by authorized agents of the Universities hereto.

IX. **Counterpart** – This MOU may be executed in any number of counterparts, including facsimile or scanned PDF documents. Each such counterpart, facsimile or scanned PDF document shall be deemed an original instrument, and all of which, together, shall constitute one and the same executed MOU.

IN WITNESS WHEREOF, the Universities have executed this MOU

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Signing for on behalf of

DocuSigned by:

Greg Luttrell

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Greg Luttrell

Director, Research Contracts
University of Notre Dame

12/5/2023

Date

DocuSigned by:

Nicole Hague

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Nicole Hague

Senior Contract Officer II
Indiana University

12/5/2023

Date

DocuSigned by:

Laura Gray

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Laura Gray

Senior Manager, Contracts
Purdue University

12/5/2023

Date

**AMENDMENT #1
TO
MEMORANDUM OF UNDERSTANDING**

THIS is an Amendment to the Memorandum of Understanding (MOU), entered into by and between the University of Notre Dame (“Notre Dame” or “Lead University”), Indiana University (“IU”), and Purdue University (“Purdue”), (collectively “Universities”, individually “University”) on December 5, 2023.

This Amendment revises the above-referenced MOU by adding the following terms:

WITNESSETH THAT:

WHEREAS, the terms of this MOU are consistent with the terms of each University’s NSF IUCRC award and shall be subject to the terms set forth in solicitation NSF 20-570.

NOW THEREFORE, it is mutually agreed as follows:

X. Special Awards Conditions of Solicitation NSF 20-570

- a. The success of CBM is predicated on the sharing of effort and responsibilities among the member Universities, thus expectations of minimum standards of performance are appropriate. Each University involved in CBM must be willing and able to contribute to the essential work of the center, which includes:
 - i. participating in the organizational and administrative work of the center, either as Lead Institution or as a Research Site;
 - ii. hosting and organizing meetings of the IAB in a rotation agreed upon by the Site Directors;
 - iii. soliciting proposals from faculty members that address topics identified by the CBM IAB and that appear in annual requests for proposals;
 - iv. working with faculty and students at each respective Site to ensure that CBM funded projects deliver on stated objectives and are executed in a timely manner; and
 - v. contributing to center-wide efforts to recruit and retain full dues paying members.
- b. While the number of CBM projects funded annually at each site is variable, it is expected that each member University will participate in some fraction of funded projects each year and, no matter the number of funded projects, will contribute to the activities outlined above.
- c. Member Universities falling short of these expectations and standards will be issued a written warning by the other members and given a year to take corrective action. If no improvement is seen in the subsequent year, the termination of said Site will be considered by the other University, consistent with the voluntary termination process

described in Paragraph VI. That is, the University leaving CBM will be given ninety (90) days written notice by the other Universities, and termination will not affect any intellectual property rights acquired by the member prior to the effective date of the termination notice.

IN WITNESS WHEREOF, the Universities have executed this MOU

Signing for on behalf of

DocuSigned by:

Greg Luttrell

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Greg Luttrell

Director, Research Contracts
University of Notre Dame

5/31/2024

Date

DocuSigned by:

Nicole Hague

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Nicole Hague

Senior Contract Officer II
Indiana University

5/31/2024

Date

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Tammie Lee Bain

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Tammie Lee Bain

Lead Contracts Analyst
Purdue University

5/31/2024

Date

**AMENDMENT #2
TO
MEMORANDUM OF UNDERSTANDING**

THIS is an Amendment to the Memorandum of Understanding (MOU), entered into by and between the University of Notre Dame (“Notre Dame” or “Lead University”), Indiana University (“IU”), and Purdue University (“Purdue”), (collectively “Universities”, individually “University”) on December 5, 2023.

This Amendment revises the above-referenced MOU by deleting and replacing the following:

X. Special Awards Conditions of Solicitation NSF 20-570

- a. Member Universities falling short of these expectations and standards will be issued a written warning by the other members and given a year to take corrective action and NSF will be notified. If no improvement is seen in the subsequent year, the termination of said Site will be considered by the other University, consistent with the voluntary termination process described in Paragraph VI. That is, the University leaving CBM will be given ninety (90) days written notice by the other Universities, and termination will not affect any intellectual property rights acquired by the member prior to the effective date of the termination notice. The NSF will be notified 90 days prior to any termination actions being executed.

All other terms and conditions remain the same.

IN WITNESS WHEREOF, the Universities have executed this MOU

Signing for on behalf of

DocuSigned by:

4A3911FFC50B480...

Greg Luttrell
Director, Research Contracts
University of Notre Dame

7/12/2024

Date

DocuSigned by:

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Nicole Hague
Senior Contract Officer II
Indiana University

7/12/2024

Date

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Laura Gray
Senior Contracts Manager
Purdue University

7/15/2024

Date