

## MEMORANDUM OF UNDERSTANDING

**Initial Participating Universities:** The Florida International University Board of Trustees, Trustees of Boston University, Sam Houston State University, and Texas A&M AgriLife Research.

This Memorandum of Understanding (MOU) is effective this **August 1<sup>st</sup>, 2023** between the participating universities listed above, who intend to join together in a cooperative effort to support the Center for Advanced Research in Forensic Science (hereinafter referred to as “CENTER, or CARFS”). All of the universities mentioned above shall be hereinafter referred to collectively as “INSTITUTIONS, or SITES”.

WHEREAS, the activities of the CENTER are funded by 1) the National Science Foundation and (hereinafter referred to, respectively, as “NSF”) 2) Industrial Members (hereinafter referred to as “MEMBERS”) and 3) other funds that may be received from time to time.

WHEREAS, INSTITUTIONS desire to formalize certain agreements between them with respect to the subject matter contained herein;

NOW THEREFORE, for and in consideration of the mutual promises and covenants herein contained and intending to be legally bound, INSTITUTIONS hereto agree as follows:

### 1. Center Governance

- a. The CENTER will be guided by a common set of By-laws (a copy of which is included as Attachment A). The By-laws incorporate a mechanism for their modification.
- b. The CENTER will share a common Industrial Advisory Board (IAB), which recommends policy and project funding for the CENTER.
- c. The CENTER Director provides overall administrative management of the CENTER.
- d. Each SITE shall have a SITE Director that provides overall administrative management of the SITE.
- e. The Academic Leadership Team is composed of the CENTER Director, SITE Directors and a representative from each Institution that is affiliated with any SITE within the CENTER.
- f. MEMBERS join the CENTER by executing the CARFS IUCRC Membership Agreement with a SITE.

### 2. Center Funding

Projects will be proposed to the IAB by SITE Directors at semiannual IAB meetings, and project funding allocations will be determined based on IAB project selection recommendations and Academic Leadership Team input as detailed in the CENTER By-laws. Florida International University will be responsible for collecting and administering membership dues from MEMBERS who are joining the CENTER through that SITE. Certification of MEMBER names and total fees paid by MEMBERS shall be reported to NSF by each SITE, for the MEMBERS joining through that SITE.

### 3. Cross-Funding of Research

Each SITE shall collect fees from their respective MEMBERS. SITE Directors will use those fees to support CENTER research at their respective SITES and, when needed, at other SITES. The transfer of funds to support research projects that are based at other SITES shall be made by subcontract between the SITES. The SITE that collected the funds is permitted to collect an indirect cost (IDC) rate at a maximum of 5% of the transferred MEMBER funds, as defined within the subcontract. The SITE receiving the transferred funds is permitted to collect a maximum of 5% IDC rate of the transferred funds.

### 4. Ownership and Administration of Intellectual Property.

Intellectual Property (IP) shall be managed according to the terms of the existing CARFS IUCRC Membership Agreement, the CARFS By-laws and the guidance provided within the IUCRC solicitation.

### 5. Changes to this Memorandum of Understanding

The terms of this Memorandum of Understanding may be amended at any time by a written amendment executed by the authorized officers of all the parties to this MOU that are identified in the first paragraph above.

IN WITNESS WHEREOF, the parties hereto have caused this MOU to be duly executed by their duly authorized officers as of the day and year set forth next to each signature.

Agreed, this is 17<sup>th</sup> day of June, 2024:

The Florida International University Board of Trustees

**Ana M.  
Villafana**

Digitally signed by Ana M. Villafana  
DN: cn=Ana M. Villafana, o=Florida  
International University, ou=ORED,  
email=avillafa@fiu.edu, c=US  
Date: 2024.06.17 14:55:52 -04'00'

By: Ana M. Villafana (nm)  
Its Senior Director of Award Services

Agreed, this is 10 day of June, 2024:

Trustees of Boston University

**Beth Durak**

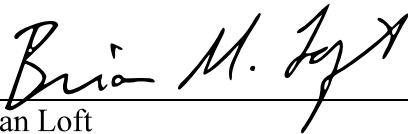
Digitally signed by Beth  
Durak  
Date: 2024.06.10  
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By: Beth Durak

Its: Associate Director of Contracting, Pre-Award Services

Agreed, this is 4th day of June, 2024:

Sam Houston State University

  
\_\_\_\_\_  
By: Brian Loft  
Its: Associate VP for Research

Agreed, this is 7 day of June, 2024:

Texas A&M AgriLife Research

DocuSigned by:  
  
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By: Debra Cummings  
Its: Assistant Director, Agency & CFO

## **Attachment A**

### ***Center for Advanced Research in Forensic Science (CARFS) Bylaws***

#### **Article 1 – Name and Purpose**

##### *Section 1 – Name*

The Center for Advanced Research in Forensic Science (“Center” or “CARFS”) is an Industry-University Cooperative Research Center (“IUCRC”) funded in part by the National Science Foundation (“NSF”) and the National Institute of Justice (“NIJ”). The Center is composed of Academic Institutions and Industrial Members.

##### *Section 2 – Purpose*

Vision Statement: The CARFS will be a collaborative research environment that involves government, private industry, and academic researchers to advance the field of forensic science practice through innovative research.

Mission Statement: The CARFS will advance the nation’s research infrastructure base by developing long-term partnerships among industry, academia, and government to address important challenges within the field of forensic science and to provide meaningful solutions to these problems.

Research Focus: Research topics of the CARFS will focus on the needs of the Industrial Members and the capabilities of the Academic Institutions in various areas of forensic science.

#### **Article 2 – Membership Categories**

##### *Section 1 – Academic Institutions*

An Academic Institution is any college or university that joins the Center for purposes of participating in activities of the Center.

A Site is any Academic Institution that joins the Center by an award from NSF for purposes of participating in activities of the Center.

An Affiliate Site is any Academic Institution that joins the Center through subcontract to a Site for purposes of participating in activities of the Center. Affiliate Sites cannot subcontract with additional Affiliate Sites.

##### *Section 2 – Industrial Members*

An Industrial Member is any industrial firm or organization (including non-profits), or non-NSF federal agency that joins the Center, signed the CARFS Membership

Agreement (or for federal agencies, executed an interagency agreement with NSF), and timely paid the annual membership fees.

Full Industrial Members are defined as any Industrial Member who has paid at least a \$50,000 membership fee per year to support research at the Center. The pricing structure also always for ½ of a membership at \$25,000 per year. Full or One-Half Industrial Members have voting privileges.

Affiliate Industrial Members are defined as any Industrial Member qualifying as a “Small Business” (according to the Federal Government definition) that join as a non-voting member with a minimum contribution of \$5,000 per year. Affiliate Industrial Members do not have voting privileges.

### **Article 3 – Joining and Maintaining Membership in the Center**

#### *Section 1 – Academic Institutions*

Academic Institutions, whether Sites or Affiliate Sites, will be added to the Center following the NSF IUCRC guidelines.

Academic Institutions may only join the Center through award of an IUCRC grant from NSF, with a minimum of two-thirds agreement among the existing Academic Site Directors and with simple majority agreement of the Center’s IAB. An Academic Institution may withdraw from the Center and no longer be obligated by this agreement, by giving IAB Members and the other Academic Institutions ninety (90) days written notice prior to the withdrawal date from the Center.

Academic Institutions and Affiliate Sites must sign the CARFS Memorandum of Understanding (“MOU”). This agreement among the Academic Institutions participating in the Center, describes how they will interact within the Center. It addresses sharing of administrative and managerial responsibilities, handling of the collection and allocation of membership fees after project selection, the arrangement for annual certification of the collected membership fees and sources, and intellectual property issues.

The CARFS MOU shall be posted on the public portion of the Center website along with the University Partners and the IAB Members.

#### *Section 2 – Industrial Members*

Companies, federal research and development organizations, government-owned or contractor-operated laboratories, small businesses, and related entities may request, or be requested, to join the Center as a Full or Industrial Member at a Site or an Affiliate Site. Other categories of Industrial Members, for example, state/local government agencies, may also be eligible for membership.

Industrial Members join the Center through the CARFS Membership Agreement<sup>1</sup> (Exhibit A) executed with one of the Center's member Academic Institutions.

Federal agencies have the option of joining the Center without signing the membership agreement, by entering into a Military Interdepartmental Purchase Request (MIPR) or Interagency Agreement (IAA) with NSF.

New Industrial Members may join the Center upon signature of the CARFS Membership Agreement (or for federal agency joining via MIPR/IAA, upon award of supplemental funds to an NSF site award), acceptance of the current bylaws, and payment of the applicable annual membership fees. Membership fees are non-refundable and will not be pro-rated for those Industrial Members that join the Center off cycle or terminate early.

Application of new or additional membership fees may be made at the Site or Affiliate Site to existing research programs or new interim proposals approved by the Center Leadership in consultation with the IAB. Alternatively, these fees may be held in reserve for project funding until the next Center meeting.

New Industrial Members' rights to continued funding and intellectual property are subject to the same provisions as existing members.

## **Article 4 – Center Governance**

### *Section 1 – General*

The Center shall be governed by:

- NSF IUCRC guidelines (<https://iucrc.nsf.gov/universities/solicitation/center-requirements/> and membership agreement <https://iucrc.nsf.gov/industry/joining-a-center/membership-agreement>);
- The Academic Leadership Team;
- Recommendations and advice of the Industrial Advisory Board; and
- A University Policy Committee for each Site.

### *Section 2 – Academic Leadership Team*

The Academic Leadership Team is comprised of Site Directors from each Academic Institution member and a designated faculty member representing an Affiliate Site. Site Directors are responsible for Center activities at their Site and will report directly to their respective university administrators and to the Center Director. Site Directors are appointed by their respective universities and are usually the Principal Investigators (“PIs”) of the IUCRC awards. Site Directors serve as liaisons between the Center and the researchers at the Academic Institutions.

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<sup>1</sup> The membership agreement requires that it be countersigned by an authorized representative of a Site or Affiliate Site.

The Center Director will be appointed by the Academic Leadership Team and will either be chosen from among the Site Directors or be an experienced faculty member from one of the Sites. The Center Director has the following qualifications and responsibilities:

- Must have significant background and experience in one or more disciplines of forensic science.
- Oversees all operating and performance management aspects of Center operations to ensure solicitation requirements (including membership) are met.

The Center Liaison will be appointed by the Center Director and has the following responsibilities:

- Acts as a bridge between academic researchers and industry partners.
- Building and maintaining relationships with industry partners, academic researchers, and other stakeholders involved in the IUCRC.
- Collaborates with researchers to ensure proposals meet both academic and industry requirements.

The leadership at the Sites and Affiliate Sites will manage their respective university researchers and research projects and collaborate with each other within the Center. The Center Director will be advised by the Industry Advisory Board.

An Associate Director will be appointed by the Academic Leadership Team and will either be chosen from among the Site Directors or be an experienced faculty member from one of the Sites. The Associate Director will have the following responsibilities:

- Represent the Center Director when the Center Director is unable to fulfill his or her duties.

A minimum of 51% of the Academic Leadership team must be present either in person or virtually for decisions to be made.

### *Section 3 – Industrial Advisory Board (IAB)*

A Full Industrial Member is entitled to have one or more representatives on the IAB for every paid annual membership fee (\$50,000). A ½ Industrial Member is entitled to have one representative on the IAB for every paid annual membership fee.

Regardless of the number of representatives, the following votes will be allowed for Industrial Members:

- Full Industrial Member with one paid annual membership: 1 vote
- Full Industrial Member with two or more paid annual memberships: 2 votes

½ Industrial Member with one-half paid annual membership: ½ vote All Industrial Members (Full Industrial Members and Affiliate Industrial Members) will participate through the IAB in the strategic planning of the Center.

The IAB will select a Committee consisting of a chair, vice-chair, and secretary for a two-year term. The IAB is advisory to the Center Director regarding project selection and other Center activities. The committee will be selected via nominations by IAB members, Center Sites, and Affiliate Sites. Nominees will be evaluated based on their qualifications, expertise, and experience in the areas relevant to the committee's purpose by the Center Director and Site Directors. Upon completion of the review, the Center Director will formally appoint committee members.

Roles and Responsibilities of the committee are as follows:

**Chair**

- provide leadership and guidance to the advisory board, ensuring meetings are well-organized and productive.
- Facilitate discussions and decision-making processes, maintaining order and encouraging active participation.
- Work with the advisory board members to establish the board's goals, objectives, and strategic direction.
- Serve as the primary point of contact between the advisory board and Center Director.
- Ensure that the board's decisions and recommendations are effectively integrated into the strategic planning and decision-making processes.
- Act as the official spokesperson for the advisory board when communicating with the organization, stakeholders, and the public.

**Vice Chair**

- Support the Chair in their duties and step in when the Chair is unavailable or temporarily unable to perform their responsibilities.
- Be prepared to assume the role of Chair in the event of the Chair's absence or in the future when a transition is necessary
- Collaborate with the Chair to plan and prepare for advisory board meetings, including setting agendas, distributing materials, and coordinating logistics
- Encourage active participation and engagement from all advisory board members, ensuring that diverse perspectives are heard
- Assist in resolving disputes or conflicts within the advisory board, helping to maintain a productive and harmonious working environment
- Provide valuable input and suggestions during advisory board discussions and decision-making processes, contributing to the board's strategic direction.

**Secretary**

- Assist the Chair in scheduling meetings of the IAB
- Create minutes of all IAB meetings and distribute to all IAB members for their review

- Collaborate with the Chair to plan and prepare for advisory board meetings, including setting agendas, distributing materials, and coordinating logistics
- Encourage active participation and engagement from all advisory board members, ensuring that diverse perspectives are heard
- Assist in resolving disputes or conflicts within the advisory board, helping to maintain a productive and harmonious working environment
- Provide valuable input and suggestions during advisory board discussions and decision-making processes, contributing to the board's strategic direction.

In the event of extended absences or scheduling conflicts for an IAB member, Center or Site Director, a substitution or proxy will be chosen at the discretion of the IAB member who will be absent. In the event of an unforeseen emergency, such as sudden illness or family crisis, a substitute member can step in to ensure that the advisory board's work continues without disruption.

A minimum of 51% of the IAB Members must be present either in person or virtually for decisions to be made.

The IAB will assist the Center Director, Site Directors, and participating faculty in identifying pre-competitive, forensic science-related research problems; recommend (via a voting process) future research projects; identify appropriate internship opportunities for graduate students; assist the Center Director and Site Directors in identifying new members; review the research and educational accomplishments of the Center; and recommend restructuring and/or redirecting of ongoing programs to meet needs and concerns expressed by the IAB.

#### *Section 4 – University Policy Committee*

A University Policy Committee for each Site and Affiliate Site will be available to resolve administrative issues related to the operation of the Center. It will be comprised of individuals from the Academic Institution's administration and will facilitate the operation of the Site or Affiliate Site, while ensuring compliance with the policies of their respective universities.

Each University Policy Committee will meet as necessary to discuss and resolve Center-related issues.

This Committee shall not have any overlap with members of the Academic Leadership Team.

A minimum of 51% of the University Policy Committee must be present either in person or virtually for decisions to be made.

#### **Article 5 – Administration**

The IAB and Academic Leadership Team will develop strategic plans for the Center, to include recruiting new Industrial Members and Academic Institutions to the Center.

The Center Director, in coordination with the Academic Leadership Team, with consideration of recommendations of the IAB, and in accordance with provisions of prevailing membership agreements, will authorize the use of membership fees by awarded project Principal Investigators in support of Center research.

## **Article 6 – Meetings**

### *Section 1 – Center Meetings*

The CARFS will meet during the semi-annual Industrial Advisory Board meetings; once in the fall and once in the spring. Meeting locations will be determined at the previous IAB meeting, or at least six months in advance. Regions/cities will be identified that have a significant concentration of IAB members and a closing survey will be held at the end of each semi-annual meeting to determine preferences for the next meeting location. A rotation schedule for meeting locations will be put in place that systematically alternates between different regions to ensure fair access to all members. In extraordinary circumstances, as determined by the Center Director and the IAB, the semi-annual IAB meetings may be held remotely.

The Center Director, in consultation with the Academic Leadership Team and the IAB, will establish the schedule of activities and meetings for the Center including establishing the agenda for the semi-annual IAB meetings.

All Center projects and meetings are confidential and closed to the public. Attendance is limited to representatives of Industrial Member organizations that have paid the annual membership fees and signed a membership agreement or executed an MPIR/IAA with NSF before the meeting date and member Academic Institutions. Additional participants in Center meetings include, but are not limited to:

- Project Principal Investigators who manage specific research projects funded by the Center;
- Administrative support staff provided by the Academic Institutions to provide a reasonable level of clerical and accounting support for the operation of the Center; and
- An Evaluator to provide an independent assessment of the operation of the CARFS to the Center's NSF Program Officer, as per NSF guidelines.<sup>2</sup>

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<sup>2</sup> The support of the NSF-appointed Assessment Coordinator is managed independently by NSF. Centers are required to provide all necessary data and materials to the Center Evaluator in a timely fashion, so that the Evaluator can fulfill his or her responsibilities.

In the event a prospective member would like to attend, that organization or academic institution must sign a non-disclosure agreement (“NDA”), effective until canceled, and will not participate in IAB voting.

### *Section 2 – IAB Meetings*

The IAB shall meet twice annually (as per IUCRC guidelines) during the semi-annual IAB meeting to fulfill its responsibilities.

The closed session of the IAB meeting will be organized and led by the IAB Chair or appointed representative.

At all meetings of the IAB, two-thirds of the Full and Half Industrial Members of the IAB will constitute a quorum for the transaction of business.

All representatives of the Full and Half Industrial Members may participate in discussions of all matters before the Board, but only the authorized representatives of Industrial Members may vote on issues before the IAB. In extraordinary circumstances, as determined by the Center Director and the IAB, these meetings may be held remotely. Industrial Members are expected:

- to physically attend both semi-annual IAB meetings. Video- or teleconference participation during project selection procedures is discouraged but may be acceptable under extraordinary circumstances.
- to participate in the process of reviewing and recommending research to be funded; and
- to vote on research projects and other research matters before the IAB.

## **Article 7 – Research Project Selection and Progress Reports**

### *Section 1 – Selection of Research Projects*

Projects will be proposed to the IAB by Site Directors at the semiannual Center Meetings, and project funding allocations will be determined by the Center Director based on IAB project selection recommendations and input from the Academic Leadership Team using a priority driven ranking mechanism designed to ensure the allocation of funds aligns with the strategic objectives and priorities.

Each project proposal submission will outline the project’s objectives, expected outcomes, resource requirements, and alignment with the IUCRC goals. The IAB and Center Sites will collaboratively establish a set of strategic priorities and evaluation criteria that will guide the allocation of funds. These priorities should be based on the IUCRC’s current needs, industry trends, and long-term objectives. IAB members, review and score each project proposal based on the established priorities and evaluation criteria.

IAB members shall have project recommendation voting rights based on the amount of their individual membership contributions. Collaborative proposals across academic sites are encouraged and all recommended projects must have votes from multiple IAB members. Following the evaluation, the IAB will compile a ranked list of recommended projects based on their scores and alignment with priorities. This ranked list identifies which projects should be funded and in what order of priority. The IAB will communicate the funding recommendations to the Center Director who working with the IAB Chair will finalize project selections and notify project proposers, providing feedback on the evaluation process and rationale for selections. The IAB and Academic Leadership will regularly review and adjust the strategic priorities and evaluation criteria to adapt to changing industry dynamics and IUCRC goals. The Principal Investigators will be identified in the specific project proposals.

The Center will only consider research projects that are not a duplicate of, or substantially similar to federal awards received by researchers participating in the Center's activities.

Where conflicts exist in matching voted allocation to project funding requirements, the Academic Leadership Team will work as a group and with the IAB to support IAB member needs at all Sites and to optimize the Center-wide impact of funding decisions.

Funds are defined as NSF funds provided to the Site, plus all funds (program income) provided by IAB members to Sites and Affiliate Sites. The Site Directors will control the funds at their Site. In the event a Principal Investigator changes institutions and the grant is transferred to another institution that joins CARFS, the new institution accepts all responsibilities to follow all applicable NSF policies, including those that apply to remaining program income.

### *Section 2 – Project Progress Reports*

Principal Investigators of awarded projects report directly to the appropriate Site Director and provide progress reports to the IAB. Progress reports will be offered to interested IAB members no less than once a quarter (e.g., in person at semi-annual IAB meeting, through scheduled project update meetings with interested IAB members and/ or through written reports).

### **Article 8 – Intellectual Property**

Intellectual property includes patents, publications, copyrights, and licensing/royalty agreements, and the underlying data, research, project summaries, trade secrets and know how that gave rise to them (collectively “Intellectual Property”). The rules and program guidelines of the NSF IUCRC Program and the membership agreement shall be followed with regard to the administration of intellectual property.

Intellectual property that results from CARFS-funded research shall be the exclusive property of the research Site or Affiliated Site where the work was performed.

If an invention or discovery is made resulting from CARFS-funded research, the Principal Investigator shall submit an invention disclosure to the relevant department or office (i.e., Technology Transfer Office) associated with their Site. In conjunction with the Technology Transfer Office and/or university, the Principal Investigator will forward the invention disclosure to the Center Director, or his or her designee, who will then forward the disclosure to the currently paid Industrial Members who have a signed membership agreement on file with the CARFS (or executed a MIPR/IAA through NSF).

Industrial Members shall have 90 days from receipt of an invention disclosure to notify the disclosing University of the member's desire to enter into a non-exclusive royalty-free license.

The entitlement of Full Industrial Members to these patent rights is contingent upon having an active membership at the time of the invention disclosure. Full Industrial Members who join the Center after a disclosure has been filed are not eligible to the same patent rights as those who were active in the program year of the invention's discovery. This also applies to Full Industrial Members whose membership has lapsed and rejoin the Center at a later date. Likewise, Full Industrial Members who terminate their membership prior to the end of the membership year waive their patent rights, and any right of notice of invention disclosures and publications. The Membership Agreement defines the requirements pertaining to publications.

Intellectual Property is confidential. Industrial Members that sign the membership agreement (or execute MIPR/IAA through NSF) agree not to disclose or disseminate any Intellectual Property to non-members outside the Center without written permission from the Center Director and the execution of an NDA of the receiving entity with CARFS.

## **Article 9 – Amendments**

The bylaws of the Center may be amended at any time by an affirmative vote of the Academic Leadership Team, with the consent of two-thirds of the IAB.

## **Article 10 – Hierarchy of Operational Documents**

The bylaws of the Center are subordinate to the IUCRC program guidelines for operating an IUCRC (including relevant NSF solicitation) and if a conflict is identified, the IUCRC guidelines shall be followed. The Center bylaws are similarly subordinate to the CARFS membership agreement and MOU, and if a conflict is identified, the CARFS membership agreement and MOU shall be followed. The MOU is subordinate to the IUCRC Membership Agreement and if a conflict is identified, the IUCRC Membership Agreement will be followed.