

## **Call for Participation for potential US-collaborators in the area of biomedical applications:**

### **“Wanted”:**

We are looking for research groups or companies working on biomedical applications with specific challenges/problems that could be solved with bio-based materials and our competences on label free imaging and interaction measurements.

## Call for Participation for potential US-collaborators:

**Deadline: April 15<sup>th</sup>, 2022**

The Academy of Finland has two partners in the United States: the National Science Foundation (NSF) and the National Institutes of Health (NIH). The Academy and the American funders have agreed to promote Finnish-American research collaboration in 2020–2024. Cooperation will be strengthened by funding research projects between American and Finnish parties in areas represented by the research flagships included in the [Academy's Finnish Flagship Program](#). The collaboration between the funders follows a lead agency model, with the US-agency reviewing applications and the Academy of Finland providing additional funding for Finnish PIs, thus enlarging the overall possible budget.

To support the utilization of these opportunities the Finnish-American Research & Innovation Accelerator (FARIA) launched in collaboration with the Academy of Finland a light-weight matching and preparatory program for US and Finnish researchers – the FARIAincubator.

### FARIAincubator

The FARIAincubator is a program that encourages the creation of joint project teams and prepares them to apply for funding. The preparation is conducted via a series of four online seminars which aim to share up to date information of the joint Finnish-US calls and coaching by experienced grant writers.

#### *Added value for participating researchers:*

- Reach new potential collaborators specific to your field of interest
- Qualify for joint Academy of Finland/NIH/NSF funding by partnering
- Stay up to date on funding criteria and application processes
- Increase the quality of your proposal and thereby success chances for funding

### How US-colleagues can participate:

#### *1. Read the short project idea and request for US-expertise:*

Finnish researchers submitted a draft research/project idea and description of the kind of collaborator expertise they are looking for. Have a quick look if your interests and expertise are a potential match.

## 2. Get in touch with the FARIA incubator team:

If interested, send a short email until April 15<sup>th</sup> to the program manager (Dr. Jérôme Rickmann; [Jerome.rickmann@aalto.fi](mailto:Jerome.rickmann@aalto.fi)) indicating:

- The proposal you are potentially interested in
- A short description of how you fit the searched profile

## 3. Next steps:

Dr. Rickmann will reach out to you and organize the “matching seminar”, which essentially is a zoom-session serving the Finnish PI to present the project proposal in a bit more detail and to discuss the idea with US-colleagues.

## 4. Program participation:

After the matching seminar participants can freely decide if they want follow the program and to continue to refine the initial ideas together. The participation is at all stages free of cost and no “hard commitment” to proposal submission is expected.

*The program is structured as follows:*

Step 1	Researcher matching seminar	April
Step 2	Academy of Finland Seminar: Joint calls with NSF and NIH	28 <sup>th</sup> of April
Step 3	Grant writing workshop	May/June
Step 4	Joint proposal development/refinement	June-August
Step 5	Academy of Finland Seminar: Updates on imminent calls	August**
Step 6	Submission of proposals	Fall 2022**

*\*\* Exact dates to be confirmed, depends on the Academy's budget situation and the timing of the next joint calls.*

## **Background of Initiative:**

The state governments of Maine, Michigan, Minnesota, and most recently Washington and Colorado have signed Memoranda of Understanding with Finland to increase collaboration in various areas of mutual interest. Other MoUs are in preparation. Research collaboration is highlighted and encouraged in all of them.

The Finnish-American Research & Innovation Accelerator (FARIA) is a US-focused RDI-network, which integrates, aligns and supports joint and associated actions of its Finnish member higher education institutions. FARIA comprises 16 Finnish higher education institutions - representing 92 % of Finnish research universities, and 89 % of the Finnish HE sector's RDI-power (measured in RDI funding).

FARIA is financed by the Finnish Ministry of Education and Culture and collaborates closely with the Finnish Ministry of Foreign Affairs to strengthen Finnish-US RDI-relationships.

FARIA is jointly coordinated by Aalto University and the University of Helsinki.

[www.faria.network](http://www.faria.network)

[USA - Academy of Finland \(aka.fi\)](http://USA - Academy of Finland (aka.fi))

## Proposal:

**Consent:** By submitting the form you consent that we share the here compiled information with academic institutions in the USA in order to find suitable colleagues for your idea.

Your research project idea?
<p>The use of plat-based materials in biomedical applications, such as drug and gene delivery and tissue engineering.</p> <p>The inherent properties of bio-based materials, like cellulose nanofibrils, bark extracts or lignin offer interesting opportunities for various biomedical applications.</p> <p>On material development, our competences include e.g. producing hydrogels from purely plant-based sources with controlled stiffness and producing plant-based foams and films with e.g. antimicrobial properties. We have extensively studied lignin nanoparticles and their use in various applications such as emulsions, adhesives, coatings, and energy storage but also for encapsulation and release of drugs.</p> <p>In addition to material development, we can <b>quantitatively</b> study (specific) interactions between materials and living cells using AFM force measurements and/or QCM-D and image materials and cells in liquid media (all <b>label free methods</b>). With these methods we have shown that stem cells proliferate in cellulose nanofibril hydrogels without differentiation due to lack of specific interactions with cellulose. Adsorbing certain proteins (e.g. laminin) to CNF surface leads to strong specific interactions.</p>
What (complementary) expertise are you looking for from US-partner?
<p>We are looking for research groups or companies working on biomedical applications with specific challenges/problems that could be solved with bio-based materials and our competences on label free imaging and interaction measurements. Our interest would be to find partners from the biomedical field to be eligible to apply for the AKA/NIH funding in the future.</p>
Which information you want the US-colleague to have about your expertise/background?
<p>PI: Prof. Monika Österberg, Head of Department of Bioproducts and Biosystems.  <a href="https://www.aalto.fi/en/department-of-bioproducts-and-biosystems/bioprodukt-chemistry">https://www.aalto.fi/en/department-of-bioproducts-and-biosystems/bioprodukt-chemistry</a>  <a href="https://research.aalto.fi/en/persons/monika-%C3%B6sterberg">https://research.aalto.fi/en/persons/monika-%C3%B6sterberg</a>  <a href="https://www.scopus.com/authid/detail.uri?authorId=6603618217">https://www.scopus.com/authid/detail.uri?authorId=6603618217</a></p>