

## **ABSTRACT: 2019 ELAM Institutional Action Project**

**Project Title:** Establish an International Collaboration Center in Occupational Safety and Health

**Name and Institution:** Tiina Reponen, Ph.D., Department of Environmental Health, College of Medicine, University of Cincinnati (UC)

**Collaborators and Mentors:** Shuk-Mei Ho, Ph.D.; Sergey Grinshpun, Ph.D.; Jurate Virkutyte, Ph.D.; Amit Bhattacharya, Ph.D.; Jay Kim, Ph.D., Susan Reutman, Ph.D.; Aimin Chen, Ph.D.

**Topic Category:** Research

### **Background, Significance of Project:**

Occupational safety and health (OSH) is an important but underappreciated discipline. Although the need for professionals in this field is solid and increasing, it is difficult to recruit qualified faculty and promising students. Also, the funding opportunities in this field in the US are limited. This project involves expanding the activities of the current regional Education and Research center to include international collaboration.

### **Purpose/Objectives:**

The long-term goal is to establish a World Health Organization Collaboration Center (WHO CC) in the field of OSH at the UC. The prerequisite for a WHO CC is to build a team with high scientific and technical standing and two years of prior collaboration with a partner in South or Central America. The primary outcome of this project is to create a team at UC and initiate a two-year pilot collaboration with an international partner.

### **Methods/Approach/Evaluation Strategy:**

Objective 1. Establish collaboration network within the College of Medicine and in the UC.

(1a) Define the goals and prepare a short description of the center; (1b) Contact and meet at least ten potential collaborators; (1c) Create a team of at least five collaborators from different disciplines.

Objective 2. Connect with the three existing WHO CCs in OSH in the USA.

(2a) Contact and interview the leader of each center; (2b) Refine the IAP plan based on feedback from the three other centers.

Objective 3. Initiate collaboration with a partner from South or Central America in the field of OSH.

(3a) Identify potential collaborators in South and Central America; (3b) Initiate regular web-meetings with the international partner; (3d) Outline a collaborative pilot project.

Objective 4. Seek funding for a pilot project

(4a) Identify sources for extramural funding; (4b) Start developing the proposal.

### **Outcomes/Results:**

Objectives 1-3 have been completed. A collaborative network at the UC has been established, the leaders of the three WHO CCs have been interviewed. A collaborator in Cayetano Heredia University (UPCH), Lima, Peru and a topic for a pilot project have been identified: "Development of integrated data visualization module for aerosols." The following potential funding sources have been identified: Fogarty, NIOSH, and NIH. The primary outcome of this project is the plan for the pilot project and establishing a Strategic Partnership with Peruvian University. The main long-term outcome will be the establishment of a WHO CC at the UC.

### **Discussion/Conclusion with Statement of Impact/Potential Impact:**

The WHO CC is expected to attract internationally recognized experts and expand the funding opportunities to international funding pools. This, in turn, will make the program more attractive to promising students, postdocs, and junior faculty in the USA.

## Tiina Reponen, Ph.D.

Department of Environmental Health, College of Medicine, University of Cincinnati, Ohio, USA

### Background

- Occupational safety and health (OSH) is an important but often underappreciated discipline.
- Although the need for professionals in this field is solid and increasing, it is difficult to recruit qualified faculty and good students.
- Limited funding is available in this field in the USA.
- University of Cincinnati houses one of the 18 Education and Research Centers (ERCs) that are funded by the National Institute for Occupational Safety and Health in the USA.
- ERCs are focused on interdisciplinary research and graduate training in the field of occupational safety and health. Each of the NIOSH centers serves the surrounding region; funding does not cover international collaboration.
- In contrast, the World Health Organization (WHO) funds about 800 collaborating centers (CCs) in 80 different countries. In the USA, there are three WHO CCs focused on occupational health.

#### GOAL

To expand the activities of the current regional Education and Research Center to include international collaboration.

### Approach

- Establish collaboration network within the College of Medicine and in the University of Cincinnati.
- Connect with the three existing WHO CCs in occupational safety and health in the USA.
- Initiate collaboration with a partner in South or Central America in the field of occupational safety and health.
- Identify sources of funding for a pilot project.

### Outcomes

- Five local collaborators are committed. They represent Medical, Nursing, and Engineering colleges.
- The leaders of the three US WHO CCs have pledged support.
- Several potential collaborators in South and Central America have been identified (see Fig.1).
- A pilot project with a collaborator in Cayetano Heredia University (UPCH), Lima, Peru has been outlined: "Development of integrated data visualization module for aerosols."
- Potential funding sources are identified: UC International, Fogarty, Health Effects Institute, NIH.

#### Specific focus areas identified:

- Health care workers' respiratory protection against infectious agents.
- Occupational exposure in electronic waste handling.
- Indoor air quality (specifically mold problems).
- Occupational safety and health in disaster response.

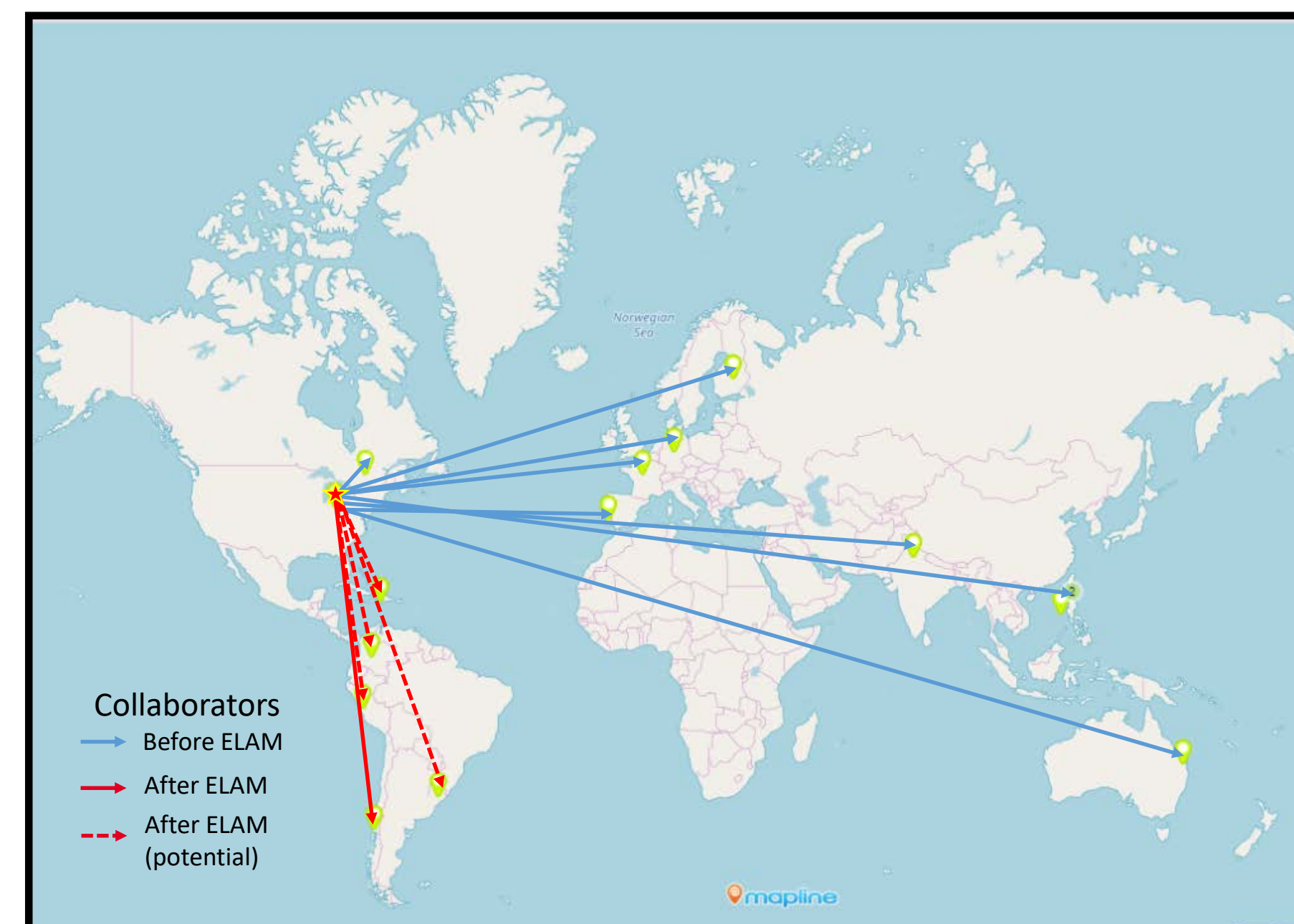
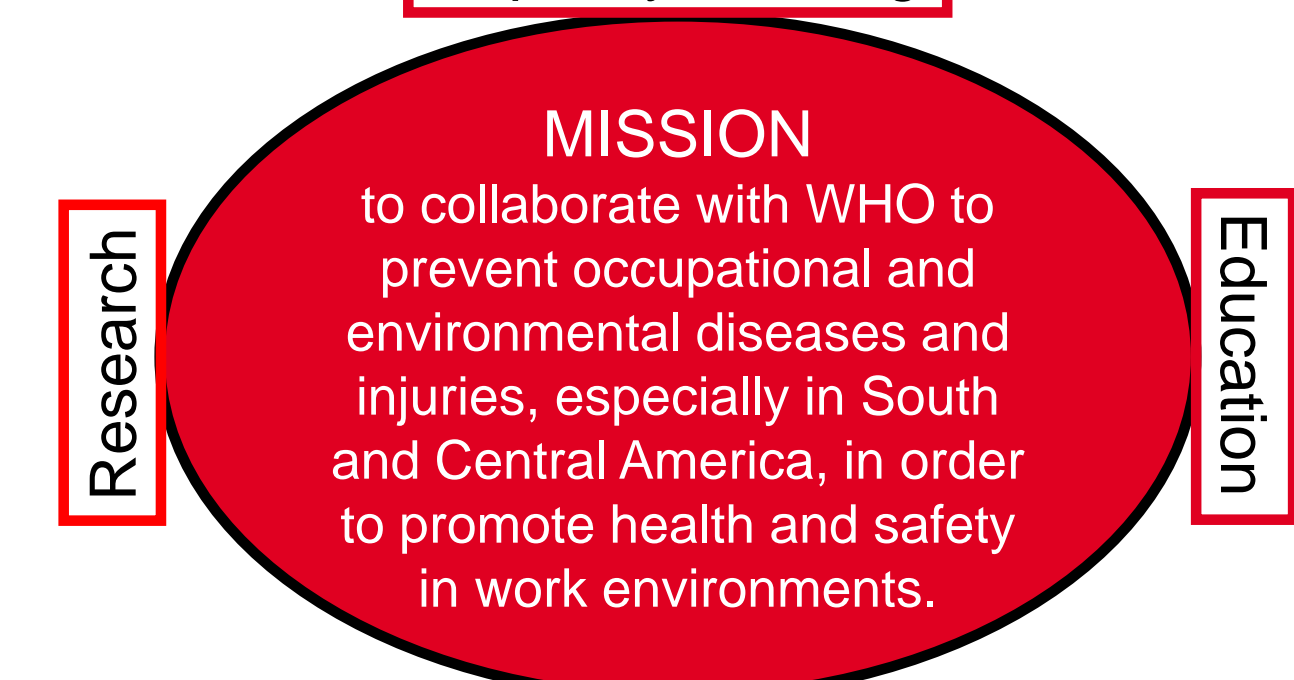


Figure 1. Collaborators before and after the ELAM project

### Outcomes

#### Capacity Building



#### Support WHO Activities

### Future Directions

The goals for the next two years are:

- Complete a pilot project with the Peruvian partner.
- Identify additional partners in South and Central America.
- Apply for a WHO Collaboration Center status.

### Expected Impact

The WHO CC is expected to attract internationally recognized experts and expand the funding opportunities to international funding pools. This, in turn, will make the OSH program more attractive to promising students, postdocs, and junior faculty at the University of Cincinnati.

### Acknowledgements

Collaborators: Shuk-Mei Ho, Ph.D.; Sergey Grinshpun, Ph.D.; Jurate Virkutyte, Ph.D.; Amit Bhattacharya, Ph.D.; Jay Kim, Ph.D., Susan Reutman, R.N., Ph.D.; Aimin Chen, Ph.D.  
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### Questions or Comments?

Please contact Dr. Tiina Reponen at [Tiina.Reponen@uc.edu](mailto:Tiina.Reponen@uc.edu)