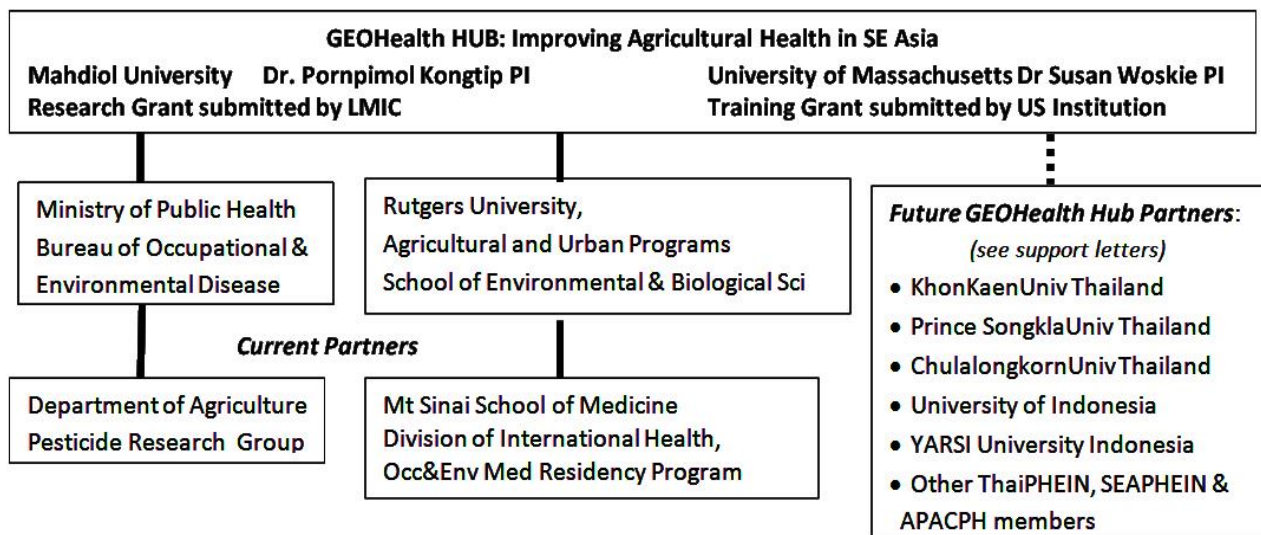


Mahidol and UMass Lowell Joint Center for Work, Environment, Nutrition and Development (CWEND)

GEOHealth Hub for Occupational and Environmental Health:

Improving Agricultural Health in Southeast Asia.

The U.S. National Institutes of Health (NIH) through the Fogarty International Center has funded two paired grants to the GEOHealth Hub, one for research and one for training focused on a core set of common research and training topics that address agricultural health issues in the region. The GEOHealth Hub partners are the focal point for all proposed research, research capacity-building, training, and collaborative activities, in which partner institutions may participate.



Training Program

The ILO reports that over 60% of the world's agricultural workers are in developing countries, with the majority in the Asia Pacific region. Within Thailand, over 40% of the working population is in agriculture despite the increasing industrialization of the economy. Our examination of informal sector work in Thailand has shown that the majority of agricultural workers are self-employed (informal sector), with little economic security and protected by no formal occupational health and safety regulations. Thus they represent a population in need of research to practice and research to policy initiatives. The field of agricultural health potentially touches on many disciplines and topics; however the GEOHealth hub funder (NIH) required an in-depth research focus with associated training. Based on our previous work, our initial focus will be on the research question of whether some widely used pesticides in Southeast Asian agriculture act as endocrine disrupters, altering endocrine hormone homeostasis, resulting in increased risk of metabolic syndrome, obesity and metabolic-related disorders such as heart disease, diabetes, and stroke, all of which are on the rise in Thailand.

The matched training program for the GEOHealth Hub focuses on institutional capacity building through a program of mentored research training for junior faculty and medical staff at our partner institutions (initially Mahidol University and the Thai Ministry of Public Health). Each trainee will have Mentorship Team (Thai and U.S. mentors). The training program will

include: 1) 1 month Introduction to the GEOHealth program and agricultural health issues at Mahidol; 2) 6 months of research specific training and mentorship in the U.S. (UMass, Rutgers or Mt. Sinai), resulting in a funded interdisciplinary research proposal; 3) data collection, analysis and manuscript(s) supported by Mentorship Team.

The program is designed to establish an international, interdisciplinary collaborative research group that will continue to work together in the future. The training program will link with our proposed research project through extensions of the current project aims and pilot projects that extend the scope of the research in agricultural health, aiding the GEOHealth Hub to expand its research capacity. We will use short term training (short courses/seminars) to recruit future institutional partners through existing public health networks (ThaiPHEIN, SEAPHEIN and APACPH) and to create opportunities for Hub members to interact and develop ideas for new approaches to agricultural health research. Expected increased capacity will be reflected by publications, extramural funding, multidisciplinary collaboration, new research areas and policy changes.

The training program will:

1. Provide 15 trainees with advanced training and mentored research opportunities in Agricultural Health related disciplines
2. Promote Research to Policy and Research to Practice initiatives by trainees
3. Enhance trainees professional development in research and project management skills
4. Provide short term training to potential Hub partners through the ThaiPHEIN, SEAPHEIN and APACPH networks
5. Build institutional capacity within the CWEND-GEOHealth Hub for sustainable interdisciplinary research that will impact policy and improve health in Southeast Asia.

More details on the program, research areas and application procedures can be found at our website: <http://www.geohealthseasia.org>

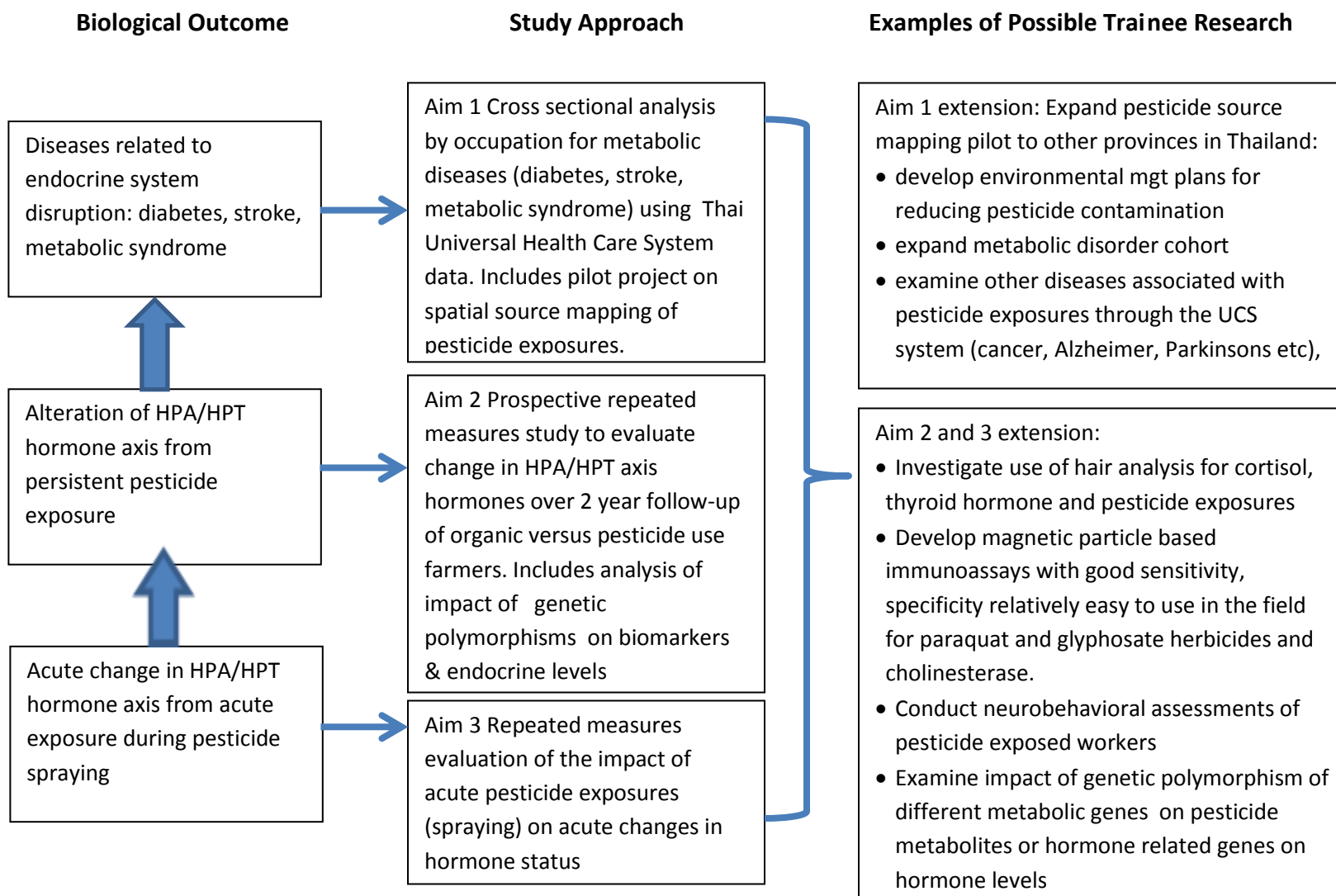
Questions can be sent to:

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Dr Susan Woskie at UMass Lowell (Susan_Woskie@uml.edu)

or to CWEND.Geohealth@gmail.com

Figure 1: The initial focus of our trainees research will be to expand the core research of the CWEND GEOHealth Hub research program:

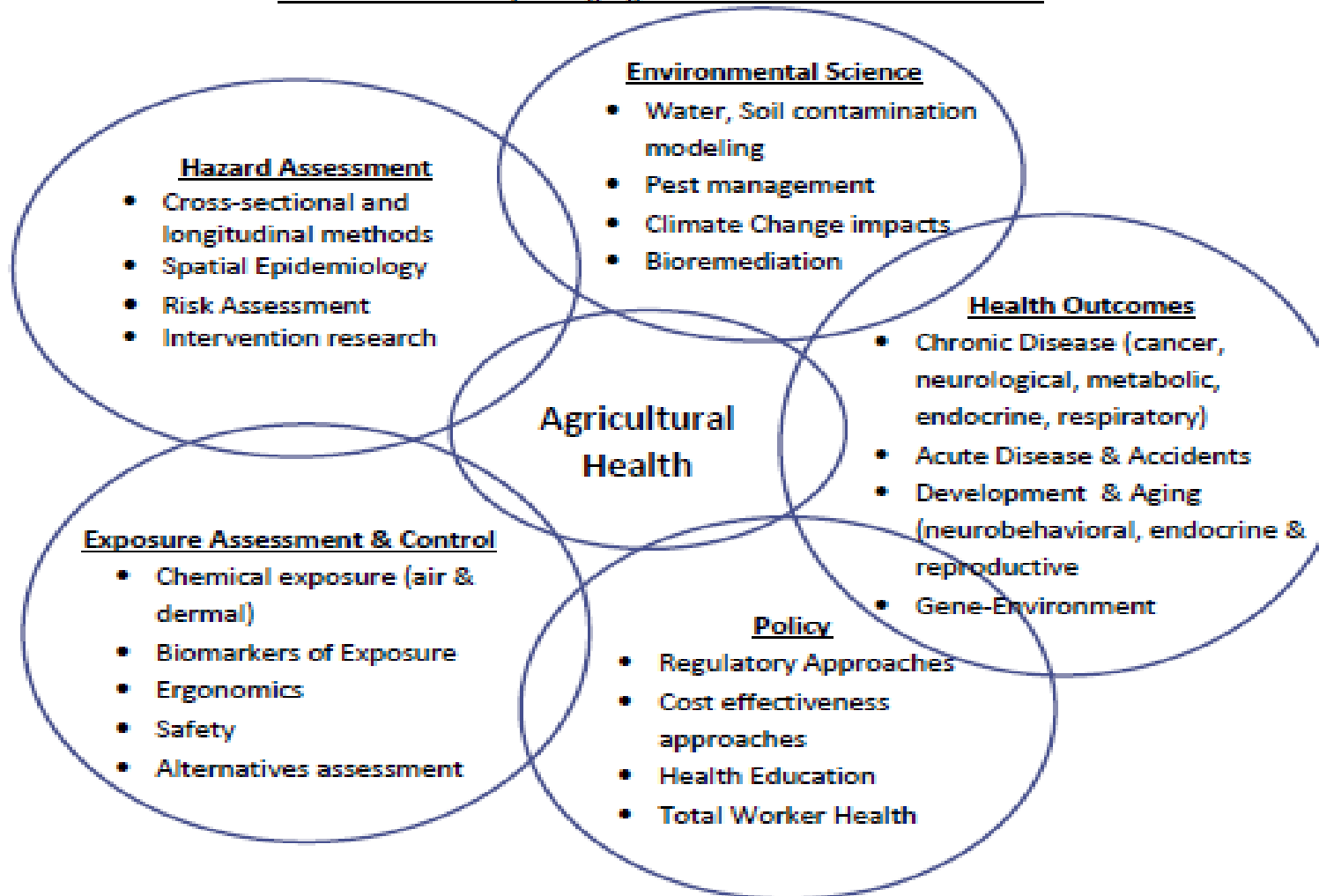


As the GEOHealth Hub research progresses, there may also be opportunities to begin to expand the research to create pilot work that will in turn position the Hub to expand its research portfolio. For example some future research areas of interest that trainees may want to work on include:

- New exposure assessment methods (dermal)
- Pesticide related biomarkers of chronic exposure
- Other chronic disease risks among agricultural workers through linkages with several limited but specific disease registries
- Intervention research
- Health disparities research among migrant agricultural workers
- Climate change and agricultural health
- Disaster response research in occupational and environmental health
- Healthy Homes research

Figure 2

GEOHealth HUB: Improving Agricultural Health In Southeast Asia



Training Grant Mentors:

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