



## invitation

**Wednesday**  
**19 October 2016**  
**17:30**

CII Building  
1st floor  
95 Irenes Street  
3041 Limassol

The Cyprus International Institute for Environmental and Public Health of the Cyprus University of Technology invites you at a lecture on:

### **The Role of Honeybees (*Apis mellifera*) in Understanding the Toxicity of Sub-lethal Pesticide Exposure in Mammals**

Speaker:

**Chensheng (Alex) Lu,**  
*PhD, MS Associate Professor of Environmental Exposure  
Biology Department of Environmental Health  
Harvard T.H. Chan School of Public Health*



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### **Biosketch:**

My research focuses on assessing pesticide exposure and its effects on ecological and human health. I am particularly interested in utilizing innovative research platforms to characterize pesticide exposures using biomarker approach, and then seek for mechanistic interpretations for the adverse health effects. I am interested in using metabolomics as a tool to elucidate the perturbation of metabolic pathways by chronic low-level exposure of pesticides in children. My other recent research extends to the exploration of the association between the losses of honeybees and the hazards of neonicotinoids, a group of the most commonly used insecticides worldwide. My public health service involves in implementing practical methodologies, such as the promotion of integrated pest management (IPM) and organic food consumption, at the community level aiming to mitigate pesticide exposures in vulnerable sub-populations, such as young children. I am also actively engaging in public speaking events to translate research findings on the subject of pesticides and human/ecological health to general publics. Before joining Harvard T.H. Chan School of Public Health in 2008, I was an Assistant Professor at Rollins School of Public Health, Emory University, from 2004-2008. I received my PhD degree from the School of Public Health and Community Medicine at the University of Washington, Seattle WA, in 1996. I have served as an Associate Editor for Environmental Health Perspectives (EHP) between 2006 and 2016, and on several committees at the federal and state levels, including the Scientific Advisory Panel (SAP) to US Environmental Protection Agency under the authority of the Federal Insecticides, Fungicides, and Rodenticides Act (FIFRA) since 2004 and the National Academy of Science (NAS) since 2013.

### **Abstract:**

#### **The Role of Honeybees (*Apis mellifera*) in Understanding the Toxicity of Sub-lethal Pesticide Exposure in Mammals**

In the presentation, I aim to demonstrate our ongoing research in biomarker development for linking sub-lethal pesticide exposure to health effects. We are utilizing the data obtained from the ecological studies using honeybees as the insect model in order to elucidate the plausible mechanism relevant to sub-lethal exposure and toxicity of neonicotinoids, a group of the most widely use insecticides in the world. I will focus on the discussion of how sub-lethal neonicotinoids exposure could impair mitochondrial DNA that leads to detrimental effects in bees, and the implication to human health studies.