# University of Chicago

**The Committee on Genetics, Genomics & Systems Biology**

**2012 - 2013 Seminar Series**

**BIOLOGICAL RESEARCH FOR THE DEVELOPING WORLD**

**Tuesdays, 4:00 p.m., CLSC 101**

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**Co-Sponsored by The Global Health Initiative**

In this exciting new seminar series, six renowned researchers will visit Chicago from December 2012 through June 2013 to speak on the theme of how basic biological research can engage major challenges in the developing world. Each researcher focuses on problems of immediate importance to the peoples of developing countries, including vaccine development, emerging viruses, crop plant diseases, malnutrition, and animal conservation. All of the speakers have significant projects on the ground in countries such as India, Bangladesh, Uganda and Zimbabwe. They will discuss their basic research, its application to real world problems, and the challenges of conducting and funding research in developing world countries. The goal of this series is not only to invite stimulating researchers to our campus, but also to provide our community with a primer on how basic scientific research can effect change in the developing world.
The Speakers:

December 4, 2012
Andrew Camilli - Sackler School of Medicine Tufts University
Translating the biology of Vibrio cholerae into prevention of cholera
Dr. Camilli studies the life cycle of Vibrio to identify strategies for disease prevention. They are working to develop a new type ofacellular, intranasal vaccine for cholera that may translate into a highly effective, inexpensive vaccine. Dr. Camilli has long-standing collaborative research projects in Bangladesh.

February 5, 2013
Andrew Read - Pennsylvania State University
Managing Evolution in the developing world: drug resistance from math, to mouse, to India.
Dr. Read's work addresses the following questions: Can some vaccines drive the evolution of more virulent or more infectious pathogens? Can we slow the evolution of drug-resistant pathogens? Can we make evolution-proof insecticides for malaria control? Can entomopathogenic fungi be used to produce cheap organic pesticide for sustainable malaria control?

March 5, 2013
Mark Manary - Washington University in St. Louis
Environmental Enteropathy
Dr. Manary's professional goal is to ‘fix malnutrition for kids in Africa’. To this end, he explores the basic pathophysiology and metabolism of malnutrition, including studies of gut microbiota and metabolomics as well as zinc homeostasis. He has developed ready-to-use therapeutic food to heal tropical enteropathy, a non-specific inflammation of the small bowel present in a significant fraction of the world's children. In addition, Manary works to genetically modify plants for increased nutrient content.

April 2, 2013
Jonathan Lynch – Penn State University
Roots of the Second Green Revolution
Dr. Lynch is a plant biologist working to develop crops with superior yield at low soil fertility. Such crops are essential for food security in developing nations where fertilizer is prohibitively expensive and soils are nutrient-poor. Dr. Lynch's work has resulted in the generation of new genotypes of bean and soybean with substantially better yield in low phosphorus soils of Africa, Asia, and Latin America. They currently have collaborative projects in Mozambique, Malawi, South Africa, China, Ecuador, Honduras, Nicaragua, and Colombia.

May 7, 2013
Todd Disotell - New York University
Molecular Genetic Approaches in Conservation
Dr. Disotell focuses on primate evolution and conservation. He will discuss his use of NexGen approaches to obtain critical information about primate migration patterns, sources of dietary components, and other data critical to conservation efforts in Africa and South America.

June 4, 2013
Art Reingold - University of California - Berkeley
The interconnection between training and research in building collaborations with developing country institutions: examples from the world of HIV/AIDS, TB and Malaria.
Dr. Reingold is an epidemiologist studying HIV/AIDS, tuberculosis and emerging viruses. As a fitting finale to the series, Dr. Reingold will discuss how to create successful research collaborations between high and low income countries, addressing local priorities while advancing research in the area of human health.

Details:
All seminars will be held at 4PM in Cummings Life Sciences Center, Room 101. Please contact Sue Levison (slevison@bsd.uchicago.edu) if you would like to meet with any of the speakers and we will do our best to include you in their schedule.

Persons with disabilities who need assistance, please contact the GGSB office at 773.702.2464