

CLIMATE CHANGE, DISEASE ECOLOGY, AND SOCIAL IMPACTS

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SPEAKER BIOS

RAFFI AROIAN is a professor at UC San Diego in the Section of Cell and Developmental Biology and is also the founder of the Wormfree World Institute. He received his BS in Physics from the Massachusetts Institute of Technology and his PhD in Biology from the California Institute of Technology. His current group at UCSD researches infectious diseases and parasites. Their research is dedicated to discovering new cures and new basic information that leads to cures for major diseases that afflict humankind, namely intestinal roundworms and bacterial pathogens. Research is targeted at newer cures for bacterial infections that are becoming more difficult to treat because of antibiotic resistance.

PETER ATKINSON is the Director of, and professor for, the Center for Disease Vector Research at UC Riverside. He is also the Director of the Cell, Molecular and Developmental Biology Graduate Program. Dr. Atkinson received both his BS and PhD in Genetics from the University of Melbourne, Australia. The overall goal of his research is to develop molecular-based strategies to genetically control pest insects. He has been involved in genetic research with pest insects for many years and has published numerous works on his findings and projects.

CHRISTOPHER BARKER is an Assistant Adjunct Professor in the Center for Vectorborne Diseases at the University of California, Davis. He studies the ecology and epidemiology of mosquito-borne virus transmission using statistical and mathematical modeling approaches, with particular emphasis on the West Nile virus system. Dr. Barker received his MS in Entomology from Virginia Tech and an MS in Epidemiology and PhD in Entomology from UC Davis. His interests include climate and landscape factors driving arbovirus transmission and receptivity for invasive pathogens and vectors, evaluating surveillance and control strategies, and improving our ability to predict outbreak risk. He has been studying arboviruses and their mosquito vectors for the last 16 years.

HOYT BLEAKLEY studies economic development, human capital, economic history, and international macroeconomics. This has led him to do research ranging from the eradication of malaria to language skills and immigration. Bleakley has received fellowships from the National Science Foundation and the National Institute for Child Health and Human Development, as well as a President's Award for Outstanding Service from the Federal Reserve Bank of Boston. He has received grants from the National Institutes of Health, the FDIC Center for Financial Research and the Pacific Rim Research Program at the University of California. His articles have been published in the various professional journals such as the Review of Economics and Statistics, the Quarterly Journal of Economics, and the New England Economic Review. He earned both a bachelor's degree in 1995 and a PhD in 2002 at the Massachusetts Institute of Technology. He joined the Chicago Booth faculty in 2005.

JOSEFINA COLOMA has a BS in Biology from the Catholic University in Quito, Ecuador and a PhD in Microbiology and Molecular Genetics from the University of California, Los Angeles where her research focused on engineering of therapeutic monoclonal antibodies. After postdoctoral work at the School of Medicine at UCLA, she joined the Division of Infectious Diseases, School of Public Health, University of California Berkeley where she is an academic scientist on the topic of dengue virus on several international scientific projects carried out in Nicaragua and in Ecuador. Since 1993, with Eva Harris, Dr. Coloma has worked transferring scientific capacity to the developing world through the AMB/ATT program (Applied Molecular Biology/ Appropriate Technology Transfer) that led to the creation of the Sustainable Sciences Institute in 1998 where she is the Executive Director

JOSHUA GRAFF ZIVIN is professor of economics at UC San Diego, where he holds faculty positions in the School of International Relations and Pacific Studies and the Department of Economics. He is also a Research Associate at the National Bureau of Economic Research (NBER) and Research Director for International Environmental and Health Studies at the Institute for Global Conflict and Cooperation (IGCC). In 2004-2005, he served as Senior Economist for Health and the Environment on the White House Council of Economic Advisers. Prior to joining UCSD in 2008, he was an Associate Professor of Economics in the Mailman School of Public Health and the School of International and Public Affairs at Columbia University, where he served as the Director of the PhD Program in Sustainable Development. He received his PhD from the University of California, Berkeley.

KRISTEN GUIRGUIS is a Project Scientist at Scripps Institution of Oceanography where her research focuses on weather extremes, particularly heat waves and cold waves. She received the Postdocs Applying Climate Expertise (PACE) Fellowship in 2010 from the University Corporation for Atmospheric Research (UCAR) to study the health impacts of California heat waves with host partners SIO and the California Environmental Protection Agency with the goal of helping to improve heat warnings. While at Scripps, she has also been involved in extreme weather predictability for energy applications. She received her B.S. in Earth Sciences from UCSD in 1998 and her Ph.D. in Hydrology and Fluid Dynamics from Duke University in 2009.

GORDON MCCORD is an Assistant Professor at the University of California, San Diego's School of International Relations and Pacific Studies. His interests include economic growth and poverty reduction, health systems in resource-constrained settings, the role of geography in economic dynamics, and the interaction of epidemiology and poverty (particularly in the case of malaria). Prior to his doctoral work in sustainable development, Gordon worked as Special Assistant to Jeffrey Sachs at Columbia University's Earth Institute and at the United Nations Millennium Project. He completed his Ph.D. degree in Sustainable Development from Columbia University in May 2011.

SARA PAULL is a disease ecologist whose research primarily focuses on the influence of anthropogenic change on disease risk in both human and animal systems. She is currently a postdoctoral research associate in the Ecology and Evolutionary Biology department at the University of California, Santa Cruz where she is working with Marm Kilpatrick to study the role of climate in interannual variation of human cases of West Nile Virus. Sara also completed a

PhD and post-doc in the Ecology and Evolutionary Biology department at the University of Colorado, Boulder where she studied how climate change can influence the timing and consequence of host-parasite interactions using a trematode parasite and its amphibian hosts as a model system.

DAVID PIERCE obtained his B.A. in Physics from the University of California, Santa Cruz, then worked for several years in the memory products division of Intel Corporation before going to graduate school at the University of Washington. He received an M.S. in Physical Oceanography in 1989, followed by a Ph.D. in 1993 studying laboratory models of rotating geophysical convection regimes. After that he joined the staff in the Climate Research Division of the Scripps Institution of Oceanography, where he has worked on such problems as El Nino prediction, thermohaline variability, large-scale numerical modeling of the ocean and atmosphere, understanding climate variability in the North Pacific, and global climate change. Dr. Pierce constructed and manages the Scripps Institution of Oceanography El Nino forecast system, is an author on numerous papers in the peer-reviewed literature, a contributing author to the 2007 and 2013 United Nations IPCC climate assessment reports, a reviewer for the U.S. Southwestern Climate Assessment, and has given many talks on climate prediction, variability, and change to student, civic, and community groups throughout the region.

ELIZABETH WINZELER is a Professor of Pediatrics and Director of Translational Research at the UC Health Sciences Center for Immunology, Infection, and Inflammation. Her laboratory has traditionally used "big data" approaches to solve problems in public health at the molecular level. They have created and evaluated large chemical screening datasets to help create new drug candidates for the treatment of malaria. They are currently using comprehensive whole genome sequencing approaches to find novel drug targets, and are using genomics to find genes involved in pathogen drug resistance.