

Assessing and Improving Strategies for Preventing, Countering, and Responding to Weapons of Mass Destruction Terrorism: Biological Threats

Committee

Jacqueline Fletcher

Chair

Jacqueline Fletcher, Regents Professor Emerita, Oklahoma State University, is a consultant and advocate for agricultural biosecurity. While at OSU she served as Director of the National Institute for Microbial Forensics & Food and Agricultural Biosecurity (NIMFFAB), which addresses high priority national issues in plant pathogen forensics, crop biosecurity and food safety. She is internationally recognized for research on virulence and insect transmission of phytopathogenic bacteria; relationships between foodborne human pathogens and plants; and microbial forensics and agricultural biosecurity. As President of the American Phytopathological Society (APS) following September 11, 2001, she led APS responses and input to National biosecurity initiatives. She founded and chaired both the APS Microbial Forensics Working Group and the APS Food Safety Working Group. She served as a member of the Forum on Microbial Threats at the National Academies of Sciences, Engineering, and Medicine, and remains active on several federal biosecurity advisory panels including the National Science Advisory Board on Biosecurity. Dr. Fletcher was named a Fellow of the American Phytopathological Society (2005) and a Fellow of the American Association for the Advancement of Science (2007). She received a B.S. in Biology from Emory University, M.S. in Botany from the University of Montana, and Ph.D. in Plant Pathology from Texas A&M.

Denise N. Baken

Member

Dr. Denise N. Baken is President of Shield Analysis Technology, LLC and founding member of the Institute for Biodefense Research. Her independent research investigates the public health implications of dual use research of concern. Among her research projects are: the Microbial Forensics Advances within the ISIS and Al Qaeda Territories of the Red Sea; potential impact of nanotechnology on bioterrorism; and the implications of hypothesis that al Qaeda executes its missions using a business method approach on fragile states where al Qaeda exists. During her investigations, she has identified a value factor for mission execution, communication/influence factor for mission activity, WMD list potential and profile of WMD selection criteria. Subsequent work on an Office of Net Assessment effort led to the development of the Biotechnology Industry Competitive Intelligence Terrorism Threat Analysis Tool, a biotechnology innovations and advancement monitor used to estimate the penetration of mal-intentioned organizations or individuals who seek to exploit the industry's capabilities to threaten the interests of the United States and its allies. Dr. Baken retired as an Army Colonel after 28 years and a career that included positions as Chief of Staff for the Special Assistant to the Deputy Secretary of Defense for Chemical and Biological Protection where she developed and implemented chemical and biological warfare healthcare policies for the Department of Defense, and Biodefense Director for the Center for Innovative Technology.

Rita R. Colwell

Member

Dr. Rita Colwell is Distinguished University Professor at the University of Maryland at College Park and Founder of CosmosID, Inc. Her interests are focused on global infectious diseases, water, and health. She has authored or co-authored 20 books and more than 800 scientific publications. Dr. Colwell served on the National Science Board and as the 11th Director of the National Science Foundation. Dr. Colwell is a member of the National Academy of Sciences, Royal Swedish Academy of Sciences, Royal Society of Canada, Royal Irish Academy, American Academy of Arts and Sciences, and American Philosophical Society. She has been awarded 63 honorary degrees and is the recipient of the US National Medal of Science, Japan Order of the Rising Sun, Gold and Silver Star, Stockholm Water Prize, Chevalier de la Légion d'Honneur, and Lee Kuan Yew Water Prize of Singapore.

Asha George

Member

Asha M. George, DrPH, is the Executive Director of the Bipartisan Commission on Biodefense, cochaired by former Senator Joe Lieberman and Governor Tom Ridge. She served on the Biden-Harris Transition Team, addressing biodefense as a member of the Department of Homeland Security Agency Review Team. Previously, she served in the US House of Representatives as subcommittee staff director and senior professional staff at the Committee on Homeland Security. Dr. George is a nationally recognized weapons of mass destruction, biodefense, and public health security expert. She conducts biodefense research and makes policy and oversight recommendations to counter biological threats. Dr. George also served on active duty in the U.S. Army as a military intelligence officer and as a paratrooper. She is a decorated Desert Storm Veteran. Dr. George holds a Doctor of Public Health from the University of Hawaii, a Master of Science in Public Health from the University of North Carolina at Chapel Hill, and a Bachelor of Arts from Johns Hopkins University. She is also a graduate of the Harvard University National Preparedness Leadership Initiative.

Margaret E. Kosal

Member

Dr. Margaret E. Kosal is Associate Professor in the Sam Nunn School of International Affairs at Georgia Institute of Technology. Her research explores the relationships among technology, strategy, and governance. She focuses on two, often intersecting, areas: reducing the threat of weapons of mass destruction (WMD) and understanding the geopolitics of emerging technologies. Formally trained as an experimental scientist, Kosal earned a doctoral degree in Chemistry from the University of Illinois at Urbana-Champaign (UIUC) working on biomimetic and nano-structured functional materials. She is also the co-founder of a sensor company, where she led research and development of medical, biological, chemical sensors and explosives detection systems. Kosal previously has served as a Senior Advisor to the Chief of Staff of the U.S. Army, as Science and Technology Advisor within the Office of the Secretary of Defense (OSD), and as an Associate to the National Intelligence Council (NIC). She is the recipient of multiple awards including the Office of the Secretary of Defense Award for Excellence. Her numerous publications include “Nanotechnology for Chemical and Biological Defense,” the first and most rigorous to consider how nanotechnology may enable or be adapted for defensive purposes, along with potential mis-use and proliferation risks. In January 2017, she was appointed the Editor-in-Chief of the Cambridge University Press journal, *Politics and the Life Sciences*.

Erik Prentice

Member

Erik Prentice is the owner and CEO of 6th Floor Insights (6FI), a consulting firm providing pharmaceutical and government clients with information and advice about advances in biotechnology. Prior to founding 6FI, Erik advised government and pharmaceutical clients as the Senior Vice President for Healthcare and Lifesciences at Proactive Worldwide. Additionally, he spent 10 years in the U.S. Intelligence Community, first at the Defense Intelligence Agency, then at the National Counterproliferation Center, focusing on biological threats – both intentional and naturally occurring. Erik was a contributing author to the 2009 National Strategy for Countering Biological Threats and the senior author of the 2010 National Intelligence Strategy for Biological Threats. For his government service, Erik was awarded the Joint Civilian Service Achievement Award and the Director's Award from the Director of National Intelligence.

Erik holds PhD in Microbiology and Immunology from Vanderbilt University where he worked on mechanisms of coronavirus replication complex formation and function. During his training, Erik collaborated with the NIH Laboratory of Infectious Diseases and the United States Army Medical Research Institute for Infectious Disease to characterize SARS-CoV-1 isolates

Ronald Schouten

Member

Ronald Schouten, M.D., J.D. is Director of the Forensic Psychiatry Fellowship at St. Elizabeths Hospital in Washington, DC, and Director Emeritus of the Law & Psychiatry Service (LPS) of the Massachusetts General Hospital. Dr. Schouten previously served as Director of LPS and is an Associate Professor of Psychiatry at Harvard Medical School. He is a Board-Certified Psychiatrist with Added Qualifications in Forensic Psychiatry and is a Member of the Bar of the State of Illinois.

Dr. Schouten participated in the Office of the Director of National Intelligence (ODNI) 2008 Summer Hard Problem Program (SHARP) entitled "Biological Warfare Perpetrators: Rationality, Culture, and Likelihood of Discovery." In 2009, he again participated in SHARP, studying "Nuclear Attribution in Nuclear Forensics and Intelligence Analysis." He has presented to the National Science Advisory Board for Biosecurity, as well as the American Association for the Advancement of Science, regarding personnel reliability programs and insider threat. He has served as a panelist at workshops on those topics sponsored by multiple federal agencies as well as the Nuclear Threat Initiative and the Nautilus Institute. From 2009 to 2011, Dr. Schouten served as a member and report co-author of the Amerithrax Expert Behavioral Analysis Panel.