Singapore-US Strategic Dialogue on Biosecurity
June 10-11, 2014

Professional Biographies of Meeting Participants

Kenneth BERNARD
Seth CARUS
Teck-Mean CHUA
Anita CICERO
Richard DANZIG
Julie E. FISCHER
Gigi GRONVALL
KWA Chong Guan
William HOSTYN
Noreen HYNES
Tom INGLESBY
Barbara JOHNSON

Kenneth BERNARD, MD

Rear Admiral Kenneth Bernard (USPHS, Ret.) served at the White House from 2002-2005 as Special Assistant to the President for Biodefense and as Assistant Surgeon General. From 2001-2003 he was head of the U.S. Delegation negotiating the Framework Convention on Tobacco Control. From 1998-2001 he was Senior Adviser for Security and Health on President Clinton’s National Security Council Staff. His other positions have included Senior Political Adviser to the Director-General of the World Health Organization (2005-2007), Senior Adviser for Security, Defense and Intelligence to Health Secretary Tommy Thompson, International Health Attaché at the US Mission to the UN in Geneva, Associate Director for Medical and Scientific Affairs in the Office of International Health, Department of Health and Human Services, and as International Health Policy Adviser to the Director of the US Peace Corps. Early in his career, he spent 3 years as a medical epidemiologist at the Centers for Disease Control in Atlanta, Georgia.
Dr. Bernard has an MD from the University of California, Davis, a DTM&H from the London School of Hygiene and Tropical Medicine, is board certified in internal medicine, and is a member of the Council on Foreign Relations.

**Seth CARUS, PhD**

Dr. Carus is a Distinguished Research Fellow at the Center for the Study of Weapons of Mass Destruction at the National Defense University. His research focuses on issues related to biological warfare, including threat assessment, biodefense, and the role of the Department of Defense in biodefense. He also studies the history of biological warfare and has written a working paper, *Bioterrorism and Biocrimes: The Illicit Use of Biological Agents in the 20th Century*, and several articles on allegations of biological agent use. He has been at NDU since 1997. From 2003-2013 he also served as the WMD Center’s Deputy Director.

From 2001-2003, Dr. Carus was detailed to the Office of the Vice President, where he was the Senior Advisor to the Vice President for Biodefense. Before assuming that position, he was on the staff of the National Preparedness Review, commissioned to recommend changes in homeland security organization and supported the Office of Homeland Security while it was being established.

Prior to joining NDU, Dr. Carus was a research analyst at the Center for Naval Analyses. He worked on studies related to naval forward presence in the Persian Gulf and on the impact of nuclear, biological, and chemical weapons on the conduct of a major regional contingency in Korea. From 1991-1994, Dr. Carus was a member of the Policy Planning staff in the Undersecretary of Defense for Policy, Office of the Secretary of Defense. Before joining the government, he was a research fellow at the Washington Institute for Near East Policy.

Dr. Carus has a PhD from the Johns Hopkins University in Baltimore, Maryland.

**Teck-Mean CHUA, DMD**

Dr. Chua is Consultant, Biorisk Management, at Temasek Laboratory. He has experience working for the World Health Organization and the Food and Agricultural Organization of the United Nations on laboratory capacity building in the Asia-Pacific region. Additionally, he serves as a laboratory consultant for the Temasek Life Science Laboratory of the National University of Singapore. He is the current treasurer and past president of the Asia-Pacific Biosafety Association.
Anita CICERO, JD

Ms. Cicero is Chief Operating Office and Deputy Director of the UPMC Center for Health Security. Working with the CEO, she directs operations, strategic and budget planning, and program development for the UPMC Center for Health Security. Since joining the Center, she has expanded the Center’s efforts in epidemic preparedness, nuclear resilience, and international programs.

Ms. Cicero has authored or co-authored a number of widely cited articles and reports on biosecurity policy, pandemic preparedness, nuclear and radiological consequence management, biosurveillance, international disease surveillance, and public health law. In working to engage the Center in valuable new exchanges, Ms. Cicero launched a number of initiatives to improve mutual understanding and collaboration with countries including China, Kuwait, the Kingdom of Saudi Arabia, Singapore, and Taiwan.

Before joining the Center, Ms. Cicero spent nearly 2 decades as a practicing attorney in both the US federal government and the private sector. She was Managing Partner in charge of the Washington, DC, office of Drinker, Biddle & Reath, LLP, where she was responsible for more than 300 lawyers and staff. In her legal work, she created and managed a number of pharmaceutical consortia, with a particular focus on clinical research and regulatory compliance. Ms. Cicero’s work required constructive engagement with members of Congress; the World Health Organization; the European Commission; the US Food and Drug Administration; the US Departments of State, Defense, and Health and Human Services; and the Environmental Protection Agency.

Before entering private practice, Ms. Cicero focused on environmental litigation and counseling. She began her career as a trial attorney in the Honors Program at the US Department of Justice, Environmental Enforcement Section.

Ms. Cicero is a graduate of the Yale Law School and of Oberlin College.

Richard DANZIG, JD, PhD

Dr. Danzig is Vice Chair of the Board of Trustees of the RAND Corporation, a member of the Defense Policy Board and the President’s Intelligence Advisory Board, a Trustee of Reed College, a Director of the Center for a New American Security, and a Director of Saffron Hill Ventures (a European investment firm). Dr. Danzig is a member of the Aspen Strategy Group and a senior advisor at the Center for New American Security, the Center for Naval Analyses, and the Center for Strategic and International Studies in Washington DC. His primary activity is as a consultant to the Departments of Defense and Homeland Security on terrorism.

In recent times, he has been a director of National Semiconductor Corporation (NYSE Stock Exchange) and Human Genome Sciences Corporation (NASDAQ). He has also
served as Chairman of the Board of the Center for a New American Security and Chairman of the Board of the Center for Strategic and Budgetary Assessments. From the spring of 2007 through the Presidential election of 2008, Dr. Danzig was a senior advisor to Senator Obama on national security issues. Dr. Danzig served as the 71st Secretary of the Navy from November 1998-January 2001. He was the Under Secretary of the Navy between 1993 and 1997.

Between 1981 and 1993, Dr. Danzig was a partner in the law firm of Latham and Watkins. Resident in Washington, his unusually broad legal practice encompassed white-collar crime defense work, civil litigation, and corporate work, including heading the firm’s Japan practice. During this time he co-authored a book on national service, taught contracts at Georgetown Law School, and was a Director of the National Semiconductor Corporation, a Trustee of Reed College, and litigation director and then vice chair of the International Human Rights Group. In 1991, he was awarded that organization’s Tony Friedrich Memorial Award as pro-bono human rights lawyer of the year.

From 1977-1981, Dr. Danzig served in the Office of the Assistant Secretary of Defense, first as a Deputy Assistant Secretary and then as the Principal Deputy Assistant Secretary of Defense for Manpower, Reserve Affairs and Logistics. In these roles, he contributed particularly to the development of the Department’s ability to mobilize manpower and materiel for deployment abroad. In 1981, he was awarded the Defense Distinguished Public Service Award. He received that same honor—the highest Department of Defense civilian award—twice more in 1997 and 2001 for his work with the Navy and Marine Corps.

Between 1972 and 1977, Dr. Danzig was an Assistant and then Associate Professor of Law at Stanford University, a Prize Fellow of the Harvard Society of Fellows, and a Rockefeller Foundation Fellow. During this period, he wrote a book on contract law and articles on constitutional history, contracts, criminal procedure, and law and literature.

Dr. Danzig’s recent publications include “Driving in the Dark: Ten Propositions About Prediction” and as co-author of “Aum Shinrikyo: Insights into How Terrorists Develop Biological and Chemical Weapons,” both published in 2011 by The Center for a New American Security.

He received a BA degree from Reed College, a JD degree from Yale Law School, and bachelor of philosophy and doctor of philosophy degrees from Oxford University, where he was a Rhodes Scholar. Upon his graduation from Yale, Dr. Danzig served as a law clerk to US Supreme Court Justice Byron White.
Julie E. FISCHER, PhD

Dr. Fischer co-directs a portfolio of research projects in global health security with Dr. Rebecca Katz at the George Washington University School of Public Health and Health Services, where she is currently an Associate Research Professor in the Department of Health Policy.

From 2007-2012, Dr. Fischer directed Stimson’s Global Health Security Program, exploring the tools, policies, and partnerships that strengthen global capacities for disease detection and response. Dr. Fischer is a former Council on Foreign Relations International Affairs Fellow and American Association for the Advancement of Science Congressional Fellow. As professional staff with the Senate Committee on Veterans’ Affairs, she worked on issues related to emergency medical preparedness and the consequences of biological, chemical, and radiological exposures during military service. She served as a senior research fellow at the University of Washington and Seattle Biomedical Research Institute, and as a microbiologist with a Thai-US collaboration aimed at strengthening Thailand’s capacities to identify and control emerging infections of regional and global significance.

Dr. Fischer received a BA from Hollins University and a PhD in microbiology and immunology from Vanderbilt University.

Gigi GRONVALL, PhD

Dr. Gronvall is a Senior Associate at the UPMC Center for Health Security and an Assistant Professor of Medicine at the University of Pittsburgh. She is an immunologist whose work addresses the role of scientists in biosecurity—how they can diminish the threat of biological weapons and how they can contribute to an effective technical response against a biological weapon or a natural epidemic.

Dr. Gronvall is author of the book Preparing for Bioterrorism: The Alfred P. Sloan Foundation’s Leadership in Biosecurity, which describes early gains in US efforts to confront the threat of bioterrorism, for a nontechnical audience, and she is currently working on a second book about the governance and risks of synthetic biology. She is Associate Editor of the journal Biosecurity and Bioterrorism, and she has published and lectured extensively on issues that affect scientists and the practice of science. Dr. Gronvall advises the Department of Defense (DoD) Defense Threat Reduction Agency (DTRA) as a member of the Threat Reduction Advisory Committee (TRAC). She has served as Science Advisor for the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism, has testified before Congress about the safety and security of high-containment biological laboratories in the United States, and has served on several task forces related to laboratory security. She has investigated and presented policy recommendations on the governance of science to the Biological
Weapons Convention (BWC) in Geneva, Switzerland (2003, 2005, and 2006), and she was selected to join the European Union Visitors Program in 2011, a competitive process designed to increase mutual understanding between professionals and future leaders from non-EU countries and their EU counterparts. She also participated in the Council on Foreign Relations Term Member Program from 2006-2011.

She is a founding member of the Center, and prior to joining the faculty in 2003, she worked at the Johns Hopkins University Center for Civilian Biodefense Strategies, which she joined in 2001. From 2000-2001 she was a National Research Council Postdoctoral Associate at the US Army Medical Research Institute of Infectious Diseases (USAMRIID) in Fort Detrick, Maryland.

Dr. Gronvall received a BS in biology from Indiana University, Bloomington. She subsequently worked as a protein chemist at the Memorial Sloan-Kettering Cancer Center and received a PhD from Johns Hopkins University for work on T-cell receptor/MHC I interactions.

KWA Chong Guan, MA

Mr. Kwa works on the intersections of history, security studies and international relations of Southeast Asia. As Senior Fellow at the S Rajaratnam School of International Studies at the Nanyang Technological University he works on a range of regional security issues with a focus on the implicit narratives underlying our framing of regional security. As Visiting Fellow at the Archaeological Unit of the Nalanda-Sriwijaya Centre at the Institute of Southeast Asian Studies and Adjunct Associate Professor at the History Department of the National University of Singapore, Mr. Kwa is interested in the long cycles of Southeast Asian history.

He started his career working on policy analysis in the Ministry of Foreign Affairs and then the Ministry of Defence before being assigned to reorganize the Oral History Department in the National Archives and concurrently, the old National Museum. He continues to be associated with these heritage institutions in various advisory capacities and as Chairman of the National Archives Advisory Committee. He also chairs the National Library Advisory Committee.

His most recent publication is Early Southeast Asia Viewed from India; An Anthology of Articles from the Journal of the Greater India society (2013). His other book publications include Singapore: A 700-Year History; From Early Emporium to World City (2009) co-authored with Derek Heng and Tan Tai Yong; Energy Security; Asia Pacific Perspectives (2010) co-edited with Virendra Gupta and China-ASEAN Sub-regional Cooperation; Progress, Problems and Prospects (2011) co-edited with Mingjiang Li, and Maritime Security in Southeast Asia (2007) co-edited with John Skogan.
William HOSTYN, MS

Mr. Hostyn is the Director, Advisory Committees and Programs Office, Defense Threat Reduction Agency and STRATCOM Center for Combatting Weapons of Mass Destruction (DTRA/SCC-WMD). In this capacity, he is the senior Department of Defense (DoD) Designated Federal Officer responsible for the Threat Reduction Advisory Committee (TRAC). The TRAC provides the Secretary of Defense with independent advice and recommendations on reducing the risk to the United States, its military forces, and its allies and partners posed by nuclear, biological, chemical, and conventional threats. Additionally, he oversees DoD program management of the Project on Advanced Systems and Concepts for Countering Weapons of Mass Destruction; the Project on Nuclear Issues; the Emerging Leaders in Biosecurity Initiative; and the Nuclear Strategy Forum.

Prior to his current assignment, Mr. Hostyn was the Chief, Systems and Engineering Division in DTRA’s Advanced Systems and Concepts Office (ASCO). While assigned to ASCO, he oversaw the development and execution of technical projects and strategic international dialogues that cut across federal agencies for weapons of mass destruction (WMD) threat reduction in nuclear, chemical, biological, and emerging requirements. He further maintained interagency liaison on programs, policy, and doctrinal issues and was a principal interface with think-tanks in the Washington, DC, area and the Naval Post Graduate School, Monterey, CA. He also served as Chief, Joint Military Personnel Division with DTRA.

Mr. Hostyn retired from the United States Air Force in 2003 after more than 20 years of distinguished service. Having served on 3 major command staffs (Headquarters Tactical Air Command, Pacific Air Forces, and Air Force Space Command), he was primarily engaged in manpower and personnel force structure planning and execution of programs stemming from the Base Realignment and Closure Commission for installation-wide and unit level activation, inactivation, and conversions in missile, satellite, fixed and rotary wing weapon systems. A graduate of the Air University Contingency Warfare Planning Course, he further worked with Joint Chief of Staff (JCS) contingency warfare planning while serving on the Air Component Staff, Headquarters Seventh Air Force, Osan Air Base, Republic of Korea.

Mr. Hostyn has a BS in organizational management from Colorado Christian University, an MS in public administration from Troy State University, and an MS in national resources strategy with a minor as a national security professional from the National Defense University, Industrial College of the Armed Forces.
Noreen HYNES, MD, MPH

Dr. Hynes has more than 40 years of medical and public health experience in both international and domestic settings. She is a physician trained in internal medicine, infectious diseases, tropical medicine and epidemiology.

In 2007 she transitioned from 30 years of government service including having served as Deputy Assistant Secretary for Public Health Emergency Preparedness and the Director of the Office of Public Health Emergency Medical Countermeasures. She currently is a faculty member of both the Schools of Medicine and Public Health at the Johns Hopkins University, where she directs the Geographic Medicine Center of the Division of Infectious Diseases. Her research focuses on tropical diseases and vaccine preventable diseases.

In 2014 she was inaugurated as a member of the National Biodefense Science Board/National Preparedness and Response Science Board which provides advice to the Assistant Secretary for Preparedness and Response at the US Department of Health and Human Services.

Tom INGLESBY, MD

Dr. Inglesby is Director of the UPMC Center for Health Security and Associate Professor of Medicine and Public Health at the University of Pittsburgh Schools of Medicine and Public Health. His work is internationally recognized in the fields of public health preparedness, pandemic flu and epidemic planning, and biosecurity. He is Chair of the Board of Scientific Counselors, Office of Public Health Preparedness and Response, of the US Centers for Disease Control and Prevention. He is Co-chair of the National Health Security Preparedness Index initiative.

Dr. Inglesby has been chair or a member of a number of National Academy of Sciences committees, and he has served in an advisory capacity to the Defense Science Board, the Departments of Health and Human Services and Homeland Security, and the National Institutes of Health. He has been invited to brief White House officials from the past 3 presidential administrations on national biosecurity challenges and priorities, and he has delivered Congressional testimony on public health preparedness and biosecurity. He is also on the Board of Directors of PurThread, a company dedicated to developing antimicrobial textiles.

During the past 15 years, Dr. Inglesby has authored or co-authored more than 80 peer-reviewed articles, reports, and commentaries on a wide range of issues related to health and security. He is Coeditor-in-Chief of the journal Biosecurity and Bioterrorism, and he was principal editor of the 2002 JAMA book Bioterrorism: Guidelines for Medical and Public Health Management. He is regularly consulted by major news outlets for his expertise.
Dr. Inglesby completed his internal medicine and infectious diseases training at Johns Hopkins University School of Medicine, where he also served as Assistant Chief of Service in 1996-97. He received his MD from Columbia University College of Physicians and Surgeons and his BA from Georgetown University. He continues to see patients in a weekly infectious disease clinic.

Barbara JOHNSON, PhD, RBP

Dr. Johnson is owner of the consulting company Biosafety Biosecurity International. She is a microbiologist with more than 20 years of experience as a senior scientist in the US government in the area of biosafety, biocontainment, and biosecurity. She provides training and consultation in the US and internationally on biorisk assessment, management and mitigation; facility design, testing, certification and construction for BSL/ABSL 2-4 and BSL-3 Ag; and development of compliance documentation in the form of manuals, SOPs and site-specific risk assessments and NEPA documentation.

Dr. Johnson’s technical and policy advice and strategies are requested in the US by various government agencies, companies and universities, subcommittees (ANSI, NRC-Life Sciences Board, Senate, NBBTP, etc); as well as by International Ministries of Health.

Dr. Johnson is a registered biosafety professional, an approved facility certifier and trainer by the Singapore Ministry of Health, Past President of ABSA, founding member of IFBA and Co-Editor of the peer review journal *Applied Biosafety*.

Krishna KHANAL, MSc, MBA

Mr. Khanal is a Research Analyst working on biological security at S. Rajaratnam School of international studies (RSIS) attached to International Centre for Political Violence and Terrorism Research (ICPVTR), under the supervision of Prof Rohan Gunaratna, International Terrorism Expert.

His responsibilities will be to conduct research into unconventional weapons—especially biological and chemical agents and their likely impact—assess the Post-Syrian Threat Landscape—especially threat groups with access to unconventional agents—and examine the current and emerging threat in Southeast Asia and the proliferation of unconventional agents.

He holds a master’s degree in water science from University of Duisburg-Essen, Germany, and a master’s degree in biotechnology from Vinayaka Missions University, India. He also holds a post-graduate diploma in clinical research and clinical data management from ICBIO, Bangalore. He did his master’s thesis on metabolomics from
Singapore Centre on Environmental Life Sciences Engineering (SCELSE), where he looked at the effect of aluminum on microbes using metabolomics approach.

His research interests are in pandemic preparedness, bioterrorism and policy response, and chemical-biological legislation and biosecurity measures within Southeast Asia.

Jim LE DUC, PhD

Dr. Le Duc is Director of the Galveston National Laboratory (GNL), the only full-suit Biological Safety Level 4 (BSL4) laboratory in operation on an academic campus in the US. BSL2, -3 and -4 laboratories of the GNL are approved by CDC and USDA to handle virtually all select agents. He is a Professor in the Department of Microbiology and Immunology in the School of Medicine at the University of Texas Medical Branch (UTMB) in Galveston, Texas, and holds the John Sealy Distinguished University Chair in Tropical and Emerging Virology.

Dr. Le Duc also is the principal investigator for DOD grants supporting the National Biocontainment Training Center at UTMB. The Center provides hands-on training in biosafety and biosecurity to both faculty and students at UTMB and to national and international partners around the world. Under his direction, the Center has provided more than 5000 training encounters to individuals in Asia, Africa, the Middle East, and the US.

Dr. Le Duc joined UTMB in late 2006 from the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia, where he was the Influenza Coordinator. He also served as Director, Division of Viral and Rickettsial Diseases (2000-2005), coordinating research activities, prevention initiatives and outbreak investigations for viral and rickettsial pathogens of global importance, including viral hemorrhagic fevers, influenza and other respiratory infections, childhood viral diseases, and newly emerging diseases such as SARS and monkeypox. He served as the Associate Director for Global Health (1996-2000) in the Office of the Director, National Center for Infectious Diseases at CDC, where he formed the Amazon Basin and Southern Cone networks of public health experts to address emerging infectious diseases. As Medical Officer in charge of arboviruses and viral hemorrhagic fevers at the World Health Organization in Geneva, Switzerland (1992-1996), he was the architect of the WHO program to address emerging infectious diseases and began the process to revise the International Health Regulations. Dr. Le Duc also held leadership positions during a 23-year career as a US Army officer in the medical research and development command, with assignments in Brazil, Panama, and various locations in the United States, including the Walter Reed Army Institute of Research and the US Army Medical Research Institute of Infectious Diseases. His professional career began as a field biologist working for 2 years with the Smithsonian Institution in West Africa.
He is a Fellow, Infectious Diseases Society of America and a member of various professional organizations. He has published more than 200 scientific articles and book chapters, and is well recognized as an expert in virus diseases, biodefense, and global health.

LEE Fook Kay, PhD

Dr. Lee is the Chief Science and Technology Officer (CSTO) of the Ministry of Home Affairs Singapore (MHA), where he reports directly to the Deputy Prime Minister and Minister of Home Affairs, and the Permanent Secretary of Home Affairs. Dr. Lee’s office, the Office of the Chief Science and Technology Officer (OCSTO), is the Science and Technology authority in MHA and leads the Ministry in all science and technology related issues and policies to support the Ministry’s doctrine in policy formulation and decision making contributing to augment operations in homeland security.

Dr. Lee has more than 20 years of experience in the CBRE domain and is instrumental in the strategic building and development of CBRE capabilities in Singapore. He is a member of the Central College Advisory Committee of Institute of Technical Education in Singapore. Dr. Lee is also the appointed Singapore expert member in the IAEA Emergency Preparedness and Response Expert Group (EPREG).

He started his career in 1989 as a Research Scientist at DSO National Laboratories, an affiliated organization under MINDEF, and has served as Head of Centre for Chemical Defence. His portfolio was subsequently expanded with his appointment as Deputy Director of the Defence Medical and Environmental Institute at DSO to manage defense research and development in the areas of environmental protection, biomedical sciences and human performance. He was concurrently the Director of Chemical, Biological and Radiological Programme. In addition, Dr. Lee was also appointed by the Minister for Foreign Affairs as the Director of National Authority (Chemical Weapons Convention) from 2000-2007, and was instrumental in steering Singapore’s policy and implementation strategies in the domains of weapons of mass destruction treaties, like the Chemical Weapons Convention and Biological Weapons Convention. Today, he remains a key advisor in the national Advisory Board that oversees the strategic and policy issues in this area. In 2006, Dr Lee joined the Ministry of Home Affairs.

Well regarded both in the local and international scientific communities, Dr. Lee’s alliances range from technology institutes in CB defense to international organizations like the Organisation for the Prohibition of Chemical Weapons (OPCW), the Expert Group for the Biological Weapons Convention and the United Nations Monitoring, Verification and Inspection Commission (UNMOVIC).

Dr. Lee’s pioneering efforts in building Singapore’s CBRE defense research, won him several awards, including the Defence Technology Prize. He was also conferred the credentials of Chartered Chemist by the Royal Society of Chemistry, as well as the Public
Administration Medal (Silver) by the President of Singapore, conferred to him in 2009, for his valuable and inimitable scientific contributions in the defense and homeland security domains.

**Vernon LEE, MBBS, PhD, FAMS, MPH, MBA**

Dr. Lee is a preventive medicine physician and Head of the Singapore Armed Forces Biodefence Centre, in charge of preparedness, surveillance, and response to infectious diseases. He is also an adjunct Associate Professor at the Saw Swee Hock School of Public Health, National University of Singapore; and an Advisor to the Public Health Group in the Ministry of Health, Singapore.

Prior to his current appointment, he was Advisor to the Assistant Director General for Health, Security and Environment at the World Health Organization headquarters.

Dr. Lee graduated from medical school at the National University of Singapore and is a Fellow of the Academy of Medicine, Singapore. He also holds a PhD in epidemiology from the Australian National University, and MPH and MBA degrees from the Johns Hopkins University.

**Ambassador Ashok Kumar MIRPURI, MA**

Mr. Mirpuri took up his appointment as Singapore's Ambassador to the United States of America in July 2012. Prior to his current appointment, he served as Ambassador to Indonesia from 2006-2012, High Commissioner to Malaysia from 2002-2006 and High Commissioner to Australia from 2000-2002.

A career diplomat, Mr. Mirpuri joined the Ministry of Foreign Affairs (MFA) in 1984. In 1994, he was appointed Director of MFA’s Policy Planning & Analysis Directorate I (Southeast Asia). In 1997, Mr. Mirpuri was seconded to Shell International Ltd in the United Kingdom as Corporate Advisor (Asia Pacific). He was subsequently assigned to the Singapore Embassy in Jakarta in 1998 as Minister-Counsellor and Deputy Chief of Mission, having previously served in Jakarta as First Secretary (Political).

Mr. Mirpuri graduated with an honors degree from the National University of Singapore. He received his MA at the University of London's School of Oriental & African Studies under a Raffles Scholarship. He attended the Programme for Executive Development at the Institute for Management Development, Switzerland, and the Advanced Management Program at Harvard Business School, USA.
Ryan MORHARD, JD

Mr. Morhard is an Associate at the UPMC Center for Health Security. His primary research interests include law, public health preparedness, and emerging disruptive science and technology as well as related biosecurity and national security implications.

His work addresses legal issues pertaining to public health emergency preparedness and response. His current and recent research involves legal protections for volunteer health professionals, legal and ethical issues relating to the allocation of scarce resources and crisis standards of care, victim compensation and insurance considerations relating to catastrophic disasters, and other related emergency legal preparedness issues. He has written on the medium-term future of biotechnology. Mr. Morhard and colleagues have raised awareness among senior leaders from the US and the UK about the future of biotechnology and biological dangers and the resulting economic, strategic, and national security consequences as well as possible approaches for addressing biological dangers. Mr. Morhard also is a member of the first class of the Synthetic Biology Leadership Accelerator Program, a community of emerging leaders committed to developing ideas for how to best advance synthetic biology in the public interest.

His work on radiological and nuclear preparedness includes co-authoring the Rad Resilient City Preparedness Checklist and briefing the checklist to federal, state, and local officials as well as to response professionals. He also co-authored the Center’s report, After Fukushima: Managing the Consequences of a Radiological Release, which assessed US policies and plans for consequence management to reduce public exposure to radiation following a nuclear power plant accident and offered recommendations for strengthening those efforts. He is currently examining public health preparedness activities within Emergency Planning Zones in communities surrounding nuclear power plants, and he is participating in NACCHO's Radiation Legal Preparedness Project Workgroup. He is Associate Editor of the peer-reviewed journal Biosecurity and Bioterrorism, Editor of the journal’s Legal Perspectives column, and Editor of Preparedness Pulsepoints, a weekly update on US government action on readiness and response.

Mr. Morhard received his JD from Washington University in St. Louis School of Law and his BS degree from the University of Pittsburgh, double-majoring in neuroscience and history and philosophy of science.

Tara O'TOOLE, MD, MPH

Dr. O'Toole is Mission Manager and Senior Fellow at In-Q-Tel. In-Q-Tel (IQT) is a private, nonprofit strategic investment firm that links the US intelligence community and venture-backed start-up firms on the leading edge of technological innovation.
From 2009-2013, Dr. O'Toole served as Under Secretary of Science and Technology (S&T) at the Department of Homeland Security. During her tenure, she established a performance review process to evaluate the portfolio of research and development projects; instituted a technology foraging program to increase return on investment of research projects and speed transition to field use; created a division of cybersecurity research and an organization devoted to delivering technologies needed by first responders; earned Departmental, OMB and Congressional approval to build a high containment laboratory for emergent and contagious animal diseases. In 2013, a time of severe, widespread budget cuts, Congress appropriated a 25% increase in S&T’s budget, affirming S&T’s value to homeland security.

In the decade before becoming Under Secretary, Dr. O’Toole founded and directed 2 university-based think tanks devoted to civilian biodefense. She was a professor of Public Health and Director of the Johns Hopkins Center for Civilian Biodefense Studies at the Johns Hopkins Bloomberg School of Public Health, which was the first academic center devoted to biosecurity policy and practices and helped define the nature and consequences of major biological threats. In 2003, the Center joined the University of Pittsburgh Medical Center (UPMC), where Dr. O’Toole was CEO and Director of the Center for Biosecurity of UPMC and Professor of Medicine and Public Health at the University of Pittsburgh.

During President Clinton’s administration, Dr. O’Toole served for 4 years as Assistant Secretary for Environment Safety and Health in the Department of Energy. In this role, she oversaw vulnerability assessments of the chemical and fissile materials that had been stored at the US nuclear weapons complex or stranded in place with the cessation of nuclear weapons production. She worked to establish a more efficient and effective approach to workplace and environmental safety at DOE sites, was the government lead of a comprehensive study of Cold War experiments involving human exposure to radiation, and led the US delegation to Russia to begin joint studies of pollution left in the wake of Soviet nuclear weapons production.

From 1989-93, Dr. O’Toole was a senior analyst at the Congressional Office of Technology Assessment. She practiced internal medicine in community health centers in east Baltimore for several years. She received her BA from Vassar College, her MD from the George Washington University School of Medicine and an MPH from the Johns Hopkins Bloomberg School of Public Health. She is board certified in internal medicine and occupational and environmental medicine.

Dr. O'Toole served as Chair of the Board of the Federation of American Scientists, and is a member of the Council on Foreign Relations.
Tikki Elka PANGESTU, PhD

Professor Pangestu is presently Visiting Professor, Lee Kuan Yew School of Public Policy, National University of Singapore.

He was previously Director, Research Policy & Cooperation, World Health Organization (WHO), Geneva, Switzerland (1999-2012). Prior to joining WHO, he was Professor of Biomedical Sciences, Institute of Postgraduate Studies & Research, University of Malaya, Kuala Lumpur, Malaysia (1989-1999), and Lecturer/Associate Professor, Department of Microbiology, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia (1977-1989).

Professor Pangestu has published more than 250 scientific articles and 12 books, and he was lead author on several major WHO reports including the *World Health Report 2013: Research for Universal Health Coverage* (2013), *Knowledge for Better Health* (2004), and *Genomics and World Health* (2002). His research interests are in epidemiology, pathogenesis, laboratory diagnosis and prevention of infectious diseases, dual-use research, genomics and global health, and in health research policy, health research systems, global health governance, best practices in research, development of research capabilities in developing countries, and linkages between research and policy.

He holds a PhD in immunology-microbiology from the Australian National University, Canberra, Australia, and he is a Fellow of the Royal College of Pathologists (UK), Institute of Biology (UK), American Academy of Microbiology (USA), Academy of Medicine of Malaysia, and Academy of Sciences for the Developing World (TWAS).

Meghan D. RASMUSSEN, MPA

Ms. Rasmussen is Program Manager for the Center on Contemporary Conflict (CCC) at the Naval Postgraduate School (NPS) in Monterey, California. The CCC's largest undertaking is the Project on Advanced Systems and Concepts for Countering WMD (PASCC). PASCC funds approximately 25 projects per year at universities and research organizations including UPMC. In addition to PASCC, Ms. Rasmussen works with other funding agencies and NPS faculty on regional studies and issues in international security.

Prior to joining NPS in 2011, Ms. Rasmussen worked for 5 years as a management consultant in Washington, DC. She has also worked for Johns Hopkins University, Catholic Relief Services, and smaller NGOs in the United States and in Turkey.

She holds masters degrees in public administration and international relations from the Maxwell School at Syracuse University, and she has a bachelors degree in economics from Bowdoin College.
Sanjana RAVI, MPH

Ms. Ravi is an Analyst at the UPMC Center for Health Security. She is an Associate Editor of the peer-reviewed journal, *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science* and co-editor of *Preparedness Pulsepoints*. Ms. Ravi also serves as analyst manager for Center projects examining healthcare preparedness in the US, biosecurity policy, and the risks and societal impacts associated with synthetic biology research. She has previously contributed to projects exploring mass population displacement, nuclear emergency preparedness, and mobile health technologies. Ms. Ravi’s research interests include global health systems, infectious disease policy, and medical countermeasure delivery.

In 2013, Ms. Ravi received a master of public health degree in infectious disease management, intervention, and community practice from the Graduate School of Public Health at the University of Pittsburgh, where her thesis explored the dynamics of blood product management during public health emergencies. As a graduate student, she contributed to research on nosocomial infections, community-based health education, and geriatric health. In 2013, she served as a Global impact Fellow with Unite for Sight in Tegucigalpa, Honduras, delivering basic eye care to underserved regions. Ms. Ravi also earned a BA in biology from Saint Louis University in 2011.

Shane Smith, PhD

Dr. Smith is a Research Fellow at the National Defense University's Center for the Study of Weapons of Mass Destruction. His current research focuses on strategic stability issues in the Asia-Pacific region. He is also a Special Advisor at the Defense Threat Reduction Agency, where he helps shape and support a strategic engagement and applied research program aimed at reducing WMD dangers. In 2007, Dr. Smith helped launch the WMD Center's Program for Emerging Leaders and was the Program's Director from 2008 to 2012.

He has taught national security and nuclear policy related courses at the University of Colorado at Boulder, the National Defense University, and Johns Hopkins University. Before joining the WMD Center, Dr. Smith worked for former Secretary of Defense William Perry and former Deputy Secretary of Defense Ashton Carter at the Harvard-Stanford Preventive Defense Project. He was also a Research Associate for National Security Studies at the Council on Foreign Relations, where he coordinated 2 nuclear policy task forces, and a Research Assistant at the Russian-American Nuclear Security Advisory Council.

He has published in edited volumes, academic journals, and leading newspapers. Most recently, he co-authored a chapter in Etel Solingen (ed), *Sanctions, Statecraft, and Nuclear Proliferation* (Cambridge University Press, 2012), and he authored a chapter
Andrew C. WEBER, MSFS

The Honorable Andrew C. Weber is Principal Advisor to the Secretary of Defense, the Deputy Secretary of Defense, and Under Secretary of Defense for Acquisition, Technology and Logistics for matters concerning nuclear, chemical, and biological defense programs. As the ASD (NCB), his mission is to prevent, protect against, and respond to these global threats. Mr. Weber is Staff Director of the Nuclear Weapons Council, which manages the nuclear weapons stockpile, and he oversees the Defense Threat Reduction Agency and the Nunn-Lugar Cooperative Threat Reduction Program.

Since taking office, Mr. Weber has overseen an expansion of Nunn-Lugar programs into new regions, including Africa and South Asia. He has also been a key player in reforming the nation’s medical countermeasures enterprise. His nuclear duties include executing President Obama’s direction that as the US reduces the number of deployed weapons, we are assured that the remaining stockpile is safe, secure, and effective.

Prior to his appointment by President Obama, Mr. Weber served for 13 years as an Adviser for Threat Reduction Policy in the Office of the Secretary of Defense. He played a key role in Nunn-Lugar operations to remove weapons grade uranium from Kazakhstan and Georgia and nuclear-capable MiG-29 aircraft from Moldova. Mr. Weber also developed and oversaw the Department of Defense Biological Threat Reduction Program. For his work at the Department of Defense, Mr. Weber has twice been awarded the Exceptional Civilian Service Medal.

Most of Mr. Weber’s 26 years of public service have been dedicated to reducing the threat of weapons of mass destruction. He served previously as a United States Foreign Service Officer, with diplomatic assignments in Saudi Arabia, Germany, Kazakhstan, and Hong Kong.

From 2002 through 2008 Mr. Weber taught a course on Force & Diplomacy at the Edmund A. Walsh Graduate School of Foreign Service at Georgetown University. He has a master of science degree in foreign service from Georgetown and is a graduate of Cornell University. Mr. Weber speaks Russian and is a member of the Council on Foreign Relations.