

Dr. Tara O'Toole, MD, MPH



Dr. Tara O'Toole was confirmed as the Under Secretary for Science and Technology (S&T) at the U.S. Department of Homeland Security (DHS) on November 4, 2009.

From 2003 to November 2009, Dr. O'Toole was the CEO and Director of the Center for Biosecurity at the University of Pittsburgh Medical Center (UPMC), and Professor of Medicine and of Public Health at the University of Pittsburgh. The Center for Biosecurity of UPMC is an independent organization dedicated to improving the country's resilience to major biological threats.

Dr. O'Toole is internationally known for her work on biosecurity and on health and safety issues related to the U.S. nuclear weapons complex. Her publications in the biodefense field include articles on the response to anthrax, smallpox, and plague biological attacks; containment of contagious disease epidemics; biodefense research and development strategies; and

hospital preparedness. She is the founding editor of the journal *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*. She was a principal author and producer of *Dark Winter*, an influential exercise conducted in June 2001 to alert national leaders to the dangers of bioterrorist attacks. She was also a principal writer and producer of *Atlantic Storm*, an international ministerial-level biosecurity exercise held in January 2005. Prior to founding the UPMC in 2003, Dr. O'Toole was one of the original members of the Johns Hopkins Center for Civilian Biodefense Strategies and served as its director from 2001 to 2003.

She has served on numerous government and expert advisory committees dealing with biodefense, including panels of the Defense Science Board; the National Academy of Engineering Committee on Combating Terrorism; and the National Academy of Sciences Working Group on Biological Weapons. She served as chair of the Board of the Federation of American Scientists from 2006 to 2007, and in 2006 she was appointed to the board of Google Foundation's International Networked System for Total Early Disease Detection.

From 1993 to 1997, Dr. O'Toole served as Assistant Secretary of Energy for Environment Safety and Health. In this position, she was the principal advisor to the Secretary of Energy on environmental protection and on the health and safety of the approximately 100,000 workers in the U.S. nuclear weapons complex and Department of Energy (DOE) laboratories. She developed the first overall management and safety plan for dealing with the highly enriched uranium, plutonium, spent fuel, and radioactive waste left in place when nuclear weapons production was stopped in the early 1990s. She ran the multi-agency, multimillion-dollar task force that oversaw the government's investigations into human radiation experiments conducted during the Cold War and led the U.S. delegation to Russia to establish the U.S./Russia cooperative effort to study radiation exposure and environmental hazards of the Russian nuclear weapons complex.

Prior to her work at DOE, Dr. O'Toole was a senior analyst at the Congressional Office of Technology Assessment, where she directed several projects and studies, including the health impact of pollution resulting from nuclear weapons production. She also served as a consultant to industry and government in matters related to occupational and environmental health; worker participation in workplace safety protection; and organizational change. Dr. O'Toole practiced general internal medicine in community health centers in Baltimore from 1984 to 1988. She is board certified in internal medicine and occupational and environmental health.

She has a bachelor's degree from Vassar College, an M.D. from the George Washington University, and a Master of Public Health degree from Johns Hopkins University. She completed internal medicine residency training at Yale University and a fellowship in Occupational and Environmental Medicine at Johns Hopkins University.

Dr. Daniel M. Gerstein
Deputy Under Secretary for Science & Technology, Department of Homeland Security



Dr. Daniel M. Gerstein has served as the Deputy Under Secretary for Science & Technology in the Department of Homeland Security since August 2011. He is also an Adjunct Professor at American University in Washington, DC at the School of International Service (SIS) where he teaches graduate level courses on biological warfare and the evolution of military thought.

Dr. Gerstein has extensive experience in the security and defense sectors in a variety of positions while serving as a Senior Executive Service (SES) government civilian, in uniform, and in industry. Before joining DHS, he served as the Principal Director for Countering Weapons of Mass Destruction (WMD) within the Office of the Secretary of Defense (Policy). He has served on four different continents participating in homeland security and counterterrorism, peacekeeping, humanitarian assistance, and combat in addition to serving for over a decade in the Pentagon in various high level staff assignments. Following retirement from active duty, Dr. Gerstein joined L-3 Communications as Vice President for Homeland Security Services, leading an organization providing WMD preparedness and response, critical infrastructure security, emergency response capacity, and exercise support to U.S. and international customers.

Dr. Gerstein also has extensive experience in international negotiations having served on the Holbrooke Delegation that negotiated the peace settlement in Bosnia, developed and analyzed negotiating positions for the Conventional Armed Forces in Europe (CFE) talks, and developed an initiative to improve cross border communications between Colombia and neighboring Andean Ridge nations. Additionally, Dr. Gerstein led an initiative to develop a comprehensive biosurveillance system for the Department of Defense (2010-2011), served on the leadership team for the Project for National Security Reform (PNSR) which was charged with developing a new national security act to reflect the changing security environment (2007-2008), co-led the Secretary of the Army's Transition Team (2004-2005), and led the Army's most comprehensive restructuring since World War II (2000-2001).

He has been awarded numerous military and civilian awards including an award from the Government of Colombia, the Department of State's Distinguished Service Award, and the U.S. Army Soldiers Medal for heroism.

He has published numerous books and articles on national security, biological warfare, and information technology including *Bioterror in the 21st Century* (Naval Institute Press, October 2009), *ICMA Report: Planning for a Pandemic* (ICMA Press, Volume 39/Number 3 2007), *Securing America's Future: National Strategy in the Information Age* (Praeger Security International, September 2005); *Leading at the Speed of Light* (Potomac Books, November 2006); *Assignment Pentagon* (Potomac Books, May 2007). He has also served as a fellow at the Council on Foreign Relations and is a current member.

Dr. Gerstein graduated from the United States Military Academy at West Point and has masters degrees from Georgia Institute of Technology in Operations Research, the National Defense University in National Security & Strategic Studies and the Command & General Staff College in National Security Strategy & Policy, and a Doctor of Philosophy degree from George Mason University in Biodefense.

He resides in Alexandria, VA with his wife Kathy. They have two daughters.



Paul Benda

**Special Counselor to the Under Secretary for Science and Technology and the Director of the Homeland Security Advanced Research Projects Agency
U.S. Department of Homeland Security**

Paul Benda joined the Department of Homeland Security's Science and Technology Directorate (S&T) in January 2010. He now serves as Special Counselor to the Under Secretary and Director of the Homeland Security Advanced Research Projects Agency (HSARPA).

At the Department of Defense (DOD), Mr. Benda was Director of the Project Integration Office (PIO), a Senior Executive Service position. As Director, he oversaw the design, implementation, testing, and commissioning of all security systems at the Pentagon Reservation including modernization of identity management and access control system for 90,000+ building pass holders and protection against Chemical, Biological, Radiological, Nuclear and Explosives (CBRNE) attacks.

Earlier, as the Pentagon's CBRNE Director, Mr. Benda led the deployment of an advanced CBRNE surveillance, monitoring, response, and protection capability via the Pentagon Shield Program. The National Academies of Science hailed the program as representing the "highest standard" of building protection programs.

In earlier civilian service, Mr. Benda served as a program manager at DOD's Defense Advanced Research Projects Agency (DARPA). There, he ran several programs to develop new technologies to defend against CBRN weapons. He ran the Triangulation Identification for Genetic Evaluation of Risks (TIGER), a revolutionary biosensor that enables all pathogens present in a sample to be simultaneously identified. TIGER was used during the H1N1 Flu Pandemic to detect and characterize samples before traditional assays were available.

Before being assigned to DARPA, Mr. Benda served as contract lead technical support to the Director of the Special Projects Office at DARPA on the Immune Building program and other classified efforts. During this time, he also supported the U.S. Special Operations Command as Chief Engineer for the Independent Validation and Verification team for an Advanced Concept Technology Demonstration that focused on the tools and techniques necessary to support counter-proliferation operations against chemical and biological weapons production facilities.

Mr. Benda began his career as a U.S. Air Force officer at the Air Force Research Laboratory, Rome Research Site, providing operational support to the Defense Intelligence Community.

Mr. Benda earned B.S. and M.S. degrees in Mechanical Engineering from Purdue University.



Debra S. Durham
Director, Acquisition Support & Operations Analysis (ASOA)
U.S. Department of Homeland Security, Science & Technology Directorate

Mrs. Debra Durham (Debbie) joined the Department of Homeland Security (DHS), Science and Technology Directorate (S&T) in April 2011. She is a Senior Executive serving as the Director of the Acquisition Support & Operations Analysis Group. In this capacity she serves as the DHS Executive Agent for the Federally Funded Research and Development Centers, S&T Component Acquisition Executive, and leads the DHS S&T Offices of Chief Systems Engineer, Operational Test and Evaluation, Standards, and Research & Development Analysis and Assessment. Mrs. Durham came to DHS S&T from the U.S. Secret Service where she introduced acquisition and established the first major acquisition program and corporate acquisition process. She served as the Deputy Chief of an operational Information Technology (IT) workforce with over 200 federal professionals located throughout the United States and around the world.

Mrs. Durham joined DHS in 2007 after serving a two and a half year executive tour in the private sector as Vice President of Defense Systems leading geospatial and IT products and services. Prior to working in private industry, Mrs. Durham worked twenty years with the U.S. Navy. She was the Director for Department of the Navy's Naval Sea Systems Command (NAVSEA) Office of Warfare Systems Engineering and Architecture. In that role, she implemented Technical Authority for surface ship combat and weapon systems. Mrs. Durham transitioned in to NAVSEA as the Strike Force Interoperability Warfare Systems Certification and Assessment Manager and provided technical and programmatic direction for U.S. Naval combat and weapon system integration and interoperability, certification, and strike force assessments for deploying combat and C4ISR systems.



Dr. Robert Griffin
Director of First Responder Group
Science and Technology Directorate
Department of Homeland Security

Dr. Griffin joined the Department of Homeland Security's Science and Technology Directorate in August 2010. He serves as the Director of the Support to the Homeland Security Enterprise and First Responders and is a member of the Federal Senior Executive Service. Dr. Griffin comes to DHS after a twenty-year career in local government as a senior leader and first responder.

Prior to his appointment Dr. Griffin served as the Director of Environmental Services for Arlington County Virginia. He managed a diverse portfolio of core governmental functions including roads and engineering, water and waste-water delivery and treatment, transportation, refuse and recycling, facilities construction and maintenance, fleet management, capital planning and construction, and a nationally recognized energy and environmental sustainability program.

Earlier Dr. Griffin was appointed the first Director of the Arlington County Office of Emergency Management, where he developed a cross-functional department consisting of emergency management, law enforcement, fire/rescue, public health, and emergency communications personnel. As the Director of Emergency Management, he managed the integration of the County's emergency management functions and emergency communications functions into a single department. Programs of note include construction of a state of the art emergency communications center and data analysis center, an integrated public notification system including outdoor warning systems, enhanced sheltering capabilities for people and pets, and a nationally recognized citizen outreach effort. While in Arlington, Dr. Griffin organized and led relief efforts to Florida (2004), New Orleans (2005), and numerous regional and intra-state deployments. In 2006, Dr. Griffin was recognized by the Arlington Civic Federation with the President's Award.

Prior to his time in Arlington, Dr. Griffin served as Assistant County Administrator and Chief of Fire and Rescue in Loudoun County, Virginia, where he led the County's fire, rescue, bomb squad, emergency communications, and emergency management functions. He ran the Loudoun emergency operations center during the response to the 9/11/2001 attack on the Pentagon and the anthrax attack on the Dulles Postal Facility. Previously, he was Executive Administrator of the Town of Tyngsborough and Town Administrator of Townsend, Massachusetts. He is a certified fire fighter and fire officer.

Dr. Griffin earned a Doctor of Philosophy in public administration/public affairs from Virginia Tech as well as a Master's degree in public administration from the University of Massachusetts, Amherst, and a Bachelor of Science in political science from the same institution. Dr. Griffin's dissertation was a study of the characteristics of coordination in the homeland security network.

Kenneth P. Rapuano

**Director of Advanced Systems and Policy
Homeland Security Center
The MITRE Corporation**

Kenneth P. Rapuano is the Director of Advanced Systems and Policy at the MITRE Corporation. He is responsible for guiding crosscutting national and homeland security mission initiatives.

Prior to joining MITRE, Mr. Rapuano served at the White House as Deputy Homeland Security Advisor to President George W. Bush from 2004-2006. He chaired the Homeland Security Council Deputies Committee, co-chaired the White House Counterterrorism Security Group, and was responsible for managing the development and implementation of homeland security policies among departments and agencies. He left the White House in 2006 to deploy to Afghanistan as a Marine Corps Reserve officer with a Joint Special Operations Task Force, establishing and directing a targeting fusion center tracking high-value terrorists and insurgents. He also served in Iraq in 2003, commanding the Joint Interrogations and Debriefing Center of the Iraq Survey Group established to conduct the mission of surveying and exploiting possible weapons of mass destruction sites and activities across Iraq.

In 2003, Mr. Rapuano was appointed Deputy Under Secretary for Counter Terrorism at the Department of Energy, responsible for counter terrorism, homeland security, emergency response, and special access programs for DOE and the National Nuclear Security Administration. Previous to that, he was the National Security Advisor to the Secretary of Energy. Mr. Rapuano has also served as Special Assistant to the Assistant Secretary of Defense, International Security Policy. He served 21 years on active duty and in the reserves as a Marine Corps infantry officer and intelligence officer.

Mr. Rapuano is a Distinguished Research Fellow at the Center for the Study of WMD at National Defense University, and the George Washington University Homeland Security Policy Institute's Preparedness, Response and Resilience Task Force, and served as a member of the Homeland Security Science & Technology Advisory Committee, and the DHS Quadrennial Homeland Security Review Advisory Committee.

Mr. Rapuano received a bachelor's degree in Political Science from Middlebury College, and a master's degree in National Security Studies from Georgetown University.