

SECURING THE FUTURE

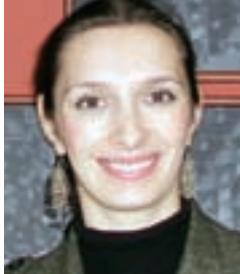
JAMES MARTIN CENTER FOR NONPROLIFERATION STUDIES

MONTEREY INSTITUTE OF INTERNATIONAL STUDIES



20TH ANNIVERSARY

TRAINING
THE NEXT
GENERATION OF
NONPROLIFERATION
SPECIALISTS
1989-2009



From Anthrax Bacteria Factory to Ghost Town

B *acillus anthracis* strain 836 produces a fine, gray-brown powder of microscopic spores, lethal to humans in minute quantities, and capable of floating invisibly for miles. Ideal for arming biological weapons, *B. anthracis* 836 was the creation of Soviet weapons scientists and was slated for full-scale production in wartime at what was once the world's largest biological warfare agent production facility. Located on the windswept steppes of northern Kazakhstan near the town of Stepnogorsk, the top-secret facility was dismantled, building by building, in the early 2000s, never having been used to produce its deadly wares. Twenty-year-old Marina Voronova, a Kazakhstan native and Center for Nonproliferation Studies (CNS) staff member, was the youngest member of an international delegation to visit the facility while it was being dismantled. At that time, she donned disposable coveralls and a parka against the February chill and led a group of visitors through the lonely complex, much of it rubble, past football field-sized buildings that once housed giant fermenters, autoclaves, and aerosol test chambers. The threat from the Stepnogorsk facility may be no more, but laboratory freezers throughout the former Soviet Union still house a variety of deadly pathogens in poorly secured facilities. Now, after having earned a master's degree and Certificate in Nonproliferation Studies through CNS at the Monterey Institute, Marina follows her passion for biological disarmament by working on international biosafety and biosecurity issues for Global Green USA.



The Deadly Smell of Sweet Apples

On the evening of March 16, 1988, Iraqi fighter-bombers dropped unconventional munitions on the northern Iraqi city of Halabja, close to the border with Iran. Instead of producing large explosions, the bombs released clouds of white, black, and yellow smoke that quickly blanketed the streets of the Kurdish city. Although the cocktail of chemicals had a pleasant odor of sweet apples, within minutes thousands of men, women, and children were dead or dying from exposure to the nerve agents sarin, tabun, and VX. More than 20 years later, after Saddam Hussein's genocidal attack on Iraq's own Kurdish population, illicit traffickers still sell precursor materials and production technology for nerve agents to willing buyers in states that seek chemical weapons (CW). In addition to precursor chemicals, proliferators and sophisticated terrorist groups require specialized know-how to produce CW agents and delivery systems. Working as an AAAS Science and Technology Policy Fellow in the U.S. Department of State's Office of Cooperative Threat Reduction, Ben Brodsky is applying his knowledge of chemistry to help work with chemical scientists and engineers globally to raise awareness. After receiving his Ph.D. in synthetic organic chemistry, Ben became a research assistant at the Monterey Institute's Center for Nonproliferation Studies, where he analyzed the potential security risks associated with the emerging fields of nanotechnology and synthetic biology. Now, as an AAAS Science and Technology Policy Fellow, Ben straddles the worlds of hard science and nonproliferation policy in efforts to prevent the future use of chemicals as weapons.



A Nuclear Tower No More

The warning flare arcs into the late afternoon sky over the nuclear facility at Yongbyon, North Korea, signaling a three-minute countdown to detonation. On a nearby ridge, a small group of international experts wait for the blast that will level the cooling tower that was part of a North Korean plant used to extract plutonium for nuclear weapons. Monterey Institute alumnus Greg Dwyer and his team from the U.S. Department of Energy stand among those on the ridge. Coursework, simulations, and internships at the Center for Nonproliferation Studies prepared Greg well for his career with the U.S. government, first as a point person for securing radiological materials in countries like Jordan and Nigeria, and now as a team leader on North Korean nuclear issues. Suddenly, the cooling tower comes tumbling down in a massive cloud of smoke. The tower is gone, but the threat of nuclear proliferation remains—a threat that Greg and the ranks of capable, well-trained Monterey Institute graduates around the world are prepared to confront.



Got Rebels Clamoring for Government's Nuclear Cache? Get Research!

Members of a congressional committee meet to discuss increasing instability in nuclear-armed Pakistan. Based on chatter intercepted by intelligence, some fear a radical takeover of the government in Islamabad. Others are concerned about proliferation by remnants of the infamous A.Q. Khan nuclear smuggling network or by “insider” scientists and technicians who sympathize with the goals of the rebels. The lawmakers must take action, and soon, but additional facts and analysis are needed. When members of Congress need balanced information on pressing proliferation issues, they turn to Mary Beth Nikitin at the Congressional Research Service. A 2000 graduate of the Monterey Institute and former Center for Nonproliferation Studies staff member, Mary Beth numbers herself among the “Monterey Mafia”—an elite group of men and women who, having undergone extensive training in nonproliferation and arms control in Monterey, now work in their respective governments to prevent the spread of WMD around the world.



Sons and Daughters of a Secret City Work for a Nuclear-Free World

You won't find the Soviet city of Zelenogorsk (code-named Krasnoyarsk-45) on maps printed before 1995. Inaccessible by public roadways and waterways, the city of 60,000 is located on the banks of the Kan River in the heart of Siberia. For 40 years, its inhabitants worked night and day enriching uranium for nuclear bombs. When the Soviet Union disintegrated, the formerly secret, but still closed, city gave itself a new name and reached out to the rest of the world. Among those extending her hand was Nelli Porseva, a gregarious high school English-language teacher, who came to Monterey to learn to design a WMD nonproliferation curriculum for U.S. and Russian students. Nelli has returned to the Monterey Institute's Center for Nonproliferation Studies each year with her high school students—the sons and daughters of Russia's nuclear weapons makers—to share with their U.S. peers the vision of a world free of nuclear weapons.

CNS—Combating the Spread of WMD One Student at a Time

The James Martin Center for Nonproliferation Studies (CNS), the premier research center at the Monterey Institute of International Studies, is the world's largest nongovernmental organization dedicated entirely to education and research on nonproliferation issues. With over 35 full-time staff and 30 graduate student researchers, and with offices in Monterey and Washington, DC, the Center's mission is to train the next generation of nonproliferation specialists at home and abroad and to disseminate timely information and analysis.

The Center is recognized worldwide as the foremost training ground for nonproliferation experts. Its alumni include leaders in multiple fields: policymaking, diplomacy, science, journalism, education, and policy analysis. Through an integrated program of coursework, research, and hands-on experience in the field, CNS trains its graduates to enter the workplace ready and able to make a significant difference.

Today's urgent proliferation challenges and nonproliferation opportunities make your support of CNS more important than ever before. As former Senator Sam Nunn said recently in a speech at the Center, "We are in a race

between cooperation and catastrophe." Now more than ever, we must better understand why states pursue nuclear, chemical, and biological weapons and what can be done to halt and reverse their spread.

No other nongovernmental or educational organization is better positioned than CNS to provide that understanding, along with a practical action plan for reducing the dangers posed by weapons of mass destruction.

Please join us in this vital work by making a gift to CNS. Your support of the Center's teaching and research missions can help to bring us closer to a safer, more peaceful world. Visit <http://cns.miis.edu/cns/giving.htm>.

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