



University of Nebraska Medical Center Congressionally Directed Funding FY2001 to FY2010

FY2010 - \$16 million

- \$5.7 million for the Liquid Bandage & Tissue Regeneration project (DoD-TATRC) to develop a fast-acting absorbable liquid bandage for use in trauma-related hemorrhage.
- \$4.2 million for the Simplified Orthopedic Surgery project (DoD-Navy) to advance development of a computer-aided surgical system to simplify and improve orthopedic surgery.
- \$2.7 million for Robotic Surgery research in remote locations (NASA) to design, simulate, and test mini surgical robots during long-duration space missions, submarine deployments, and remote military and research outposts.
- \$500,000 for the Smart Coatings project (DOE) to further develop nanocrystalline coatings that can improve the efficiency, economy, and durability of medical and industrial components, like engines and nuclear storage containers.
- \$450,000 for the Biomarkers Database of Rural Diseases project (HHS-CDC) to continue developing the nation's first rural database to determine the effects that genetics, the environment, and other factors have in developing chronic diseases.
- \$2.4 million for a UNMC-Iowa State University collaboration (DoD-TATRC) to develop vaccines for respiratory infections and central nervous system disorders.

FY2009-\$15.39 million

- \$6.2 million for the Battlefield Tracheal Intubation project (DoD-TATRC) to modify the videolaryngoscope for battlefield use by creating a mask, miniaturizing and hardening the device, developing wireless and telemetry capabilities, and adding patient monitoring and recordkeeping applications.
- \$2.96 million for Soldier Survival in Extreme Environments (DoD-TATRC) to research genes that regulate energy expenditure to predict warfighter performance and survivability in extreme environments.
- \$2 million for the Fighting Drug Resistant Infections research (DoD-ARO) to study and control bacterial cell death and eliminate drug resistant bacteria by developing new antibacterial compounds against infections such as MRSA.
- \$2 million for Solutions for Infection Control in Military and Community Hospitals (DoD-TATRC) to address the problem of hospital-acquired infections for both military and civilian patients by testing new technologies in hospital settings to significantly reduce the overall risk of infection.
- \$1 million for the New Vaccines to Protect Against Respiratory Infections research (DoD-TATRC), a collaboration with Iowa State University, to further develop vaccines to protect military personnel and civilians against respiratory infections.
- \$1 million for the Personal Protection Against Infectious Disease project (DoD-AFRL), a collaborative project with the 3M Corporation, to develop and test portable, lightweight masks to protect against infectious diseases such as anthrax and avian flu.
- \$238,000 for the Midwest Health Informatics Database project (HHS) to create the first statewide database



of health information about Nebraskans, which will enable researchers to identify rural environmental factors that cause cancer and other diseases.

FY2008-\$13.5 million

- \$4 million for New Vaccines to Protect Against Respiratory Infections (DoD-TATRC), a collaboration with Iowa State University, to develop vaccines using polymeric adjuvant systems that will protect military personnel and civilians against respiratory infections.
- \$3.5 million for Miniature Robots for Telesurgery in Combat Environments (DoD-TATRC) to further refine the miniature robots, including developing wireless capabilities, testing the refined prototype in animals, and commencing the FDA approval process.
- \$1.9 million for Nanoimaging to Prevent and Treat Alzheimer's and Parkinson's Diseases (DoE) to purchase nanoimaging equipment for imaging, manipulation and analysis of biomedical materials to develop treatments for neurodegenerative diseases.
- \$1.6 million for Battlefield Tracheal Intubation (DoD-TATRC) to enable lesser-trained individuals to successfully manage an airway by refining the videolaryngoscope to: make it smaller, battery operated, and wireless, improve intubation blades, and develop telemetry capabilities.
- \$1.6 million for the Rapid Identification of Biological Warfare Agents project (DoD-CBMS) to develop an easily transportable mechanism for soldiers to quickly identify the presence of deadly biological warfare agents.
- \$694,000 toward construction of one floor (32,000 gross square feet) of cancer research space in the Durham Research Center II (HHS-HRSA), including 16 laboratory modules and common equipment.
- \$95,305 for 21st Century Environment for Nursing (HHS-HRSA) for equipment for a state of the art teaching facility at the College of Nursing's Lincoln Division.
- \$95,305 for the Nebraska Early Detection-Informatics Technology Project (HHS-HRSA) to develop a web-based imaging data registry and computer-aided detection (CAD) algorithms that will improve the early detection and management of lung cancer and other smoking-related diseases.

FY2007-\$6.4 million

- \$2.25 million for Mini In-Vivo Robots (DoD-TATRC) to further refine the development of miniature, mobile, wireless robots that can be placed entirely within the abdominal cavity by a medic at the site of injury to provide diagnostic, imaging, and surgical capabilities to a surgeon, who can administer care.
- \$1.8 million for Personal Protection Against Infectious Diseases project (DoD-AFRL), a collaboration between UNMC and 3M Corporation, to conduct research and development related to personal protection masks that protect against exposure to infectious diseases.
- \$1.35 million for Rapid Identification of Biological Warfare Agents (DoD-CBMS) to develop essential tools necessary for the rapid identification of biological warfare agents and toxic chemicals to protect civilians and warfighters from deadly chemicals.
- \$1 million for UNMC's School of Allied Health Professions (DoD-Guard) to establish a distance education program for pre-professional and professional training of Physician Assistants to increase the PA workforce in the National Guard.
- \$1.3 million for a planning study (FHWA) to assess the feasibility of realigning Saddle Creek Road.



FY2006-\$3.15 million

- \$2 million for Nanodiagnostics of Cancer (DoD) to develop non-invasive diagnostics for early detection of cancer in order to screen large numbers of active duty military and their dependents.
- \$1 million for a planning study (FHWA) to assess the feasibility of realigning Saddle Creek Road.
- \$150,000 for Integrated Systems against Methamphetamine (DOJ) to combat methamphetamine abuse in Nebraska by integrating judicial, law enforcement, medical, behavioral health and human services systems to create an innovative and effective model of care for both urban and rural settings to reduce METH-related criminal activity and improve the lives of children.

FY2005-\$2.0 million

- \$1 million for Neurotoxins research (DoD-CBMS) to develop new approaches to protect soldiers from chemical warfare nerve agents through understanding neurotransmitter regulation, and accelerating the protein therapy concept by identifying peptides of organophosphorus compounds.
- \$1 million for the Weaponized Infectious Diseases project (DoD) to develop new knowledge regarding the molecular basis of DNA replication in an effort to develop novel strategies for protecting the war fighter from biological weapons, with a goal of developing new therapies used to treat infections by bacteria considered by the Department of Defense to be potential bioterrorism or biowarfare agents.

FY2004-\$3.75 million

- \$2.5 million for Automated Labs (DoD) to develop a platform for automated collection, culturing and identification and susceptibility testing of microorganisms.
- \$1 million for the National Biosecurity Center for Rural Health project (HHS) to advance the generation, retrieval and relay of bio-security related information within the State of Nebraska and the region; and improve Nebraska's ability to contribute to the overall emergency response capacity of the state by sharing information, expertise and resources.
- \$250,000 for the Great Plains Oral Health project (HHS) to improve access to dental care in rural Nebraska and the region.

FY2003-\$3.5 million

- \$2 million for the Biomedical Research Labs project (HHS) to construct a research building that would facilitate recruitment of prominent researchers with a history of sustained federal funding.
- \$1 million for Chemical Warfare Protection (DoD) to determine how to counteract exposure to nerve agents and develop prevention treatments, and to identify the proteins in the human brain that bind organophosphorus agents.
- \$500,000 for a Nursing Resources project (HHS) to address the critical shortage of both nurses and nursing faculty in the state by redesigning and testing the implementation of distance education strategies for traditional undergraduate nursing courses.

FY2002-\$800,000

- \$500,000 for the Research Center for Excellence project (HHS) to construct a building that would facilitate recruitment of internationally recognized researchers with a history of sustained federal funding.
- \$300,000 for the 500-mile Medical Center project (HHS) to expand and enhance the distance education delivery of health professions degree programs to students in rural Nebraska.

FY2001-\$800,000

- \$800,000 (HHS-HRSA) to improve the infrastructure at UNMC and at sites across the states (rural and underserved areas) to improve the delivery of telehealth services.