



*Lincoln*



*Omaha*



*Kearney*



*Medical Center*

## The National Strategic Research Institute at the University of Nebraska

### **Background**

The University of Nebraska and United States Strategic Command (USSTRATCOM) have entered into a long-term partnership to create a University-Affiliated Research Center (UARC). The UARC, housed in the university's National Strategic Research Institute, will provide research and development services in support of USSTRATCOM's missions related to national security. The University of Nebraska has a comprehensive research portfolio with highly qualified researchers and faculty who are well-suited to delivering on the research needs of USSTRATCOM and the Department of Defense.

The UARC will focus on the following five "core competencies," or areas in which the University of Nebraska has demonstrated significant expertise:

#### ➤ **Nuclear Detection and Forensics**

The University of Nebraska has unique facilities and researchers who are pioneering development of novel technologies to be used to detect nuclear materials and radiation signatures that are more cost-effective, easier to use, and more accurate. This research has nuclear security implications and application in the maintenance of the nation's nuclear arsenal.

#### ➤ **Detection of Chemical and Biological Weapons**

University of Nebraska medical researchers are internationally known for developing methodologies to detect neurotoxins and biological agents. Researchers from physics, chemistry, engineering, and computer science are working on novel molecular, magnetic field, and biodetection sensors, as well as autonomous and adaptive sensor networks. This unique combination of faculty in complementary research areas and unique laboratories and facilities are well-suited to develop devices to better protect the men and women in the military.

#### ➤ **Passive Defense Against Weapons of Mass Destruction**

The University of Nebraska has significant and unique expertise, facilities and resources to rapidly develop bioagent countermeasures and vaccines from exploration, design and development to piloting, manufacturing and field use. University faculty members' research on soldier performance in harsh environments, novel approaches to vaccine and drug delivery, and testing of respiratory protection equipment will provide therapeutic countermeasures for military and civilian use.

#### ➤ **Consequence Management**

Under the stress of a natural or man-made disaster or battlefield conditions, decisions can have tremendous consequences. Tools to help mitigate and plan for consequences save lives. The University of

Nebraska offers unique expertise in decision support software, disaster mitigation, hazard modeling, biosurveillance monitoring, public health laboratory diagnostics tools, collaboration science, forecasting models, and information technology to enhance communication and critical infrastructure protection.

➤ **Space, Cyber and Telecommunications Law**

NU's Law College offers one of the world's leading degree programs in space law. This emerging legal frontier critical to our national security is still largely undefined. NU has provided expertise and research on all major space regulation in the United States and has advised governments throughout the world on space traffic management, space asset security, legal protocol development, and related areas in cyber and telecommunications law.

**Questions and Answers**

**What is the importance of the UARC?**

University of Nebraska scientists are conducting cutting-edge research in critical areas related to national security and are in a strong position to support the priorities of USSTRATCOM and the Department of Defense. Faculty will have new opportunities to support national security efforts, and students will have the chance to participate in cutting-edge research that may lead to careers in security or defense. In addition, the UARC likely will position the university to significantly grow its research funding. DoD research funds awarded to NU already have grown from \$7.3 million in 2000-01 to \$34.8 million in 2010-11, for example. The initial contract award from the Department of Defense to the university provides for up to \$84 million over the next five years to support the early research activities of the UARC.

**Where are other UARCs located in the United States?**

The University of Nebraska is one of only 14 U.S. institutions to host a UARC. Other UARCs are based at MIT, Johns Hopkins University, Penn State, and other leading research universities.

**Where will Nebraska's UARC be located?**

Researchers from all four University of Nebraska campuses will be involved in the institute, but it has not been determined where the administrative team will be located. Initially, the UARC's work will be distributed across multiple locations where research is currently being conducted.

**How many faculty will be involved?**

University of Nebraska faculty will have the opportunity to participate in the UARC if their research aligns with federal funding opportunities. Faculty will not be required to work with the UARC. Initially, we have identified more than 100 faculty members with research interests that may align with the UARC; that number likely will grow over time as the UARC grows.

**Will their research be classified?**

The university will work with the Department of Defense to ensure that proper security controls are in place for research and development projects within the UARC that have implications for national security, including the establishment of secure locations for classified research. There will be instances where, in the interest of national security, the DoD will reserve the right to control the release of certain information.