



RESEARCH & SCIENCE

CAPABILITIES TO MEET THE MISSION



**NATIONAL STRATEGIC
RESEARCH INSTITUTE**
at the University of Nebraska



The National Strategic Research Institute (NSRI) at the University of Nebraska (NU) is designated by the Department of Defense (DOD) as a University Affiliated Research Center (UARC) with core competencies identified to counter national security threats, to include chemical, biological, radiological, nuclear, explosive and other mission-related domains.

NSRI and NU support national interests and strategies by providing the DOD and other federal agencies with evolutionary and revolutionary solutions to the dangerous and evolving threats created by weapons of mass destruction (WMD) and their potential impacts to warfighters and civilians.

As one of just 15 UARCs in the country, NSRI serves as an integrated partner and trusted agent of its sponsor, U.S. Strategic Command (USSTRATCOM), and the entire U.S. government, leveraging NU's deep multi-disciplinary research capabilities and established collaborations with industry, academia and government agencies to respond to current and anticipated threats.

To deal with a multitude of requirements impacting the warfighter of today and tomorrow:

- ▶ **NSRI delivers** technology, product and strategy development, training and exercises and subject matter experts.
- ▶ **NSRI links** high-caliber research scientists with real-world DOD and federal agency problems and then delivers effective solutions to those defined needs.
- ▶ **NSRI provides** leading-edge training programs to organizational leaders and their teams to help prepare for and mitigate threats.
- ▶ **NSRI supports** graduate and undergraduate student research programs to grow the multidiscipline workforce with a strong appreciation for the challenges introduced to the battlespace and society by national security threats.

As a non-profit, NSRI is acutely mission-focused, committed to advancing its research capabilities to stay ahead of the technological challenges the U.S. is sure to face in the future. NSRI's job is to serve its sponsors and the requirements they have for keeping the nation safe.

Let us know how we can support you in your important mission areas, with shared purpose for our warfighters and our nation.

▶ **[NSRI.NEBASKA.EDU](https://www.nsri.nebraska.edu)**



LEADERSHIP TEAM



**MAJ. GEN., USAF (RET.)
RICHARD EVANS**
Executive Director



JOSHUA SANTARPIA, PH.D.
Science & Technology Advisor



MARTY SIKES, MS
Associate Executive Director,
Chemical & Biological Defense
Programs



JOHN TENCER, MBA
Associate Executive Director,
Operations



**NEAL WOOLLEN,
DVM, PH.D., MSS**
Associate Executive Director,
CWMD Allied Programs



CHRISTOPHER YEAW, PH.D.
Associate Executive Director,
Strategic Deterrence & Nuclear
Programs



MISTY BENSMAN, MS
Director, Program Operations



PAUL BRANTMIER
Director, Advanced
Technologies



ADAM CARLSTROM, MBA
Research Director,
USSTRATCOM Programs



WES CARTER
Research Director, Field
Operations & Training



DILLON CUNNINGHAM
Research Strategy Advisor



THOMAS DINANNO, MS, MA
Director, Strategic Resiliency
& Wargaming



ALLEN GEIST, MAS
Director, EMSO Programs



KATELYN IDEUS, MA
Director, Strategic
Communications & Engagement



THOMAS MUELLER, PH.D.
Research Director, Chemical
Defense Programs



KYLE PARKER, MA
Director, Sample Exploitation
and Sequencing



DANIEL POLANSKI
Director, Training



ANNA RAVNHOLDT, MPA
Director, Security Compliance



PATRICK RHOADS, MS
Research Director, Nuclear
Enterprise Support



DAVID ROBERTS
Research Director, Special
Programs



TERRY THIEM, PH.D.
Director, Medical
Countermeasures



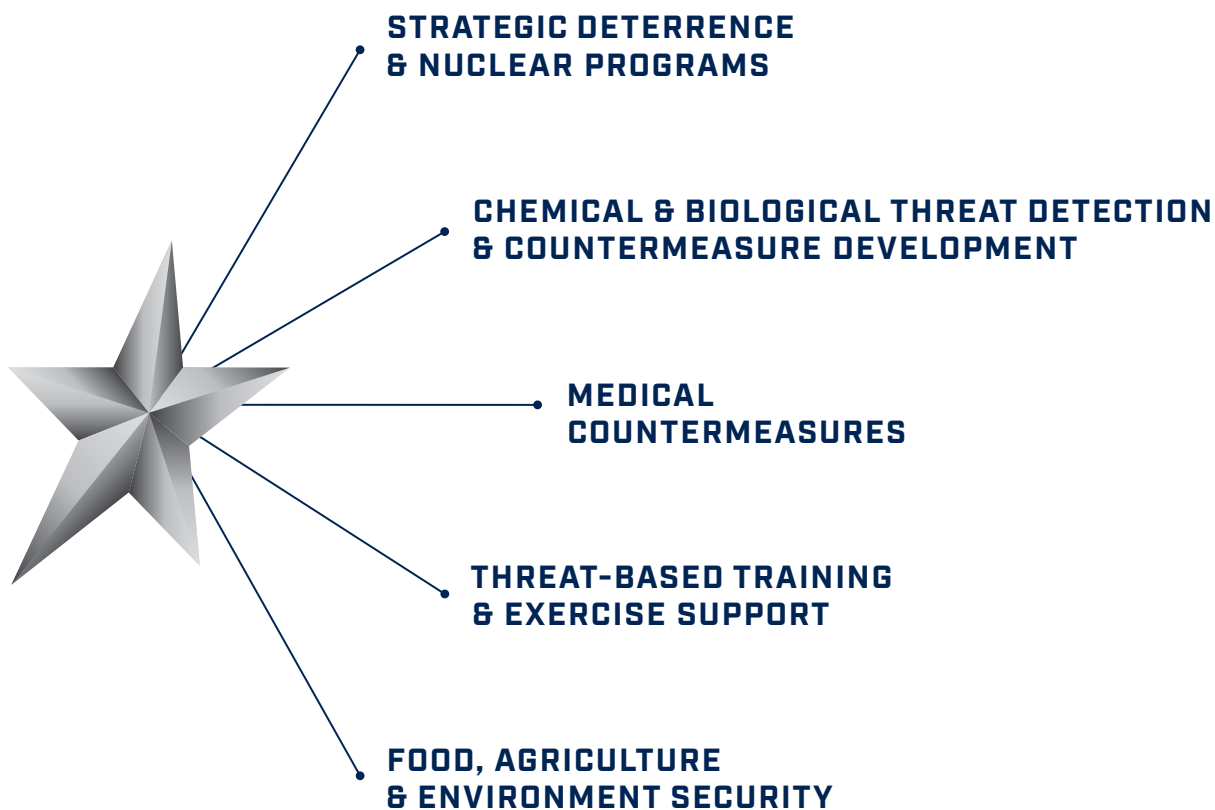
TAMI THOMPSON, PH.D.
Strategic Advisor

UARC CORE COMPETENCIES

NSRI's research portfolio is comprised of five focus areas that are derived from the core competencies within its University Affiliated Research Center designation from the Department of Defense. Each focus area encompasses a host of capabilities, capacity and expertise.

- ▶ Active & Passive Defense Against Weapons of Mass Destruction
- ▶ Nuclear Detection & Forensics
- ▶ Consequence Management
- ▶ Detection of Chemical & Biological Weapons
- ▶ Mission-Related Research

FOCUS AREAS



CAPABILITIES



STRATEGIC DETERRENCE & NUCLEAR PROGRAMS

- ▶ Weapons policy analysis: foreign threats, arms control, conceptual weapon design, strategic materials production
- ▶ Strategic conflict deterrence and escalation dynamics: tabletop exercises, wargames, model development, decision support tools
- ▶ Consequence management: nuclear detection and forensics, hazard modeling, disaster mitigation research
- ▶ Support technologies: future NC3 technology exploration, advanced concepts and architecture, materials research, advanced manufacturing, nuclear certification



CHEMICAL & BIOLOGICAL THREAT DETECTION & COUNTERMEASURE DEVELOPMENT

- ▶ Development of detection, collection, identification, exploitation strategies and technologies
- ▶ Hazard detection, decontamination, mitigation, remediation
- ▶ Aerosol science: environmental characterization, dissemination
- ▶ Materials biology: substrate effects, binding kinetics, surface integration
- ▶ Threat and effects: intelligence analysis, modeling, simulation studies
- ▶ Technical collection, field exploitation, forensics
- ▶ Rapid prototyping and development
- ▶ Testing and evaluation, independent verification and validation



MEDICAL COUNTERMEASURES

- ▶ Multi-system disaster medicine readiness and response solutions for CBRNE threats
- ▶ High-consequence, pathogen-infected patient management and training
- ▶ Vaccine, therapeutic, diagnostic capability discovery and development



THREAT-BASED TRAINING & EXERCISE SUPPORT

- ▶ Academic, hands-on, just-in-time and scenario-driven programs across the CBRNE spectrum conducted on site or at NSRI's secure location
- ▶ Full-scale exercise coordination challenging all levels of technical and tactical WMD response teams
- ▶ Sponsor-tailored scenarios that promote multi-jurisdiction participation of mission partners during a WMD-related incident
- ▶ Facilitation of advanced development acquisition support and DOD testing and evaluation activities
- ▶ Subject matter expert support to customer-run exercises



FOOD, AGRICULTURE & ENVIRONMENT SECURITY

- ▶ Characterization and mitigation solutions for natural, accidental and intentional chemical, biological and radiological threats and their consequences
- ▶ Research solutions for environmental impacts and factors associated with chemical, biological, radiological and nuclear incidents
- ▶ One-health perspective solutions for incidents that cross domains with human, animal, plant and environment considerations

CONTRACTING & BUSINESS PROCESS

As a UARC, NSRI accesses an indefinite delivery, indefinite quantity (IDIQ) contract vehicle through USSTRATCOM that shortens the timeline from identification of need to contract award and creates trusted, collaborative relationships. Benefits of doing business with NSRI include:

- ▶ Comprehensive knowledge of sponsors' requirements and problems
- ▶ Broad access to information, including proprietary data
- ▶ Broad corporate knowledge
- ▶ Independence and objectivity
- ▶ Quick response capability
- ▶ Current operational experience
- ▶ Freedom from real and/or perceived conflicts of interest

3-STEP IDIQ CONTRACTING PROCESS

NSRI's Integrated Team Process significantly reduces the contracting timeline and increases responsiveness to requirements.

▶ Requesting Sponsor ▶ NSRI ▶ 55th Contracting Squadron

USSTRATCOM facilitates and assists throughout the process.

1. PERFORMANCE WORK STATEMENT (PWS) DEVELOPMENT

- ▶▶▶ Identify requirements and budget
- ▶▶▶ Draft PWS through collaborative process
- ▶▶▶ Commit funding
- ▶▶▶ Create independent government estimate
- ▶▶▶ Identify Contracting Officer Representative (COR)
- ▶▶▶ Draft proposal

2. REQUEST FOR PROPOSAL (RFP)

- ▶▶▶ Formal PWS review
- ▶▶▶ Release of RFP
- ▶▶▶ Proposal submission

3. PROPOSAL REVIEW & AWARD

- ▶▶▶ Perform technical and cost analysis
- ▶▶▶ COR training
- ▶▶▶ Contract team reviews
- ▶▶▶ Negotiations
- ▶▶▶ Process award documentation



NSRI also accepts funding from direct contracting vehicles, other transaction agreements, cooperative agreements and grants. Details at nsri.nebraska.edu/business.

LOCATIONS

HEADQUARTERS

Omaha, Nebraska

RESEARCH OFFICE

U.S. Strategic Command Headquarters
Offutt Air Force Base
Omaha, Nebraska

NATIONAL CAPITAL REGION LABORATORY & CONFERENCE CENTER

Annapolis Junction, Maryland

SPACE COAST FIELD OFFICE

Melbourne, Florida

FIELD OFFICE & LABORATORY

Fredericksburg, Virginia

COLLABORATIVE BIOSECURITY LABORATORY

University of Nebraska–Lincoln
Lincoln, Nebraska

ENGAGEMENT HUB

Nebraska Innovation Campus
Lincoln, Nebraska



**NATIONAL STRATEGIC
RESEARCH INSTITUTE**
at the University of Nebraska



NSRI.NEBRASKA.EDU

