

NRI Collaboration Initiative

2025-2026 Award Recipients

July 1, 2026



Proposal Title	Researchers	PI	Campus
A Multi-Collaborative Implementation Plan for a Nebraska Regenerative Circular Bioeconomy	Tala Awada Ryan Anderson Jennifer Auchtung Nicole Buan Edgar Cahoon Ozan Ciftci Galen Erickson Konstantinos Giannakas George Grispos Loren Isom Meghan Jackson Derek McLean Santosh Pitla Mark Riley Jake Smith Mahadevan Subramaniam Emie Yiannaka	PI	UNL UNL UNL UNL UNL UNL UNL UNL UNO UNL UNS UNL UNL UNL UNL UNO UNL
A Multi-Modal Artificial Intelligence Framework for Molecular Categorization of T-Cell Acute Lymphoblastic Leukemia	Shibiao Wan Vijaya Bhatt Ran Dai Guoqing Lu Jieqiong Wang	PI	UNMC UNMC UNMC UNO UNMC
Advancing Nuclear Energy Workforce Development at the University of Nebraska	Bai Cui Jeremy Armstrong Jeffrey Shield	PI	UNL UNK UNL
AI-Enabled Perinatal Risk Prediction for Early Detection of Fetal Congenital Heart Disease in Rural Care Settings	Jason Christensen Ling Li Shibiao Wan Jieqiong Wang Tianjing Zhao	PI	UNMC UNMC UNMC UNMC UNL
An Integrated Infrastructure-Public Health Modeling Framework for Community Recovery Under Compounding Hazards	Milad Roohi Jesse Bell Kristina Kintziger Yunwoo Nam Shivendra Srivastava	PI	UNL UNMC UNMC UNL UNMC
Beyond Balance: Effects of Wobble-Board Training on Brain Health and Memory Outcomes in Fall-Prone Older Adults	Hillary Schwarb Madhur Mangalam	PI	UNL UNO
Biopsychosocial Influences on the Gut Microbiome in Women's Health: Moving Towards Eubiosis	Ashley Blount Abby Bjornsen-Ramig Tiffany Moore Gurudutt Pendyala Praveen Rudra Kara Schneider	PI	UNO UNO UNMC UNMC UNO UNO
Carbohydrate-Peptide Amphiphile Nanostructures as an Emerging Platform for Selective Bacterial Targeting	Alexey Krasnoslobodtsev Martin Conda Sheridan	PI	UNO UNMC
COMPAS: Computational Multimodal Precursor Assessment System for Proactive Interventions in Individuals with Intellectual and Developmental Disabilities	Tara Fahmie Mahadevan Subramaniam	PI	UNMC UNO

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CORRN: Cybersecurity Operations for Risk Reduction in Agri-Networks, A UNO/MATRIX-NSRI/UNL-IANR Partnership safeguarding Nebraska Farms	Matt Hale Tala Awada Jennifer Clarke Robin Ghandi Megan Jackson Joe Luck Derek McLean Santosh Pitla	PI	UNO UNL UNL UNO UNS UNL UNL UNL
Decoding Alzheimer's Through Sleep: An AI-Powered Approach	Xin Xing Peng Zhong	PI	UNO UNMC
Defining Genetic Structure Among Phenotypically Distinct Lizard Populations Across the Latitudinal Thermal Gradient	Travis Robbins Jessica Petersen	PI	UNO UNL
Design, Synthesis, and Testing of Novel Truxillic Acid (TA) Derivatives for Binding/Inhibition of Fasciola Hepatica Fatty Acid Binding Protein-V (Fh-V)	Frank Kovacs Mahesh Pattabiraman Mark Wilson	PI	UNK UNK UNL
Developing Methods for Genetic Engineering of Plant Mitochondrial Genomes	Jeff Mower Huang Li Haiwei Lu	PI	UNL UNL UNK
Developmental Origins of Reproductive Dysfunction: Impacts of Infant Micro- and Nanoplastic Exposure	Amy Desaulniers Kendra Clark Yusong Li Yongfeng Lu Svetlana Romanova	PI	UNL UNMC UNL UNL UNMC
Dietary Palmitoleate Prevents Maternal Obesity-Induced Placenta and Fetal Tissue Injury	Sathish Natarajan Ann Berry Corri Hanson Tara Nordgren	PI	UNL UNMC UNMC UNMC
Engineering siRNA-Loaded Extracellular Vesicles for Targeting SPP1 Therapy to Restore Endothelial Barrier Integrity in Pulmonary Fibrosis	Bo Liu Angie Pannier Hanjun Wang	PI	UNMC UNL UNMC
From Code Review to Secure Software: Data Foundations for Vulnerability Detection	Jaydeb Sarker Kshitiz Aryal Robert Dyer Harvey Siy	PI	UNO UNO UNL UNO
Integrating Behavioral and Biological Data Into a Multi-Modal AI Framework for Identifying Longitudinal Scenarios of Stress Response Under Gut Dysbiosis from Antibiotic Treatment	Dobromir Dotov Jonathan Clayton Shibiao Wan Xin Zhong	PI	UNO UNO UNMC UNO
Large Language Model-Driven Discovery of Novel Antimicrobial Peptides	Gus Wang Guoqing Lu Lisong Xu	PI	UNMC UNO UNL
Linking Microbiomes, Environment, and Host Genotype to Airborne Disease Outcomes in Maize	Hyun-Seob Song Xiaoyue Cheng Saet-Byul Kim	PI	UNL UNO UNL
Mechanisms of Cardio-Locomotor Coupling in Aging Revealed through Music Synchronized Walking	Aaron Likens Iraklis Pipinos Benjamin Riggan Nikolaos Stergiou	PI	UNO UNMC UNL UNO

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Mechanisms of Leg Failure in Peripheral Artery Disease	Iraklis Pipinos Emma Fletcher Gleb Haynatzki Panagiotis Koutakis Sara Myers	PI	UNMC UNMC UNMC UNMC UNO
NARS: Networked Autonomous Robotic Systems for Advanced Manufacturing	Qiang Liu Daoce Wang	PI	UNL UNO
NE-AGCAMNET - Nebraska Agricultural Camera Networking for High-Fidelity Plant Health Monitoring	Tiffany Zhang Peng Jiang Weizhen Liang Yu Pan	PI	UNO UNO UNL UNL
NU ECHO For Writing: A Virtual Collaborative and Interprofessional Model of Writing Professional Development	Apryl Poch Jill Kumke Philip Nordness Whitney Schneider-Cline	PI	UNO UNO UNO UNK
Quality of Life & Adaptive Functioning in Adolescents & Young Adults with Down Syndrome	Susan Loveall-Hague Jenni Blackford	PI	UNL UNMC
Targeted Venous Aspiration to Alleviate Severe Intracranial Hypertension	Majid Jadidi Mithun Sattur	PI	UNO UNMC
Understanding Teacher Variation and Data Utilization in Language-Focused Coaching: A Pilot Study in Head Start Classrooms	Alexandra Daro Claribelle (Ma) Gabas Myung-Jin Kim Philip Lai Paula Thompson	PI	UNS UNL UNK UNK UNK