



Proposal Title	Researchers		Campus
Antibacterial elastic materials for infection-resistant prosthetics	Denis Svechkarev Marat Sadykov Yury Salkovskiy	PI	UNO UNMC UNO
Antiretroviral-Induced Placental Impairment: Biomarkers and Therapeutic Intervention	Aditya Bade Sathish Kumar Natarajan	PI	UNMC UNL
An Artificial Intelligence Based Framework to Reduce Health Disparities for Breast Cancer	Shibiao Wan Guoqing Lu Jieqiong Wang	PI	UNMC UNO UNMC
Deciphering the contribution of environmental bacterium to agriculture and medicine	Martin Conda Sheridan Clemencia Rojas	PI	UNMC UNL
Diet-microbiome interactions in the regulation of dilated cardiomyopathy	Amanda Ramer-Tait Brian Lowes Hesham Basma	PI	UNL UNMC UNMC
Effects of High Intensity Gait Training on gait mobility outcomes in early subacute stroke survivors	Brian Knarr Judith Burnfield Samuel Bierner	PI	UNO UNL UNMC
Elucidating the Role and Mechanisms of OMA1 in Triple Negative Breast Cancer Tumorigenesis	Oleh Khalimonchuk Vimla Band	PI	UNL UNMC
Enhancing Upper Extremity Rehabilitation in Neurodiverse Children: BCI-Mediated Neurofeedback and Virtual Reality for Improved Engagement and Training Quality	Ahad Behboodi Andrea Baraldi Cunha Jamie Gehringer Jorge Zuniga Ulloa	PI	UNO UNMC UNMC UNO
Examining the autoimmune potential of HISP, a broad-spectrum anti-infective immunostimulating peptide	Paul H Davis Joseph Dolence	PI	UNO UNK
Exploring Anti-Inflammatory Tissue Sparing in Brain Organoid Models of Toxoplasma gondii Infection	Sowmya Yelamanchili Paul H Davis	PI	UNMC UNO
Fast Coating of Diamond Films in Open Air for Thermal-Energy Storage	Yongfeng Lu Bai Cui Renat Sabirianov	PI	UNL UNL UNO
Functionalized Fibrin Matrix For Treating Diabetic Wounds	Iraklis Pipinos Bill Velander Geoffrey Thiele James Eudy Mark Carlson	PI	UNMC UNL UNMC UNMC UNMC
Genetic dissection of the role of Cbl-b ubiquitin ligase in cancer cachexia	Bhopal Mohapatra Hamid Band Ivan Vechetti	PI	UNMC UNMC UNL
Gut Microbiome and MMP9 in T1DM Cardiac Dysfunction	Paras Kumar Mishra Amar Singh Dhundy Bastola	PI	UNMC UNMC UNO
Heart-Gut Axis in Type 1 Diabetes-Induced Cardiac Dysfunction	Paras Kumar Mishra Amar Singh Dhundy Bastola	PI	UNMC UNMC UNO
High-flux micro-pleated filter for waterborne pathogen removal	Yury Salkovskiy Alexey Kamenskiy Marat Sadykov	PI	UNO UNO UNMC
Human biobank of Nebraska: Investigating the role of the microbiota in health and disease	Derrick Samuelson Daren Knoell Edward Deehan	PI	UNMC UNMC UNL
In Vivo Feasibility Assessment of Physiologic Longitudinal Prestretch (LPS) in Mechanically Biomimetic Synthetic Vascular Grafts	Kaspars Maleckis Jason MacTaggart	PI	UNO UNMC
Incorporating AI analysis into cancer organoid characterization	Nick Woods Adrian Black Qiuming Yao	PI	UNMC UNMC UNL
Investigating the role of commensal microbes in the development and survival of human hookworms (Necator americanus)	Joseph Fauver Paul Ayayee	PI	UNMC UNO



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Leveraging the Metabolic Versatility of <i>R. palustris</i> Towards the Bioremediation of Forever Chemical Pollutants PFAS	Nirupam Aich Rajib Saha Vinai Thomas	PI	UNL UNL UNMC
Low-cost exosuits for home-based constraint-induced therapy in rural stroke survivors	Philippe Malcolm Cheng Zheng Marco Gonzalez Castellon Mukul Mukherjee	PI	UNO UNMC UNMC UNO
Machine Learning-Assisted Ultrahigh-Throughput Engineering of Lanmodulin for Rare Earth Elements (REEs) Production	Wei Niu Fanben Meng Renat Sabirianov Wai-Ning Mei Yinsheng Guo	PI	UNL UNL UNO UNO UNL
Mental Health and Communication in Parents with Children with Autism Spectrum Disorder	Philip Lai HyeonJin Yoon Yiwei Zhang	PI	UNK UNL UNO
Microbiome, Energy Metabolism, and Parental Care in Subsocial Burying Beetles	Claudia Rauter Kristi Montooth Paul Ayayee	PI	UNO UNL UNO
Nebraska as a model to assess tick-borne disease risk using vector population genomics	Roberto Cortinas Joseph Fauver	PI	UNL UNMC
Neutrophil NADPH Oxidase Priming and Reactive Oxygen Species in Autoimmune Bullous Disease of the Skin	Erin Barrett Christopher Barrett Corey Georgesen Xiaoyue Zoe Cheng	PI	UNMC UNMC UNMC UNO
Northern Great Plains Rural Producer Oral History and LEK Project	LuAnn Wandsnider Will Stoutamire	PI	UNL UNK
Novel Ultrasound Muscle Stiffness and Strain Evaluations in Lower Extremity Peripheral Artery Disease	Ling Li Farahnaz Fallah Tafti Iraklis Pipinos Sara Myers	PI	UNMC UNO UNMC UNO
Phosphoinositide signaling controls breast cancer metastasis via the regulation of a mechanotransducer YAP	Suyong Choi Jung Yul Lim	PI	UNMC UNL
Probing the Effects of Subthalamic Deep Brain Stimulation on Motor and Prefrontal Cortical Hemodynamics in Gait and Balance	Carotin Curtze Josue Avecillas-Chasin Miguel Situ-Kcomt	PI	UNO UNMC UNMC
Remote Nanoparticle Heating for Enhanced Continuous Monitoring of Aptamer-based Protein Detection	Ryan Riskowski Rebecca Lai Sangjin Ryu	PI	UNO UNL UNL
Role of Ferredoxin in <i>Mycobacterium Avium</i> Susceptibility to Gallium Protoporphyrin	Praba Narayanasamy Bradley Britigan Raul Barletta	PI	UNMC UNMC UNL
The Role of Slc15a3 on Obesity-related Metabolic Disorders	Saraswathi Viswanathan Edward Harris James Eudy Robert Powers	PI	UNMC UNL UNMC UNL
Rural Advancement: Navigating Irrigation and Climate Change Challenges (RANICC)	Liang Chen Gwendwr Meredith Kristina Kintziger Rezaul Mahmood	PI	UNL UNL UNMC UNL
SREBF1/2 Signaling in Granulosa Cells: Steroidogenesis, Lipid Metabolism, and Mitochondrial Function	Michele Plewes John Davis Micah Schott Oleh Khalimonchuk Zeljka Korade	PI	UNMC UNMC UNMC UNL UNMC



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Tactile-augmented walking in stroke survivors: biomechanics and brain control	Mukul Mukherjee Aaron Likens Pierre Fayad Steven Barlow Yingying Wang	PI	UNO UNO UNMC UNL UNL
Towards Smart Aviation: Harnessing Intelligent, Data-driven Technologies and Analytics for Elevated Flight Safety and Airport Operations	Xin Zhong Moe Alahmad Victor Huang	PI	UNO UNL UNO
Understanding the Protective Effect of VEGFA on Ovarian Vasculature Against Chemotherapy Toxicity	So-Youn Kim Andrea Cupp	PI	UNMC UNL
Understanding the roles of wheat curl mite microbiome in wheat streak mosaic virus and Triticum mosaic virus transmission	Shaonpius Mondal Shaun Cross	PI	UNL UNMC
UNO CBA USSTRATCOM Advanced Analytics Lab	Dustin White Adam Carlstrom Ben Smith Christopher Yeaw	PI	UNO UNCA UNO UNCA
Use mRNA FISH to characterize the spatiotemporal expression of detoxification genes in arthropod pests	Leslie Rault Shaonpius Mondal Shaun Cross	PI	UNL UNL UNMC
Using targeted dietary fiber to alter the gut microbiome in people with cystic fibrosis	Ashley Deschamp Derrick Samuelson Devin Rose Edward Deehan John Dickinson	PI	UNMC UNMC UNL UNL UNMC
Vascular Biomechanics in Pregnancy: Integrating Biomechanical Insights for Better Diagnostics and Clinical Management of Hypertensive Disorders of Pregnancy	Majid Jadidi Ann Anderson Berry Ling Li	PI	UNO UNMC UNMC
Vumerity treatment of claudication: leg skeletal muscle and vascular pathology	Song-Young Park Gwenael Layec Iraklis Pipinos Irving Zucker Lie Gao Matthew Zimmerman	PI	UNO UNO UNMC UNMC UNMC UNMC