

Seed Grant Award Recipients

Summer 2017



Project Title	PI Name	Co-PI Name	Participating Campuses/ Institutions
Role of Endocytic Regulators EHD1/2 in Adipocyte Hypertrophy and Metabolism	Hamid Band, UNMC	Soonkyu Chung	UNL
One Health: A systems approach linking human and livestock antibiotic resistance at the watershed scale	Shannon Bartelt-Hunt, UNL	Wayne Mathews Linsey Donner Xu Li Alan Kolok	UNMC UNMC UNL UNO
Development of a system-level pangenome metabolic model for analysis of Staphylococcus aureus physiology	Kenneth Bayles, UNMC	Paul Fey Vinai Chittecham Thomas Daryl Murry Robert Powers Rajib Saha Marat Sadykov	UNMC UNMC UNMC UNL UNL UNMC
Enhancing phytosterol bioavailability using nanoporous starch bioaerogels	Ozan Ciftci, UNL	Tatiana Bronich Devin Rose Regis Moreau Jian Zhang	UNMC UNL UNL UNL
Early diagnostic signs of autism	Shari DeVeney, UNO	Wayne Fisher Anastasia Kyvelidou Howard Needelman	UNMC Creighton University UNMC
A Model-Based Approach to Dependability for a Family of Surgical Robots	Shane Farritor, UNL	Myra Cohen Hamid Bagheri Dmitry Oleynikov Marsha Morien	UNL UNL UNMC UNMC

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System Science of Pancreatic Cancer	Michael Hollingsworth, UNMC	Hesham Ali Qi Zhang Chi Zhang David Klinkebiel Paul Grandgenett Dandan Zheng	UNO UNL UNL UNMC UNMC UNMC
Betaine supplementation ameliorates high-fat diet-induced liver injury to prevent/decrease progression to fibrosis and HCC: Potential role in the treatment of obesity-related epidemic	Kusum Kharbanda, UNMC	Natalia Osna Carol Casey Edward Harris Qiaozhu Su Geoffrey Talmon	UNMC UNMC UNL UNL UNMC
Systems-based resolution of the complex relationship between cadmium and dietary zinc insufficiency in COPD pathogenesis	Daren Knoell, UNMC	Jim Rogers Tadeusz Wysocki	UNO UNL
Understanding the Effect of Exercise on Future Food Intake: The Role of Behavioral, Physiological, and Neural Mechanisms	Karsten Koehler, UNL	Jeffrey Stevens Jeffrey French Matthew Bice Maital Neta Julie Blaskewicz Boron Kendra Schmid Ronald Bulbulian Jung Min Lee Teresa Smith Scott Stoltenberg Christopher Gustafson Dustin Slivka	UNL UNO UNK UNL UNO UNMC UNO UNO Other UNL UNL UNO

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Systems Biological Modeling of Pathogen-Host Interactome-Immune	Marilynn Larson, UNMC	Khalid Sayood Kaihong Su Ufuk Nalbantoglu	UNL UNMC Other
Regulation of Nutrient Sensing and Energy Metabolism by Copper Limitation	Jaekwon Lee, UNL	Keshore Bidasee Soonkyu Chung Rodrigo Franco Amarnath Natarajan Robert Powers	UNMC UNL UNL UNMC UNL
Developing a MOOCocracy Prototype to Increase Public Understanding of Food Insecurity	Jamie Loizzo,	Lisa PytlikZillig Leen-Kiat Soh Jenny Dauer Denise Britigan Jennie Hill Simanti Banerjee Sunnie Watson William Watson Jennifer Richardson	UNL UNL UNL UNMC UNMC UNL Purdue University Purdue University Purdue University
Modular Self-Reconfigurable Robot for Autonomous Rehabilitation Assistance in Daily Living Tasks for Spinal Cord Injury Patients	Carl Nelson, UNL	Prithviraj Dasgupta Judith Burnfield	UNO Madonna Rehabilitation Hospital
Mechanism of persister formation in <i>Staphylococcus epidermidis</i>	Austin Nuxoll, UNK	Paul Fey Kathryn Cooper	UNMC UNO
Development and Modeling of DNA-Loaded Zein-Chitosan Particles for Oral Vaccination against Infectious Diseases	Angela Pannier, UNL	Paul Davis Deborah Brown Amanda Ramer-Tait Tadeusz Wysocki	UNO UNL UNL UNL

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The Impact of habitat loss and fragmentation on human-wildlife conflict in an agriculturally dominated system	Dustin Ranglack, UNK	Nate Bickford Matt Bice Sonja Bickford Angela Hollman James Hayes	UNK UNK UNK UNK UNO
Dynamical Modeling as a Method for Integrating Multi-Level Data for Translational Science in Innate Immunity	Jim Rogers, UNO	Pawel Ciborowski Tomas Helikar Mahbulul Majumder Dora Matache	UNMC UNL UNO UNO
Microscale Investigation of Mechanobiology of Atherosclerosis Using Novel Microfluidic Biochambers	Sangjin Ryu, UNL	Yiannis Chatzizisis Timothy Wei Iraklis Pipinos Jae Sung Park	UNMC UNL UNMC UNL
Risk of Adverse Birth Outcomes Associated with Maternal Exposure to Nitrate and Nitrosatable Compounds in Drinking Water	Patrick Shea, UNL	Helen Raikes Debora Barnes-Josiah Troy Gilmore Jane Meza Kent Eskridge	UNL UNMC UNL UNMC UNL
An Analysis of Localized Muscle Fatigue, I-Beam Surface Coating, and Harness and Tool Belt on Gait Stability for Steel Erection	Terry Stentz, UNL	Jorge Zuniga Nick Stergiou Changbum Ahn Terry Housh Richard Schmidt	UNO UNO UNL UNL UNL
Functional Roles of Novel Glutaredoxin-Like Proteins	Julie Stone, UNL	Donald Becker Mark Wilson Matthew Zimmerman	UNL UNL UNMC

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Foot Biomechanics and Thermoregulation in Peripheral Artery Disease and Diabetes	Kota Takahashi, UNO	Iraklis Pipinos Alexey Kamenskiy Dustin Slivka Greg Bashford	UNMC UNMC UNO UNL
Maternal Obesity-Dependent Mechanisms that Increase Offspring Predisposition for Metabolic Dysfunction	Jennifer Wood, UNL	Dustin Yates Jessica Petersen Sathish Natarajan Robert Bennett Dinesh Chandel Pinaki Panigrahi	UNL UNL UNL UNMC UNMC UNMC
Developing and Testing of Low-cost 3D Printed Prostheses to Restore and Improve Function of Children with Congenital or Traumatic Below Elbow Amputations	Jorge Zuniga Ulloa, UNO	Carl Nelson Mukul Mukherjee Justin Cramer Joseph Siu Said Abushamleh	UNL UNO UNMC UNMC UNK