

## Collaboration Initiative Seed Grant Award Recipients

July 1, 2019



Project Title	PI Name	Co-PI Name	Participating Campuses/ Institutions
Strengthening the Center for Electro-Optics and functionalized surfaces team to make it competitive for an NSF ERC	Dennis Alexander, UNL	Wai-Ning Mei Renat Sabirianov George Gogos Craig Zuhlke Jeff Shield Christos Argyropoulos Siamak Nejati Natale Ianno	UNO UNO UNL UNL UNL UNL UNL UNL
Unraveling mechanisms of wheat heterosis for hybrid cultivar development	Peter Baenziger, UNL	Vikas Belamkar Yufeng Ge Yeyin Shi Trenton Franz James Eudy	UNL UNL UNL UNL UNMC
Ecdysoneless as a novel link between calcium signaling and metabolism in breast cancer	Vimla Band, UNMC	Oleh Khalimonchuk	UNL
Mechanisms of action and resistance of gallium nanoparticles against pathogenic mycobacteria	Raul Barletta, UNL	Prabakaran Narayanasamy Bradley Britigan	UNMC UNMC
Quantum electron beams	Herman Batelaan, UNL	Renat Sabirianov Ken Trantham Jeremy Armstrong Shireen Adenwalla Timothy Gay Martin Centurion	UNO UNK UNK UNL UNL UNL

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Emergency Preparedness Team for weather- and climate-related events: A safer Nebraska	Jesse Bell, UNMC	Martha Shulski Sharon Meaker-Medcalf Rezaul Mahmood Clinton Rowe Michael Hayes Rachel Lookadoo John-Martin Lowe	UNL UNMC UNL UNL UNL UNMC UNMC
The alcohol exposome: Role of alcohol use in exposures contributing to human disease	Carol Casey, UNMC	Todd Wyatt Kristina Bailey Benita McVicker Loretta Jophlin Natalia Osna Kusum Kharbanda Robert Powers Murali Ganesan Paul Thomes Sri Kidambi Edward Harris Karuna Rasineni Saraswathi Viswanathan Armen Petrosyan Daren Knoell	UNMC UNMC UNMC UNMC UNMC UNMC UNL UNMC UNMC UNL UNL UNMC UNMC UNMC UNMC
Project Ag Aware: SBIRT in agricultural work settings	Christine Chasek, UNK	Shinobu Watanabe-Galloway Sandy Cook-Fong Susan Harris-Broomfield Chandran Achutan Aaron Yoder	UNMC UNO UNL UNMC UNMC

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Understanding cancer cachexia as the transcriptional and metabolic reprogramming of adipose tissue by activin A	Soonkyu Chung, UNL	So-Youn Kim John Davis	UNMC UNMC
A novel molecular signature for polyp stratification and colon cancer	Punita Dhawan, UNMC	Dhundy Bastola Geoff Talmon Lynette Smith	UNO UNMC UNMC
Developing new antibiotic pipeline using the potent and narrow-spectrum WAP-8294As as lead compounds	Liangcheng Du, UNL	Patrick Dussault Kenneth Bayles	UNL UNMC
Multi-layered vascularized cardiac patch for the treatment of chronic heart failure	Bin Duan, UNMC	Yulong Li Yuguo Lei	UNMC UNL
Adapt or die - A story of the exotic alkaline lakes of the western Nebraska sandhills	David Dunigan, UNL	Jessica Corman Emma Brinley Buckley Michael Farrell Michael Forsberg Sherilyn Fritz Mary Harner Thomas Powers James Van Etten Irina Agarkova	UNL UNK UNL UNL UNL UNK UNL UNL UNL
In-situ comparison of landfill gas emission through an intermediate cover with linear low-density polyethylene (LLDPE) or co-extruded ethylene vinyl-alcohol (EVOH) geomembranes	Jongwan Eun, UNL	Shannon Bartelt-Hunt Yunwoo Nam Chandron Achutan	UNL UNL UNMC
Integrated sensor technologies and information fusion for understanding watershed dynamics	Mary Harner, UNK	Andrew Harms Michael Forsberg Michael Farrell	UNL UNL UNL

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Multi-scale study of cellular concrete tailored with time-dependent rheological behavior	Jiong Hu	Yong-Rak Kim Florin Bobaru Mahmoud Shakouri	UNL UNL UNK
Performance tradeoffs in agile arboreal locomotion	Nathaniel Hunt, UNO	James Wilson Carl Nelson	UNO UNL
Engineering optimal 3D bioprinted bone scaffolds for the treatment of craniotomy-associated infection	Tammy Kielian, UNMC	Bin Duan Yongfeng Lu Bai Cui	UNMC UNL UNL
Pipe-pile-based micro-scale compressed air energy storage for buildings with intermittent renewable energy resources	Seunghee Kim, UNL	Wei Qiao Youngki Jang	UNL UNO
Pre-clinical study of nano-engineered fibrin-fibronectin matrix for healing large wounds and chronic wounds	Yuguo Lei, UNL	William Velander Mark Carlson	UNL UNMC
Targeted nanoparticle delivery of hedgehog inhibitor and siAPE1 for treating medulloblastoma	Ram Mahato, UNMC	Kishor Bhakat Forrest Kievit	UNMC UNL
Characterizing the evolution of gene function over a billion years of plant and algal diversification	Jeffrey Mower, UNL	Heriberto Cerutti Thomas Clemente Frank Kovacs Dawn Simon	UNL UNL UNK UNK
Signaling in marmoset oxytocin receptors: From cells, brain imaging, to behavior	Aaryn Mustoe UNO	Jeffrey French Yutong Liu Wallace Thoreson Myron Toews	UNO UNMC UNMC UNMC
Overcoming antibiotic resistance with teixobactin analogs	Hector Palencia, UNK	Austin Nuxoll Paul Fey Andy Zhang	UNK UNMC UNO

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Multi-physical and multi-phase analysis and modeling of in-situ capping system for sediment rehabilitation	Jae Sung Park, UNL	Jongwan Eun Yusong Li Jong-Hoon Youn	UNL UNL UNO
Sustainable adoption of Mobile Health (mHealth) on equitable health outcomes in Nebraska	Sajda Qureshi, UNO	John Windle Timi Barone Yi Qi Marina Clarke	UNMC UNO UNL UNMC
Leaky gut in inducing gut bacterial dysbiosis to promote mucosal inflammatory diseases	Amar Singh, UNMC	Amanda Ramer-Tait Dundy Bastola Geoffrey Talmon	UNL UNO UNMC
A novel task to decrease step width variability in older adults	Nicholas Stergiou, UNO	Iraklis Pipinos Julie Masters Kendra Schmid	UNMC UNO UNMC
Coming to the plains: Latinx stories in central Nebraska	Michelle Warren, UNK	Lory Janelle Benjamin Malczyk Jacob Rosdail Isabel Velázquez Laurinda Weisse	UNL UNK UNK UNL UNK
Shape-recoverable nanofiber aerogels for minimally invasive delivery of 3D ordered and functional tissues	Jingwei Xie, UNMC	Yuguo Lei Mark Carlson Aleem Siddique	UNL UNMC UNMC
Cellular mechanical stress regulation in autoimmune blistering disorders	Ruiguo Yang, UNL	James Wahl Jung Yul Lim	UNMC UNL