Distinguished Scientist

AWARDS CEREMONY

February 23, 2021
Virtual Ceremony | 4:30 p.m.
Welcome
Jennifer Larsen, MD
VICE CHANCELLOR FOR RESEARCH, UNMC

Remarks
Jeffrey P. Gold, MD
CHANCELLOR, UNMC

Presentation of Awards

New Investigator
Distinguished Scientist
Research Leadership

Presentation of Scientist Laureate Award

Remarks
Matthew Rizzo, MD, FAAN
2020 UNMC SCIENTIST LAUREATE

“The ceremony marks the excellence in the work that is done by our students, residents, fellows, postdoctoral trainees, and others who have a direct impact in science and discovery. The faculty that are being recognized here today, show that UNMC not only has a local and regional impact, but has a global impact as well.”

Jennifer Larsen, MD
Vice Chancellor for Research, UNMC

The New Investigator Award goes to outstanding UNMC scientists who have secured funding from the National Institutes of Health, the Department of Defense or other national sources. New Investigators also had to demonstrate scholarly activity such as publishing their research and/or presenting their findings at national conventions.

The Distinguished Scientist Award recognizes researchers who have been among the most productive scientists at UNMC during the past five years.

The Research Leadership Award is intended to honor scientists previously recognized as Distinguished Scientists who have a longstanding research funding history and also serve as research leaders and mentors on campus.

The Scientist Laureate is UNMC’s highest award for research. Nominees must be a nationally and internationally recognized research leader in his or her field, previously recognized as a Distinguished Scientist, and contributed to the UNMC research community for at least five years.
New Investigators
Leah Cook, PhD, College of Medicine
Prasanta Dash, PhD, College of Medicine
Samikshan Dutta, PhD, College of Medicine
Bryant England, MD, PhD, College of Medicine
Kyle Hewitt, PhD, College of Medicine
Regina Idoate, PhD, College of Public Health
Bhavesh Kevadiya, PhD, College of Medicine
So-Youn Kim, PhD, College of Medicine
Anthony Podany, PharmD, College of Pharmacy
Matthew Van Hook, PhD, College of Medicine
David Warren, PhD, College of Medicine
Elizabeth Wellsandt, PT, DPT, PhD, OCS, College of Allied Health Professions

New Investigator
Prasanta Dash, PhD
Title: Assistant Professor, Department of Pharmacology and Experimental Neuroscience, College of Medicine
Joined UNMC: Fall 2008
Hometown: Nayagarh, Odisha, India
Research focus: HIV Elimination

The goal of my research is: To target HIV latent reservoirs (such as Lymphoid, Myeloid, Peripheral and Central Nervous System) using multi-modal approach for its complete elimination

My research will make a difference because: More than a year ago we were the first group in the world to show HIV-1 elimination from a subset (30%) of infected animals using a combinatorial treatment approach. Therefore, the next aim is to improve the targeting strategy, which can reach most of the reservoir compartments where the virus resides, in order to recognize it and excise it. The ultimate goal is to find a cure for HIV-infected people.

Distinguished Scientists
Jesse Bell, PhD, College of Public Health
Vijaya Bhatt, MD, College of Medicine
Diana Florescu, MD, College of Medicine
Channabasavaiah Gurumurthy, MVSC, PhD, Exec MBA, College of Medicine
Sarah Holstein, MD, PhD, College of Medicine
R Katherine Hyde, PhD, College of Medicine
Robin Lally, PhD, MS, BA, RN, AOCN, FAAN, College of Nursing
Hanjun Wang, MD, College of Medicine
Jingwei Xie, PhD, College of Medicine

Research Leadership
Maneesh Jain, PhD, College of Medicine
Ted Mikuls, MD, MSPH, College of Medicine

Scientist Laureate
Matthew Rizzo, MD, FAAN, College of Medicine
Samikshan Dutta, PhD
Title: Assistant Professor, Department of Biochemistry and Molecular Biology, College of Medicine
Joined UNMC: April, 2011
Hometown: Kolkata, India
Research focus: Prostate cancer metastasis

The goal of my research is: My research focuses on addressing how advanced stage of prostate cancer evade therapeutic stress to promote growth and survival.

My research will make a difference because: Therapy-resistant prostate cancer has the worst prognosis and needs immediate intervention in terms of novel target-identification and drug-development. Moreover, the lack of proper biomarkers limits therapeutic management against clonal variability of advanced prostate cancer. Our research is trying to stratify patients based on the molecular signature responsible for the therapy resistance and lineage switch of prostate cancer. Therefore, the identification of appropriate biomarkers can discriminate clonal variation, and novel targeted therapy can provide a better therapeutic outcome.

Bryant England, MD, PhD
Title: Assistant Professor of Medicine, Division of Rheumatology and Immunology, Department of Internal Medicine, College of Medicine
Joined UNMC: July 2017
Hometown: Elliott, IA
Research focus: Rheumatoid arthritis

The goal of my research is: Improve the long-term outcomes for patients with rheumatoid arthritis.

My research will make a difference because: Of our comprehensive focus on how rheumatoid arthritis (RA), a systemic disease, is affecting patients’ well-being. We investigate how patients with RA may develop other chronic conditions, how these other conditions may impact their lifespan and treatment, and target some of the most devastating conditions that may affect patients with RA, such as RA-associated lung diseases.

Kyle Hewitt, PhD
Title: Assistant Professor, Department of Genetics, Cell Biology and Anatomy, College of Medicine
Joined UNMC: 2018
Hometown: Bristol, VT
Research focus: Hematopoiesis, anemia, leukemia

The goal of my research is: To establish the gene regulatory networks involved in blood development, homeostasis, and stress response mechanisms. We defined a family of regulatory enhancers that are switched on during periods of stress and may be important mediators of blood production in the context of anemia and leukemia. Moreover, we are interested in assigning function to a family of sterile alpha motif domain proteins expressed in blood progenitors.

My research will make a difference in our conceptual and functional understanding of the critical components involved in hematopoietic stress responses. Revealing mechanisms underlying gene activation and genes/proteins that drive the acceleration of red blood cell production in anemia will lead to new therapeutics and diagnostic markers in blood diseases.

Regina Idoate, PhD
Title: Assistant Professor, Department of Health Promotion, College of Public Health
Joined UNMC: 2010
Hometown: Fallbrook, CA
Research focus: Health disparities

The goal of my research is: To generate culturally and spiritually significant knowledge with the aim of applying this knowledge to reduce health disparities, I study how community partnerships, workforce development programs, and the medical humanities impact health disparities, particularly in relationship to American Indian populations. My goal is to better understand community systems in relation to cultural context to support population health through good culturally responsive work.

My research will make a difference because: The innovative community-based and Indigenous research methods I employ bring new ways of looking at things that can support culturally-relevant multi-level interventions that promote mental, physical, and spiritual health and wellness. My work demonstrates the relevance of context in mobilizing underserved communities in health promotion and prevention efforts.
Bhavesh Kevadiya, PhD

**Title:** Assistant Professor, Department of Pharmacology and Experimental Neuroscience, College of Medicine  
**Joined UNMC:** July, 2020  
**Hometown:** Bhavnagar, Gujarat, India  

**Research focus:** HIV, Nanoparticles, Theranostics  

The goal of my research is: Development of strategies for (i) long-acting antiretroviral drugs tracking through molecular imaging technologies, (ii) Viral delivery and molecular imaging tracking system of CRISPR technology, (iii) Nano-cocrystal strategy for multi-drug antiretroviral therapy, (iv) Development of virus-like nanoparticles for targeting antiretroviral therapy and monitoring by nuclear medicine and molecular imaging technology, (v) Synthesis of radiolabeled nanoparticles for nuclear medicine and molecular imaging technology for diagnostics as well as a therapeutic purpose.

My research will make a difference because: The aim is to develop effective theranostic nanoparticles for the purpose of effective drug delivery, targeting, multi-modal tracking of antiretroviral agents to treat HIV-1 positive or latent individuals. All of the work is about making the drugs more effective for patients by focusing on translatable research. Of course, beyond my specific research goals, I hope to teach and empower the students in the lab, so that they can lead their own difference-making research in the future.

So-Youn Kim, PhD

**Title:** Assistant Professor, Department of Obstetrics and Gynecology, College of Medicine  
**Joined UNMC:** Oct. 2018  
**Hometown:** Seoul, Korea  

**Research focus:** Oncofertility, Cancer Cachexia  

The goal of my research is:  
- Research for Oncofertility: The goal of my research is to understand the mechanisms of primordial follicle depletion that occurs during gonadotoxic cancer treatment and to develop adjuvant therapies against this iatrogenic consequence.  
- Research for Cancer Cachexia: The goal of my research is to uncover the underlying mechanisms of adipose tissue loss related to activin A and to identify potential targets to prevent adipose tissue wasting in patients with pancreatic ductal adenocarcinoma (PDAC).

My research will make a difference because:  
- Research for Oncofertility: My research will have a significant impact on the field by clarifying mechanisms by which specific chemotherapeutic agents deplete primordial follicles, and by testing the preclinical fertoprotective efficacy and safety of candidate adjuvants against specific chemotherapeutic agents.  
- Research for Cancer Cachexia: My research will make a difference by clarifying the underlying diversity of cancer cachexia depending on cancer types.

Anthony Podany, PharmD

**Title:** Assistant Professor, Department of Pharmacy Practice and Science, College of Pharmacy  
**Joined UNMC:** October 2014  
**Hometown:** Lincoln, NE  

**Research focus:** HIV Pharmacology  

The goal of my research is: To optimize therapy for people living with HIV to bring about superior health outcomes. I have a particular interest in the co-treatment of HIV and Tuberculosis (TB).

My research will make a difference because: It will shed light on the link between eye pressure and neuronal physiology, 2-photon microscopy, and neuroanatomy techniques, and have found that elevated eye pressure triggers pronounced changes to synaptic transmission and neuronal responses in visual centers of the brain.  

Matthew Van Hook, PhD

**Title:** Assistant Professor, Department of Ophthalmology and Visual Sciences, College of Medicine  
**Joined UNMC:** 2011 (as a postdoc) – joined faculty in 2016  
**Hometown:** Framingham, Massachusetts  

**Research focus:** Neuroscience of glaucoma  

The goal of my research is: To unravel the neurobiological processes linking injury to neurodegeneration in diseases of the visual system. My lab addresses this by using inducible and inherited mouse models of glaucoma, a blinding neurodegenerative disease commonly associated with pressure-induced injury to retinal ganglion cell axons as they exit the eye and form the optic nerve. We use patch-clamp electrophysiology, optogenetics, synaptic physiology, 2-photon microscopy, and neuroanatomy techniques, and have found that elevated eye pressure triggers pronounced changes to synaptic transmission and neuronal responses in visual centers of the brain. These changes include increased synaptic transmission, altered dendritic structure, and enhanced neuronal excitability. We think that these are among the earliest signs of disease, occurring prior to major degeneration of retinal ganglion cells, suggesting that they might represent a homoeostatic scaling of neuronal function to preserve vision in the face of compromised optic nerve health. Moving into the future, we will further determine how glaucoma affects the ability of neurons to send visual information to the brain and uncover the neurobiological mechanisms and molecular signals regulating that process.

My research will make a difference because: It will shed light on the link between eye pressure and neuronal function/dysfunction in the visual pathway as well as the key neuronal signaling mechanisms that go awry during disease. This will be critical for developing novel diagnostic and therapeutic approaches to prevent blindness and restore sight.
Elizabeth Wellsandt, PT, DPT, PhD, OCS

Title: Assistant Professor, Department of Physical Therapy, College of Allied Health Professions
Joined UNMC: 2016
Hometown: Hartington, NE

Research focus: Osteoarthritis after ACL injury

The goal of my research is: To better understand mechanisms underlying the rapid development of knee osteoarthritis that occurs within 10-15 years after anterior cruciate ligament (ACL) injury. Treatment strategies to delay or prevent osteoarthritis after ACL injury do not yet exist. Our research team is investigating how factors that influence knee joint loading, such as movement patterns and daily physical activity, are related to early signs of poor cartilage health on MRI. Our long-term goal is to develop rehabilitation programs that promote long-term knee joint health and lifelong participation in physical activity.

My research will make a difference because: Of the quarter-million ACL injuries each year in the United States, most occur in young, otherwise healthy individuals. The resulting pain, reduced quality-of-life, and increased risk for co-morbidity from osteoarthritis lead to substantial healthcare costs, inability to fulfill work and personal responsibilities, and risk for multiple knee replacements. Our work is significant because it is focused on movement risk factors that can be modified and optimized after injury to prevent cartilage breakdown and osteoarthritis development. Our research team blends a unique combination of expertise in rehabilitation, orthopaedic surgery, radiology, and engineering that has positioned us to develop novel treatment solutions to provide lifelong knee health and quality of life for individuals after knee injury.

Jesse Bell, PhD

Title: Claire M. Hubbard Professor of Health and Environment, Department of Environmental, Agricultural and Occupational Health, College of Public Health
Joined UNMC: 2018
Hometown: Bloomfield, Nebraska

Research focus: Environmental change and health

The goal of my research is: The goal of my research is to understand how changes in the environment impact human health.

My research will make a difference because: My research will make a difference because our environment is changing, and these changes are impacting our health. For example, we are facing environmental degradation and climate change. It is critical to understand these challenges so that we can better prepare our communities and reduce negative outcomes.

New Investigator

David Warren, PhD

Title: Assistant Professor, Department of Neurological Sciences, College of Medicine
Joined UNMC: January 1st, 2016
Hometown: Palatine, IL

Research focus: Alzheimer’s disease & memory

The goal of my research is: To better understand cognitive processes (such as memory) by studying how they are affected by genes, development, aging, and neurological diseases including Alzheimer’s disease.

My research will make a difference because: We are studying how genes associated with increased risk for Alzheimer’s disease in older adulthood affect brain and cognitive development in children. These genetic risk factors may create unique vulnerabilities that could be addressed with interventions early in life, thus reducing the risk of Alzheimer’s disease decades later.

Vijaya Bhatt, MD

Title: Associate Professor, Division of Oncology and Hematology, Department of Internal Medicine, College of Medicine
Medical Director, Leukemia Program
Joined UNMC: 2012
Hometown: Kathmandu, Nepal

Research focus: Acute leukemia, Geriatric Oncology and Graft-versus-host disease

The goal of my research is: To improve the survival and quality of life of adults with acute leukemias, including those who have undergone allogeneic stem cell transplantation.

My research will make a difference because: Acute leukemias continue to take the lives of many adults. Treatment for leukemias can also cause significant morbidity, particularly in older adults. My research is targeted towards reducing early mortality in older adults with acute myeloid leukemia, prevent relapse of leukemia after an allogeneic stem cell transplant and improve symptoms related to graft-versus-host disease.
Channabasavaiah Gurumurthy, MVSC, PhD, Exec MBA
Title: Professor, Department of Pharmacology and Experimental Neuroscience, College of Medicine
Director, Mouse Genome Engineering Core Facility
Joined UNMC: 2007
Hometown: Davangere-India
Research focus: Genome Editor

The goal of my research is: To advance scientific research, bring new therapies and cutting edge technology to affected populations, and to treat a broad and diverse population of affected individuals.

My research will make a difference because: Any new technology/method that impacts a large number of scientific fields becomes a revolutionary technology, some of which receive the highest recognition, such as a Nobel Prize. I am fortunate to be working in the interface of two Nobel awarded technologies (mouse genome engineering and CRISPR-Cas systems, awarded in 2007 and 2020, respectively). I have made several improvements to these two related technologies, publishing >25 papers, including developing Easi-CRISPR—an approach now regarded as a revolutionary method in my field, and adapted as a method of choice at several hundreds of laboratories worldwide. A few companies and institutes are investigating my technical contributions for use as gene therapy platforms for cancer and some genetic diseases.

Sarah Holstein, MD, PhD
Title: Associate Professor, Division of Oncology & Hematology, Department of Internal Medicine, College of Medicine
Joined UNMC: Sept 2016
Hometown: Iowa City, IA
Research focus: Multiple myeloma and pancreas cancer

The goal of my research is: to develop novel small molecules that disrupt intracellular trafficking in cancer cells—a strategy that we have found to be particularly effective in cancer types characterized by abnormal protein production/secretion, including multiple myeloma and pancreas cancer.

My research will make a difference because: While significant advances have been made in the treatment of myeloma, this disease unfortunately remains incurable. In addition, survival rates for patients with advanced pancreas cancer remain dismal. Therefore we still need to develop new therapies that attack these cancers in novel ways in order to improve long-term outcomes for patients. My hope is that the work we are doing in the lab will one day reach the clinic as a new treatment option for patients.

Diana Florescu, MD
Title: Professor, Division of Oncology and Hematology, Department of Internal Medicine, College of Medicine
Joined UNMC: July 2009
Hometown: Bucharest, Romania
Research focus: Infections in transplantation

The goal of my research is: To advance scientific research, bring new therapies and cutting edge technology to affected populations, and to treat a broad and diverse population of affected individuals.

My research will make a difference because: It will improve people’s quality of life, create new scientific findings and technologies, and helps build a better future.

Distinguished Scientist

R Katherine Hyde, PhD
Title: Associate Professor, Department of Biochemistry and Molecular Biology, College of Medicine
Joined UNMC: 2013
Hometown: Waterville, Maine
Research focus: Acute myeloid leukemia

The goal of my research is: To understand the molecular mechanisms regulating leukemia cells and healthy blood cells, with a long-term goal of developing new treatments that effectively and specifically target leukemia cells.

My research will make a difference because: Current treatments for leukemia can have severe side effects and are not effective in all patients. Understanding the basic biology of leukemic and healthy blood cells is critical for developing new, more effective drugs for patients with leukemia.
My research will make a difference because: Nearly everyone diagnosed with cancer experiences some degree of psychological distress manifested as symptoms of anxiety, depression, panic and/or existential crisis. If left unchecked, these symptoms escalation to poor long-term psychologic, social, spiritual, and physical well-being that affects people’s lives, and the lives of family and friends occur as well as increasing the burden on society and healthcare. Aiming patients and families with easily accessible, tailored and targeted self-management interventions that increase the likelihood of them engaging in self-management to mitigate cancer-related distress, has the potential to change the lives of over 22 million cancer survivors expected in the U.S. by 2030. My work focuses on the largest group of cancer survivors, breast cancer survivors, of whom over 30% experience significant cancer-related distress. My team developed, and has continued to test and upgrade, CaringGuidance After Breast Cancer diagnosis, an e/mHealth psychoeducational self-management tool aimed at distress prevention and reduction when accessed in the days after diagnosis. We have achieved significant differences in overall distress, depressive symptoms and social constraints over usual care alone when women had access to CaringGuidance for eight weeks. Currently, our R01 proposal under review is aimed at increasing meaningful engagement with interventions that increase the likelihood of them engaging in self-management to mitigate cancer-related psychological distress.

The goal of my research is: To develop and evaluate e/mHealth, self-management interventions to transform the care of people experiencing cancer-related psychological distress.

Research focus: Cancer-related psychological distress

Robin Lally, PhD, MS, BA, RN, AOCN, FAAN
Title: Professor & Interim Associate Dean for Research and Bertha L. Pankratz Professor of Nursing, College of Nursing, Omaha Division
Joined UNMC: September 1, 2016
Hometown: Eagan, Minnesota

Jingwei Xie, PhD
Title: Associate Professor, Department of Surgery, College of Medicine
Joined UNMC: January 2014
Hometown: Mengcheng, Anhui Province, China

Research focus: Biomaterials, Drug Delivery, Regenerative Medicine

The goal of my research is: Develop novel biomaterials serving as scaffolds and carriers for tissue repair/regeneration and drug delivery.

My research will make a difference because: Electrospun nanofibers have great promise as scaffolds for tissue regeneration due to biomimetic property. However, electrospun nanofiber materials are often produced as dense membranes or mats with small pore size, limiting cell penetration and their tissue regeneration efficacy. My lab has invented new ways to transform 2D membranes into 3D objects with controlled pore size and porosity. Our recent work has demonstrated that the transformed 3D nanofiber objects alone show high efficacy in cranial bone regeneration without combining with therapeutics and living cells, which is rarely seen in the literature.
Maneesh Jain, PhD

**Title:** Professor, College of Medicine
**Joined UNMC:** 2001, December
**Hometown:** Tundla/Delhi/Omaha

**Research focus:** Pancreatic Cancer

**The goal of my research is:** To understand the intricate cross talk of tumor cells with the stromal cells (fibroblasts and immune cells) in pancreatic tumor microenvironment and exploit this knowledge to:

1. Improve the efficacy of existing therapeutic modalities (chemotherapy, radiation therapy)
2. Develop novel targeted therapies (immunotherapies and antibody-based therapies)
3. Identify biomarkers for early detection and treatment response.

**My research will make a difference because:** We may find more effective ways to diagnose and treat pancreatic cancer, which is one of the most lethal malignancies. The reagents, models and approaches that we are developing will also help improve the basic understanding of pancreatic cancer pathophysiology and identify vulnerabilities that can be targeted.

**The best advice I could give a beginning researcher is:** To be focused, patient, interactive and open minded. Although this is an era of multidisciplinary research, one cannot be an expert on everything. While it is critical to recognize your strengths and build your research program around them, it is equally important to identify people who can complement your expertise and experience, and build collaborations and partnerships. Don’t be discouraged if things don’t go your way; there is an opportunity in every failure if one is patient and open minded.

Ted Mikuls, MD, MSPH

**Title:** Umbach Professor of Rheumatology, Vice Chair of Research, College of Medicine
**Joined UNMC:** August 2002
**Hometown:** Omaha, NE

**Research focus:** Rheumatoid arthritis

**The goal of my research is:** To better understand mechanisms the links between established risk factors with disease onset and progression in rheumatoid arthritis.

**My research will make a difference because:** By better understanding disease pathogenesis in RA, we hope to identify improved strategies for the diagnosis and management and possibly even prevent its onset.

**The best advice I could give a beginning researcher is:** Show initiative. If you wait for “projects” or “opportunities” to fall in your lap, you may be waiting a very long time.
Matthew Rizzo, MD, FAAN
Frances & Edgar Reynolds Chair and professor in the UNMC Department of Neurological Sciences

Dr. Matthew Rizzo is the Frances & Edgar Reynolds Chair and professor in the UNMC Department of Neurological Sciences. He also is the clinical program leader of neurosciences, the director of the Great Plains IDeA-CTR Network, the lead convenor of the National CTR PI group, the director of the Mind and Brain Health Laboratories, the co-director of the Center for Integrative and Translational Neuroscience and the chair of the American Brain Coalition.

As the leader of the Great Plains IDeA-CTR, Dr. Rizzo heads an organization that brings together institutions across North Dakota, South Dakota, Nebraska, and Kansas to collaborate on research and develop research resources across clinical-translational research. This grant is the largest single grant UNMC has ever received.

Dr. Rizzo’s research goal is to advance multidisciplinary research programs and activities of personnel devoted to basic, translational, and clinical research on human neurocognitive performance across laboratory and naturalistic settings. His research has been particularly focused on the impact of changes in cognition, from aging or other disorders, on real-world decision-making and behavior in the face of risk, as during automobile driving. He and collaborators have pioneered the design of new tools and techniques, including computer vision and machine learning, to process the flood of data spanning decades of continuous real-world observations in human subjects.

Currently, Dr. Rizzo sees patients with memory disorders and participates in several studies related to addressing behavioral consequences of aging and neurological disorders.

Dr. Rizzo received his MD from the Johns Hopkins University School of Medicine in Baltimore, Maryland. He attended the University of Iowa in Iowa City to complete his residency in neurology and his fellowship in behavioral neurology and cognitive neuroscience.