Rush Researchers Named Finalists for Prestigious Award

Three Rush faculty members – **Wrenetha Julion**, **Amanda Marzo** and **Meghan Moran** – are among the finalists for the Institute of Translational Medicine's (ITM) 2018 Pilot Awards, which provide $60,000 in funding for research projects, plus support services.

The finalists are ITM researchers from Rush, the Illinois Institute of Technology and the University of Chicago, and their projects involve collaborators across the ITM network and country. They'll be offered a range of free resources available through the ITM in preparing their final applications due in October.

Reviewers will narrow the pool of 10 finalists down to three award winners. The projects will kick off Jan. 1, 2019, with awardees receiving $60,000 in funding; ITM resource support for each step of the study process; and video production and communications support to share research findings and impacts.

The following are the three Rush finalists and their projects:

Wrenetha Julion, PhD, MPH, RN, FAAN, professor, Department of Women, Children and Family Nursing – Boosting the Microbiome to Prevent Disease in African American Men

Project title: "Using Prebiotics to Favorably Modulate Gut Dysbiosis in African American Fathers"

African American men are at higher risk of developing cardiovascular disease and colorectal cancer than other demographics. Though there are nutrition-based programs to address these issues, they often fail because they don't take into account social factors that make it difficult for black men to stick to the program. Julion's proposed project would evaluate a culturally sensitive approach using a convenient nutrition bar to boost their microbiomes. She plans to use those bars to deliver a new prebiotic supplement—or a non-digestible food ingredient that grows healthy bacteria in your intestines – to help optimize their microbiomes and avoid or overcome colorectal cancer, cardiovascular disease, obesity and other related conditions.

Collaborators: Barbara Swanson, PhD, RN, FAAN, ACRN; Ali Keshavarzian, MD; Louis Fogg, PhD; all of Rush; Bruce Hamaker, PhD, Purdue University; and Heather Rasmussen, PhD University of Nebraska

Amanda Marzo, PhD, assistant professor, Department of Internal Medicine, Division of Hematology, Oncology and Cell Therapy – Exploring New Ways to Treat Head and Neck Cancer

Project title: "Establishing the role of IL-15 and biomarker efficacy has on HNSCC"

Head and neck squamous cell carcinoma (HNSCC) is the seventh most common cancer worldwide. It causes pain in the throat area, difficulty swallowing, ulcers and can be deadly. Marzo's research shows that a certain cytokine—or substance created by your immune system cells—could help get rid of HNSCC tumors. Marzo wants to study this substance to create more personalized treatments that harness your immune system to fight cancer.

Collaborators: Kerstin Stenson, MD; Samer Al-Kudari, MD; Joe Goldufsky; Jeffrey Borgia, PhD; Mary Jo Fidler, MD; all of Rush; Tanguy Seiwert, MD; Nishant Agrawal, MD; Arun Khattri, PhD; Sara Kochanny; all of University of Chicago

Meghan Moran, PhD, assistant professor, Department of Cell & Molecular Medicine – Altering the Microbiome to Reduce Bone Damage

Project title: "The Gut Microbiome as a Novel Diagnostic Tool for Osteolysis"

Osteolysis is a condition where debris from a joint prosthetic, like a hip or knee replacement, causes inflammation that destroys the surrounding bone and loosens the prosthetic. It can cause pain, fractures, infections and require invasive revision surgery. Moran's research shows that orthopedic issues in the knee joint affect the gut microbiome, which is the community of microorganisms living in our intestines. Moran wants to explore the connection between the microbiome and bone health to understand exactly how changes in the gut may slow the progression of osteolysis. Her goal is to use these insights to create new ways to identify and track bone loss surrounding an orthopedic implant so that joint replacement patients can keep their bones healthy.

Collaborators: Brett Levine, MD, MS; Rick Sumer, PhD; Ali Keshavarzian, MD; all of Rush.

The Institute for Translational Medicine is a research accelerator led by Rush and the University of Chicago in collaboration with Advocate Health Care, the Illinois Institute of Technology, Loyola University Chicago, and NorthShore University HealthSystem. This consortium is fueled by about $35 million in grants from the NIH's National Center for Advancing Translational Sciences over the next five years to help drive research breakthroughs and bring those discoveries into the real world to improve health as soon as possible. Learn more about the ITM is available on Rush's website.