# Wisconsin Partnership Program: New Investigator Awards support innovative approaches to burn treatment, atrial fibrillation and aging

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The Wisconsin Partnership Program at the UW School of Medicine at Public Health (SMPH) has funded three new projects through its New Investigator Program. The awards, each $100,000 over two years, support early-career investigators who are taking innovative approaches to improving health in Wisconsin. This year's projects focus on burn treatment, atrial fibrillation and aging.

Improving Treatment for Burn Victims

In Wisconsin, over the course of one year, there were 61 fatalities and more than 600 hospitalizations related to burn injuries. Burn survivors can experience lifelong pain, scarring and infection from the burns as well as from the surgery needed to heal the wounds. Angela Gibson, MD, PhD, assistant professor in the Department of Surgery, has received funding for the project entitled Autologous Regeneration in Burn- Injured Patients. Gibson, a former UW Health Burn Center nurse, recognizes the urgent need to develop new methods to treat serious burns. This project aims to

reduce the pain and suffering of burn patients by understanding how wound healing can be accomplished without grafting healthy skin from a different part of the patient's body. The proposed work will yield insights into wound-healing processes that will help people who suffer burn injuries in Wisconsin and beyond.

Understanding Atrial Fibrillation in Patients with High Blood Pressure

Atrial fibrillation (AF) is an abnormal heart rhythm characterized by rapid and irregular beating of the atria and often occurs in individuals with high blood pressure. AF is the most common serious cardiac rhythm disorder and significantly increases a person's risk for heart failure and stroke. Management of AF currently focuses primarily on preventing such complications, rather than curing the disease. Alexey Glukhov, PhD, assistant professor, Department of Medicine, has received funding for his proposal, Mechano-Electrical Feedback in Pathophysiology of Atrial Fibrillation: Novel Strategy for Antiarrhythmic Therapy, to study the mechanisms responsible for AF associated with high blood pressure. Greater understanding of these mechanisms is expected to lead to the development of new therapies and ultimately reduce treatment costs and decrease the number of patients affected by AF.

Understanding Stem Cell Function in the Role of Aging

Aging is an inevitable part of life, and is also the greatest risk factor for numerous diseases. However, much of the aging research today focuses on the diseases themselves. Darcie Moore, PhD, assistant professor, Department of Medicine has received funding from the Wisconsin Partnership Program to study the processes underlying stem-cell aging. The project, The Role of Nesprin 3 in Mammalian Neural Stem Cell Aging, will focus on understanding and improving the decline in stem-cell function that occurs with age. In doing so, the project will identify new targets for improving stem-cell function and reducing age-dependent diseases. The far-reaching goal of this project is to improve health during aging, ultimately leading to better cognitive function and independence for seniors and decreasing the medical costs and burdens of age-related diseases.

The Wisconsin Partnership Program was established at UW School of Medicine and Public Health to improve the health of Wisconsin residents through investments in research, education and community partnerships. To date, the Wisconsin Partnership Program has awarded 450 research, education and community grants totaling more than $200 million aimed at improving the health of Wisconsin

residents.