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Northwestern to explore personalized medicine for scleroderma

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Northwestern Medicine researchers have received two five-year grants totaling $953,000 from the National Institutes of Health's (NIH) National Institute of Arthritis and Musculoskeletal and Skin Diseases to study scleroderma, an autoimmune disease for which there currently is no cure. The grants will enable researchers at Northwestern to identify biomarkers for the disease, and are the first step in developing a national resource for investigators studying scleroderma.

Scleroderma, also known as systemic sclerosis, is a chronic autoimmune disease in which the body's immune system attacks itself. It causes progressive thickening and tightening (fibrosis) of the skin and also can lead to serious internal organ damage and, in some cases, death.

Scleroderma affects an estimated 300,000 people in the United States, most frequently young to middle-aged women.

"These are game-changing grants for scleroderma research," said John Varga, M.D., professor of medicine and of dermatology at Northwestern University Feinberg School of Medicine and a physician at Northwestern Memorial Hospital. "They will greatly accelerate research into understanding fibrosis and its causes, and will move us toward personalized medicine for this complex disease."

Northwestern is one of four sites, along with Boston University School of Medicine, Dartmouth School of Medicine and University of Pittsburgh Medical Center, to receive funding through the new NIH

grants. Northwestern will serve as the lead institution for proteomics research – a fairly new area of biological study – among this group, and will explore biomarkers at the protein level. These grants mark the first time large-scale proteomics will be applied to scleroderma research.

Early identification of biomarkers would potentially permit the development of more targeted therapies, noted Monique Hinchcliff, M.D., co-investigator and assistant professor of medicine at Feinberg.

"These grants allow researchers to use advanced techniques to study a very large and geographically diverse patient population at the molecular level," Hinchcliff said.

Provided by Northwestern University