DISCOVERY

Transforming lives through innovation.

Lupus Research Institute

November 4, 2015

LRI Announces New Distinguished Innovator Awards Aimed to Uncover Root Causes of Lupus While Driving toward a Cure

The Lupus Research Institute (LRI) announces its 2015 Distinguished Innovator Award (DIA) recipients: Eric Morand, M.D., Ph.D., Monash University, Australia; and Tanya N. Mayadas, Ph.D., Brigham and Women's Hospital and Harvard Medical School, U.S. LRI's global DIA program allows exceptional researchers who match scientific rigor with innovative vision to conduct major projects for up to $1 million that can uncover the root causes of lupus and advance treatment that could arrest or reverse the disease.

"We have discovered a protein, GILZ, that may be a factor in causing lupus," said Dr. Morand. "If so, we will investigate if GILZ is a target for a safer therapy to replace the widely used steroids which can cause severe side effects that contribute to permanent organ damage and increased mortality."

"We aim to identify specific characteristics of circulating autoantibodies that make them more likely to trigger inflammation in the kidney and cause renal damage," explained Dr. Mayadas. "We will also investigate why and how autoantibodies accumulate in some lupus patients but not others, providing a basis for therapies designed to prevent kidney disease."

Previous Distinguished Innovator Awardees continue to rack up outstanding discoveries; in

work underway, DIA investigators are delivering scientific break-throughs aimed to prevent complications of lupus, uncover fundamental causes and advance toward new treatments and a cure. Recent DIA winners Drs. James Chen, Doug Green, Randolph Noelle, David Tarlinton, and Kenneth Smith share their extraordinary progress:

- *"We found a specific enzyme, cGAS, that when activated in mice "sounds the alarm" for the autoimmune system to attack -- and then, when inhibited, "rescues them" from the disease. This breakthrough should facilitate development of new drugs to inhibit the cGAS enzyme and stop the autoimmune response."* Zhijian 'James' Chen, Ph.D., UT Southwestern Medical Center, Dallas, TX

- *"We have begun developing a prognostic test based on our discovery that lupus patients who develop more severe disease have a distinctive pattern of genes turned on in their white blood cells. Now we will further validate this biomarker in patients to develop and deliver an optimized practical test ready for the clinic."* Kenneth Smith, M.D., Ph.D., University of Cambridge, Cambridge, UK

- *"Lupus may be caused by the body's failure to properly dispose of dead cells. Previously we identified a process called LAP that facilitates the disposal of these cell corpses. Our new research has found that mice that lack this ability have more inflammation and lupus-like autoantibodies. We are now investigating how the LAP process prevents disease – including kidney disease in lupus patients - and whether developing a way to restore LAP can provide new strategies for stopping disease progression in lupus patients."* Douglas Green, Ph.D., St. Jude Children's Research Hospital, Memphis, TN

- *"Can a novel 'checkpoint' molecule that limits the activity of the immune system be used to bring the overactive lupus immune system back under control? Our research in a mouse model of lupus indicates yes, and we are pursuing if targeting these molecules – which has recently revolutionized cancer treatments – can also fight lupus."* Randolph J. Noelle, Ph.D., Dartmouth College

- *"A key component of lupus is the production of antibodies that attack the individual's own cells, called autoantibodies. We discovered that the cells that make antibodies can be killed by removing the gene responsible for a protein called Mcl1, making Mcl1 an excellent target for potential therapies. We have also uncovered how the Mcl1 gene is turned on, allowing us to target this process. In addition, we have identified differences in cells producing autoantibody, differences that may be useful in ridding the body of these dangerous cells and thus reducing the symptoms of lupus."* David Tarlinton, Ph.D., Monash University, Australia

Lupus Research Institute
330 Seventh Avenue, Suite 1701, New York, NY 10001
T: 212.812.9881 F: 212.545.1843
e-mail: **Lupus@LupusNY.org**