



# DISCOVERY

Transforming lives through innovation.



November 2014

## LRI 2014 Forum for Discovery Shares Inspiring Research Progress *Two-Day Think Tank on Lupus*

Sparks of innovation and stimulating insights were flying as 150 top researchers spent two days at [Lupus Research Institute](#)'s 14<sup>th</sup> annual Forum for Discovery. They directed all their intensity and talent on driving the most novel science to transform patient lives today while driving to prevent and cure lupus tomorrow.





“The LRI annual conference provides a unique forum for researchers from diverse disciplines to interact and spark new collaborations, united in the search for solutions to this very difficult disease,” noted world-leading immunologist William Paul, M.D., LRI Scientific Advisory Board Chairman and National Academy of Sciences member.

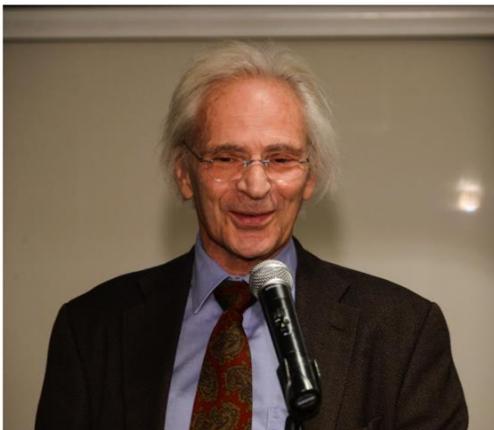
This newsletter is dedicated to sharing with patients, families and friends the excitement that world-class scientists engender as they exchange results, ideas, insights and suggestions for pushing lupus research further and faster.

## Getting the Big Picture from Big Data



Big data was a focal theme explored throughout the conference. LRI brought together experts in novel data-driven approaches to understanding the immune system to discuss how this complex information can be collected, analyzed and put into use to improve the care of people with lupus.

How can we process the growing amounts of available genetic information and harness the computational power to help develop new drugs? That was the question addressed by pharmaceutical industry speakers **Robert Plenge, M.D.**, Merck Research Laboratories and **Mark E. Curran, Ph.D.**, Janssen Research & Development, LLC.



Guest speakers **Bali Pulendran, Ph.D.**, Emory University and **Mark Davis, Ph.D.**, Stanford University described how systems biology helps answer fundamental questions about how the human immune system works.

We were honored to have **Sir Marc Feldmann, M.D., Ph.D.**, from Oxford University share insights from his pioneering research in rheumatoid arthritis. He described how scientific approaches taken in this autoimmune disease offer lessons that could be applied to lupus research and development of new therapies.

## Lupus Research Institute Awards \$1 Million Grants to Discover What Causes Lupus

The LRI announced recipients of its [2014 Distinguished Innovator Awards](#) with three cutting-edge projects that tackle the underlying causes of the disease. The LRI Distinguished Innovator Awards are the largest privately funded lupus research grants, providing up to \$1 million to afford visionary scientists the ability to pursue ambitious studies that will get at the fundamental causes of lupus that can drive toward prevention and a cure.

The 2014 award recipients are **Douglas Green, Ph.D.**, St. Jude Children's Research Hospital, **Zhijian "James" Chen, Ph.D.**, UT Southwestern Medical Center; (both pictured below left); and **Randolph J. Noelle, Ph.D.**, Dartmouth College (below right).



### **Novel Research Grantees Using Cutting-Edge Approaches**

36 investigators currently working on their [Novel Research Grants](#) presented the important strides they've made to further our understanding of lupus and development of new treatments. Supporting high-risk, high-reward studies, Lupus Research Institute's novel research platform is the proven source of breakthroughs over the past decade.



Picture above, clockwise from top left: Meggan Mackay, M.D., M.S.; Matthia Wabl, Ph.D. and Hamit Malik, Ph.D.; Jane Salmon, M.D.; Joshua Thurman, M.D.; Yousang Gwack, Ph.D.; Sandra Wolin, M.D., Ph.D.

#### Highlights include:

- **Meggan Mackay, M.D., M.S.**, The Feinstein Institute of Medical Research presented her research of new brain imaging markers of mental impairment to detect disease in people with lupus.
- Small remnants of viruses passed down from our collective ancestors might very well be behind autoimmune diseases like lupus according to findings presented by **Harmit Malik, Ph.D.**, of Fred Hutchinson Cancer Center and **Matthias Wabl, Ph.D.**, of University of California, San Francisco.
- **Jane Salmon, M.D.**, Hospital for Special Surgery, spoke about a recently identified molecule called iRhom2 that initiates inflammation and can cause kidney damage in lupus. She is investigating this protein further to determine if drugs that block its activity will be beneficial treatments for lupus nephritis.
- **Joshua Thurman, M.D.**, University of Colorado, described his work identifying better markers for lupus nephritis as well as novel treatment.
- **Yousang Gwack, Ph.D.**, University of California, Los Angeles, and colleagues have identified a potential new drug to control T cells in lupus. This candidate therapy was tested in animals and found to suppress a very serious type of bleeding that can occur as a complication in lupus. Future work will determine if the drug can control other complications of lupus.
- Big data techniques are helping **Sandra Wolin, M.D., Ph.D.**, Yale University, understand how sun exposure may trigger lupus skin flares. Dr. Wolin hopes to apply her findings to develop novel targeted therapies for lupus and lupus skin flares.

#### Thanks to Our Supporters and Our Sponsors

Fostering innovation is only possible with the support of the lupus community — the involvement and collaborative spirit of patients, families, scientists, physicians and biopharmaceutical companies sustain

the momentum. We thank our corporate sponsors for supporting the unfettered scientific interchange that has made the Forum for Discovery a forum for collaboration and innovation.



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**About the Lupus Research Institute**  
The world's leading private supporter of innovative research in lupus, the LRI champions scientific risk-taking in the hunt for solutions to this complex and dangerous autoimmune disease.

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