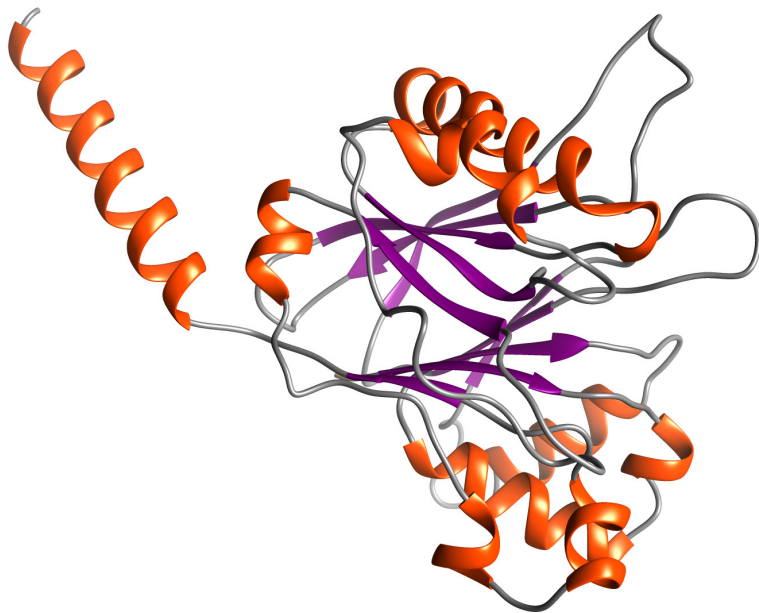


2016 SYMPOSIUM

# ADVANCES IN AUTOIMMUNITY

Thursday, November 28, 2016 • 1:00 to 5:00 PM  
Apella Event Space at Alexandria Center

Hosted by: Steve B. Abramson, MD; Jill P. Buyon, MD & Boris V. Reizis, PhD



Sponsored by

THE JUDITH & STEWART COLTON  
CENTER FOR AUTOIMMUNITY

We are pleased to welcome you to our second annual Judith and Stewart Colton Symposium on Autoimmunity and recognize the special commitment of Judith and Stewart Colton to foster fundamental discoveries that translate into improved clinical care and health for families living with autoimmune disease.



The Coltons have been generous benefactors of NYU Langone, with ties that date back to the 1960s, when Judith's uncle, a prominent surgeon, established a loan fund for medical students. Some of the couple's previous gifts to the Medical Center have supported asthma research and the research of early-career physician scientists known as the Colton Scholars. The recently established Judith and Stewart Colton Center for Autoimmunity is particularly close to their heart.

The center's researchers are furthering our understanding of immune system functions and how they are disrupted, for example, by gut microbes, so that we may more effectively treat and even prevent diseases like lupus, arthritis, Crohn's disease and multiple sclerosis.

Judith and Stewart Colton's philanthropic leadership extends to other institutions, including Tel Aviv University, where they have provided scholarship funds, endowed an eponymously named chair in Law and Security, and established the Colton Family Next Generation Technologies Institute.

Cover photo credit:

**Timothy J. Cardozo, MD, PhD**

Associate Professor

Department of Biochemistry and Molecular Pharmacology

NYU School of Medicine

## INTRODUCTION

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1:00-1:10pm **Steven B. Abramson, MD**  
*Senior Vice President & Vice Dean for Education,  
Faculty and Academic Affairs; Frederick H. King  
Professor and Chair, Department of Medicine  
NYU School of Medicine*

## SCIENTIFIC PRESENTATIONS

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1:10-1:45pm **Richard A. Flavell, PhD, FRS**  
*Investigator, HHMI/Sterling Professor,  
Department of Immunobiology  
Yale School of Medicine  
Regulation of Auto Inflammatory Disease*

1:45-2:20pm **John O'Shea, MD**  
*Scientific Director, National Institute of Arthritis  
and Musculoskeletal and Skin Diseases; Senior  
Investigator, Molecular Immunology and  
Inflammation Branch  
Genomic Views of Cytokines and Lymphocytes:  
Implications for Therapy?*

2:20-2:55pm **Julie Segre, PhD**  
*Chief, National Human Genome Research  
Institute; Senior Investigator, Translational and  
Functional Genomics Branch  
Head, Microbial Genomics Section  
Human-Microbial Interactions at the Skin Surface*

2:55-3:15pm **Coffee Break**

3:15-3:50pm **Yehuda Shoenfeld MD, FRCP, MaACR**  
*Head Zabudowicz Center for Autoimmune  
Diseases, Sheba Medical Center  
Harnessing the Microbiome to Treat  
Autoimmune Diseases*

3:50-4:25pm **Daniel J. Cua, PhD**  
*Group Leader, IMR Pathway Biology  
Merck Research Laboratories, Palo Alto  
Targeting the IL-23-Th17 Immune Pathway for  
the Treatment of Auto-Inflammatory Disorders*

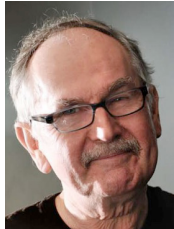
4:25-5:00pm **Kenneth Smith, MD, PhD**  
*Professor of Medicine and Head of the  
Department of Medicine  
University of Cambridge School of Clinical Medicine  
Autoimmune and Inflammatory Disease: Are  
Susceptibility and Prognosis Driven by Distinct  
Pathways?*

## RECEPTION

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5:00-6:00pm **Reception**

## BIOGRAPHICAL INFORMATION OF PRESENTING SCIENTISTS IN ORDER OF PRESENTATIONS



### **Richard A. Flavell, PhD, DSc, FRS**

Dr. Richard Flavell is Sterling Professor of Immunobiology at Yale University School of Medicine, and an Investigator of the Howard Hughes Medical Institute. He received his B.Sc. (Honors) in 1967 and Ph.D. in 1970 in biochemistry from the University of Hull, England, and performed postdoctoral work in Amsterdam (1970-72) with Piet Borst and in Zurich (1972-73) with Charles Weissmann. Before accepting his current position in 1988, Dr. Flavell was first Assistant Professor (equivalent) at the University of Amsterdam (1974-79); then Head of the Laboratory of Gene Structure and Expression at the National Institute for Medical Research, Mill Hill, London (1979-82); and subsequently President and Chief Scientific Officer of Biogen Research Corporation, Cambridge, Massachusetts (1982-88). Dr. Flavell is a fellow of the Royal Society, a member of EMBO, the National Academy of Sciences as well as the National Academy of Medicine. Dr. Flavell served as the founding Chairman of Yale's Department of Immunobiology for 28 years, stepping down in early 2016.

Dr. Flavell is co-discoverer of introns in cellular genes: he showed DNA methylation correlates inversely with, and prevents, gene expression. He was the first to develop reverse genetics as a postdoc and in his own lab continued in this field throughout his career; he is a pioneer and sophisticated practitioner in the use of this approach in vivo to study function. Dr. Flavell's laboratory studies the molecular and cellular basis of the immune response, particularly as it applies to autoimmune and auto inflammatory diseases. He has published more than 1000 peer reviewed papers and is one of the world's most cited immunologists.



### **John J. O'Shea, Jr., MD**

Dr. John J. O'Shea graduated Phi Beta Kappa from St. Lawrence University with a Bachelor of Science degree, and then obtained a Doctor of Medicine degree from the University of Cincinnati. He completed a residency in Internal Medicine at the State University of New York Upstate Medical University, followed by subspecialty training at the National Institute of Allergy and Infectious Diseases (NIAID) at the National Institutes of Health (NIH). He is currently the Director of the Intramural Research Program at the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) at the NIH. Dr. O'Shea has received numerous awards, including four NIH Director's Awards, the US Public Health Service Physician Researcher of the Year Award, Irish Immunology Public Lecture Award, Arthritis Foundation's Howley Prize, Daniel Drake Award, and the 2014 Ross Prize in Molecular Medicine. Dr. O'Shea is an elected member of the American Association of Physicians (AAP) and the Institute of Medicine/National Academy of Science, and Fellow of the American Association for the Advancement of Science (AAAS). He has published more than 300 peer-reviewed articles and serves on the editorial boards of *Immunity* and the *Journal of Experimental Medicine*.



## Julie Segre, PhD

Dr. Julie Segre is a Senior Investigator at the National Human Genome Research Institute, NIH. Her research focuses on microbial genomics, investigating both hospital pathogens and the diversity of commensal skin organisms. Dr. Segre's research integrates DNA

sequence technology, algorithm development and diagnostic clinical microbiology. She has published extensively with 30 research articles (19 as senior author) and 5 review articles in the last 5 years in journals including *Science*, *Nature*, *Science Translational Medicine*, *PNAS*, *Genome Biology* and *Genome Research*.

Dr. Segre's research has defined the normal human skin bacterial and fungal communities, enabling studies of alterations associated with pediatric atopic dermatitis and primary immunodeficiency. Her research also focused on integrating whole genome sequencing of hospital pathogens both to study nosocomial transmission and to develop a national surveillance network. Dr. Segre received the 2013 Service to America Medal, together with NIH Clinical Center epidemiologist Tara Palmore, for deploying genomic sequencing to guide hospital outbreak containment. She received her B.A. from Amherst College in 1987, graduating Phi Beta Kappa and summa cum laude in mathematics. She obtained her PhD in Genetics from MIT, advised by Eric S. Lander and received postdoctoral training in skin biology mentored by Elaine Fuchs. Dr. Segre was recruited as a new investigator to NHGRI/NIH in 2000 and received tenure in 2007. She was elected to the Board of Trustees of Amherst College in 2011.



## Yehuda Shoenfeld MD, FRCP, MaACR

Dr. Yehuda Shoenfeld is the founder and head of the Zabludowicz Center for Autoimmune Diseases, at the Sheba Medical Center which is affiliated to the Sackler Faculty of Medicine in Tel-Aviv University, in Israel. Dr. Shoenfeld is the Incumbent of the Laura Schwarz-Kipp Chair for Research of Autoimmune

Diseases at the Sackler Faculty of Medicine, Tel-Aviv University.

His clinical and scientific works focus on autoimmune and rheumatic diseases, and he has published more than 1920 papers in journals such as *New England Journal of Medicine*, *Nature*, *Lancet*, *Journal of Clinical Investigation*, *Journal of Immunology*, *FASEB*, *Journal of Experimental Medicine*, *Circulation*, *Cancer* and others. He has written more than three hundred and fifty chapters in books, and has authored and edited 40 books. His most recent publication is a textbook on Vaccines and Autoimmunity published by Wiley Blackwell. Prof. Shoenfeld is on the editorial board of 43 journals in the field of rheumatology and autoimmunity and is the founder and the editor of the *Israel Medical Association Journal* the representative journal of science and medicine in the English language in Israel.

Dr. Shoenfeld received the EULAR prize in 2005, in Vienna, Austria: "The infectious etiology of anti-phospholipid syndrome". He is an honorary member of the Hungarian Association of Rheumatology and the Royal Society of Physicians (UK). In UC Davis, USA, Dr. Shoenfeld received the Nelson's Prize for Humanity and Science for 2008. In 2009 he was honored as Doctoris Honoris Causa, from Debrecen University (Hungary), and from 2009 he is honorary member of the Slovenian National Academy of Sciences. He has recently been awarded a Life Contribution Prize in Internal Medicine in Israel (2012) as well as the ACR Master Award in 2013.



## Daniel J. Cua, PhD

Dr. Daniel Cua completed his Doctorate Degree with the Department of Molecular and Cellular Immunology at University of Southern California. He is currently Group Leader, Pathways of Inflammation at Merck Research Laboratories, Palo Alto. His research is focused on the discovery of novel biologic agents for the treatment of immune-mediated inflammatory diseases. His early work demonstrated that IL-23 and IL-17 are part of a critical cytokine network that promotes autoimmune inflammatory disorders. These findings led to the development of the Th17 Immune Axis Hypothesis, which formed the basis for the successful clinical testing of anti-IL-17, anti-IL-23 and ROR  $\gamma$  t inhibitors for treatment of chronic inflammatory disorders. More recently, his group has leveraged their expertise to study novel immune modulatory receptors on T cells and myeloid cells for immunotherapy of autoimmunity and cancer.



## Kenneth Smith, MD, PhD

Dr. Ken Smith is Professor of Medicine and Head of the Department of Medicine at the University of Cambridge, in Cambridge, United Kingdom. His laboratory studies basic immunological mechanisms and how defects in regulatory control of the immune system can lead to autoimmunity and alter defence against infection. The lab also runs a translational program in autoimmune disease (particularly SLE, vasculitis and IBD) and has led to the discovery of a prognosis-predicting biomarker entering clinical trials and the identification of new pathways driving disease outcomes in autoimmunity and infection. By integrating human and animal studies and using state-of-the-art bioinformatic methodology, the laboratory can explore immunological mechanisms that are relevant to human disease, and to translate these results into applications of direct benefit to patients.

Dr. Smith trained in nephrology and clinical immunology with an interest in autoimmune disease at the University of Melbourne, Australia. His PhD at the Walter and Eliza Hall Institute examined aspects of B cell immunology. Along with his laboratory work, Dr. Smith established the Cambridge Immunology Strategic Research Network, directs the FoCIS Cambridge International Centre of Excellence, and led a recent successful bid for funding to establish the Cambridge Institute for Therapeutic Immunology and Infectious Disease, to open in 2018. He was elected a Fellow of the Academy of Medical Sciences in 2006, and he was awarded the Lister Institute Research Prize in 2007 and the Distinguished Investigator Award of the Lupus Research Institute in 2013.

