

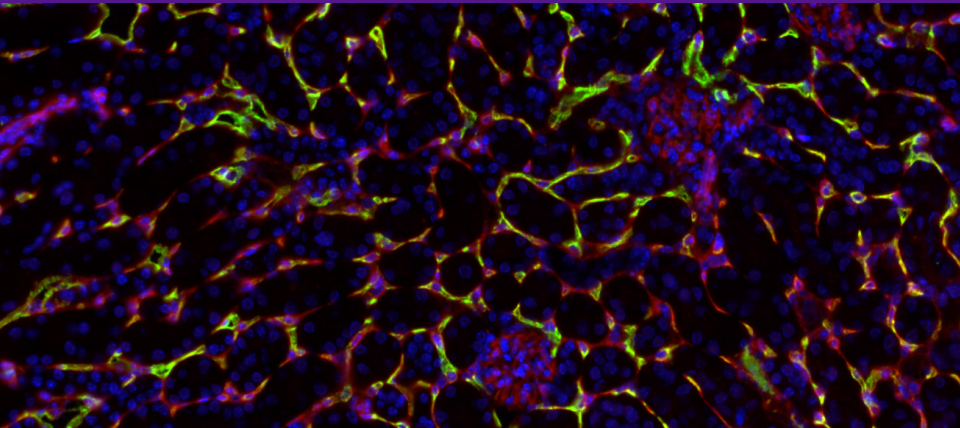
**FOURTH ANNUAL COLTON CENTER SYMPOSIUM**

# ADVANCES IN AUTOIMMUNITY

Monday, November 5, 2018 • 2–5 pm  
NYU Langone Health, Science Building

**Hosts:** • Timothy Niewold, MD  
• Steven Abramson, MD  
• Jill Buyon, MD  
• Boris Reizis, PhD

**Speakers:** • Joseph Craft, MD  
*Yale School of Medicine*  
• Katherine Fitzgerald, PhD  
*University of Massachusetts Medical School*  
• Franck Barrat, PhD  
*Hospital for Special Surgery*  
• Jane Buckner, MD  
*Benaroya Research Institute at Virginia Mason*



For additional information:  
[nyulmc.org/coltoncenter](http://nyulmc.org/coltoncenter)

Sponsored by:  
The Judith & Stewart Colton  
Center for Autoimmunity

We are pleased to welcome you to our fourth 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.

In its fourth year, the Colton center continues to grow and thrive, under the direction of Dr. Timothy Niewold. He joins the leadership team with Drs. Jill Buyon, Boris Reizis, and Steve Abramson. The pilot grants awarded thus far have generated considerable progress in the field, leading to numerous high impact publications and prestigious external grant awards which accelerate the center's mission to find solutions for autoimmune disease. Thank you for joining us for the Annual Judith and Stewart Colton Symposium on Autoimmunity, I'm sure you will enjoy the inspiring science presented here today.

Cover photo credit:

**Image of Mouse Kidney stained for Peritubular capillaries.**

Amrutesh S. Puranik, Shanmugapriya Selvaraj, Cynthia Loomis.

## INTRODUCTION

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2:00-2:10pm **Timothy Niewold, MD**  
*Judith and Stewart Colton Professor of Medicine and Pathology  
Director, Colton Center for Autoimmunity*

## SCIENTIFIC PRESENTATIONS

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2:10-2:45pm **Joseph Craft, MD**  
*Paul B. Beeson Professor of Medicine (Rheumatology) and Professor of Immunobiology  
Director, Investigative Medicine Program  
Yale University School of Medicine  
T-Dependent Humoral Immunity and Autoimmunity*

2:45-3:20pm **Katherine Fitzgerald, PhD**  
*Professor of Medicine  
Director, Program in Innate Immunity  
Worcester Foundation Chair in Biomedical Sciences  
Umass Medical School  
A SAVI approach to IFN Gene Regulation*

3:20-3:50pm **Coffee Break**

3:50-4:25pm **Franck Barrat, PhD**  
*Senior Scientist and Professor  
Hospital for Special Surgery  
Plasmacytoid Dendritic Cells Activated through TLR8  
Promote Systemic Sclerosis*

4:25-5:00pm **Jane Buckner, MD**  
*President  
Benaroya Research Institute at Virginia Mason  
Tracking autoreactive Tcells in Rheumatoid Arthritis*

## RECEPTION

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

## BIOGRAPHICAL INFORMATION OF PRESENTING SCIENTISTS IN ORDER OF PRESENTATIONS



### **Joseph Craft, MD**

*Paul B. Beeson Professor of Medicine (Rheumatology)  
and Professor of Immunobiology  
Director, Investigative Medicine Program  
Yale University School of Medicine*

Dr. Joseph Craft is Paul B. Beeson Professor of Medicine and Professor of Immunobiology at the Yale University School of Medicine. He received his degree in chemistry as a Phi Beta Kappa graduate of University of North Carolina at Chapel Hill, and is an Alpha Omega Alpha graduate of the University of North Carolina School of Medicine. Dr. Craft did postgraduate training in medicine and in rheumatology and immunology at Yale, and has been on the faculty at that institution since 1985. At Yale, he teaches undergraduate, graduate, and medical students. He directs a research laboratory devoted to understanding the immune response to pathogens and vaccines, and dissecting and treating autoimmune diseases, such as systemic lupus erythematosus, with a primary focus upon the differentiation and function of follicular helper (T<sub>fh</sub>) cells that promote B cell maturation in germinal centers (GC). In collaboration with Shane Crotty's group, his lab was the first to demonstrate that the transcription factor Bcl6 is both necessary and sufficient for T<sub>fh</sub> cell genesis. Subsequent work by his students was the first to decipher metabolic events that dictate T<sub>fh</sub> cell development, with the more recent novel determination that T<sub>fh</sub> cells spatially and temporally differentiate in the GC, events necessary for B cell selection and plasma cell formation. Other recent students have demonstrated that follicular regulatory T cells drive productive GC B cell responses, by comparison to their traditional role in downregulation of

autoimmunity. His research has been continually supported by the National Institutes of Health since 1985, at which he is a two-time R37 (MERIT) Awardee. He has been a primary mentor for over 20 postdoctoral fellows and for 14 PhD and MD/PhD (MSTP) graduate students, plus 7 graduate students currently in his lab (two jointly mentored with Richard Flavell, PhD and one with Nikhil Joshi, PhD). Dr. Craft is Director of the Investigative Medicine Program at Yale, a unique program designed to provide Ph.D. training for physicians, and, in his capacity as Director of the program and its Director of Graduate Studies, has supervised training of over 40 Investigative Medicine PhD students. Dr. Craft is recipient of the Bohmfalk Teaching Prize at Yale School of Medicine for outstanding teaching in the basic sciences. He is an elected Fellow of the American Association for the Advancement of Science, and an elected member of the American Society for Clinical Investigation and the Kunkel Society. Dr. Craft also is a member of the Board of the Lupus Clinical Trials Consortium and Chair of the Executive Committee of the Lupus Clinical Trials Network, devoted to initiating novel therapeutic trials in lupus, and past Chair of the Board of Scientific Counselors at the National Institute of Arthritis, Musculoskeletal, and Skin Diseases (NIAMS). He is former chair of the Immunological Sciences (now HAI) and current member of the Arthritis, Connective Tissue and Skin Diseases (ACTS) standing study sections at NIH, past chair of the Scientific Advisory Board of the Alliance for Lupus Research, and a former Pew Scholar in the Biomedical Sciences and Kirkland Scholar. He is co-founder of L2Diagnostics, a company in New Haven, CT, formed in partnership with Yale University and devoted to discovery of new diagnostics and therapeutic targets for immunological and infectious diseases, and is currently a member of its Board of Directors.



### **Katherine Fitzgerald, PhD**

*Professor of Medicine*

*Director, Program in Innate Immunity*

*Worcester Foundation Chair in Biomedical Sciences*

*Umass Medical School*

Dr. Fitzgerald received her B.Sc. in Biochemistry in 1995 from University College Cork, Ireland, and her

Ph.D. in Biochemistry in 1999 from Trinity College Dublin, Ireland. After a short post-doctoral fellowship at Trinity College Dublin working with Professor Luke O'Neill she joined the Division of Infectious Disease at the University of Massachusetts Medical School as a Wellcome Trust Fellow in 2001. She joined the Faculty as an Assistant Professor in 2004 and is currently Professor of Medicine, the Worcester Foundation Chair in Biomedical Research and Director of the Program in Innate Immunity at the University of Massachusetts Medical School.

Research in the Fitzgerald laboratory is focused on understanding the molecular mechanisms controlling the inflammatory response. Her group is interested in determining how the immune system distinguishes self and non-self to protect the host from infection and avoid damaging inflammatory diseases. Her lab uses multifaceted approaches including immunology, biochemistry, molecular biology and genetics to understand these mechanisms. The long-term goal of her work is to determine how inappropriate activation of innate immunity underlies the pathogenesis of infectious, inflammatory and autoimmune diseases such as Systemic Lupus Erythematosus in humans.



### **Franck Barrat, PhD**

*Senior Scientist and Professor*

*Hospital for Special Surgery*

Dr. Franck Barrat is a Senior Scientist in the Autoimmunity and Inflammation Program at the Hospital for Special Surgery and Professor of Microbiology and Immunology at the Weill Cornell

Medical College of Cornell University in New York. Prior to joining HSS, Dr. Barrat has spent over 15 years conducting research and developing new drugs in the biotech industry. His research is centered on how the sensing of nucleic acids by Toll-Like Receptors contributes to diseases such as lupus and scleroderma, two complex and incapacitating disorders for which there are currently no cures or effective treatments. Dr. Barrat's expertise is in the function and regulation of immune system cells in disease settings and his approach combines the use of mouse models and human studies in vitro with the ultimate goal to apply this work for the benefit of patients.



## **Jane Buckner, MD**

*President*

*Benaroya Research Institute at Virginia Mason*

Jane Buckner is the President of the Benaroya Research Institute at Virginia Mason, the Director of Translational Research Program at the Benaroya Research Institute, and an affiliate Professor of both Medicine in the Division of Rheumatology, and Immunology at the University of Washington. Dr. Buckner's interdisciplinary research combines genetics, immunology and clinical medicine to advance our understanding of the causes of autoimmune diseases including type 1 diabetes, multiple sclerosis, rheumatoid arthritis, systemic lupus erythematosus, and relapsing polychondritis. She has published over 100 peer-reviewed papers, and is funded by the National Institutes of Health, the Department of Defense, and the Leona M. and Harry B. Helmsley Charitable Trust. Dr. Buckner served as the chair of the Cooperative Study Group for Autoimmune Disease Prevention at NIH from 2012-2017, and is the Director of the North American Federation of Clinical Immunology Societies Center of Excellence in Seattle. Dr. Buckner received her bachelor's degree in chemistry from Carleton College, and her medical degree from Johns Hopkins School of Medicine. She has been honored by the American College of Rheumatology, having received both their Senior Rheumatology Scholar award, and their Arthritis Investigator Award.

