Seventh Annual Weill Department of Medicine Research Retreat

Wednesday, November 30th, 2022 | 8:30 am–6:00 pm

Hybrid Retreat | https://weillcornell.zoom.us/j/93325772437 | Oral Presentations: Belfer 3rd Floor | Posters: Belfer 2nd Floor | Keynote Lecture: Uris Auditorium
Dial In | 646-876-9923
Meeting ID | 933 2577 2437
Passcode | 11302022

Keynote Speaker
E. Dale Abel, MD, PhD
William S. Adams Distinguished Professor of Medicine, Chair and Executive Medical Director, Department of Medicine, David Geffen School of Medicine and UCLA Health

Organizers
John P. Leonard, MD
Professor and Chairman (Interim)
Steven M. Lipkin MD, PhD
Professor and Vice Chairman of Research

Executive Committee
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Professor of Sociology in Medicine
Shahin Rafii, MD
Professor of Medicine
Kyu Y. Rhee, MD
Associate Professor of Medicine
Joseph M. Scandura, MD
Associate Professor of Medicine
Jonathan W. Weinsaft, MD
Professor of Medicine

Meeting Description
The Seventh Annual Department of Medicine Research Retreat will provide a distinct forum to bring together a diverse range of established and emerging faculty and trainees and experts in complimentary fields to foster and expand our research efforts. The conference will feature a broad range of faculty with talks reflecting different career stages and research fields. Participation by young investigators, trainees and residents is strongly encouraged. The central goals of the conference are to:

1) Highlight the various research programs within the Department—specifically to promote interaction between young and senior investigators and exchange of ideas which will shape the future direction of research within the Department
2) Foster the development of the next generation of researchers by encouraging participation of residents and post-doctoral trainees
3) Promote interactions and collaborations amongst our research faculty

The conference will provide time for formal and informal discussions allowing for widespread participation of conference attendees at various career stages.

The full program and speaker bios are listed in the following pages below.

weillcornell.org
Wednesday, November 30th, 2022

8:45 am
Introduction | Belfer 3rd Floor
Dr. John P. Leonard, MD
Dr. Steven Lipkin, MD, PhD

9:00 am
Junior Faculty Presentations | Belfer 3rd Floor
Mark Bustoros, MD
Assistant Professor of Medicine, Division of Hematology and Medical Oncology
“Studying Chromatin Modifiers in Multiple Myeloma”

Grace Maldarelli, MD, PhD
Instructor in Medicine, Division of Infectious Diseases
“Enteric Bacteria are Immune Reactive in Crohn’s Disease”

Alexandra Racanelli, MD, PhD
Instructor in Medicine, Division of Pulmonary and Critical Care Medicine
“A Path Towards Understanding the Role of Vascular Dysfunction in the Pathogenesis of Emphysema”

Shannon Reilly, PhD
Assistant Professor of Metabolic Health in Medicine, Division of Endocrinology, Diabetes and Metabolism
“Catabolic Adipocyte Metabolism: Beyond Lipolysis”

10:00 am
Senior Faculty Presentations | Belfer 3rd Floor
Laura Kirkman, MD
Associate Professor of Medicine, Division of Infectious Diseases
“From East Africa to the Eastern Seaboard: The Search for Novel Approaches to Combat Parasites of Human Red Blood Cells”

Gregory Sonnenberg, PhD
Associate Professor of Medicine, Division of Gastroenterology and Hepatology
“Immune Regulation of Health, Inflammation, and Cancer in the Intestine.”

11:00 am
AM Poster Session | Belfer 2nd Floor

12:00 pm
Boxed Lunch | Belfer Skylight Lounge

1:00 pm
PM Poster Session | Belfer 2nd Floor

2:00 pm
Abstract Oral Presentations | Belfer 3rd Floor
Lilla Brody
Senior Research Assistant, Division of Geriatrics and Palliative Care
“Improving Caregiver Assessment and Communication about Pain in Relatives with Dementia: Results from a Pilot Study”

Xiaofeng (Steve) Huang, PhD
Postdoctoral Associate, Division of Regenerative Medicine
“Restoring Glucose Homeostasis with Stomach-Derived Human Insulin-Secreting Organoids”

Ruth Kagan, MD
Clinical Associate, Division of Cardiology
“Left Ventricular Apical Injury Augments Stroke Likelihood in Patients with Systolic Dysfunction and No Left Ventricular Thrombus - Multiparametric Tissue Characterization and Strain Assessment via Cardiac Magnetic Resonance”

Joann P. Wongvravit, DO
Resident Physician, Division of General Internal Medicine (NYPQ)
“The Impact of Physician-led Conversations on Adherence to COVID-19 Vaccinations”

3:00 pm
Break

3:30 pm
Keynote Lecture | Uris Auditorium
E. Dale Abel, MD, PhD
William S. Adams Distinguished Professor of Medicine, Chair and Executive Medical Director, Department of Medicine
David Geffen School of Medicine and UCLA Health
“Mitochondria and the Pathophysiology of Cardiovascular Disease”
Mark Bustoros, MD is an Assistant Professor in the Hematology & Medical Oncology division and leads the Multiple Myeloma Lab at Weill Cornell Medicine. After completing his medical training in Hematology & Oncology, he pursued his postdoctoral training at Dana-Farber Cancer Institute in Boston, Massachusetts where he studied the mechanisms and biomarkers of progression of Multiple Myeloma from its precursor conditions. He then became an instructor of Medicine at Harvard Medical School and continued conducting his research in Multiple Myeloma and Waldenstrom Macroglobulinemia, another type of cancer with overlapping features between myeloma and lymphoma. He started his lab at WCM a year ago, where he studies the genetic and epigenetic alterations involved in Multiple Myeloma pathogenesis and works on identifying novel targets in this malignancy. As a physician-scientist, he also focuses on studying the biological factors associated with racial disparities in Multiple Myeloma development and mechanisms of drug resistance to standard and novel therapies in patients.

Grace Maldarelli, MD, PhD is an Instructor of Medicine in the Division of Infectious Diseases at Weill Cornell Medicine. She earned her MD and PhD from the University of Maryland School of Medicine and completed her internal medicine residency and infectious disease fellowship training at NewYork Presbyterian-Weill Cornell Medical Center through the Medical Research Track program. Her research interests are in enteric bacteria and bacterial mechanisms of interaction with the host. She also attends on the general ID clinical service.

Alexandra Racanelli, MD, PhD is an Instructor of Medicine in the Division of Pulmonary and Critical Care Medicine at Weill Cornell. Dr. Racanelli received her bachelor’s degree from the University of Mary Washington, where her research career began when she was awarded a research fellowship sponsored by the Jesse Ball DuPont Foundation. During these studies, she became committed to a career of scientific discovery and pursued advanced training as a physician-scientist. She received her MD/PhD in Pharmacology and Toxicology and Molecular Biology and Genetics from Virginia Commonwealth School of Medicine. Her graduate studies were under the mentorship of Dr. Richard G. Moran and focused on understanding the transcriptional, signaling, and epigenetic events involved in the efficacy of antifolate therapeutics. Dr. Racanelli pursued clinical training in Internal Medicine and Pulmonary and Critical Care Medicine at Weill Cornell, where she also conducted her postdoctoral research with Drs. Augustine Choi and Shahin Rafii. In those studies, she identified vascular dysfunction as a key feature of the murine elastase model of emphysema and showed that restoration of the pulmonary vascular niche via cell therapy ameliorated disease. These data support the concept that the pulmonary vascular niche is critical to the integrity of the alveolar-capillary unit and are the first to show that re-establishing the vascular compartment can change the course of the emphysematous state. In her current work, Dr. Racanelli is advancing these studies using genetically modified murine models and human vascularized lung organoids to understand how pulmonary vascular dysfunction supports alveolar destruction and prevents regeneration and repair during the disease process of emphysema. Her research is currently funded by the NHLBI and the American Lung Association.

Shannon Reilly, PhD has dedicated her career to studying metabolic health and disease. During her doctoral studies at Harvard’s TH Chan School of Public Health, Dr. Reilly investigated the transcriptional networks that contribute to obesity related metabolic diseases. As a postdoctoral fellow in Alan Saltiel’s laboratory at the University of Michigan, Dr. Reilly characterized the signaling pathways linking adipose tissue inflammation to metabolic disease in obese animals and humans. Dr. Reilly is now an assistant professor at the Weill Cornell Medicine studying catabolic metabolism in catecholamine stimulated adipocytes. She has discovered that upon stimulation of lipolysis adipocytes suppress fatty acid re-esterification and promote oxidative metabolism, thereby increasing energy expenditure. Current research in the Reilly lab is focused on identifying the molecular pathways regulating energy expenditure in adipocytes and their impact on obesity and metabolic health.

Laura Kirkman, MD is a Physician-scientist and Associate Professor of Medicine and Microbiology and Immunology at Weill Cornell Medicine. Dr. Kirkman received her M.D. from Albert Einstein College of Medicine with distinction in research. She completed her clinical training in Internal Medicine at Yale-New Haven Hospital and her Infectious Disease training at the New York Presbyterian-Weill Cornell Medical Center. Dr. Kirkman’s laboratory focuses on the molecular pathogenesis of infection with the intraerythrocytic protozoan parasites, Plasmodium and Babesia, that cause the human diseases malaria and babesiosis. In particular, the lab investigates the molecular
mechanisms of DNA repair that drive the parasite’s ability to evade the host immune system and develop drug resistance as well as identify novel compounds and drug targets for the development of new antiparasitic drugs.

**Gregory Sonnenberg, PhD** is the Henry R. Erle, M.D.-Roberts Family Associate Professor of Medicine and Head of Basic Research in the Division of Gastroenterology & Hepatology. He obtained his Ph.D. in Immunology from the University of Pennsylvania in 2011 and was recruited to Weill Cornell Medicine in 2014. The focus and long-term research goals of the Sonnenberg Laboratory are to interrogate the cellular and molecular mechanisms by which the mammalian immune system controls tissue physiology, immunity, inflammation, and cancer in the gastrointestinal tract.

**Lilla Brody** is a Senior Research Assistant and Research Dissemination Strategist in the Division of Geriatrics & Palliative Medicine. She graduated from Yale University with a B.A. in Cognitive Science and Theater Studies. Lilla hopes to pursue a doctoral degree in Clinical Psychology.

**Xiaofeng (Steve) Huang, PhD** is a Postdoctoral Research Fellow in the laboratory of Dr. Qiao Zhou at the Weill Cornell Medical College. He received his B.S. in Biotechnology from Xiamen University in China and his Ph.D. in Molecular Virology from the University of Hong Kong in Hong Kong, China. His current research goal is to develop a technology to derive large numbers of functional insulin-secreting cells from the abundant renewable sources of human gastric stem cells to treat Type 1 Diabetes.

**Ruth Kagan, MD** is a third-year Internal Medicine resident at Weill Cornell Medicine. She received her medical degree from Harvard Medical School through the Harvard-MIT Health Sciences and Technology program. Her ongoing research interests are in the intersection of advanced cardiac imaging techniques, particularly cardiac MRI, and their implications and uses in electrophysiology.

**Joann P. Wongvravit, DO** is a third-year Internal Medicine resident and rising chief at New York-Presbyterian Queens Hospital. She is a graduate of Stony Brook University, received a Master’s degree in Pharmacology from New York Medical College and participated in epilepsy research throughout her time in graduate school. Prior to starting medical school, she worked as a newborn screening program assistant at New York-Presbyterian Morgan Stanley Children’s Hospital. She received her medical degree from Marian University College of Osteopathic Medicine in Indianapolis, IN. After completion of her chief resident year, she plans to pursue a fellowship in Gastroenterology.

**Keynote Speaker: E. Dale Abel, MD, PhD** is the William S. Adams Distinguished Professor of Medicine, Chair and Executive Medical Director of the Department of Medicine in the David Geffen School of Medicine and UCLA Health. He was formerly a Professor of Medicine, Biochemistry and Biomedical Engineering, Chair of the Department of Medicine and Director of the Fraternal Order of Eagles Diabetes Research Center at the University of Iowa where he held the John B. Stokes III Chair in Diabetes Research and the François M. Abboud Chair in Internal Medicine.

Dr. Abel has had a distinguished career in endocrine and metabolism research. His pioneering work on glucose transport and mitochondrial metabolism in the heart guides his current research interests: molecular mechanisms responsible for cardiovascular complications of diabetes. His laboratory has provided important insights into the contribution of mitochondrial dysfunction and aberrant insulin signaling, to heart failure risk in diabetes. Recent work has focused on mitochondrial mechanisms that mediate inter-organ crosstalk that may influence the pathophysiology of insulin resistance and mitochondrial pathways linking metabolism with increased risk for atherothrombosis.

Dr. Abel’s research program has been continually funded by the National Institutes of Health since 1995, and by the American Heart Association, the American Diabetes Association, and the Juvenile Diabetes Research Foundation. Dr. Abel is the recipient of numerous awards for scholarship and mentorship. He is an elected member of the American Association of Physicians (AAP), the American Society for Clinical Investigation (ASCI), National Academy of Medicine (NAM), and the American Clinical and Climatological Association (ACCA). Dr. Abel is a past President of the Endocrine Society and is currently President of the Association of Professors of Medicine (APM).