# **Children's Health Council**

Celebrating Five Years of Support for Children's Health Research



## Weill Cornell Medicine

April 2019

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## 

Thank you for joining our efforts to improve the lives of children." Dear Friends,

Weill Cornell Medicine's Children's Health Council was founded just five years ago, and in that short time, we have seen tremendous growth and achievement.

I am so proud to be part of this passionate group of families and individuals who work tirelessly to raise funds that bolster pediatric research and educate our community on pediatric health topics. Your dedicated philanthropy is crucial to ensuring that doctors and researchers have the tools they need to continue their groundbreaking research to benefit children.

During these five years, we have engaged with physician-scientists through annual Discovery Panels, brought families and medical students together for fun and inspiration at Family Science Day, and built a thriving community of children's health supporters.

Most important, we have made a remarkable impact on pediatric research efforts at Weill Cornell Medicine, which you will see throughout this report. I hope you will join me in celebrating our accomplishments, because without your support, this impactful work would not be possible.

Thank you for joining our efforts to improve the lives of children, and thank you for five wonderful years. I look forward to many more.

in Luesdale

Christina Truesdale Chair, Children's Health Council



**Leadership:** Christina Truesdale, Chair; Mara Feil, Vice Chair of Membership; Lori Freedman, Vice Chair of Marketing; Casey Weiss, Vice Chair of Programming

## **Children's Health Council** By the Numbers

# Total funds raised: **\$5.6 Million**



### Areas funded:

Child and adolescent psychiatry Pediatric pulmonology Pediatric cardiology Pediatric endocrinology Pediatric gastroenterology and nutrition Pediatric hematology/oncology Pediatric neurology and neurosurgery









## **At a Glance** CHC 2014-2019







### **Children's Health Investigators Fund Recipients**

Through the Children's Health Investigators Fund, the CHC "adopts" scientists at the beginning of their careers and provides funding so they can establish the preliminary research results required to qualify for substantial grants from the National Institutes of Health (NIH). The research projects on these two pages were made possible through the Investigators Fund.



Shannon Bennett, PhD Assistant Professor of Psychology in Clinical Psychiatry



Avital Falk, PhD Assistant Professor of Psychology in Clinical Psychiatry



**Rebecca Jones, PhD '12** Assistant Professor of Neuroscience in Psychiatry



**Conor Liston, MD '08, PhD** Associate Professor of Neuroscience, Feil Family Brain & Mind Research Institute Assistant Professor of

Psychiatry



Faith Gunning, PhD Associate Professor of Psychology in Psychiatry Vice Chair for Research and Psychology, Department of Psychiatry

Drs. Bennett, Falk, Gunning, Jones and Liston use sophisticated brain imaging techniques to identify patterns of brain network connectivity in adolescents and young adults suffering from anxiety and depression. In partnership with The Wharton School of the University of Pennsylvania, the researchers use brain connectivity patterns to personalize app-based Cognitive Behavioral Therapy (CBT) and incentivize adolescents to complete treatment. The team will also use brain imaging to better understand whose symptoms improve with app-based CBT and whose persist.



#### Amy Tsou, MD, PhD

Instructor in Pediatrics

Dr. Tsou's research is focused on understanding how intestinal bacteria and the nervous system interact with the immune system, and how these interactions influence intestinal inflammation in inflammatory bowel disease (IBD). The research

aims to shed light on the factors underlying the initiation and perpetuation of IBD as well as identify new classes of therapeutics — either microbial or small molecule in nature – which can influence the course of IBD. The ultimate goal of Dr. Tsou's work is to apply this knowledge towards the development of next-generation therapies for patients suffering from IBD.



#### Perdita Permaul, MD

Assistant Professor of Clinical Pediatrics

Dr. Perdita Permaul is the principal investigator of a National Institutes of Health (NIH) K23-funded research project evaluating the role that body mass index (BMI) plays in the relationship between inflammation and asthma morbidity in

an established cohort of urban children with asthma. Through epidemiological, clinical and translational research methods, the data collected will reveal potential biomarkers linking obesity and asthma, thereby providing better insight into the connection between these two chronic diseases.



#### Melody Zeng, PhD

Assistant Professor of Immunology in Pediatrics Member, Gale and Ira Drukier Institute for Children's Health

The primary focus of research in Dr. Zeng's laboratory is to study how gut immune cells and bacteria interact at the maternal-fetal/neonatal interface in the

context of pediatric inflammatory diseases. The goal of the research is to develop strategies to use beneficial gut bacteria as candidates for maternal vaccinations to help protect babies from dysregulated inflammation that could lead to autoinflammatory diseases.

## Investigators Supported by CHC Members

Children's Health Council members have also supported the work of a wide variety of pediatric physicians and investigators throughout Weill Cornell Medicine.



#### Zoltan Antal, MD

Chief, Division of Pediatric Endocrinology Associate Professor of Clinical Pediatrics Director, Pediatric Diabetes Program

Dr. Zoltan Antal is an expert in pediatric diabetes, growth and pubertal disorders, thyroid disorders, and the multiple hormone disorders that can result from childhood

cancer treatments. His current research includes ongoing prospective studies of psychosocial wellbeing in children with type 1 diabetes, as well as collaborative research with Dr. Katherine Hajjar in a multifaceted study designed to define the role of annexin A2 in exacerbating complications of diabetes.



#### David Artis, PhD

Director, Jill Roberts Institute for Research in Inflammatory Bowel Disease Director, Friedman Center for Nutrition and Inflammation Michael Kors Professor of Immunology Professor of Microbiology and Immunology

Dr. David Artis' research focuses on dissecting the pathways that regulate innate and adaptive immune cell function at barrier surfaces, such as the linings of the intestines and airways. His research program also encompasses a significant effort to translate research findings in preclinical models into patient-based studies of immune-mediated diseases.



#### Emile Bacha, MD

Adjunct Professor of Cardiothoracic Surgery

Dr. Emile Bacha is a board-certified cardiothoracic surgeon with a sub-specialization in pediatric cardiac surgery and expertise in congenital heart disease and congenital heart failure. His research focuses on 3D printing and tissue engineering, as well as

pediatric heart and valve research.



#### James Bussel, MD

Professor Emeritus of Pediatrics

Dr. James Bussel's clinical and clinical research interests have largely been in Immune Thrombocytopenia (ITP), a platelet disorder, and Fetal and Neonatal Alloimmune Thrombocytopenia (FNAIT), a disease affecting infants in which the platelet count is

decreased because the mother's immune system attacks her fetus' or newborn's platelets.



#### Marisa Censani, MD

Assistant Professor of Pediatrics Director, Pediatric Obesity Program

Dr. Marisa Censani investigates the association between vitamin D and cardiovascular risk during childhood. As director of the Pediatric Obesity Program, Dr. Censani aims to increase nutrition-related knowledge and decrease body mass index in children and adolescents who

are overweight or obese.



#### Alexis Feuer, MD

Assistant Professor of Clinical Pediatrics Caryl and Israel A. Englander Clinical Scholar

Dr. Alexis Feuer studies metabolic bone disease and has a particular interest in psychopharmacology. Her current research analyzes the skeletal effects of psychotropic medications commonly used to treat attention-deficit/hyperactivity disorder and autism.

Her long-term goals include prevention of future osteopenia and osteoporosis in at-risk children with psychiatric disorders.



#### Katherine Hajjar, MD

Vice Chair for Research, Department of Pediatrics Brine Family Professor of Cell and Developmental Biology Professor of Pediatrics and of Pediatrics in Medicine

Dr. Katherine Hajjar is credited with the discovery of a key molecule called annexin A2 that is involved in maintaining and growing new blood vessels. Her studies focus on the role of this molecule in blood clotting, immune cell migration and tumor metastasis.



#### Barry Kosofsky, MD, PhD

Chief, Division of Child Neurology Horace W. Goldsmith Foundation Professor of Pediatrics Professor of Neuroscience, Feil Family Brain & Mind Research Institute Professor of Pediatrics in Radiology and of Neurology

Dr. Barry Kosofsky endeavors to improve the diagnosis and treatment of children with developmental brain disorders. His research includes developing advanced methods in brain imaging, gaining insights into diseases that affect human brain development and identifying biomarkers predictive of ongoing symptoms following traumatic brain injury.



#### Francis Lee, MD, PhD

Chairman, Department of Psychiatry Mortimer D. Sackler, MD Professor of Molecular Biology in Psychiatry

Dr. Francis Lee's research is focused on why many psychiatric disorders emerge during the transition from childhood to adolescence. He is studying the brain circuits and molecular mechanisms that underlie this transition to develop treatments. Dr. Lee is also

focused on ensuring compliance of treatment plans by youth in order to improve outcomes.



#### David Lyden, MD, PhD

Stavros S. Niarchos Professor in Pediatric Cardiology Professor of Pediatrics and of Cell and Developmental Biology Member, Gale and Ira Drukier Institute for Children's Health

Dr. David Lyden is an authority on the mechanisms by which cancer metastasizes throughout the body, particularly through the activity of exosomes and exomeres,

microparticles released by tumor cells. His laboratory studies the biology of medulloblastoma and high-grade gliomas, working to understand how cells near the tumor help to foster its growth.



#### Jennie Ono, MD, MS '16

Assistant Professor of Pediatrics Director, Pediatric Asthma Program

Dr. Jennie Ono's research strives to understand biological mechanisms of asthma in children. She is working to improve access to high quality and comprehensive asthma

services for children in New York City through a formalized asthma education program, coordinated clinical care for high-risk asthma patients and a robust patient registry and research database.



#### Anjali Rajadhyaksha, PhD

Associate Professor of Neuroscience in Pediatrics Associate Professor of Neuroscience, Feil Family Brain & Mind Research Institute Director, Weill Cornell Autism Research Program

Dr. Anjali Rajadhyaksha's work is focused on understanding the molecular mechanisms of substance abuse and drug addiction, in addition to those contributing to mood

disorders, which often occur with addiction. Her goal is to aid in developing therapeutic strategies and treatments for these disorders.



#### Praveen Raju, MD, PhD

Assistant Professor of Pediatrics and of Pediatrics in Neurology Member, Gale and Ira Drukier Institute for Children's Health

Dr. Praveen Raju directs the Laboratory for Childhood Brain Tumor Research at Weill Cornell Medicine. Dr. Raju and his team, including Dr. Tammy Hennika, Instructor in

Pediatrics, study the developmental origins of pediatric brain tumors with a particular focus on medulloblastoma and its molecular underpinnings.



#### M. Elizabeth Ross, MD, PhD '79

Nathan E. Cummings Professor in Neurology Professor of Neuroscience, Feil Family Brain & Mind Research Institute Director, Center for Neurogenetics

Dr. Elizabeth Ross' research in pediatric developmental disorders at Weill Cornell's Center for Neurogenetics focuses on studying how genes direct the organization

of cells and their connectivity in the developing brain. Dr. Ross collaborates with clinicians, basic scientists, pathologists, molecular biologists and computer scientists to help diagnose and treat patients with genetically influenced neurological disease.



#### Robbyn Sockolow, MD

Chief, Division of Pediatric Gastroenterology and Nutrition Professor of Clinical Pediatrics

Dr. Robbyn Sockolow's current research in inflammatory bowel disease (Crohn's and ulcerative colitis) is conducted in conjunction with the Jill Roberts Institute for Research

in Inflammatory Bowel Disease and the IBD Live Cell Bank at Weill Cornell. Utilizing live patient cells, Dr. Sockolow and her team are working to develop new treatments and possible cures for these diseases.



#### Stefan Worgall, MD, PhD

Chief, Division of Pediatric Pulmonology, Allergy & Immunology Distinguished Professor of Pediatric Pulmonology Professor of Pediatrics and of Genetic Medicine Member, Gale and Ira Drukier Institute for Children's Health

Dr. Stefan Worgall's laboratory studies the lung immune system in people with asthma

and cystic fibrosis as well as new vaccine strategies against lung infections. His lab has made groundbreaking progress in understanding the role of fat-based molecules called sphingolipids that influence cell activity in childhood asthma.













## **Children's Health Council Members**

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#### Christina Truesdale

VICE CHAIRS Mara Feil Lori Freedman Casey S. Weiss

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As of April 2019



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