



Icahn School
of Medicine at
Mount
Sinai

*The Mindich
Child Health and
Development Institute*

2025

ANNUAL REPORT



The Mindich Child Health and Development Institute (MCHDI) is a translational research enterprise with the mission of advancing knowledge and therapies for diseases affecting infants, children, and adolescents. Led by Bruce D. Gelb, MD, the MCHDI provides an intellectually rich and supportive environment for fostering collaborative scientific investigation and Mount Sinai’s “bench to bedside” philosophy, as well as training the next generation of scientific leaders in pediatric medicine.

Physician-scientists and scientists at the MCHDI work in a multidisciplinary manner with researchers and physicians in various departments and institutes at Mount Sinai. Together, we strive toward the objectives of developing robust paradigms for understanding the effects of genetics and environment on the health of infants, children, and adolescents and personalizing pediatric medicine through genetics and genomics.



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Director's Message

Bruce D. Gelb, MD, Director

For the biomedical research community in the United States, 2025 was a year with unprecedented uncertainty, particularly with regards to extramural funding through the National Institutes of Health (NIH). Despite the stressful roller coaster ride, the MCHDI and its faculty managed to thrive! By year's end, faculty at Mount Sinai in general and in the MCHDI in particular had not only maintained extramural funding, they had actually increased it. NIH funding levels for the United States were unchanged for fiscal year 2025, and the institutional rate for facilities and administration costs (so-called indirects) were successfully re-negotiated. While there were painful aspects—cuts of funding to important research about inequities in pediatric health care and training programs focused on diversifying the biomedical research workforce being clear examples—the overall picture was much less dire than feared. The advocacy of many MCHDI members showed us the power of lifting our voices to educate the public about the importance of our work in securing the health and well-being of our nation's children.

During the 2025 MCHDI retreat, I discussed the topic of resilience, defined as the capacity to withstand or to recover quickly from difficulties. I quoted from Michael Jordan, a former NBA superstar whom many consider the GOAT. He said, "I've missed more than 9,000 shots in my career. I've lost almost 300

games. Twenty-six times, I've been trusted to take the game winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed," words worth remembering as our next grant application is not funded and our next manuscript is rejected. There is also the all-too-human tendency to adopt a woe-is-me attitude: Why are we as academic researchers, who have struggled so much to achieve our positions, giving up a lot along the way, being targeted now? As an antidote to that ultimately self-defeating mindset, I quoted from Dr. Lucy Hon, an Australian psychologist who specializes in loss and then suffered an unimaginable personal tragedy, the death of her 12-year-old daughter in an accident. In her remarkably insightful TED talk, Dr. Hon counseled that "Adversity doesn't discriminate. If you are alive, you will deal with some tough times." In that talk, she provided us with three secrets of resilient people: 1. Resilient people get that bad stuff happens, preventing them from feeling discriminated against; 2. Resilient people are good at choosing where to put their attention, focusing on what is within their control and tune into the good; and 3. Resilient people ask themselves, "Is what I'm doing helping or harming me?"—reclaiming the driver's seat and control over their decision making. Finally, I noted that resiliency comes through community. We at the MCHDI are a community focused on child health research. We have created a collaborative, diverse group of investigators and now, more than ever, must pull together to support one another's scientific endeavors.

Over this past year, the MCHDI's key initiatives have continued to advance and mature, much of it documented in this report. The Center for Child Health Services Research (CCHSR), the only initiative of its kind in the region, has expanded with the addition of an external faculty recruit, pediatric physician-scientist, Dr. Cecile Yama. The Director of the CCHSR, Dr. Brett Anderson, successfully renewed her R01, vastly expanding the scope for her studies of outcomes in congenital heart disease from one state (NY) to four. Other faculty in the Center also procured extramural funding for pediatric health services research. At the Center for Artificial Intelligence in Child Health (CAICH), also unique in our region and one of the very few such enterprises in the entire country, Dr. Benjamin Glicksberg rejoined the Mount Sinai faculty and assumed the leadership role. The CAICH is advancing the data infrastructure using clinical data at the Mount Sinai Kravis Children's Hospital, which junior faculty Drs. Emma Holmes and Sonny Duong are using for exciting studies in newborn medicine and pediatric cardiology, respectively. Excitingly, a clinical trial based on an algorithm using real-time imaging of babies in the NICU, implemented by a company started by former trainee Dr. Felix Richter, is poised to start in 2026. The Pediatric Clinical Trials Office (PCTO) continued to expand the portfolio of clinical trials for children, both those sponsored by industry and ones funded by NIH. The PCTO has nearly 50 clinical trials under management or being negotiated, an impressive expansion of such studies for infants, children, and adolescents at our institution. Lastly, our efforts in pediatric precision/genomic medicine continue to expand. In addition to implementing rapid genome sequencing in both Mount Sinai's NICUs and PICU, we have deployed the Mount Sinai site for the NIH-funded Undiagnosed Diseases Network, which began recruiting patients this past April. We are currently exploring how to roll out exome or genome sequencing in General Pediatrics, focusing on children with significant developmental delays.

With 2025 now behind us, all members of the MCHDI should feel proud of how we pulled together to weather this storm. We relied upon one another and made each other better. We showed that we are resilient. We also accomplished much for our mission in child health research, focusing on improving the futures of children everywhere.

FACULTY GROWTH

MCHDI ANNUAL FACULTY GROWTH 2025

In 2025

We welcomed five new external faculty and five internal faculty members to our institute.

112 Members

Currently, we have a total of 112 members consisting of scientists and physician-scientists across the disciplines of Allergy and Asthma, Cardiovascular Disease, Neurodevelopmental Disorders, Obesity and Diabetes, Health Services, and more.

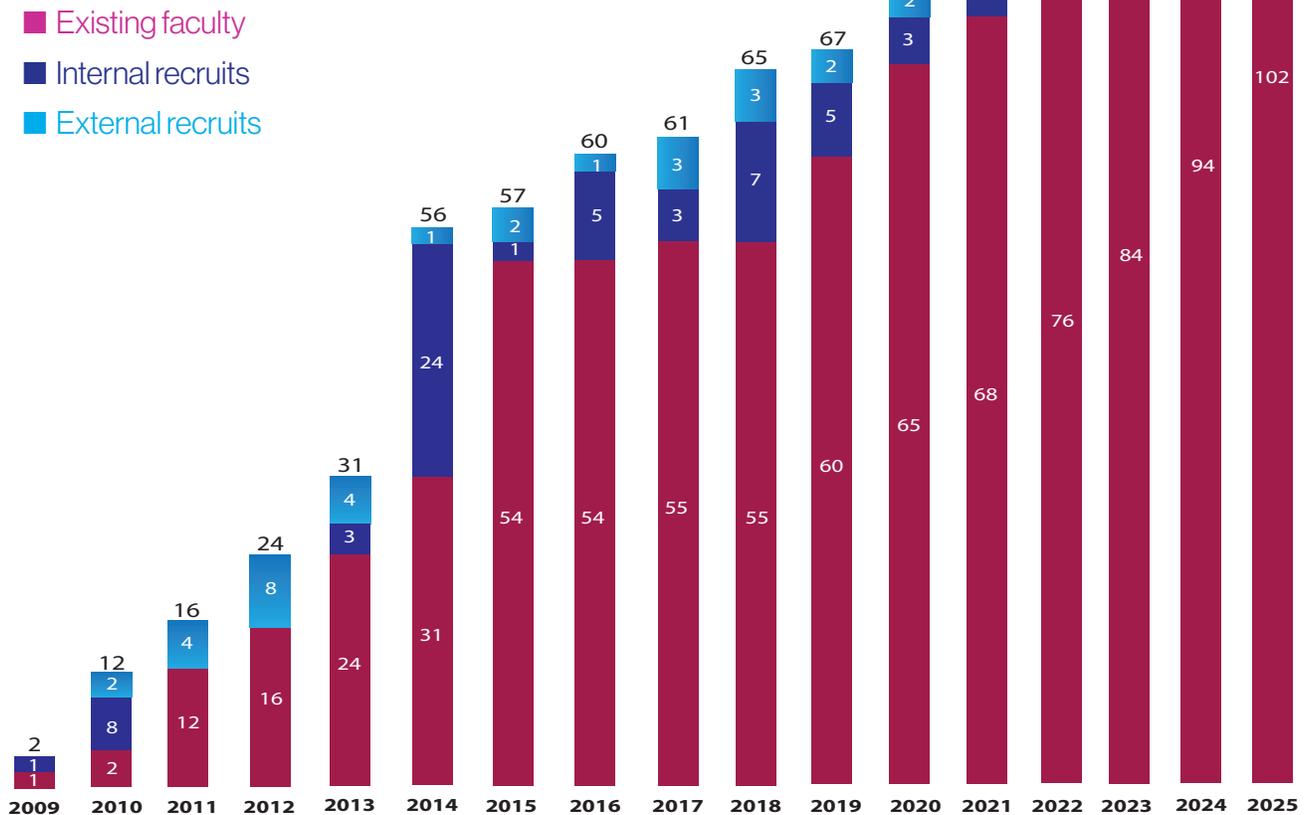


Chart of faculty recruits since our inception in 2009. In 2025, our institute recruited five new external and five new internal faculty members to our institute.



NEW
FACULTY

NEW EXTRAMURAL FACULTY



Benjamin Glicksberg, PhD

Benjamin Glicksberg, PhD, is a leading researcher at the nexus of digital health, artificial intelligence, and clinical informatics. He develops advanced computational methods for large-scale biomedical data, including electronic health records (EHRs), genomics, and physiologic waveforms to drive precision medicine and improve patient outcomes.

Through interdisciplinary collaborations across academia, industry, and clinical settings, he bridges research and practice, translating AI breakthroughs into real-world tools. He holds numerous patents on multimodal AI applications licensed by startups and public companies and created open-source software that leverages common data models to enhance EHR research generalizability. From his experience co-founding and advising health-tech startups, Dr. Glicksberg will also support entrepreneurial initiatives at Mount Sinai, facilitating the development and commercialization of AI-driven health technologies. Before joining Mount Sinai, he served as Vice President and Head of Data Science and Machine Learning at Character Biosciences, a genomics-based drug discovery startup. There, he derived digital biomarkers of disease progression from

clinical and genomic trial data, identifying novel drug targets now entering clinical trials. Dr. Glicksberg has authored 190 peer-reviewed publications with more than 18,000 citations and mentored medical and graduate students, postdocs, engineers, and scientists. As Principal Investigator or Co-Investigator, he secured more than \$15 million in funding from industry, foundations, and government, including the National Library of Medicine. He received a bachelor's degree in neuroscience from Skidmore College, a PhD in Neuroscience from the Icahn School of Medicine at Mount Sinai, and completed a postdoctoral fellowship at UCSF. At Mount Sinai, he is developing novel AI frameworks to streamline clinical workflows and advance precision — especially in pediatrics.



Amy Rapp, PhD

Amy Rapp, PhD, is an Assistant Professor in the Division of Tics, OCD, and Related Disorders in the Department of Psychiatry. A licensed clinical psychologist, she received her PhD from the University of California, Los Angeles. Dr. Rapp completed a NIMH T32 postdoctoral research fellowship in the Center for OCD and Related Disorders at Columbia University Irving Medical Center/New York State Psychiatric Institute, and afterwards was appointed Assistant Professor. She joined the faculty of the Icahn School of Medicine at Mount Sinai in October 2024.

The overarching goal of Dr. Rapp's research is to mitigate the deleterious long-term impact of childhood-onset psychiatric disorders by leveraging the power of individual differences to inform personalized early intervention and prevention strategies that could be delivered during sensitive developmental periods (i.e., adolescence). Toward this goal, her research attempts to identify reliable and robust neural, cognitive, and environmental factors that are associated with transdiagnostic symptom dimensions of anxiety,

compulsion, and related disorders. She strives to harness the clinical utility of individual differences by using precision-analytic research methods like theory-driven computational modeling and trial-by-trial analysis of EEG. Future directions for her program of research include identifying how and when neurocognitive alterations emerge in development and translating this information into targeted, individualized interventions for youth.

NEW EXTRAMURAL FACULTY - CONTINUED



Rory J. Tinker, MBChB

Rory J. Tinker, MBChB, is an Assistant Professor in the Department of Genetics and Genomic Sciences, with a secondary appointment in Pediatrics, at the Icahn School of Medicine at Mount Sinai. A board certified Clinical Geneticist and Pediatrician, Dr. Tinker's research integrates genomics, population biobanks, and electronic health records (EHRs) to accelerate diagnosis and discovery in rare genetic diseases.

His work focuses on quantifying diagnostic delay, developing EHR-based phenotypes, and implementing AI-enabled tools to identify genetic diseases earlier and more equitably. Dr. Tinker trained in Neuroscience and Medicine at the University of Manchester before completing fellowships in mitochondrial genetics at the University of Newcastle and the University of Pennsylvania, followed by a combined Pediatrics and Medical Genetics residency at Vanderbilt University Medical Center. His research has yielded more than 40 peer-reviewed publications, including first-author papers in *Genetics in Medicine* and *American Journal of Med-*

ical Genetics, and was recognized with the ACMG Richard King Trainee Award. Dr. Tinker has developed novel pipelines for variant interpretation and characterized diagnostic trajectories across Mendelian disorders. His current K08 award proposal aims to combine artificial intelligence and implementation science to reduce diagnostic delays in rare diseases, under the mentorship of Drs. Ron Do, Eva Morava, and Bruce Gelb. His long-term goal is to lead a translational research program that bridges computational discovery and clinical application to improve outcomes for patients with rare genetic disorders.



Ellerie Weber, PhD, MBA

Ellerie Weber, PhD, MBA, is a Health Economist and an Assistant Professor in the Department of Population Health Science and Policy at the Icahn School of Medicine at Mount Sinai. She received her PhD in Business Economics from the University of Chicago's Booth School of Business, and completed a postdoctoral fellowship at RAND-University of Pittsburgh's Health Institute.

Her research applies principles of microeconomics and econometric techniques to study the health sector, particularly how health policies affect prices, competition, and health outcomes. She has published on topics relevant to current health policies, including Medicaid, telehealth, price transparency, and hospital-insurer bargaining. Dr. Weber's current projects focus on maternal health and health equity, specifically looking at how Medicaid continuous coverage provisions granted to postpartum people under the Families First Coronavirus Response Act impacted beneficiaries' insurance coverage and health care utilization. She is also

an expert in cost analyses and helps support clinicians, community-based organizations, and other researchers assess the cost-effectiveness of their particular practices or interventions. In addition to her PhD, Dr. Weber received an MBA from the University of Chicago's Booth School of Business and a Bachelor's of Science degree in Economics from the London School of Economics. A native New Yorker, she is a mom of three boys and enjoys spending time in nature with her family.

NEW EXTRAMURAL FACULTY - CONTINUED



Cecile Yama, MD

Cecile Yama, MD, is an Assistant Professor in the Center for Child Health Services Research at the Mindich Child Health and Development Institute at the Icahn School of Medicine at Mount Sinai and a general pediatrician in the Department of Pediatrics. She also holds a co-appointment in the Department of Population Health Science and Policy.

Dr. Yama's clinical, research, and advocacy work bridges policy and clinical care to foster healthy environments for children, beginning in early childhood. Clinically, she is a board certified pediatrician with specialized expertise in trauma-informed care for young children with behavioral, developmental, and medical complexity. She has advanced training in infant complex care, NICU follow-up, and primary care psychiatry. Her clinical practice centers on building long-term, family-centered partnerships, supporting families as they navigate complex medical and social systems, streamlining care across providers, and integrating behavioral and social supports into primary care.

Her research examines how economic and social policies influence health outcomes for low- and middle-income families. Using mixed methods, she rigorously evaluates how policy changes affect child health and family well-being. Through interdisciplinary collaborations, she also designs,

implements, and evaluates clinic-based strategies that connect families to policies that address social needs. She works closely with nonprofits and think tanks to contribute a child health perspective to evidence-based reports on social policy. Dr. Yama completed the highly prestigious National Clinical Scholars Program at the University of California, Los Angeles, where she also earned a Master's in Health Policy and Management. Her scholarship has been published in leading journals, including *JAMA Pediatrics*, *JAMA Network Open*, *JAMA Health Forum*, and *Perinatology*. Her research has advanced understanding of the role of anti-poverty policy interventions in improving outcomes for U.S. children and families. She was selected for the Academic Pediatric Association's Young Investigator Award—an honor given annually to four promising early-career pediatric investigators—and has secured funding from the Robert Wood Johnson Foundation and other organizations to support her work.

NEW INTRAMURAL FACULTY



Jessica L. Ables, MD, PhD

Jessica L. Ables, MD, PhD, is an Assistant Professor in the Departments of Psychiatry and Neuroscience, and a member of the Friedman Brain Institute, the Diabetes, Obesity, and Metabolism Institute, and the Brain-Body Research Institute. Dr. Ables completed the first two years of medical training and her PhD at UT Southwestern Medical Center, studying molecular mechanisms of adult neural stem cell maintenance. She then transferred to Mount Sinai where she completed her medical training, followed by postdoctoral training at the Rockefeller University, before returning to Mount Sinai to complete her residency training in Psychiatry.

She joined the faculty of the Icahn School of Medicine at Mount Sinai in July 2019. She was a psychiatrist in the Student and Trainee Mental Health Program from 2019 to 2022, before transitioning to her current position as a clinical trial psychiatrist in the Depression and Anxiety Center and as the Medical Director of the Spravato Program for Treatment Resistant Depression.

Diabetes nearly triples the risk of mood disorders and is one of the most common autoimmune diseases to affect children. Diabetes can also complicate pregnancy and

contribute to mood disorders in children born to mothers with diabetes. Dr. Ables' research program seeks to understand how metabolic disorders such as diabetes contribute to vulnerability to mood disorders, substance use and disordered eating, using cutting-edge technologies to examine the transcriptome and circuit-level activity in awake-behaving mice on behavioral tasks with direct clinical correlates. Her experience in clinical trials positions her to then directly translate basic findings in her lab into potential new treatments.

NEW INTRAMURAL FACULTY - CONTINUED



Jaya Ganesh, MD

Jaya Ganesh, MD, is a Medical Geneticist and Professor in the Department of Genetics and Genomic Sciences. A board certified clinical and biochemical geneticist, she trained in the Human Genetics Program at the University of Pennsylvania and was subsequently appointed as an Assistant Professor at UPenn.

She joined the faculty of the Icahn School of Medicine at Mount Sinai in 2018 and is senior faculty in the Division of Medical Genetics and Genomics. Her clinical focus is in the diagnosis and management of patients with inborn errors of metabolism.

She directs the newborn screening program for metabolic diseases and the mitochondrial disease clinic, and is the Associate Director of the lysosomal disorders program.

Her research interest includes developing novel therapies for patients with metabolic diseases. She is the Primary investigator for various interventional trials, including an AAV mediated gene therapy for Fabry disease, various enzyme replacement therapies for Homocystinuria, Arginase I deficiency, Acid Sphingomyelinase deficiency, and Brain penetrant enzyme therapy for Mucopolysaccharidosis II.

She established the Batten disease multidisciplinary clinic that was recognized as an affiliate center of excellence by the Batten Disease Support and Research Association.

She teaches the Medical Biochemistry Course for first-year medical students at ISMMS and established the Medical Biochemical Genetics Fellowship at ISMMS and is the fellowship director. One of her mentees, Dr. Schechter, obtained a United Mitochondrial Disease Foundation Gateway to Research Award (2024) and the American Academy of Pediatrics Resident Research Award to analyze the genomic data from the Nephrotic Syndrome Study Network (NEPTUNE) consortium, for the prevalence of mitochondrial defects.



Chelsea Lowther, PhD

Chelsea Lowther, PhD, is an Assistant Professor in the Department of Genetics and Genomic Sciences and a member of the Institute for Genomic Health at the Icahn School of Medicine at Mount Sinai (ISMMS). She joined ISMMS in 2024 after completing her postdoctoral research fellowship at Massachusetts General Hospital, Harvard Medical School, and the Broad Institute, and her PhD at the University of Toronto.

Her research applies state-of-the-art genomics technologies and computational approaches to understand the genetic architecture of human disease, with a particular emphasis on the contribution of structural variants (SVs; genomic rearrangements greater than 50 base pairs in size). SVs contribute to a broad spectrum of conditions across the developmental continuum, ranging from fetal structural anomalies to pediatric neurodevelopmental disorders and later-onset neuropsychiatric illnesses. As the Principal Investigator on a NICHD K99/R00 award,

she is currently developing new statistical methods to improve the functional annotation of SVs by investigating how disruptions to 3D genome organization influence gene regulation. She also serves on the American College of Medical Genetics and Genomics (ACMG) CNV Technical Standards Working Group, where she contributes to the development of evidence-based guidelines that support consistent and accurate clinical interpretation of SVs across diagnostic laboratories.

NEW INTRAMURAL FACULTY - CONTINUED



Prashanth Rangan, PhD

Prashanth Rangan, PhD, earned his PhD in Biophysics from Johns Hopkins University and completed a postdoctoral fellowship in Developmental Biology. He began his academic career at SUNY Albany and joined Mount Sinai as an Associate Professor three years ago. At Mount Sinai, the Rangan lab focuses on unraveling the mechanisms that govern the formation of maternal contribution—a critical process for initiating new generations.

Maternal contribution involves the transmission of crucial cellular components and regulatory molecules necessary for proper embryonic development. We utilize a multidisciplinary approach to explore how maternal components are generated during oogenesis and refined throughout oocyte maturation. Our primary goal is to understand how aged or inappropriate components are identified and removed during this maturation process. Additionally, we study the effects of any residual, uncleared components on fertility and childhood development. By combining cutting-edge genetic tools, advanced cellular biology, and state-of-the-art developmental methodologies, we are reshaping our

understanding of oocyte maturation and the early stages of embryonic development. Our research not only deepens our insight into the basic biology of reproduction but also challenges previous paradigms by linking these molecular events to long-term fertility outcomes and overall developmental health. Our findings also have the potential to identify critical biomarkers for reproductive health and provide new therapeutic targets for addressing developmental anomalies, ultimately advancing our approaches to fertility restoration and childhood health interventions.



Madeline H. Renny, MD, MS

Madeline H. Renny, MD, MS, is an Assistant Professor of Emergency Medicine, Pediatrics, and Population Health Science and Policy at the Icahn School of Medicine at Mount Sinai. She is a physician-scientist whose research focuses on pediatric and adolescent drug overdose prevention and emergency department-based interventions for youth with substance use.

Dr. Renny was recently awarded a NIDA K23 Career Development Award titled “Pediatric Emergency Department-initiated Support program To Link Care (PEDS-TLC) for youth with substance use,” in which she will develop and pilot test a scalable pediatric emergency department-initiated program to link youth with higher-risk substance use with outpatient care.

Dr. Renny also is passionate about medication safety. She serves on the Mount Sinai Health System Pharmacy and Therapeutics subcommittee for Pediatrics and the Mount Sinai Kravis Children’s Adverse Drug Event Committee. She has worked with the American Academy of Pediatrics and the Center for Disease Control and Prevention to improve medication safety and prevent drug overdoses on a national level.

Dr. Renny completed the pediatrics residency program at the Children’s Hospital of Philadelphia, and the pediatric emergency medicine fellowship at New York Presbyterian Morgan Stanley Children’s Hospital, Columbia University Medical Center. Following that, she completed a medical toxicology fellowship at the New York City Poison Control Center at New York University/Bellevue, and then a postdoctoral fellowship in the Population Health Science Scholars Program (AHRQ T32) at the New York University Grossman School of Medicine, during which she received a Master of Science in Clinical Investigation degree.



**FACULTY
RESEARCH
AREAS**

ALLERGY AND ASTHMA



M. Cecilia Berin, PhD

(Adjunct Professor, Pediatrics)

Research Areas: Immune mechanisms of food allergy and regulation of immune tolerance



Supinda Bunyavanich, MD, MPH, MPhil

(Professor, Pediatrics, and Genetics and Genomic Sciences)

Research Areas: Systems biology and integrative omics of asthma and allergic diseases



Maria Curotto de Lafaille, PhD

(Professor, Pediatrics, and Immunology and Immunotherapy)

Research Areas: Immunology of allergic diseases, B lymphocyte responses



Nicole Ramsey, MD, PhD

(Instructor, Pediatrics)

Research Areas: Environmental exposures and food allergy risk, food allergy treatment mechanisms, qualitative research on improving health equity in pediatric clinical trial recruitment/enrollment/retention



Ke Hao, ScD

(Professor, Genetics and Genomic Sciences)

Research Areas: Genetic pleiotropy, mendelian randomization, inflammatory bowel disease, placenta biology, ambient air particulate matter exposure



Hugh A. Sampson, MD

(Kurt Hirschhorn Professor, Pediatrics)

Research Areas: Immunopathogenesis of food allergy and anaphylaxis



Scott H. Sicherer, MD

(Director, Jaffe Food Allergy Institute; Division Chief, Pediatric Allergy; Elliot Roslyn Jaffe Professor, Pediatrics)

Research Areas: Food allergy epidemiology, treatments, natural course, quality of life

ALLERGY AND ASTHMA - CONTINUED



Erik Wambre, PhD

(Professor, Pediatrics; Director of Technology and Business Development at the Human Immune Monitoring Center)

Research Areas: Immune mechanisms of allergy, biomarkers and immune monitoring



Julie Wang, MD

(Professor, Pediatrics)

Research Areas: Novel therapeutics for food allergy, epidemiology and management of food allergy and anaphylaxis



Karen M. Wilson, MD, MPH

(Adjunct Professor, Pediatrics)

Research Areas: Secondhand tobacco smoke, secondhand marijuana smoke, inpatient respiratory illness

CARDIOVASCULAR DISEASE



Harold S. Bernstein, MD, PhD

(Adjunct Professor, Pediatrics)

Research Areas: Drug development (target validation through NDA/BLA) for cardiovascular, kidney, metabolism, and rare disease



Nicole C. Dubois, PhD

(Associate Professor, Cell, Developmental & Regenerative Biology)

Research Areas: Heart development, stem cell differentiation, disease modeling



Son Duong, MD

(Assistant Professor, Pediatrics and Artificial Intelligence and Human Health)

Research Areas: Artificial intelligence in cardiac imaging, pediatric cardiology



Bruce D. Gelb, MD

(Dean of Child Health Research, Gogel Family Professor and Director, The Mindich Child Health and Development Institute; Professor, Pediatrics, and Genetics and Genomic Sciences)

Research Areas: Genetics of cardiovascular diseases, stem cell research, pediatric precision medicine

CARDIOVASCULAR DISEASE - CONTINUED



Alan Groves, MBChB, MD

(Adjunct Professor, Diagnostic, Molecular and Interventional Radiology)

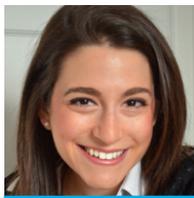
Research Areas: Hemodynamics, cardiac function, echocardiography, magnetic resonance imaging



Yuval Itan, PhD

(Associate Professor, Genetics and Genomic Sciences)

Research Areas: Human disease genomics, computational biology, and machine learning



Amy R. Kontorovich, MD, PhD

(Medical Director, Adult Cardiovascular Genetics; Associate Professor, Medicine)

Research Areas: Myocarditis, genetics of cardiovascular diseases, stem cell research

NEURODEVELOPMENTAL DISORDERS



Mafalda Barbosa, MD, PhD

(Assistant Professor, Genetics and Genomic Sciences)

Research Areas: Genetics of neurodevelopmental disorders, precision medicine, rare diseases



Shlomit Beker, PhD

(Assistant Professor, Psychiatry, and Neuroscience)

Research Areas: Autism, intellectual disabilities, cognitive neuroscience, EEG



Allison Bond, PhD

(Assistant Professor, Neuroscience, and Cell, Developmental & Regenerative Biology)

Research Areas: Neural development, neural regeneration, stem cell research



Jennifer Bragg, MD

(Associate Professor, Pediatrics)

Research Areas: Neurodevelopmental disorders, sensory processing disorders, impact of parental stress on neurodevelopment, developmental programming, neurodevelopment in children with congenital heart disease, whole genome sequencing in infants and neonates

NEURODEVELOPMENTAL DISORDERS - CONTINUED



Michael S. Breen, PhD

(Assistant Professor, Psychiatry, and Genetics and Genomic Sciences)

Research Areas: Functional genomics of neurodevelopmental and neuropsychiatric disorders, transcriptomics, single-cell RNA sequencing, stem cells, RNA editing and biology



Joseph D. Buxbaum, PhD

(Deputy Chair, Department of Psychiatry; Director, Seaver Autism Center for Research and Treatment; Professor, Psychiatry, Neuroscience, and Genetics and Genomic Sciences)

Research Areas: Autism spectrum disorder, neurodevelopmental disorders, gene discovery, functional genetics, molecular and cellular neuroscience, cell and animal model systems



Jia Chen, ScD

(Professor, Pediatrics, Environmental Medicine & Public Health, Medicine, and Oncological Sciences)

Research Areas: Environmental epigenetics, molecular epidemiology



Tirtha K. Das, PhD

(Assistant Professor, Cell, Developmental & Regenerative Biology)

Research Areas: Integrating fly plus vertebrate disease models, cancer, rare mendelian diseases, therapeutics development



Silvia De Rubeis, PhD

(Associate Professor, Psychiatry)

Research Areas: Intellectual disability, autism spectrum disorder, functional genetics, cell and animal model systems, brain development



Jennifer Foss-Feig, PhD

(Associate Professor, Psychiatry)

Research Areas: Autism spectrum and related neurodevelopmental disorders, neuroimaging, interactive social neuroscience, biomarker discovery, sensory processing



Dorothy E. Grice, MD

(Professor, Psychiatry)

Research Areas: Genetic and epidemiological studies of OCD, Tourette's disorder, autism, and related childhood-onset neuropsychiatric disorders, prenatal exposures, including smoking, functional analysis of identified risk genes

NEURODEVELOPMENTAL DISORDERS - CONTINUED



Hala Harony-Nicolas, PhD

(Associate Professor, Psychiatry, and Neuroscience)

Research Areas: Brain circuits of social behavior, mechanisms of action of the oxytocin hypothalamic system, animal models for autism spectrum disorder



Megan K. Horton, PhD, MPH

(Associate Professor, Environmental Medicine & Public Health)

Research Areas: Children's environmental health, exposure assessment, pediatric neuroimaging



Magdalena U. Janecka, PhD

(Assistant Professor, Psychiatry)

Research Areas: Neurodevelopmental disorders, epidemiology, epigenetics, environmental risk factors



Alex Kolevzon, MD

(Director, Child and Adolescent Psychiatry; Professor, Psychiatry, and Pediatrics)

Research Areas: Autism spectrum and other neurodevelopmental disorders



Robert S. Krauss, PhD

(Professor, Cell, Developmental & Regenerative Biology, and Oncological Sciences)

Research Areas: Hedgehog signaling and birth defects, muscle stem cells and regeneration



Luca Lambertini, PhD

(Assistant Professor, Obstetrics, Gynecology and Reproductive Science)

Research Areas: Placental biomarkers of altered fetal and child development



Chelsea Lowther, PhD

(Assistant Professor, Genetics and Genomic Sciences)

Research Areas: Structural variation, neurodevelopmental and neuropsychiatric conditions, congenital anomalies, computational genomics, statistical genetics, genomic medicine



Behrang Mahjani, PhD

(Assistant Professor, Psychiatry, Genetics and Genomic Sciences, and Artificial Intelligence and Human Health)

Research Areas: Genetics of neurodevelopmental disorders

NEURODEVELOPMENTAL DISORDERS - CONTINUED



Florence Marlow, PhD

(Associate Professor, Cell, Developmental & Regenerative Biology)

Research Areas: Genetics of early patterning and germline, neurodevelopment



Alejandro Martin-Trujillo, PhD

(Assistant Professor, Genetics and Genomic Sciences)

Research Areas: Functional genomics and epigenomics, genomic imprinting, structural variation



Marek Mlodzik, PhD

(Professor and Chair, Cell, Developmental & Regenerative Biology; Professor, Ophthalmology, and Oncological Sciences)

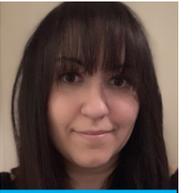
Research Areas: Genetics and cell biology of planar cell polarity establishment, cell biology of Wnt signaling and Notch signaling



Hirofumi Morishita, MD, PhD

(Professor, Psychiatry, Ophthalmology, and Neuroscience)

Research Areas: Mechanisms of perceptual, cognitive, and social development relevant to neurodevelopmental disorders



Georgia Panagiotakos, PhD

(Associate Professor, Psychiatry, and Neuroscience)

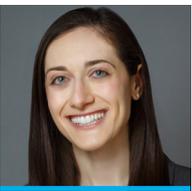
Research Areas: Brain development, neuropsychiatric disorders of developmental origin, autism spectrum disorders, animal and cell-based models, activity-dependent signaling



Dalila Pinto, PhD

(Associate Professor, Psychiatry, and Genetics and Genomic Sciences)

Research Areas: Genetics and genomics of neurodevelopmental disorders (particular focus on autism, epilepsy, schizophrenia, OCD), structural variation, transcriptomics, gene regulation, noncoding RNA



Amy Rapp, PhD

(Assistant Professor, Psychiatry)

Research Areas: Anxiety and compulsive disorders, theory-driven computational modeling, electrophysiology, early intervention, adolescence



Avi Reichenberg, PhD

(Professor, Psychiatry, and Environmental Medicine & Public Health)

Research Areas: Autism, schizophrenia, other psychiatric disorders

NEURODEVELOPMENTAL DISORDERS - CONTINUED



Anna Rommel, PhD

(Assistant Professor, Psychiatry)

Research Areas: Neurodevelopmental disorders, environmental risk factors, prenatal exposures and neurophysiology



Paige M. Siper, PhD

(Assistant Professor, Psychiatry)

Research Areas: Autism, intellectual disability, biomarker discovery, sensory processing



Andrew J. Sharp, PhD

(Professor, Genetics and Genomic Sciences)

Research Areas: Epigenomics, transcriptomics, genome function, structural variation, imprinting, congenital disorders



Annemarie Stroustrup, MD, MPH

(Adjunct Associate Professor, Pediatrics, and Environmental Medicine & Public Health)

Research Areas: Neurodevelopment, perinatal environmental exposures, identifying genetic etiologies of congenital disease



Shanna H. Swan, PhD

(Professor, Environmental Medicine & Public Health)

Research Areas: Prenatal exposures, sexually dimorphic development, phthalates, stress, anogenital distance, neurodevelopment, analgesics, glyphosate, acetaminophen



Pilar Trelles, MD

(Adjunct Assistant Professor, Psychiatry)

Research Areas: Autism spectrum disorder, neurodevelopmental disorders, health disparities



Bryn D. Webb, MD

(Adjunct Assistant Professor, Genetics and Genomic Sciences)

Research Areas: Identifying genetic etiologies of congenital anomalies, mitochondrial disorders, undiagnosed disease



Anusha Yeshokumar, MD

(Adjunct Assistant Clinical Professor, Pediatrics, and Neurology)

Research Areas: Autoimmune encephalitis, outcomes research, inflammatory biomarkers, cognition, behavior

OBESITY AND DIABETES



Jessica L. Ables, MD, PhD

(Assistant Professor, Psychiatry and Neuroscience; Medical Director of Spravato Program)

Research Areas: Molecular mechanisms of depression, addiction, and diabetes



Romina Bevacqua, PhD

(Assistant Professor, Medicine)

Research Areas: Human islet biology, gene regulation and epigenetics of pancreatic islets, genetics of diabetes, primary organoids



Ross L. Cagan, PhD

(Adjunct Professor, Cell, Developmental & Regenerative Biology)

Research Areas: Drosophila as a tool to develop therapeutics for cancer, diabetes, and rare mendelian diseases



Nathalie Chami, PhD

(Instructor, Environmental Medicine & Public Health)

Research Areas: Genetics of complex traits, monogenic disease, genetics of obesity and cardiometabolic outcomes



Lauryn Choleva, MD, MSc

(Assistant Professor, Pediatrics)

Research Areas: Type 2 diabetes, type 1 diabetes, hypoglycemia



Adolfo García-Ocaña, PhD

(Professor, Medicine)

Research Areas: Diabetes, pancreatic beta cell biology



Joan Han, MD

(Adjunct Professor, Pediatrics)

Research Areas: Pediatric obesity, neuroendocrine regulation of energy balance, genetic obesity syndromes and disorders of the leptin pathway

OBESITY AND DIABETES - CONTINUED



Esra Karakose, PhD

(Assistant Professor, Medicine)

Research Areas: Diabetes, pancreatic beta cells, beta cell proliferation, alpha-to-beta cell transdifferentiation



Liora S. Katz, PhD

(Associate Professor, Medicine)

Research Areas: Type 1 diabetes, type 2 diabetes, β -cell proliferation, β -cell demise, glucolipotoxicity, cytokine-induced toxicity, β -cell mass preservation



Corina Lesseur, MD, PhD

(Assistant Professor, Environmental Medicine & Public Health)

Research Areas: Epi/genomics, environmental exposures, pregnancy outcomes, early-life metabolic programming



Ruth J.F. Loos, PhD

(Professor, Environmental Medicine & Public Health; Charles Bronfman Professor in Personalized Medicine)

Research Areas: Genetics of obesity and related cardiometabolic traits, genetic epidemiology, epidemiology



Donald K. Scott, PhD

(Professor, Medicine)

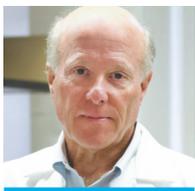
Research Areas: Metabolic regulation of transcription, beta cell regeneration and preservation, diabetes



Sarah Stanley, MBBCh, PhD

(Associate Professor, Medicine, and Neuroscience)

Research Areas: Neural control of metabolism

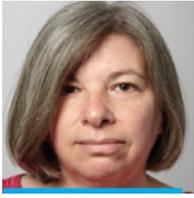


Andrew F. Stewart, MD

(Professor, Diabetes, Obesity, and Metabolism Institute; Irene and Dr. Arthur M. Fishberg Professor, Medicine)

Research Areas: Type 1 diabetes, type 2 diabetes, beta cell regeneration, drug discovery

OBESITY AND DIABETES - CONTINUED



Susan Teitelbaum, PhD

(Professor, Environmental Medicine & Public Health)

Research Areas: Environmental chemical exposure assessment, pubertal development, physical growth and development



Nita Vangeepuram, MD, MPH

(Associate Professor, Pediatrics, Environmental Medicine & Public Health, and Population Health Science and Policy)

Research Areas: Youth diabetes prevention, community-based participatory research, health equity research



Ryan W. Walker, PhD

(Associate Professor, Environmental Medicine & Public Health)

Research Areas: Clinical microbiome, obesity, nutrition, environmental exposures



Martin J. Walsh, PhD

(Professor, Pharmacological Sciences, Genetics and Genomic Sciences, and Pediatrics)

Research Areas: Chromatin biology, RNA biology and gene transcription in cancer, early development and metabolism

HEALTH SERVICES



Brett R. Anderson, MD, MBA, MS

(Director, Child Health Services Research Center; Associate Professor, Pediatrics)

Research Areas: Child health services research, health equity, econometrics, pediatric cardiology, risk modeling



Michael Cassidy, PhD

(Assistant Professor, Pediatrics and Population Health Science and Policy)

Research Areas: Children's health, housing, homelessness, education, social and environmental determinants of health, causal inference, applied microeconomics



Anna Chorniy, PhD

(Assistant Professor, Pediatrics and Population Health Science and Policy)

Research Areas: Health economics, health policy, Medicaid

HEALTH SERVICES - CONTINUED



Sarah Crook, PhD

(Assistant Professor, Population Health Science and Policy)

Research Areas: Health services research, data linkage, health equity, accessibility to care, pediatric health outcomes, racial/ethnic health disparities, congenital heart disease, claims data, epidemiology, social determinants of health, health care quality measures



Madeline H. Renny, MD, MS

(Assistant Professor, Emergency Medicine, Pediatrics, and Population Health Science and Policy)

Research Areas: Pediatric and adolescent drug overdose prevention, emergency department-based interventions for youth with substance use



Ellerie Weber, PhD, MBA

(Assistant Professor, Population Health Science and Policy; Co-Chair, Division of Medical Decision Making, Health Policy & Health Economics)

Research Areas: Health economics, health policy, maternal and child health



Sarah M. Wood, MD

(Associate Professor, Pediatrics; Division Chief, Adolescent Medicine; Director, Mount Sinai Adolescent Health Center)

Research Areas: Adolescent sexual and mental health services



Cecile Yama, MD

(Assistant Professor, Pediatrics, and Population Health Science and Policy)

Research Areas: Poverty and health, early childhood development, anti-poverty policy, social determinants of health, economic and social policy, energy insecurity, maternal-child health, medical financial partnerships

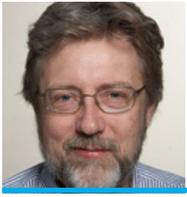


Eric G. Zhou, PhD

(Assistant Professor, Pediatrics, and Population Health Science and Policy)

Research Areas: Health economics, child health, program and policy evaluation, social determinants of health

OTHER RESEARCH FOCUSES



James J. Bieker, PhD

(Professor, Cell, Developmental & Regenerative Biology)

Research Areas: Transcriptional regulation of gene expression in erythroid cells



Dusan Bogunovic, PhD

(Adjunct Professor, Immunology & Immunotherapy and Oncological Sciences)

Research Areas: Genetics of infectious and inflammatory diseases, type I interferons, Pseudo-TORCH syndrome, neurolisterosis



Brian D. Brown, PhD

(Director, Icahn Genomics Institute; Vice Chair and Professor, Immunology and Immunotherapy)

Research Areas: Cancer, immunology, functional genomics, RNA and DNA therapeutics



John Bucuvalas, MD

(Professor, Pediatrics)

Research Areas: Outcomes after liver transplantation, allograft injury in pediatric liver transplant recipients



Minji Byun, PhD

(Adjunct Assistant Professor, Medicine)

Research Areas: Genetics of immune disorders, clonal hematopoiesis, immune dysregulation



Jaime Chu, MD

(Professor, Pediatrics; Medical Director, Pediatric Hepatology and Liver Transplantation)

Research Areas: Disorders of glycosylation, cancer metabolism, liver fibrosis, environmental toxicants in liver disease



Charlotte Cunningham-Rundles, MD, PhD

(David S. Gottesman Professor, Medicine; Professor, Pediatrics)

Research Areas: Primary immune deficiency, B cells, antibody, B cell memory, hypogammaglobulinemia, immune reconstitution



Lea K. Davis, PhD

(Professor, Medicine, Psychiatry, and Genetics and Genomic Sciences)

Research Areas: Quantitative human genetics, EHR-embedded research, machine learning, precision medicine, psychiatric genetics

OTHER RESEARCH FOCUSES - CONTINUED



Sarah Duncan-Park, PhD

(Assistant Professor, Pediatrics)

Research Areas: Behavioral health intervention development, psychosocial adjustment to pediatric chronic illness



David Dunkin, MD

(Associate Professor, Pediatrics)

Research Areas: Tolerance induction and therapeutics in inflammatory bowel disease, mechanisms of inflammatory diseases of the gastrointestinal tract



Jaya Ganesh, MD

(Professor, Genetics and Genomic Sciences)

Research Areas: Metabolic genetics



Sandeep Gangadharan, MD

(Associate Professor, Pediatrics)

Research Areas: Clinical informatics, clinical decision support, AI, resuscitation



Yolanda Garcia-Carmona, PhD

(Instructor, Medicine)

Research Areas: B cell biology research, genetics of primary immunodeficiencies, therapeutic B cell neutralization



Chris Gennings, PhD

(Professor, Environmental Medicine & Public Health, and Population Health Science and Policy)

Research Areas: Biostatistical methods development for environmental health



Benjamin Glicksberg, PhD

(Founding Director of the Center for AI in Children's Health; Associate Professor, Artificial Intelligence and Human Health)

Research Areas: AI, digital health, precision medicine



Katherine Guttman, MD, MBE

(Assistant Professor, Pediatrics)

Research Areas: Palliative care, family-centered care, parent-physician communication, research ethics

OTHER RESEARCH FOCUSES - CONTINUED



Emma Holmes, MD

(Assistant Professor, Pediatrics)

Research Areas: Machine learning applications in neonatology, physiologic waveforms, large language models



Dirk Hubmacher, PhD

(Assistant Professor, Orthopedics)

Research Areas: Short stature syndromes, extracellular matrix, genetic connective tissue disorders



Megan Januska, MD

(Assistant Professor, Pediatrics, and Genetics and Genomic Sciences)

Research Areas: Integrative genomics of pediatric lung development and disease states, including cystic fibrosis



Esra Karakose, PhD

(Assistant Professor, Medicine)

Research Areas: Diabetes, pancreatic beta cells, beta cell proliferation, alpha-to-beta cell transdifferentiation



Shelley H. Liu, PhD

(Assistant Professor, Population Health Science and Policy)

Research Areas: Biostatistics, environmental mixtures, public health



Kaustav Mukherjee, PhD

(Instructor, Cell, Developmental & Regenerative Biology)

Research Areas: Hematopoietic transcription regulation, genomics and epigenetics, single-cell technologies, erythroid disorders



Prashanth Rangan, PhD

(Professor, Oncological Sciences)

Research Areas: Germ cell development, oocyte specification, developmental cell fate transitions, reproductive biology

OTHER RESEARCH FOCUSES - CONTINUED



Michael Rendl, MD

(Professor, Cell, Developmental & Regenerative Biology, and Dermatology)

Research Areas: Stem cells, hair regeneration, morphogenesis



Felix Richter, MD, PhD

(Instructor, Pediatrics)

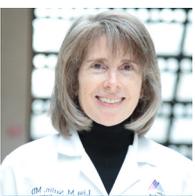
Research Areas: Neonatology, artificial intelligence, genetics



Jeffrey M. Saland, MD

(Chief, Pediatric Nephrology, and Hypertension; Professor, Pediatrics)

Research Areas: Kidney disease in children, lipoprotein metabolism in children with CKD, hemolytic uremic syndrome, primary hyperoxaluria



Lisa M. Satlin, MD

(Herbert H. Lehman Professor and Chair, Pediatrics)

Research Areas: Ontogeny and mechanoregulation of epithelial ion channels in secretory epithelia, generation and characterization of functional bioengineered kidneys



Eyal Shemesh, MD

(Professor, Pediatrics, and Psychiatry)

Research Areas: Remote intervention paradigms, biological correlates of non-adherent behaviors, multisite and multidisciplinary clinical trials



Christopher Sturgeon, PhD

(Associate Professor, Cell, Developmental & Regenerative Biology, and Medicine)

Research Areas: Hematopoiesis, development, pluripotent stem cells, adoptive immunotherapy

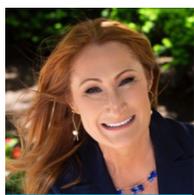


Rory J. Tinker, MBChB

(Assistant Professor, Genetics and Genomic Sciences, Pediatrics, and Artificial Intelligence and Human Health (pending))

Research Areas: Clinical genetics and genomic medicine, rare mendelian disorders, diagnostic delay in genetic disease, electronic health record (EHR)-based phenotyping, genotype-phenotype correlation

OTHER RESEARCH FOCUSES - CONTINUED



Caterina Tiozzo, MD, PhD

(Associate Professor, Pediatrics)

Research Areas: Neonatal lung diseases, lung vascular development, lung regeneration, neonatal nutrition



Rebecca Trachtman, MD

(Assistant Professor, Pediatrics)

Research Areas: Biomarkers, patient-reported outcomes in juvenile idiopathic arthritis



Ernest Turro, PhD

(Associate Professor, Genetics and Genomic Sciences)

Research Areas: Biostatistics, statistical genetics, functional genomics, Bayesian modeling, rare diseases, inherited blood disorders, primary immunodeficiencies, mitochondrial genetics, platelet function



Elvin Wagenblast, PhD

(Assistant Professor, Oncological Sciences, and Pediatrics)

Research Areas: Blood stem cells, leukemia

ANNUAL RETREAT

The 13th annual MCHDI Retreat welcomed more than 120 attendees, including faculty members, trainees, staff, and volunteers, for a day of collaboration and reflection. Planning and coordination were led by Retreat Committee Chair Florence Marlow, PhD, with committee members Allison Bond, PhD, Megan Januska, MD, Shrey Patel, MS, and MCHDI Director Bruce Gelb, MD. In-Hyun Park, PhD, served as the keynote speaker and panelist, delivering an engaging address and contributing to the panel discussion, "Bending without Breaking: Adapting to Changing Priorities in Science." The panel was further enriched by the perspectives of Carol R. Horowitz, MD, MPH, and Miranda Wilson, PhD Candidate. The program also featured a powerful presen-

tation by parent speaker Nermine Majzoub, who shared her family's experience.

Excellence across research and training was recognized during the retreat. Victoria Huhn (PI: Romina Bevacqua, PhD), received the Predoctoral Young Investigators Competition award, while Miguel Quijada-Alamo, PhD (PI: Elvin Wagenblast, PhD), was honored in the Postdoctoral division. Best Poster Awards were presented to Adriadna Cilleros-Portet, PhD (PI: Jia Chen, ScD), Sean Takahashi (PI: Hirofumi Morishita, MD, PhD), and Andy Yang, MS (PI: Michael Breen, PhD), with Samia Lasaad, PhD (PI: Lisa Satlin, MD) earning the Crowd Favorite Poster distinction.



FACULTY
RESEARCH
INTERACTIONS



Faculty Highlight: Benjamin Glicksberg, PhD



Brett R. Anderson, MD, MBA, MS



Lea K. Davis, PhD



Sonny Duong, MD



Bruce D. Gelb, MD



Katherine Guttman, MD, MBE



Emma Holmes, MD

Brett R. Anderson, MD, MBA, MS

- Co-mentor for trainees
- Collaborator on multiple projects

Lea K. Davis, PhD

- Collaborator on AI development project
- Co-mentor for trainees
- Co-I on grants

Son Duong, MD

- Formal mentorship

Bruce D. Gelb, MD

- Co-I on grants
- Collaborator on multiple projects
- Co-chairing several mentoring committees

Katherine Guttman, MD, MBE

- Collaborator on NICU initiatives
- Co-I on grants

Emma Holmes, MD

- Formal mentorship

Yuval Itan, PhD

- Collaborator on AI genetics project

Felix Richter, MD, PhD

- Informal mentorship
- Collaborator on several projects
- Co-I on grants

Eyal Shemesh, MD

- Collaborator through the PCTO

Rory J. Tinker, MBChB

- Collaborator on rare disorder project

Sarah M. Wood, MD

- Collaborator on large language model project



Yuval Itan, PhD



Felix Richter, MD, PhD



Eyal Shemesh, MD



Rory J. Tinker, MBChB



Sarah M. Wood, MD



Faculty Highlight: Sarah Stanley, MBBCh, PhD



Jessica L. Ables, MD, PhD



Silvia De Rubeis, PhD



Adolfo Garcia-Ocaña, PhD



Liora S. Katz, PhD



Luca Lambertini, PhD



Donald K. Scott, PhD

Jessica L. Ables, MD, PhD

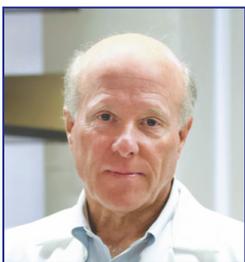
- Collaborator on NIH grant submission
- Member of graduate student thesis committee
- Project collaborator

Luca Lambertini, PhD

- Collaborator on NIH-funded project

Donald K. Scott, PhD

- Collaborator on NIH P30 grant
- Collaborator on NIH-funded project
- Member of master's thesis committee



Andrew F. Stewart, MD

Silvia De Rubeis, PhD

- Collaborator on pilot project

Adolfo Garcia-Ocaña, PhD

- Collaborator on NIH-funded projects
- Scientific collaborator on multiple projects

Andrew F. Stewart, MD

- Collaborator on NIH P30 grant
- Collaborator on NIH-funded project
- Faculty mentor



Ryan W. Walker, PhD

Liora S. Katz, PhD

- Collaborator on NIH-funded and other research projects

Ryan W. Walker, PhD

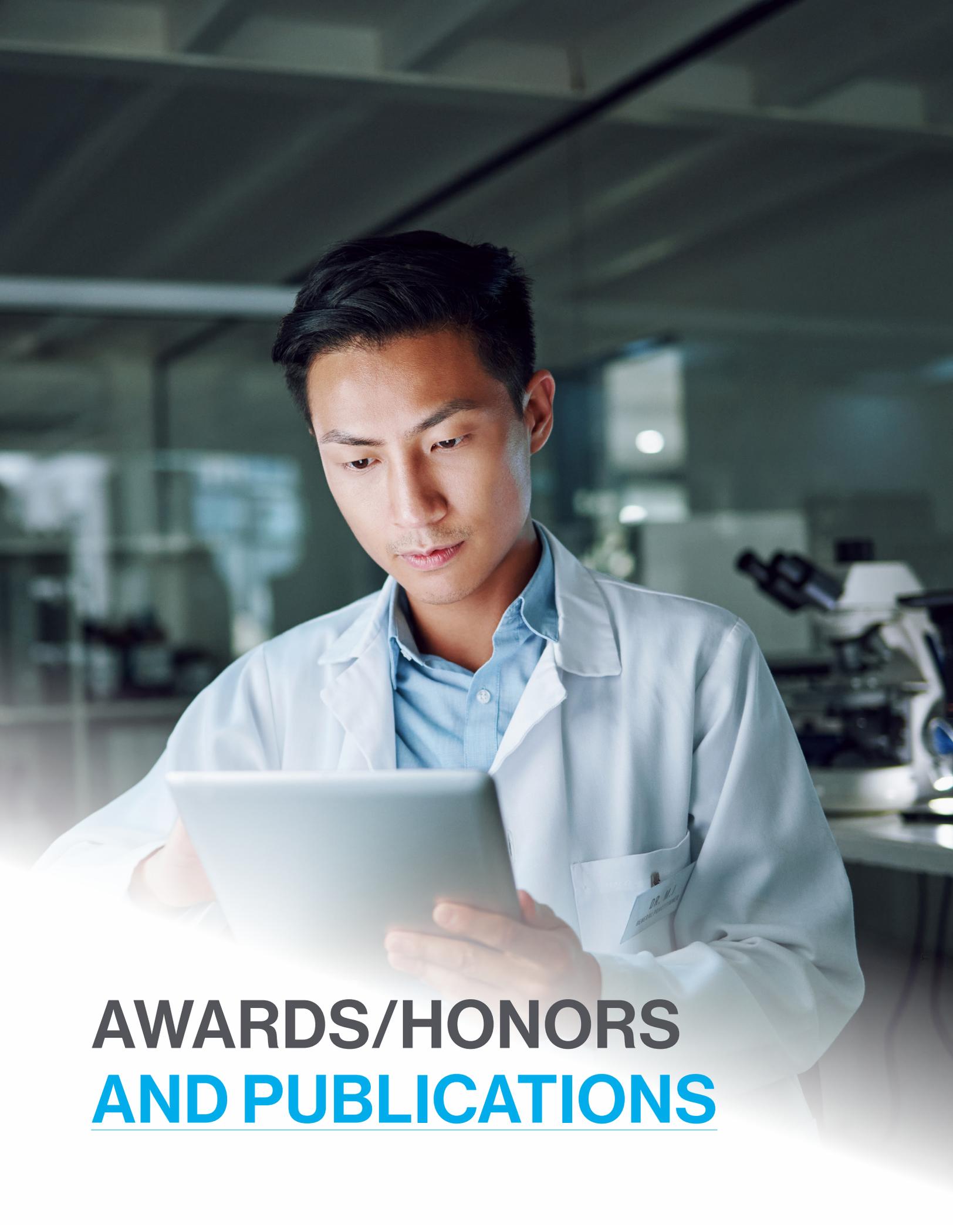
- Collaborator on NIH-funded project

Martin J. Walsh, PhD

- Advisor on Cystic Fibrosis Foundation-funded project



Martin J. Walsh, PhD



AWARDS/HONORS
AND PUBLICATIONS

FACULTY HONORS/AWARDS

John Bucuvalas, MD, NIAID, U01, “Early signals of the transition from immune quiescence to activation in the liver allograft microenvironment and in the circulation.”

Michael Cassidy, PhD, Ludovica Gazze, PhD, and Melissa Gentry, PhD Candidate, J-PAL North America, State and Local Innovation Initiative, “No Time Like the Present: The Effects of On-Demand Trips for Paratransit Customers on Rider Mobility, Wellbeing, and Health.”

Benjamin Glicksberg, PhD, Apple Investigator Award.

Amy Kontorovich, MD, PhD, 2025 Cullman Family Award for Excellence in Provider Communication.

Hugh Sampson, MD, Scholar GPS, ranked #1 in Food Allergy and #1 in Allergy in general (lifetime).

Scott Sicherer, MD, Scholar GPS, ranked #2 in Food Allergy and #3 in Allergy in general (lifetime)

Ernest Turro, PhD, Pioneer Award conferred by ReNU Syndrome United for the discovery of ReNU syndrome, Uniondale, NY, 24 Jul 2025.

Ernest Turro, PhD, Keynote Speaker, 21st Workshop on Fragile X syndrome & other Neurodevelopmental Disorders, Noordwijk, Netherlands, September 15, 2025.

Ernest Turro, PhD, Keynote Speaker, XXVIII National Congress of the Italian Society of Human Genetics, Rimini, Italy, September 24, 2025.

Julie Wang, MD, 2025 Jerome Glaser Distinguished Service Award, American Academy of Pediatrics Section on Allergy & Immunology (SOAI), September 28, 2025.

Ellerie Weber, PhD, MBA, 2025 Distinguished Scholar Award, Icahn School of Medicine at Mount Sinai.

Sarah Wood, MD, MSHP, New York State Department of Health, AIDS Institute, “HIV prevention services for women and girls.”

Sarah Wood, MD, MSHP, Member, Pediatrics U.S. News Steering Committee at Mount Sinai, 2025.

FACULTY PUBLICATIONS

Nwakama CA, Durand-de Cuttoli R, Oketokoun ZM, Brown SO, Haller JE, Méndez A, ... **Ables JL**, Sweis BM. **Neuroeconomically dissociable forms of mental accounting are altered in a mouse model of diabetes.** *Commun Biol.* 2025 Jan 21;8(1):102.

Woo JL, Dragan KL, **Crook S**, Yee LM, Grobman WA, Newburger JW, ... **Anderson BR**. **Linkage of parent-infant health care claims reveals prenatal care gaps and facilitates congenital heart outcomes study.** *JACC Adv.* 2025 Jul;4(7):101871.

Latenser C, Grobman WA, Albaro C, **Anderson BR**, Batton B, Yee LM, Woo JL. **Prenatal care and perinatal regionalization for congenital heart defects.** *JAMA Netw Open.* 2025 Nov 3;8(11):e2542135.

Seo H, Cuddleston WH, Fu T, Navarro E, Parks M, Allan A, ... **Breen MS**, ... Humphrey J. **Cytosine-to-uracil rna editing is upregulated by pro-inflammatory stimulation of myeloid cells.** *bioRxiv.* 2025 Mar 17.

Gnanapragasam MN, Jiang P, Dhara AR, Patel PN, Ramamoorthy M, Nowak RB, ... **Bieker JJ**. **Eklf/klf1 coordinates specialized transcriptional networks required to maintain the integrity of terminal erythropoiesis.** *J Cell Sci.* 2025 Sep 22.

Kopell BH, Kaji DA, Liharska LE, Vornholt E, Lund A, Hashemi A, ... **Breen MS**, ... Charney AW. **A study of rna splicing and protein expression in the living human brain.** *PLoS One.* 2025;20(10):e0332651.

Belabed M, Park MD, Blouin CM, Balan S, Moon CY, Freed G, ... **Brown BD**, ... **Wagenblast E**, ... Merad M. **Cholesterol mobilization regulates dendritic cell maturation and the immunogenic response to cancer.** *Nat Immunol.* 2025 Feb;26(2):188-99.

Aleman A, Van Oekelen O, Melnekoff DT, Grossman L, Mouhieddine TH, Kurowski A, ... **Brown BD**, ... Parekh S. **Targeted therapy of car+ t-cell lymphoma after anti-bcma car t-cell therapy.** *N Engl J Med.* 2025 Aug 21;393(8):823-5.

- Paredes-Marin A, Napoli J, Sivakumar V, Near C, Adams H, Harty A, ... **Bucuvalas J**, ... **Chu J**, ... Bansal MB. **Identifying environmental factors associated with significant fibrosis in metabolic dysfunction-associated steatotic liver disease/steatohepatitis.** *Dig Dis Sci.* 2025 Jun 19.
- Zhang L, Chun Y, Grishina G, Lo T, Reed K, **Wang J**, **Sicherer S**, **Berin MC**, **Bunyavanich S**. **Oral and gut microbial hubs associated with reaction threshold interact with circulating immune factors in peanut allergy.** *Allergy.* 2025 Oct;80(10):2800-2809.
- Zhang L, Chun Y, Reed K, Grishina G, Lo T, Wang J, **Sicherer S**, **Bunyavanich S**. **Oral immunotherapy suppresses peripheral blood transcriptomic response to peanut in peanut allergy.** *J Allergy Clin Immunol.* 2025 Nov 11.
- Khachadourian V, Arildskov ES, Grove J, O'Reilly PF, **Buxbaum JD**, **Reichenberg A**, ... **Janecka M**. **Familial confounding in the associations between maternal health and autism.** *Nat Med.* 2025 Mar;31(3):996-1007.
- Lee CH, Khan A, Wang C, Weng C, **Buxbaum JD**, Kiryluk K, Ionita-Laza I. **Liability threshold model-based disease risk prediction based on electronic health record phenotypes.** *Nat Genet.* 2025 Nov;57(11):2872-81.
- Weinstock JS, Chaudhry SA, Ioannou M, Viskadourou M, Reventun P, Jakubek YA, ... **Chami N**, ... **Loos RJ**, ... Arvanitis M. **Genetic determinants and genomic consequences of non-leukemogenic somatic point mutations.** *Nat Commun.* 2025 Oct 16;16(1):9194.
- Chami N**, Wang Z, Svenstrup V, Obrero VD, Hemerich D, Huang Y, ... **Loos RJF**. **Genetic subtyping of obesity reveals biological insights into the uncoupling of adiposity from its cardiometabolic comorbidities.** *Nat Med.* 2025 Nov;31(11):3801-12.
- Guan H, **Chen J**, Kaur K, Amreen B, **Lesueur C**, Dolios G, ... **Rommel AS**, Petrick LM. **High-dimensional mediation analysis to elucidate the role of metabolites in the association between pfas exposure and reduced sars-cov-2 igg in pregnancy.** *Sci Total Environ.* 2025 Jun 10;980:179520.
- Mahavadi VS, Aaby D, Paquette E, **Chorniy A**, Foster C, Goodman DM. **Association of financial distress with nonmedical out-of-pocket expenses in those with critical illness.** *Hosp Pediatr.* 2025 Nov 1;15(11):932-41.
- Zhang X, Sivakumar V, Paredes-Marin A, Leviton A, Villanueva A, Bansal MB, ... **Bucuvalas J**, **Chu J**. **Real-world comparison of steatosis-associated fibrosis estimator and fibrosis-4 scores for assessing metabolic dysfunction-associated steatotic liver disease-related fibrosis in a highly diverse urban metabolic dysfunction-associated steatotic liver disease population.** *Clin Gastroenterol Hepatol.* 2025 Jul 10.
- India-Aldana S, Midya V, Betanzos-Robledo L, Yao M, Alcalá C, Andra SS, ... **Chu J**, ... **Walker RW**, ... Valvi D. **Impact of metabolism-disrupting chemicals and folic acid supplementation on liver injury and steatosis in mother-child pairs.** *J Hepatol.* 2025 Jun;82(6):956-66.
- Crook S**, Sanchez CM, Dragan K, Woo JL, Jiang P, Neidell M, **Anderson BR**. **Days alive out of health care: A novel measure of health status after congenital heart surgery.** *J Am Coll Cardiol.* 2025 Mar 4;85(8):851-62.
- Ho HE, Radigan L, Qi J, Roudko V, Storek MJ, Lee JH, ... **Cunningham-Rundles C**. **Bruton tyrosine kinase modulates systemic immune activation to bacterial translocation in primary antibody deficiencies.** *J Allergy Clin Immunol.* 2025 Dec;156(6):1693-705.e5.
- Schwaba T, Mallard TT, Maihofer AX, Rhemtulla M, Lee PH, Smoller JW, **Davis LK**, ... Tucker-Drob EM. **Comparison of the multivariate genetic architecture of eight major psychiatric disorders across sex.** *Nat Genet.* 2025 Mar;57(3):583-90.
- Galimberti M, Levey DF, Deak JD, Adhikari K, Overstreet C, Gupta P, ... **Davis LK**, ... Gelernter J. **A contextual genomic perspective on physical activity and its relationship to health, well being and illness.** *Nat Genet.* 2025 Aug;57(8):1860-71.
- Mossa A, Dierdorff L, Lukin J, Garcia-Forn M, Wang W, Mamashli F, ... **De Rubeis S**. **Sex-specific perturbations of neuronal development caused by mutations in the autism risk gene *ddx3x*.** *Nat Commun.* 2025 May 15;16(1):4512.
- Chen X, Cunha Carvalho B, Sinha A, Pittman N, Benkov K, Lai J, **Lafaille MC**, **Dunkin D**. **Irritable bowel syndrome with diarrhea in pediatric patients is associated with type 2 and type 9 t cells in the intestinal mucosa.** *Cell Mol Gastroenterol Hepatol.* 2025 Feb 28:101488.

Patel N, Cohen J, Rajagopal HG, Barris DM, Stern KWD, Choueiter NF, ... **Duong SQ. Comparison of single-source cardiac ct and cmr quantified ventricular volumes and function in congenital heart disease.** *J Cardiovasc Comput Tomogr.* 2025 Nov-Dec;19(6):779-88.

Litman A, Sauerwald N, Green Snyder L, **Foss-Feig J**, Park CY, Hao Y, ... Troyanskaya OG. **Decomposition of phenotypic heterogeneity in autism reveals underlying genetic programs.** *Nat Genet.* 2025 Jul;57(7):1611-9.

Simpson WL, **Ganesh J. Imaging improvement in acid sphingomyelinase deficiency on enzyme replacement therapy.** *Mol Genet Metab.* 2025 Feb;144(2):108611.

Ushpol A, Je S, Christoff A, Nuthall G, Scholefield B, Morgan RW, ... **Gangadharan S. Evaluating post-cardiac arrest blood pressure thresholds associated with neurologic outcome in children: Insights from the pedires-q database.** *Resuscitation.* 2025 Feb;207:110468.

Gelb BD. 2024 ashg presidential address: Incomplete penetrance and variable expressivity: Old concepts, new urgency. *Am J Hum Genet.* 2025 Mar 6;112(3):461-6.

Watkins WS, Hernandez EJ, Miller TA, Blue NR, Zimmerman RM, Griffiths ER, ... **Gelb BD**, ... Tristani-Firouzi M. **Genome sequencing is critical for forecasting outcomes following congenital cardiac surgery.** *Nat Commun.* 2025 Jul 10;16(1):6365.

Midya V, Yao M, Colicino E, Barupal D, Lin X, **Gennings C**, ... **Loos RJJ, Walker RW**, ... Valvi D. **Exposure to per- and poly-fluoroalkyl substances in association to later occurrence of type 2 diabetes and metabolic pathway dysregulation in a multiethnic us population.** *EBioMedicine.* 2025 Aug;118:105838.

Omar M, Soffer S, Agbareia R, Bragazzi NL, Apakama DU, Horowitz CR, ... **Glicksberg BS**, ... Klang E. **Sociodemographic biases in medical decision making by large language models.** *Nat Med.* 2025 Jun;31(6):1873-81.

Richter F, Holmes E, Richter F, **Guttman K, Duong SQ, Gangadharan S**, ... **Gelb BD, Glicksberg BS. Toward governance of artificial intelligence in pediatric healthcare.** *NPJ Digit Med.* 2025 Oct 30;8(1):636.

Besterman AD, Alnor MA, Castaño M, DeLisi LE, **Grice DE**, Lohoff FW, ... Moreno-De-Luca D. **Psychiatric genetics in clinical practice: Essential knowledge for mental health professionals.** *Am J Psychiatry.* 2025 Aug 1;182(8):728-41.

Kim F, Ryder S, Marin A, Zygmunt A, **Guttman K. Caregiver perceptions of communication about early cerebral palsy or high-risk designation in infants.** *JAMA Netw Open.* 2025 Jul 1;8(7):e2519421.

Barbier M, Rajamani KT, Netser S, Wagner S, **Harony-Nicolas H. Altered neural activity in the mesoaccumbens pathway underlies impaired social reward processing in shank3-deficient rats.** *Adv Sci (Weinh).* 2025 May;12(17):e2414813.

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GRANTS

AGENCY_NAME	Funding from New Grants (\$)	Funding from New & Existing Grants (\$)
National Institute Of Allergy And Infectious Diseases/NIH/DHHS	6,732,986	9,026,196
Pershing Square Foundation	1,975,405	1,975,405
National Institute Of Mental Health/NIH/DHHS	1,658,324	6,928,076
National Institute Of Biomedical Imaging And Bioengineering/NIH/DHHS	843,806	1,321,204
National Institute Of Diabetes And Digestive And Kidney Diseases/NIH/DHHS	783,750	5,587,390
National Eye Institute/NIH/DHHS	562,660	1,060,678
Break Through T1D (formerly Juvenile Diabetes Research Foundation)	480,000	815,433
National Institute Of Environmental Health Sciences/NIH/DHHS	390,337	2,975,492
Washington University School Of Medicine In St. Louis	285,765	285,765
National Institute For Occupational Safety & Health/CDC/DHHS	249,150	249,150
Eagles Autism Foundation	200,000	200,000
Michael J. Fox Foundation	191,705	191,705
National Heart, Lung, And Blood Institute/NIH/DHHS	167,588	6,696,497
CURE Childhood Cancer	165,000	165,000
Atanis Biotech, AG	164,411	164,411
Neta Foundation	156,250	156,250
Simons Foundation	155,000	155,000
Food Allergy Fund	150,000	150,000
Children's Hospital Med. Center, Ohio	116,141	236,141
Pfizer Pharmaceuticals	100,000	100,000
Saving Tiny Hearts Society	100,000	100,000
Benaroya Research Institute At Virginia	98,106	951,336
National Institute On Aging/NIH/DHHS	84,166	637,443
Anjoi	79,807	79,807
Social Science Research Council	59,200	59,200
Additional Ventures Foundation	55,000	294,260
SPARK NS	50,000	50,000
Vanderbilt University Medical Center	23,255	251,246
American Heart Association	9,900	9,900
Alex's Lemonade Stand Foundation for Childhood Cancer	5,000	205,000
National Institute Of Arthritis & Musculoskeletal & Skin Diseases/NIH/DHHS		2,671,314
National Institute Of Child Health And Human Development/NIH/DHHS		1,987,223
Sanofi US Services Inc.		1,336,746
National Institute Of General Medical Sciences/NIH/DHHS		1,136,657
National Cancer Institute/NIH/DHHS		868,097
National Institute Of Neurological Disorders And Stroke/NIH/DHHS		816,633
National Institute Of Dental And Craniofacial Research/NIH/DHHS		571,054
Johns Hopkins University Medical School		506,679
National Center for Advancing Translational Sciences/NIH/DHHS		473,116
University Of Pittsburgh		437,158
National Institute On Drug Abuse/NIH/DHHS		391,925
Albert Einstein College Of Medicine		362,892
Emory University		329,381
University Of Wisconsin-Madison		263,270
Columbia University		256,121
Edward P. Evans Foundation		250,000
V Foundation for Cancer Research		200,000
Cystic Fibrosis Foundation		167,999
Leducq Foundation (Fondation Leducq)		154,935
University Of Colorado		145,627
Research Triangle Institute		88,101
St. Jude Children's Research Hospital		85,100
Massachusetts General Hospital		82,875
CureSearch for Children's Cancer		75,000
Pew Charitable Trusts		75,000
Beth Israel Deaconess Medical Center		65,640
Children's Hospital of Philadelphia		46,933
Vanderbilt University		46,851
European Commission		26,165
Boston Children's Hospital		21,725
University Of Southern California		18,036
Total	16,092,712	55,036,238

OUTGOING MATERIAL TRANSFER AGREEMENTS/LICENSES

Research Focus	Outgoing Material Transfer Agreements (#)	Licenses (#)
Neurodevelopmental Disorders	4	8
Cardiovascular Disease	2	5
Diabetes and Obesity	1	5
Allergy and Asthma	3	9
Others	2	3
Total	12	30

Licenses	Total Number
Antigens/Antibodies	8
Reagents/Methods/Cell Lines	11
Genes/Adapters/Vectors/ Oligonucleotides	5
Gene Testing/Therapeutics	4
Mouse and Cell Models	2
Total	30



PILOT PROJECTS
FUNDED FOR 2025

TRAINEE PILOT AWARDS

The Karen Levinson Mindich Trainee Pilot Grant was awarded in the amount of \$10K over a one-year period. The purpose of the program is to support postdoctoral/clinical fellows or PhD/MD-PhD students in pursuing an independently funded research project that is separate from their ongoing projects under their current Principal Investigator/mentor. Successful applications are required to: a) demonstrate that they can achieve independence and will generate preliminary data that could lead to career development or other grants and b) be relevant to children's health.

Project Title: Uncovering NPHP3's Role in Pediatric Cholestasis and Fibrosis: A Window into Ciliopathy-Driven Liver Disease



John G. Hong, MD, Advanced Translational Research Fellow, Department of Pediatrics

Primary Mentor: Jaime Chu, MD, Professor, Department of Pediatrics

Secondary Mentor: Charles DeRossi, PhD, Assistant Professor, Department of Pediatrics

Project Title: Leveraging AI to Model Trajectories of Language Development in Electronic Health Records



Rachana Nitin, PhD, Postdoctoral Fellow, Personalized Medicine Institute

Primary Mentor: Lea K. Davis, PhD, Professor, Departments of Medicine, Psychiatry, and Genetics and Genomic Sciences

Secondary Mentor: Benjamin Glicksberg, PhD, Professor, Windreich Department of Artificial Intelligence and Human Health

FACULTY PILOT AWARDS

Three pilot projects were selected for \$75K in institutional funding for a one-year period starting March 1, 2025. The purpose of the pilot program is to provide MCHDI faculty with funding for initial stages of research projects, with the goal of generating sufficient data to apply for larger, external grants. Projects are encouraged that are likely to: a) improve children's health, b) promote collaboration within the MCHDI, and c) leverage additional extramural funding for the Principal Investigators (PIs).

Project Title: Identifying Fibrogenic Drivers in Pediatric Cholestatic Disorders: Insights From Explanted Livers at Transplantation



**Jaime Chu, MD
(Communicating PI)**
*Professor, Pediatrics
Medical Director, Pediatric
Hepatology and Liver
Transplantation*



Judy H. Cho, MD (Co-PI)
*Ward-Coleman Professor
Senior Associate Dean of
Translational Genetics*

Project Title: Studying the Molecular Mechanisms of Human Beta Cell Replication in Insulinomas Using Single-Cell Approaches



**Esra Karakose, PhD
(Communicating PI)**
Assistant Professor, Medicine



Robert Sebra, PhD (Co-PI)
*Professor, Genetics and
Genomic Sciences
Director of The Center for
Advanced Genomics
Technology*

Project Title: The Roles of Pancreatic Sensory Circuits in Pancreatic Inflammation



**Sarah Stanley, MBBCh, PhD
(Communicating PI)**
*Associate Professor, Medicine
and Neuroscience*

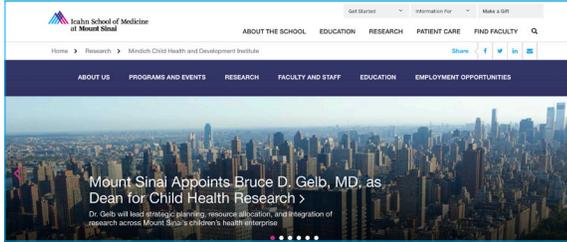


**Hongzhen Hu, PhD, MS
(Co-PI)**
*Professor, Dermatology
and Neuroscience
Scientific Director, Mark
Lebwohl Center for
Neuroinflammation and
Sensation*

COMMUNICATIONS

The MCHDI delivers the latest updates on research advancements, events, and news, both internally and externally, via various communications channels. Below is information about the MCHDI website, newsletter, and social media platforms.

Website



Our website includes detailed information about our signature programs, shared resources, trainee education, and employment opportunities. You can also find our complete list of faculty and links to their research websites as well as the latest press releases featuring our faculty. Our annual reports and MCHDI newsletters are also accessible via our website at www.mountsinai.org/mchdi.

Newsletter

MCHDI Developmental Outcomes is a biannual newsletter distributed internally to faculty, trainees, and other Institute affiliates to highlight important research breakthroughs, publications, awards, and events within the MCHDI. View our latest newsletters at www.mountsinai.org/mchdi.



Facebook



Our official MCHDI Facebook page was launched in 2014 and currently has 500+ likes and followers. Our team posts almost daily to share updates on faculty research, seminars and events, and other information relevant to children's health. Please like and follow our page at www.facebook.com/mindichchdi.

X

Our tweets are streaming on our website in real time. Follow or tweet us @MindichCHDI or visit our website at <https://x.com/MindichCHDI>.





SHARED
RESOURCES

GRANTFORWARD

GrantForward is a pre-award funding database with a comprehensive list of federal, foundation, and other funding sources. It offers a user-friendly search interface, automated email alerts, and tailored grant recommendations. GrantForward subscriptions for MCHDI faculty and trainees are covered by our institute.

To sign up, please visit: <https://www.grantforward.com>.

BIOME BIOBANK

The BioMe Biobank contains the largest collection of DNA and plasma samples at Mount Sinai, enabling high-throughput disease genotyping and phenotyping while maintaining patient confidentiality through the Epic electronic medical record (EMR). The goal is to integrate patient clinical care information and research data. Observational epidemiologic studies of children have expanded in the past decade in response to the rising prevalence of childhood diseases, including obesity, autism, and asthma, and of environmental risk factors, such as lead and pesticides, and the ability to genotype DNA has enabled further inquiry into the genetic basis of childhood diseases. The MCHDI, in collaboration with the Charles R. Bronfman Institute for Personalized Medicine, is funding the collection of DNA samples from pediatric patients with allergies, and since February 2012, the Jaffe Food Allergy Institute has recruited >1000 enrollees. The pediatric cohort is composed of samples from diverse racial and ethnic groups.

For more information, please visit:

<https://icahn.mssm.edu/research/ipm/programs/biome-biobank>.

BIOREPOSITORY CoRE SHARED RESOURCE FACILITY

The biorepository CoRE facility provides basic histology services, such as processing and embedding section fixed and frozen tissues from animal or human sources. In addition, services include DNA/RNA/miRNA extractions, preparing and analyzing tissue microarrays, and supporting functions for tissue procurement, both from consented and anonymized collections.

For a full list of their services, visit their website at:

<http://icahn.mssm.edu/research/resources/shared-resource-facilities/histology>.

STRATEGIC PLAN IMPLEMENTATION

PEDIATRIC CLINICAL TRIALS OFFICE

INTRODUCTION

The Pediatric Clinical Trials Office (PCTO) within the Mindich Child Health and Development Institute (MCHDI) has emerged as a pivotal resource, addressing the research needs of investigators within the Mount Sinai Health System, particularly in the realm of pediatric clinical trials. Its inception in the aftermath of the pandemic surge in fall 2020 underscores a strategic response to the evolving landscape of health care challenges.

A notable aspect of the PCTO's operational framework is its collaborating with the Clinical Trials Office (CTO) in Internal Medicine. This collaboration extends its purview to the adept management of a spectrum of trials, encompassing investigator-initiated, industry-funded, and federally funded endeavors. Of particular interest is the PCTO's commitment to facilitating "extension" trials, wherein the studies extend seamlessly from the adult to the pediatric population and vice versa. This nuanced approach speaks volumes about the adaptability and foresight in catering to the intricacies of diverse clinical research changes.

PCTO STAFF

Michele Cohen, MS, CCRC – Co-Director

Eyal Shemesh, MD – Co-Director

Xueru Mu, MD, CCRP – Clinical Trials Manager

Navjot Kaur, MS – Financial Analyst

Angela Stangarone, MS – Senior Regulatory Coordinator

Alyssa Gontzes, MS – Clinical Research Coordinator II

Tarini Vats, MD – Clinical Research Coordinator II

In 2025, the PCTO expanded its study portfolio with additional studies in Allergy, including a collaborative study with the Oncology team, as well as studies in Cardiology, Endocrinology, IBD, General Pediatrics, and Child and Adolescent Psychiatry. The PCTO remains dedicated to advancing excellence and innovation in pediatric health care.

RESEARCH FACULTY SERVED BY THE PCTO

The PCTO is currently serving the following investigators/divisions:

Pediatric Divisions:

Allergy

Scott H. Sicherer, MD

Julie Wang, MD

Amanda Cox, MD

Roxanne Oriol, MD

Mary Grace Baker, MD

Nicole Ramsey, MD, PhD

Angela Tsuang, MD

Endocrinology

Joan Han, MD

Indrajit Majumdar, MD

Christopher Romero, MD

Mabel Yau, MD

Gastroenterology

Marla Dubinsky, MD

David Dunkin, MD

Keith Benkov, MD

Nancy Pittman, MD

Elizabeth Spencer, MD

Nephrology

Jeffrey M. Saland, MD

Hillary Hotchkiss, MD

Corrine Benchimol, MD

Neonatal ICU

Courtney Juliano, MD

Malorie Meshkati, MD

Neurology

Walter Molofsky, MD

Maite La Vega-Talbott, MD

Cardiology

Jennifer Cohen, MD

Brett R. Anderson, MD, MBA, MS

David Barris, MD

Jacqueline Lamour, MD

Miwa Geiger, MD

Pediatric ICU

Sheemon Zackai, MD

Sandeep Gangadharan, MD

Shubhi Kaushik, MD

Jennifer Duchon, MD

General Pediatrics

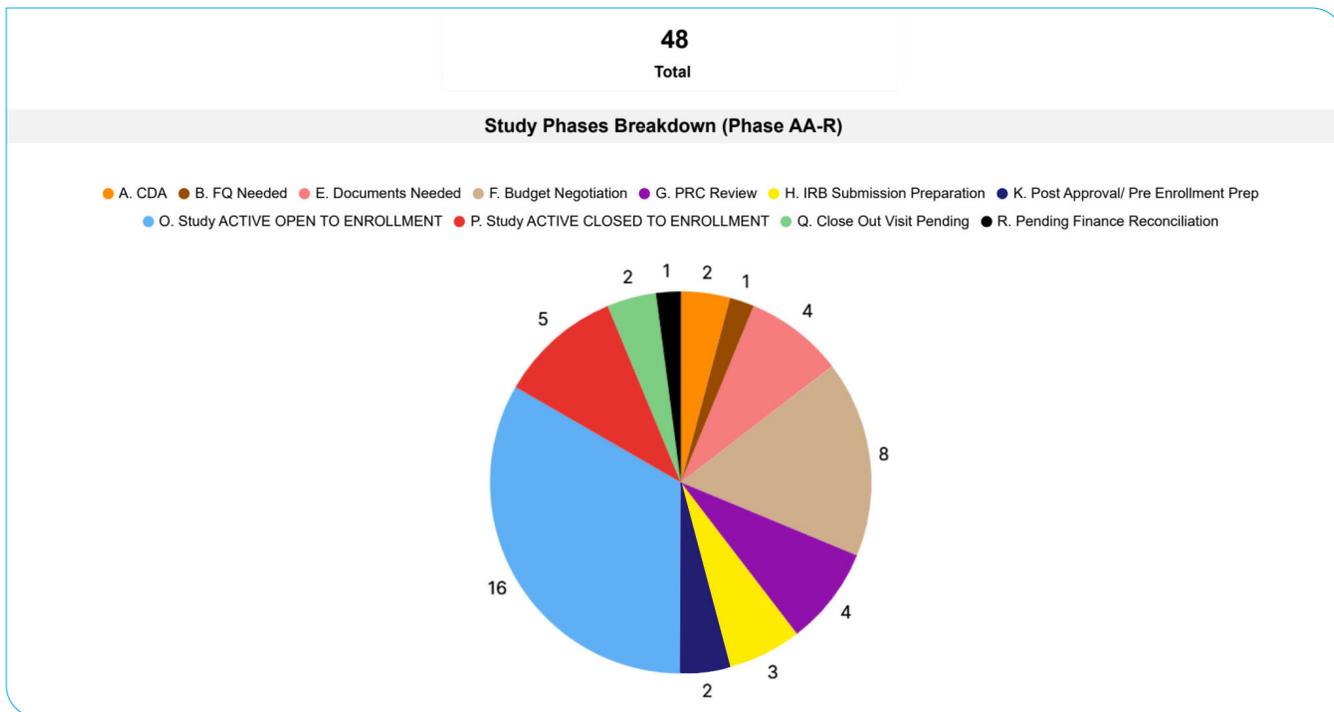
Blair Hammond, MD (New)

The Seaver Autism Center

Alex Kolevzon, MD (New)

CLINICAL TRIALS PORTFOLIO

Tracking various phases within the clinical trials review and approval flow is crucial for maintaining competitiveness with startup timelines. By closely monitoring these phases, the PCTO can ensure efficient progress through the trial process and optimize its ability to contribute to pediatric healthcare advancements.



Active Clinical Trials (26)

Pediatric Divisions

Cardiology – 2	Allergy – 6
Gastroenterology – 7	Rheumatology – 1
Endocrinology – 2	PICU – 2
General Pediatrics – 1	NICU – 1
Nephrology – 1	

Other Divisions:

Psychiatry – 1
Pediatric Allergy and Multiple Myeloma – 1

Clinical Trials in Start-Up Phase (22)

Pediatrics

Allergy – 4	Psychiatry – 21
Gastroenterology – 3	NICU – 1
Cardiology – 5	PICU – 1
Endocrinology – 5	Nephrology – 1

NOTABLE PROJECTS

- Expansion of the study portfolio to include increased collaboration with additional pediatric providers in general pediatrics, the Seaver Autism Center, and pediatric cardiology.
- Clinical study collaborations between departments have been relying on PCTO's support, for example, Pediatric Allergy and Mount Sinai Oncology, as well as the Department of Dermatology.
- The NIH/NHLBI-funded Pediatric Heart Network, a multisite effort that focuses on understanding how the heart develops and the causes of congenital heart defects in children, is supported by the PCTO.
- PCTO's support to our intensive care units' investigators and staff (PICU and NICU) enabled those units, for the first time, to successfully participate in clinical trials. Our units continue to expand their clinical trials portfolio with this support.

PEDIATRIC PRECISION MEDICINE

Precision medicine (PM) uses individualized patient data to accurately diagnose disease, better predict the outcomes of medical issues, and treat illnesses more effectively. Currently, medical problems with strong genetic underpinnings such as congenital anomalies, neurodevelopmental disorders, and inborn errors of immunity are ones that typically manifest during infancy, childhood, and/or adolescence, and where a PM approach can be most impactful. Moreover, these types of conditions can lead to diagnostic odysseys, during which young patients are subjected to extensive medical testing for months or years, families wait anxiously for definitive answers, and effective therapies, when available, are delayed.

Over the past year, the Mount Sinai Center for Undiagnosed Diseases has completed its start-up phase and is officially onboarded as one of the new diagnostic centers of excellence within the Undiagnosed Diseases Network (UDN). On April 1, 2025, we began accepting case submissions from children and adults with rare, unsolved illnesses. Since then, our team has reviewed 51 cases, 27 of which have been accepted for further UDN evaluation. To date, 15 participants are actively undergoing diagnostic workups, and one case has already been successfully solved.

Evaluations at our Center draw on a multidisciplinary model, with subspecialists spanning 14 specialties across the Departments of Medicine and Pediatrics. Participants undergo comprehensive clinical assessments by relevant experts, complemented by advanced genomic analyses using state-of-the-art short- and long-read whole genome sequencing. Together, these efforts reflect the maturation of the Mount Sinai Center for Undiagnosed Diseases into a fully functioning diagnostic center within the network, advancing our mission to bring answers to patients with rare, unsolved conditions while contributing new insights to the broader field of genomic medicine.

The MCHDI is also spearheading the pediatric arm of Mount Sinai Million since 2023. The ambitious goal of this initiative is to establish at Mount Sinai one of the largest and most diverse biorepositories in the world. Contrary to most biobanks, Mount Sinai Million enrolls not only adults but also children. This resource will include genetic data linked to the electronic medical record and will effectively enable discovery in pediatrics. Children of all ages and backgrounds who receive care at Mount Sinai are invited to join with the goal of reaching 100k participants. In order to facilitate participation, we have implemented workflows that allow for noninvasive sample collection by prioritizing the use of blood discards, cord blood, and saliva or cheek swabs. And because children grow and change over time, we designed biannual health surveys that allow us to follow the participants longitudinally. In 2025, we also made operational changes that allowed us to not only recruit participants in person but also via the MyChart app. Currently, we have 1,220 pediatric participants enrolled.

Functional Genomics and Disease Modeling Core

The Functional Genomics and Disease Modeling core was established to leverage the strengths of the *Drosophila* genetic system and develop whole-animal fly models of rare gene variants in pediatric and other rare disease indications. The core uses multiple established transgenic approaches as well as newly developed assays to provide insights about how these gene variants function *in vivo*. The objective is to serve as important leads for ongoing and future studies in vertebrate models, and to be ultimately translated to the clinics. The core has developed fly models related to rare variants of a) RASopathies, b) undiagnosed diseases, and c) cancer.

During 2025, data from fly models generated from this unit have supported i) one manuscript under revision, ii) one manuscript to be submitted, and iii) expansion into multiple ongoing areas of investigation. Furthermore, another study performed by volunteers at the core have won national recognition. For example, a study focusing on genetic and therapeutic analysis of rare cancer-variant fly models of obesity was selected as a top-40 nationwide finalist in the annual Regeneron Science Talent Search contest. This is the second top-40 national award in three years,

received by students from the Functional Genomics and Disease Modeling lab. The lab aims to incorporate volunteers productively into research projects that will ultimately generate scientific manuscripts while also enhancing these students' scientific credentials. This is indicated by five students from the lab who have received acceptance into prestigious Ivy League schools. Director Tirtha Das, PhD, has also been invited to participate in the Summer Program Advancing Research Knowledge, Education and Development (SPARKED) program to continue integrating students into productive scientific research projects, which now operates throughout the year.

We continued to support multiple investigator-initiated screens of drugs and novel classes of compounds and analogs of lead compounds using our fly disease models. These screens serve as good first-step therapeutic index indicators, as well as to understand the possible mechanisms of action, and helps to identify lead compounds to further develop using vertebrate models.

Student Research Awards

2024 – Regeneron STS Nationwide Finalist (top 40) – Sophie Gao

2024 – Terra Stem Fair NYC, Regional Semifinalist – Angela Wang

2025 – Terra Stem Fair NYC, Regional Semifinalist – Kaya Parikh

2026 – Regeneron STS Nationwide Finalist (top 40) – Kaya Parikh

Top College Admissions and Acceptance

2023 – Sadie Waldron – Johns Hopkins University

2024 – Sophie Gao – Harvard University

2024 – Angela Wang – Columbia University

2024 – Samiha Ahmed – Columbia University

2024 – Jesse-Red Gutierrez – Cornell University

2024 – Angela Zhang – Barnard College

2024 – Eshrat Quader – St. John's University

2025 – Bella Casper – Vassar College

2025 – David Li – Case Western Reserve University

2025 – Chloe Eaglesham – University of Sydney

2025 – Ella Caroleo – Connecticut College

2026 – Samia Orva – Princeton University (acceptance in 2025)

2026 – Aleah Berroa – Vassar College

CENTER FOR CHILD HEALTH SERVICES RESEARCH

The Center for Child Health Services Research in the Mindich Child Health and Development Institute at the Icahn School of Medicine at Mount Sinai serves as the primary hub for research on the health care system for children at the Icahn School of Medicine at Mount Sinai. The Center promotes the sharing of interdisciplinary ideas, methodologies, data, and mentorship to enhance productivity and creativity for investigators—both within and outside the Center. By partnering with existing departments, institutes, and governmental agencies, the Center focuses on improving the quality and effectiveness of the health care system for all children, with particular emphasis on providers, payers, and policy; value and effectiveness; and access and equity.

DIRECTOR



Brett R. Anderson, MD, MBA, MS

Director

Dr. Brett Anderson is a pediatric cardiologist, health equity advocate, and NIH-funded health services researcher. She is an Associate Professor in the Departments of Pediatrics, and Population Health and Policy, and brings a unique blend of medical, business, and statistical expertise to her work. Dr. Anderson's research focuses on linking and integrating large datasets to apply advanced econometric modeling techniques with the goal of identifying modifiable drivers of outcomes, value, and health inequities, particularly for children with cardiac disease. Through her leadership and research, Dr. Anderson fosters interdisciplinary collaborations and drives innovation to improve the quality and effectiveness of health care for children.

PRESS HIGHLIGHT

**\$8.5 Million
NIH Grant Renewal
Advances Research
on Congenital Heart
Disease**

The National Institutes of Health awarded the Icahn School of Medicine the renewal grant to continue groundbreaking work aimed at understanding and improving long-term outcomes for children with congenital heart disease—the most common type of birth defect in the United States. The project, led by Brett Anderson, MD, MBA, MS, Director of the Center for Child Health Services Research in the Mindich Child Health and Development Institute, expands upon the earlier work of Dr. Anderson and her team.

Read the full press release here: <https://www.mountsinai.org/about/newsroom/2026/mount-sinai-health-system-receives-8-5-million-nih-grant-renewal-to-advance-research-on-long-term-outcomes-in-children-with-congenital-heart-disease>

CENTER FOR CHILD HEALTH SERVICES RESEARCH

STAFF



Yohaira Rojas Guzman

Administrative Director

Yohaira Rojas Guzman is the Administrative Director of the Center for Child Health Services Research. She plays a pivotal role in managing operations, facilitating cross-functional collaboration, and supporting the Center's mission and growth. Her responsibilities include driving strategic initiatives to build partnerships, enhancing the Center's visibility,

and supporting its long-term success. Ms. Guzman previously directed a prostate cancer screening program, providing outreach to underserved communities. She began her Mount Sinai career in 2015 as Administrative Manager of Operations at the Center for Advanced Medicine, supporting patient care and access. Her experience includes roles as Associate Director of Ambulatory Care Operations and Emergency Management Branch Director.



Sarah Crook, PhD

Assistant Professor, Population Health Science and Policy

Sarah Crook, PhD, is an Assistant Professor in the Department of Pediatrics and Population Health Science and Policy. She serves as

the Director of Analytics at the Center for Child Health Services Research in the Mindich Child Health and Development Institute at the Icahn School of Medicine at Mount Sinai. With expertise in biostatistics, epidemiology, and health services research, Dr. Crook contributes

to the Center's initiatives through the application of her expertise and specialization in large-scale data analytics. This includes the integration of clinical registry data, administrative data, and social determinants of health. Dr. Crook earned both her BS in Human Physiology and MS in Epidemiology and Biostatistics from the University of Leeds, U.K. She then completed her PhD in Epidemiology and Biostatistics at the University of Zurich, Switzerland, and a training fellowship in Guidelines Methodology with Cochrane and the U.K.'s National Institute for Health and Care Excellence.



Pengfei Jiang, MS

Manager, Data Engineering and Security

Pengfei Jiang, MS, serves as Manager of Data Engineering and Security for the Center for Child Health Services Research. Mr. Jiang is a DrPH student at Johns Hopkins

Bloomberg School of Public Health, and holds an undergraduate degree in Mathematics and Economics from

UCLA and a master's in Biostatistics from the Mailman School of Public Health at Columbia University.

Mr. Jiang is responsible for designing and managing the data infrastructure for the Center for Child Health Services Research. He plays a pivotal role in fostering a dynamic and efficient data environment for the Center as well as providing essential analytic support to faculty and collaborators.



Chantal Sanchez

Research Manager

Chantal Sanchez is the Research Manager for the Center for Child Health Services Research. In her role, she focuses on supporting the Center's initiatives and contributing to studies on outcomes and health disparities

for children and young adults with congenital heart disease. Her responsibilities include oversight of the grant submission process, managing review board requirements, and contracting. Ms. Sanchez earned her undergraduate degree in Biology from Columbia University and previously worked as a Clinical Research Coordinator before joining the team.

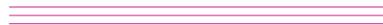


Shengnan Sun, MS

Data Analyst

Shengnan Sun, MS, is a Data Analyst at the Center for Child Health Services Research within the Mindich Child Health and Development Institute at the Icahn School of Medicine at Mount Sinai. In her role, she collaborates with Center faculty and staff to support research efforts by cleaning, linking, analyzing, and presenting data for various projects.

She also contributes to developing analyses, communicating findings, and supporting grant writing. Before joining CCHSR, Shengnan served as a biostatistician in the Nash Family Department of Neurosciences at the Icahn School of Medicine at Mount Sinai, where her research focused on suicide prevention and mental health promotion. She holds an MS in Biostatistics from Columbia University and a BS in Physiology and Neuroscience from the University of California, San Diego.



Ziying Yang, ScM

Data Analyst

Ziying Yang, ScM, is a Data Analyst at the Center for Child Health Services Research within the Mindich Child Health and Development Institute at the Icahn School of Medicine at Mount Sinai. She works with faculty and staff to support a range of research, conducting data cleaning, linkage, analysis, and visualization. Her work also includes contributing to the development of analysis plans, interpret-

ing and communicating findings, and assisting with preparing manuscripts. Prior to joining CCHSR, Ziying worked as a biostatistician with Partners for Health and Development in Africa, collaborating with SWOP clinics in Nairobi to clean and analyze Kenya EMR data, develop models to inform treatment plans, and support interpretation of results. She holds an ScM in Biostatistics from Johns Hopkins University and a BS in Data Science and Sociology from New York University.

FACULTY

Michael Cassidy, PhD

Assistant Professor, Pediatrics, and Population Health Science and Policy



Michael Cassidy, PhD, is an Assistant Professor of Pediatrics, and Population Health Science and Policy at the Icahn School of Medicine at Mount Sinai, affiliated with the Center for Child Health Services Research. An applied macroeconomist, he uses causal inference to study social, economic,

and environmental determinants of well-being, focusing on housing, homelessness, education, and children's health. Previously, he was a postdoc and associate research scholar at Princeton University's Center for Health and Wellbeing. Dr. Cassidy has also worked at The Century Foundation and NYC's Office of Management and Budget. He holds a PhD in Economics from Rutgers and an MPA from Princeton.

Anna Chorniy, PhD

Assistant Professor, Pediatrics, and Population Health Science and Policy



Anna Chorniy, PhD, is an Assistant Professor at the Department of Pediatrics and Center for Child Health Services Research at the Icahn School of Medicine at Mount Sinai. Her research focuses on

the relationship between health insurance and health, particularly in relation to Medicaid program enrollment, coverage, and financing rules. She examines how these factors affect children's health, including those in foster care and those with complex needs.

Madeline H. Renny, MD, MS

Assistant Professor, Emergency Medicine, Pediatrics, and Population Health Science and Policy



Madeline H. Renny, MD, MS, is an Assistant Professor of Emergency Medicine, Pediatrics, and Population Health Science and Policy at the Icahn School of Medicine at Mount Sinai. She is a physician-scientist whose research focuses on pediatric and adolescent drug overdose

prevention and emergency department-based interventions for youth with substance use.

Dr. Renny received her medical degree from the Perelman School of Medicine at the University of Pennsylvania

and completed pediatrics residency at the Children's Hospital of Philadelphia, followed by pediatric emergency medicine fellowship at Columbia University Medical Center and medical toxicology fellowship at the New York City Poison Control Center/NYU. She then completed the Population Health Science Scholars Program (T32) at NYU, receiving a Master of Science in Clinical Investigation.

Funded by a NIDA K23 Award, Dr. Renny is developing and pilot testing an emergency department-based intervention to improve linkage to outpatient care for youth with high-risk substance use.

CENTER FOR CHILD HEALTH SERVICES RESEARCH

Ellerie Weber, PhD, MBA

Assistant Professor, Population Health Science and Policy



Ellerie Weber, PhD, MBA, is a Health Economist and an Assistant Professor in the Department of Population Health Science and Policy at the Icahn School of Medicine at Mount Sinai. She received her PhD in Business Economics, as well as an MBA, from the University of Chicago's Booth School of Business, and completed a post-doctoral fellowship at RAND-University of Pittsburgh's Health Institute. Her research applies principles of microeconomics and econometric techniques to study the health sector, particularly how health policies affect prices, competition, and

health outcomes. She has published on topics relating to Medicaid, telehealth, price transparency, and hospital-insurer bargaining. Dr. Weber's current projects focus on maternal health and health equity, specifically looking at how Medicaid continuous coverage provisions impact postpartum beneficiaries. In addition to her own research portfolio, she helps clinicians, community-based organizations, and other researchers assess the cost-effectiveness of new treatments, procedures, or interventions.

Sarah M. Wood, MD

Division Chief, Adolescent Medicine

Director, Mount Sinai Adolescent Health Center



Sarah M. Wood, MD, is the Division Chief of Adolescent Medicine and Director of the Mount Sinai Adolescent Health Center (AHC) and an Associate Professor at the Icahn School of Medicine at Mount Sinai. A physician-scientist, she focuses on equitable sexual, reproductive,

and mental health care for adolescents. She earned her MD at Drexel University and completed her residency and fellowship training at CHOP and Penn. Joining Mount Sinai in 2024, her research, funded by NIMH and Gilead Sciences, develops HIV prevention in primary care. With more than 50 publications, she is a dedicated clinician and researcher committed to advancing adolescent health.

Cecile Yama, MD

Assistant Professor, Pediatrics, and Population Health Science and Policy



Cecile Yama, MD, is an Assistant Professor in the Center for Child Health Services Research at the Icahn School of Medicine at Mount Sinai and a general pediatrician in the Department of Pediatrics, with a co-appointment in Population Health Science and Policy.

As a board certified pediatrician, Dr. Yama specializes in trauma-informed care for young children with behavioral, developmental, and medical complexity, emphasizing long-term,

family-centered partnerships. Her research examines how economic and social policies shape health outcomes for low- and middle-income families, using mixed methods to evaluate policy changes and develop clinic-based strategies that connect families to policies that address social needs. Across her work, she is committed to aligning systems within and outside of health care to support whole family health.

CENTER FOR CHILD HEALTH SERVICES RESEARCH

Eric G. Zhou, PhD

Assistant Professor, Pediatrics and Population Health Science and Policy



Eric G. Zhou, PhD, is an Assistant Professor of Pediatrics and Population Health Science and Policy at the Center for Child Health Services Research at Mount Sinai. As a health economist, he studies how health care resources, policies, and environments impact child well-be-

ing and health disparities. Supported by the National Institute of Nursing Research, his recent work evaluates the effects of COVID-19 vaccinations on health and academic outcomes in NYC public schools, informing public health strategies. Dr. Zhou earned a PhD in Public Policy from NYU, an MA from the University of Chicago, and an LLB from Xiamen University.

YOUTH CARE (YOUTH & CAREGIVER ALLIANCE FOR RESEARCH ENGAGEMENT)

The Mindich Child Health and Development Institute (MCHDI) at the Icahn School of Medicine at Mount Sinai has launched a youth/caregiver stakeholder board to provide critical input from the community to help guide our research. Board members have important “lived experience” across many areas of child health research, including allergy and asthma, cardiovascular disease, neurodevelopmental disorders, obesity and diabetes, and others. MCHDI faculty are invited to meetings to present their research studies and get critical feedback from the board. Board members help researchers develop research ideas, questions, and topics; advise about the design of research studies; provide guidance about how to recruit young people and their caregivers into studies; share community perspectives on study findings; ensure that our research emphasizes diversity, equity, and inclusion; and help share research findings with study participants, families, and the general public.

YOUTH CARE

We conducted a needs assessment with MCHDI faculty who conduct human subjects child health research to guide development of the board.

- The board includes 12 people, including 6 youth and 6 adult caregivers of youth.
- Board members attend four to six Zoom meetings per year with brief materials to review before and/or after each meeting.
- We worked with board members to develop a structure for sharing feedback that ensures all voices are heard.
- Individual board members may be asked to provide more detailed guidance for specific research projects based on their lived experience with health topics and conditions of interest.
- Board members are compensated for their valuable time and perspectives and will be recognized on any publications resulting from studies reviewed.

Questions and More Information

Please contact Dr. Nita Vangeepuram at nita.vangeepuram@mssm.edu for questions or more information about YOUTH CARE.



Nita Vangeepuram, MD, MPH

Director, YOUTH CARE

*Associate Professor, Pediatrics, Environmental
Medicine & Public Health, and Population Health
Science and Policy*

CENTER FOR ARTIFICIAL INTELLIGENCE IN CHILD HEALTH

The Center for Artificial Intelligence in Child Health is the first dedicated center of its kind in New York City—a groundbreaking initiative to improve health care outcomes for children using artificial intelligence (AI). The Center will develop AI-powered solutions to enhance diagnostics, personalize treatments, and optimize health care delivery for youth and adolescents.

While the use of AI has accelerated in many areas of medicine, implementation in pediatric medicine has been limited due to stricter privacy considerations, more complicated regulatory pathways, and limited data infrastructure. The Center is dedicated to addressing these challenges by safely developing, testing, and embedding AI directly into child health care.

AI-BASED NICU VIDEO MONITORING (CONTINUOUS BEDSIDE “VISION AI” NEURO-MONITORING)

The Center for AI in Children's Health at the Icahn School of Medicine at Mount Sinai is advancing a NICU-focused bedside monitoring approach that uses **continuous video** and AI-based computer vision to generate real-time, objective measures of infant movement and neurologic state. In partnership with **ArtemisAI Labs** (a Mount Sinai spin-out), the goal is to translate incubator camera feeds into a continuous “movement readout,” treating movement as a functional “**fifth vital sign**,” and to integrate these AI-derived signals with existing clinical workflows and modalities so bedside teams can identify meaningful changes earlier and respond in context.

ARTEMIS AI NICU MONITORING

This work builds on emerging evidence that **pose- and movement-based AI** applied to continuous NICU video can track infant landmarks and quantify movement patterns associated with clinically relevant states (e.g., sedation level and cerebral dysfunction). The intended output is a **live, interpretable feed** (e.g., a dashboard or central monitoring view) that augments, rather than replaces, clinician assessment and helps prompt earlier clinical review when concerning changes emerge.

- **Continuous, passive bedside monitoring:** Computer vision quantifies infant movement over time, enabling objective trending rather than intermittent spot checks.
- **Actionable, clinician-centered outputs:** Signals are designed to be interpretable and reviewed alongside clinical context and other NICU data streams.
- **Early detection support:** Focuses on earlier identification of meaningful neurologic or physiologic change (e.g., patterns consistent with altered sedation or cerebral dysfunction) to prompt timely review and intervention.
- **Integration-minded approach:** Positioned as bedside AI infrastructure intended to complement existing monitoring and workflows, rather than operating as a standalone tool.

Questions and More Information

Please contact Benjamin Glicksberg, PhD, at benjamin.glicksberg@mssm.edu for questions or more information about AI-based NICU Video monitoring.



Benjamin Glicksberg, PhD

Founding Director of the Center for AI in Children's Health

Associate Professor, Artificial Intelligence and Human Health

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For more information on the MCHDI,
please visit our website at
www.mssm.edu/mchdi.



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**Mount
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*The Mindich
Child Health and
Development Institute*