



THE ANNUAL REPORT 2024



Icahn School
of Medicine at
Mount
Sinai

*The Mindich
Child Health and
Development Institute*

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

In 2024, the MCHDI enjoyed an exciting year, with the rapid build-out of the Center for Child Health Services Research (CCHSR) and the initiation of the new Center for Artificial Intelligence in Child Health (CAICH), the latter in collaboration with the Department of Artificial Intelligence in Human Health (AIHH). The Director of the CCHSR, Brett Anderson, has rapidly recruited four junior faculty members, all health economists, to the Center. In addition, the Department of Pediatrics recruited Sarah Wood to be the Division Chief of Adolescent Medicine and the Director of the Mount Sinai Adolescent Health Center. Dr. Wood is a physician-scientist, pursuing health services research focused on HIV prevention intervention in primary care for adolescents. She has joined the MCHDI and will pursue her NIH-funded research within the auspices of the CCHSR. Moving forward, the CCHSR will continue to expand with additional physician-scientists studying health care delivery in a broad range of pediatric disorders and provide robust training opportunities for residents and fellows across various subspecialties related to child health.

Artificial intelligence (AI) and machine learning are widely understood to be transformative technologies, relevant for clinical care and biomedical research. Large language models, a fairly recent development and on an exponential power curve currently, are impacting all of our lives. For this field, Mount Sinai is on the vanguard among U.S. medical schools, the first

to create a department devoted specifically to implementing AI. In child health, almost no organized AI research entities have been established. The CAICH seeks to leverage Mount Sinai's broader investment in AI, both through the AIHH and the Hasso-Plattner Institute for Digital Health. The MCHDI has two junior faculty pursuing AI-based research in child health, Sonny Duong (Pediatric Cardiology) and Emma Holmes (Newborn Medicine), both mentored by Girish Nadkarni, the new Chair of AIHH. Working with Dr. Nadkarni, a leader for the CAICH has been identified: Ben Glicksberg. Dr. Glicksberg is well known to us as he was a highly collaborative faculty member at Mount Sinai and will be returning in February after a stint in industry. He is an outstanding mentor and has extensive experience in AI, which he will leverage in leading this new Center.

This year, we also introduced a new YOUTH CARE initiative, directed by Nita Vangeepuram. This innovative initiative brings together a youth and caregiver stakeholder board to provide vital community input on child health research. By leveraging their experience, the board helps guide research design, recruitment strategies, and dissemination efforts while emphasizing diversity, equity, and inclusion. We are excited to watch this partnership, which will enhance child health research and ultimately improve outcomes for children and families.

As anticipated last year, the fiscal year 2024 budget for NIH was not optimal, with a small reduction. At this writing, NIH, along with the rest of the U.S. government, is budgeted through mid-March at the same level; we must wait to see where Congress and the President set the budget for the duration of the year. Given the NIH funding challenges ahead, the MCHDI will continue to focus on efforts to optimize funding procurement. In addition to our current programs, we have also begun to provide professional grant editing services to polish research strategies for a limited number of applications. I encourage all MCHDI faculty to take advantage of these resources and also to give generously of their time to assist others in our community.

We should all be proud of the interactive culture that we have built together over several years. Now, more than ever, we must dig deeper to enable our amazing child health-related science to garner the level of extramural support needed to advance our collective mission. While we cannot control the headwinds we may be facing, we are completely in control of how we respond to adversity.

FACULTY GROWTH

MCHDI ANNUAL FACULTY GROWTH 2024

In 2024

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

105 Members

Currently, we total 105 members consisting of scientists and physician-scientists across the disciplines of Allergy & Asthma, Cardiovascular Disease, Neurodevelopmental Disorders, Obesity and Diabetes, and more.

- Existing faculty
- Internal recruits
- External recruits

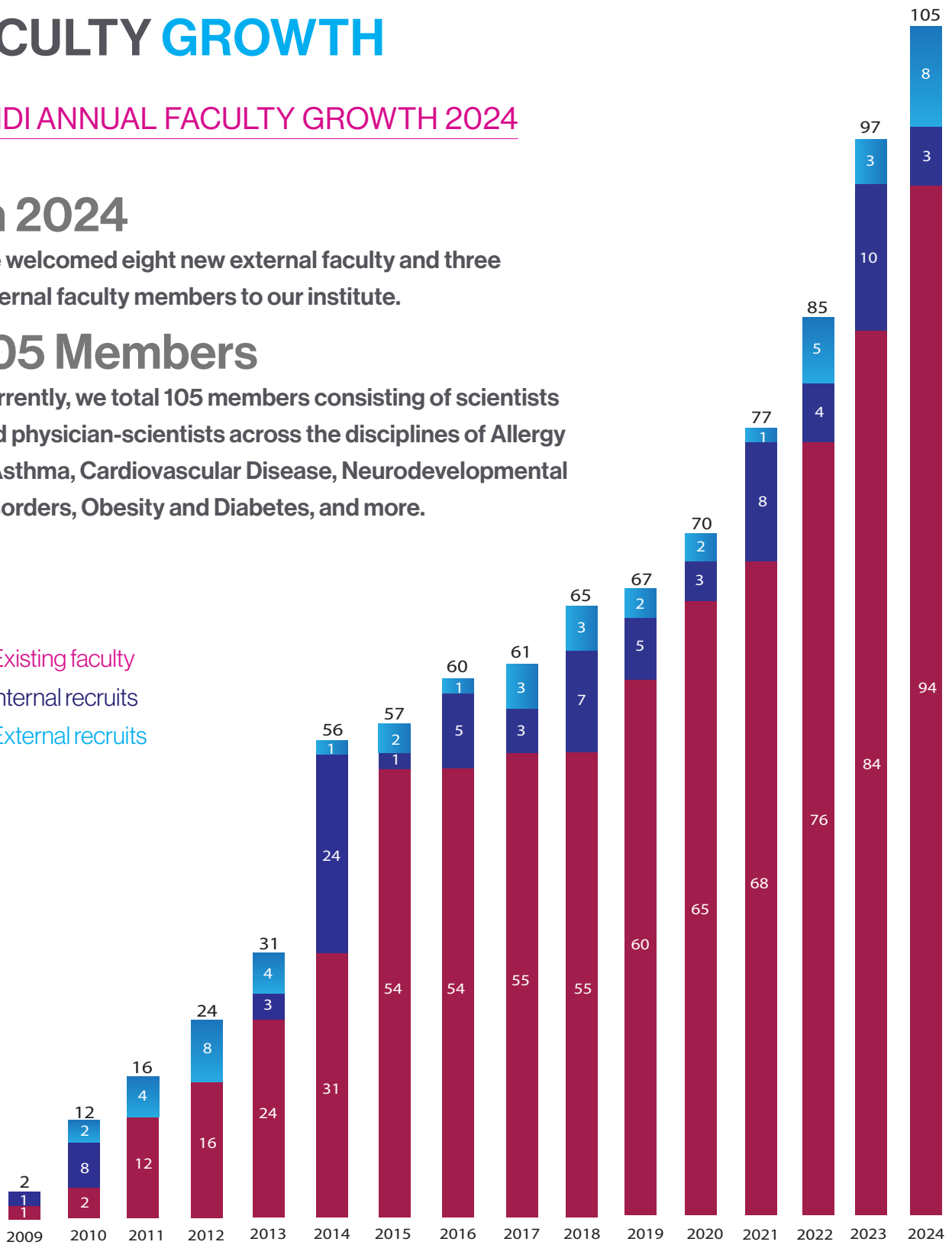


Chart of faculty recruits since our inception in 2009. In 2024, our institute recruited eight new external and three new internal faculty members to our institute.



NEW
FACULTY

NEW EXTRAMURAL FACULTY



Shlomit Beker, PhD

Shlomit Beker, PhD, is a cognitive neuroscientist, focusing on studying physiological mechanisms of neurodevelopmental disorders. She gained her BSc in Psychology and Philosophy and MSc in Cognitive Psychology from Tel Aviv University, and PhD in Neurophysiology from Bar Ilan University, Israel. In her PhD work, she studied the effects of Alzheimer's disease (AD) pathology on neuronal structure and function using intracellular recordings *in vivo* from an AD mouse model. Following her PhD, Dr. Beker moved to New York for her postdoctoral training at Albert Einstein College of Medicine, where she studied altered EEG functions in children and adults with autism.

Dr. Beker has recently joined the faculty of the Seaver Autism Center at Mount Sinai as an Assistant Professor. The study in the Beker lab will seek to identify physiological measures of altered synchronization between individuals with autism, and their physical and social environment, using EEG, behavior, and measures from the body.

Alongside the goal of elucidating the understanding of the latter, Dr. Beker's long-term goal is to use these non-invasive readouts to advance biomarkers for diagnosis and treatment of autism and other neurodevelopmental disorders.



Allison Bond, PhD

Allison Bond, PhD, is an Assistant Professor in the Departments of Neuroscience, and Cell, Developmental, and Regenerative Biology. She is also a member of the Friedman Brain Institute, the Institute for Regenerative Medicine, and the Alper Center for Neural Development and Regeneration. Dr. Bond received her undergraduate degree in Psychology and her PhD in Neuroscience from Northwestern University in Chicago, where she studied signaling mechanisms regulating adult neurogenesis.

She then completed her postdoc at the University of Pennsylvania in Philadelphia, where she explored the origin and development of neural stem cells in the adult brain. Dr. Bond recently established her own lab at Mount Sinai focused on uncovering endogenous programs that regulate neural stem cell capacity across the lifespan. The goal of her research program is to successfully target the brain's innate regenerative capacity to promote neuroplasticity *in vivo* for therapeutic purposes. Dr. Bond is particularly interested in understanding how neural stem cell capacity is regulated by changes in the cellular environment across development and uses the hippocampus region of the

mammalian brain as a model for long-lived neural stem cells. The lab employs clonal lineage tracing, single-cell omics, flow cytometry, and advanced imaging techniques to investigate neural stem cell behavior in an *in vivo* mouse model, and cell type-specific genetic manipulation to investigate how cell-cell interactions drive brain development. Future projects will investigate how experience, pathology, and disease-associated genetic interventions during development can have a long-term impact on neural stem cell behavior and brain function.

NEW EXTRAMURAL FACULTY - CONTINUED



Michael Cassidy, PhD

Michael Cassidy, PhD, is an Assistant Professor of Pediatrics, and Population Health Sciences and Policy in the Center for Child Health Services Research in the Mindich Child Health and Development Institute at the Icahn School of Medicine at Mount Sinai. He is an applied microeconomist who uses the science of causal inference to study the social, economic, and environmental determinants of well-being across the lifespan. His current work focuses on housing, homelessness, education, and children's health.

Prior to Mount Sinai, Dr. Cassidy was a postdoc and associate research scholar in the Center for Health and Wellbeing at Princeton University's School of International and Public Affairs. He has also held positions at The Century Foundation and the New York City Office of Management and Budget.

He holds a PhD in Economics from Rutgers University, a Masters in Public Affairs from Princeton University, and a BA

in Communication and Political Science from the University of Pennsylvania.

Dr. Cassidy is an invited researcher at the Abdul Latif Jameel Poverty Action Lab (J-PAL) North America and a faculty affiliate at the Wilson Sheehan Lab for Economic Opportunities (LEO) at the University of Notre Dame.



Anna Chorniy, PhD

Anna Chorniy, PhD, is a health economist interested in studying and improving public health insurance programs, including Medicaid, especially for children with common chronic conditions, such as asthma and ADHD. She completed her undergraduate and MS degrees at the Lomonosov Moscow State University, where she studied Economics with a focus on Risk Management and Insurance. She earned her PhD in Economics from Clemson University and completed additional postdoctoral training at Princeton University. Prior to joining the Icahn School of Medicine at Mount Sinai, Dr. Chorniy served as an Assistant Professor at Northwestern University Feinberg School of Medicine.

In her current work, she studies the impact of Medicaid on children's health and well-being, physician agency and treatment choices, the relationship between health insurance and labor market outcomes, and industrial organization of health care markets. This research is centered on evaluating health policy impacts and often relies on quasi-experimental econometric methods and large administrative data (e.g., claims). For example, Dr. Chorniy analyzed the transition from the fee-for-service (FFS) reimbursement model to the Medicaid managed care (MMC)

payment system—a major shift that affected 80% of states by 2016. This research highlighted that this transition significantly influenced the dramatic rise in ADHD diagnoses and treatment over recent decades. She further showed that these changes are not necessarily beneficial for the diagnosed children. While ADHD medication improves behavioral outcomes, its long-term benefits on academic performance are limited.

NEW EXTRAMURAL FACULTY - CONTINUED



Lea K. Davis, PhD

Lea K. Davis, PhD, is a Professor of Medicine, Psychiatry, and Genetics and Genomic Sciences. She is the Scientific Director of the Sinai Million Health Discoveries Program (SMHDP), one of the largest sequencing projects of its kind. The SMHDP aims to integrate health and research data at Mount Sinai to promote discoveries that will directly benefit our patient population.

Dr. Davis's research spans many domains of medicine and psychiatry, from neurodevelopmental disorders to women's health, and employs a population-level approach to investigate the genetic basis of a wide range of complex health conditions, diseases, and common traits. Her lab's research integrates genetics, clinical informatics, and social determinants of health to study health outcomes captured in

real-world clinical data found in the electronic health record. In addition to her work on complex trait genomics, Dr. Davis has a long-standing commitment to furthering social justice through science, research ethics, genomic privacy, and responsible data sharing.



Erik Wambre, PhD

Erik Wambre, PhD, is a Professor in the Department of Pediatrics, Allergy and Immunology, and Immunology and Immunotherapy, and Director of Technology and Business Development at the Human Immune Monitoring Center (HIMC) at the Icahn School of Medicine at Mount Sinai. He is also CEO and co-founder of OCCAM Immune, a spin-off of the HIMC offering immune monitoring solutions for industry conducting advanced clinical studies.

Dr. Wambre received an MSc in Biochemistry and Molecular Biology from the University of Lille in France, and attended the School of Industrial Biology in France, where he received his Master of Business Engineering. He then earned his doctorate in Immunology, *summa cum laude*, from the Sorbonne University in Paris, France. Dr. Wambre completed his postdoctoral training at the Benaroya Research Institute at Virginia Mason Hospital, Seattle, WA. In his role as a professor, his research has focused on understanding the mechanisms that control the development and functional identity of pathogenic TH2 cells, and examining how these regulations are changed during Immunotherapy. His re-

search profile is defined by a relentless pursuit of innovative solutions and comprehensive understanding of pathogenic immune responses, particularly in the context of clinical trial samples. A significant part of his work involves the creation and development of advanced immunological tools and technology platforms, which are designed to track antigen-specific immune responses effectively and to maximize information obtained from limited biological samples.



Sarah M. Wood, MD

Sarah M. Wood, MD, is the Division Chief of Adolescent Medicine and an Associate Professor in the Icahn School of Medicine at Mount Sinai. She is a physician-scientist with a career mission to improve equitable delivery of sexual, reproductive, and mental health care for adolescents and young adults. A former community health worker and HIV tester, Dr. Wood received her undergraduate degree at DePaul University and her MD at Drexel University College of Medicine.

After completing her residency at the Children's Hospital of Philadelphia (CHOP), Dr. Wood continued her training as an Adolescent Medicine fellow and received a Masters of Science in Health Policy Research at the University of Pennsylvania Perelman School of Medicine. In 2024, she joined the faculty at Mount Sinai to carry on the mission and the vision of the Division of Adolescent Medicine and the Mount Sinai Adolescent Health Center to provide high-quality comprehensive care to vulnerable adolescents. Her research, funded by the National Institute of Mental Health and Gilead Sciences, focuses on developing and

implementing HIV prevention interventions in adolescent primary care. She is also a faculty member in the Center for Child Health Services Research at Mount Sinai. She has published more than 50 publications in peer-reviewed journals, and is a frequent speaker on podcasts, webinars, and national meetings dedicated to adolescent health. Clinically, she is an Adolescent Medicine and HIV specialist committed to improving the care for youth locally and globally.



Eric G. Zhou, PhD

Eric G. Zhou, PhD, is an Instructor of Pediatrics at the Center for Child Health Services Research, with a joint appointment in the Department of Population Health Science and Policy at the Mindich Child Health and Development Institute, Icahn School of Medicine at Mount Sinai. He is a health economist specializing in the health and development of underserved children.

His research focuses on how health care resources, public policies, and environmental factors influence child well-being and contribute to health disparities.

Dr. Zhou's recent work, supported by the National Institute of Nursing Research, examines the real-world effects of COVID-19 vaccinations on children's health and academic outcomes in New York City public schools. This research, conducted in collaboration with various city government

agencies, aims to inform public health strategies that promote health and mitigate disparities. His research has been published in journals such as *JAMA Network Open* and *Obesity* (Silver Spring). Through his work, Dr. Zhou contributes to evidence-based strategies aimed at promoting equitable health care access and delivery, while improving the well-being of vulnerable populations.

NEW INTRAMURAL FACULTY



Sarah Crook, PhD

Sarah Crook, PhD, is an Assistant Professor in the Department of Population Health. 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. National Institute for Health and Care Excellence.



Emma Holmes, MD

Emma Holmes, MD, is an Assistant Professor in the Division of Newborn Medicine. Having received her MD from the University of Connecticut and completed her residency and fellowship at Mount Sinai in Pediatrics and Neonatal-Perinatal Medicine, respectively, Dr. Holmes has developed a robust clinical and research profile.

She works with the A.I.M.S lab within the Charles Bronfman Institute of Personalized medicine and specializes in the application of artificial intelligence (AI) to neonatal medicine, employing cutting-edge techniques, including deep learning and graph technology, to enhance the understanding and treatment of critical conditions such as apnea of prematurity and culture-negative sepsis. Her area of interest is in how physiologic waveforms, such as ECG and pulse oximetry, can be used to provide insight on the pathophysiologic changes occurring within neonates. This research has been presented at national conferences, highlighting the

potential of AI to revolutionize neonatal care. In addition to a strong research agenda, Dr. Holmes is committed to fostering a collaborative and inclusive environment. She believes in delivering compassionate, evidence-based care and collaborates with multidisciplinary teams to optimize patient outcomes. Through their clinical and research endeavors, Dr. Holmes aims to drive transformative change in neonatal medicine, ultimately improving health outcomes for vulnerable populations worldwide.

INTRAMURAL FACULTY - CONTINUED



Felix Richter, MD, PhD

Felix Richter, MD, PhD, is a Neonatal Hospitalist in the Division of Newborn Medicine in the Jack and Lucy Clark Department of Pediatrics at the Icahn School of Medicine at Mount Sinai and Mount Sinai West. He graduated with a BA in Integrated Science, Biological Sciences, and Chemistry from Northwestern University. He completed his MD, PhD, and pediatrics residency training at the Icahn School of Medicine at Mount Sinai.

During his graduate training, he developed software and statistical learning approaches to integrate whole-genome sequencing, epigenomic, and RNAseq datasets. He leveraged these tools to discover a role for noncoding de novo variants in congenital heart disease (CHD). He also described the contribution of inherited, mosaic, and large structural variants to CHD. During the height of the pandemic, he developed scalable phenotyping methods to describe COVID-19 clinical trajectories. This was featured in the New York Times. His clinical and research expertise includes pediatrics, genetics, bioinformatics, and statistical learning, and he is a long-standing editor on Wikipedia.

Together with other MCHDI faculty, Dr. Richter started and currently leads a multi-site study to perform genomic autopsies across 14 neonatal intensive care units (NICUs) for unexplained neonatal deaths (<https://www.nicunet.com/>). Through this work, his team discovered new causes of cardiac, genitourinary, and cerebrovascular disease. These results were provided back to families and were featured on the TODAY Show. He also initiated and continues to lead research on using computer vision from video-EEG data to predict sedation, cerebral dysfunction, and seizures in neonates from the Mount Sinai NICU.



ANNUAL RETREAT

The 12th Annual Retreat was held at the Harmonie Club on November 20, 2024, bringing together more than 100 participants, including faculty, trainees, staff, and volunteers. The retreat was organized by the dedicated committee led by Chair Florence Marlow, PhD, alongside Behrang Mahjani, PhD, Felix Richter, MD, PhD, Aditi Prasad, BS, and MCHDI Director Bruce Gelb, MD. The event featured Girish N. Nadkarni, MD, MPH, as the keynote speaker and panelist, who provided invaluable insights on the topic of artificial intelligence. Additional contributions to the panel discussion were made by Kristine Alpi, MLS, MPH, PhD, FMLA, Evan S. Bardot, PhD, and Emma Holmes, MD. The retreat also

included a heartfelt presentation by parent panelist Jessica Margrill and her family, who shared their personal story.

Recognition was given to outstanding achievements during the retreat. The Young Investigators Competition (YIC) winners were Tasneem Ebrahim (PI: Nicole Dubois, PhD) and Meltem Ece Kars, MD (PI: Yuval Itan, PhD). Best Poster Awards were presented to Grace Freed (PI: Elvin Wagenblast, PhD), Samia Lasaad, PhD (PI: Lisa Satlin, MD), Bhavana Shewale, MS (PI: Nicole Dubois, PhD), and Joshaya Trotman, MS, who received the Crowd Favorite Poster Award (PI: Jaime Chu, MD).



FACULTY
RESEARCH
AREAS

ASTHMA AND ALLERGY



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

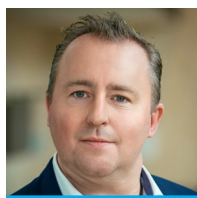


Scott H. Sicherer, MD

(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

ASTHMA AND ALLERGY - 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

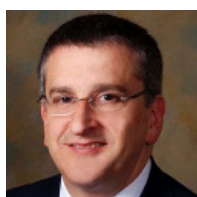


Karen M. Wilson, MD, MPH

(Adjunct Professor, Pediatrics)

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

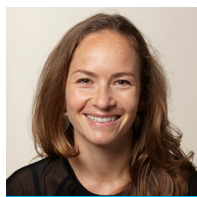
CARDIOVASCULAR DISEASE



Harold S. Bernstein, MD, PhD

(Adjunct Professor, Pediatrics)

Research Areas: Drug development (target validation through clinical proof of concept), heart failure, metabolic syndrome, diabetes, thrombosis, chronic kidney 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)

Research Areas: Artificial intelligence in cardiac imaging, pediatric cardiology

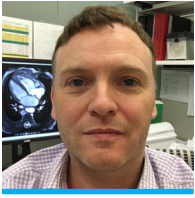


Bruce D. Gelb, MD

(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)

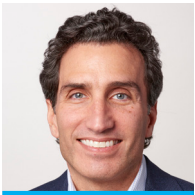
Research Areas: Children's environmental health, exposure assessment, pediatric neuroimaging



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



Alejandro Martin-Trujillo, PhD

(Assistant Professor, Genetics and Genomic Sciences)

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



Luca Lambertini, PhD

(Assistant Professor, Obstetrics, Gynecology and Reproductive Science)

Research Areas: Placental biomarkers of altered fetal and child development

NEURODEVELOPMENTAL DISORDERS - CONTINUED



Behrang Mahjani, PhD

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

Research Areas: Genetics of neurodevelopmental disorders



Florence Marlow, PhD

(Associate Professor, Cell, Developmental & Regenerative Biology)

Research Areas: Genetics of early patterning and germline, neurodevelopment



Marek Mlodzik, PhD

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

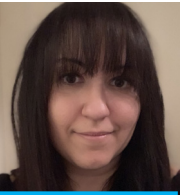
Research Areas: Genetics and cell biology of planar cell polarity establishment, cell biology of Wnt signaling and Notch signaling



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



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)

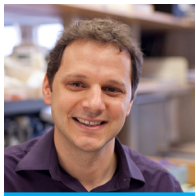
Research Areas: Neurodevelopmental disorders, environmental risk factors, prenatal exposures and neurophysiology



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)

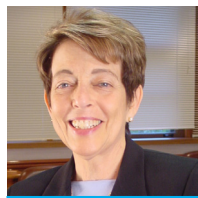
Research Areas: Epigenomics, transcriptomics, genome function, structural variation, imprinting, congenital disorders



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

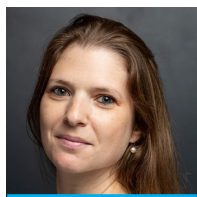


Anusha Yeshokumar, MD

(Adjunct Assistant Clinical Professor, Pediatrics, and Neurology)

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

OBESITY AND DIABETES



Sharon Baumel-Alterzon, PhD

(Instructor, Medicine)

Research Areas: Beta cell biology, oxidative stress, cell proliferation, cell cycle, cell division, apoptosis/cell death, diabetes, obesity, gene expressions, gene regulation, knockout mice, molecular biology, transcription factors



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)

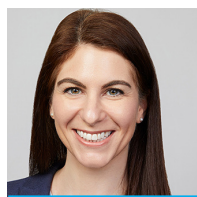
Research Areas: Drosophila as a tool to develop therapeutics for cancer, diabetes, and rare mendelian diseases



Nathalie Chami, PhD

(Instructor, Environmental Medicine & Public Health)

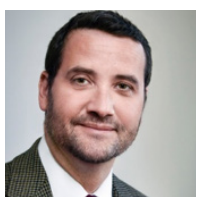
Research Areas: Genetics of complex traits, monogenic disease, genetics of obesity and cardiometabolic outcomes



Lauryn Choleva, MD, MSc

(Assistant Professor, Pediatrics)

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



Fernando Ferrer, MD, FACS, FAAP

(Professor, Urology)

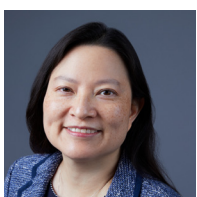
Research Areas: Cancer, bioactive lipids, renal injury, biomarkers, renal obstruction



Adolfo García-Ocaña, PhD

(Professor, Medicine)

Research Areas: Diabetes, pancreatic beta cell biology



Joan Han, MD

(Chief, Division of Pediatric Endocrinology and Diabetes; 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)

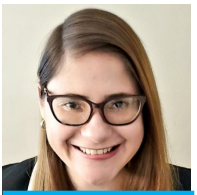
Research Areas: Diabetes, pancreatic beta cells, beta cell proliferation, alpha-to-beta cell trans-differentiation



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)

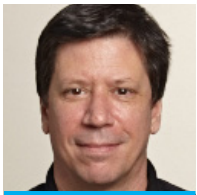
Research Areas: Epi/genomics, environmental exposures, pregnancy outcomes, early-life metabolic programming



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)

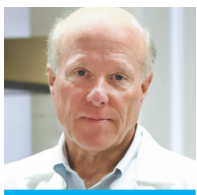
Research Areas: Metabolic regulation of transcription, beta cell regeneration and preservation, diabetes



Sarah Stanley, PhD

(Associate Professor, Medicine, and Neuroscience)

Research Areas: Neural control of metabolism

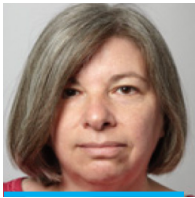


Andrew F. Stewart, MD

(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

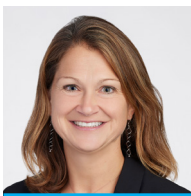


Martin J. Walsh, PhD

(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 Sciences 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 Sciences 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



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



Eric G. Zhou, PhD

(Instructor, Pediatrics and Population Health Sciences 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

(Professor, Microbiology, Oncological Sciences, and Pediatrics)

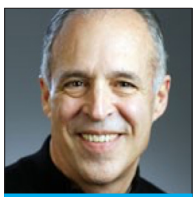
Research Areas: Genetics of infectious and inflammatory diseases, type I interferons, Pseudo-TORCH syndrome, neurolisterosis



Brian D. Brown, PhD

(Professor, Genetics and Genomic Sciences)

Research Areas: Immunology and immunotherapy, autoimmune disease, microRNA regulation, biotechnology



John Bucuvalas, MD

(Professor, Pediatrics)

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

OTHER RESEARCH FOCUSES - CONTINUED



Minji Byun, PhD

(Adjunct Assistant Professor, Medicine)

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



Jaime Chu, MD

(Assistant Professor, Pediatrics)

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)

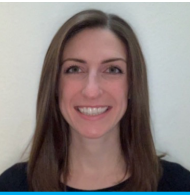
Research Areas: Primary immune deficiency, B cells, antibody, B cell memory, hypogammaglobulinemia, immune reconstitution



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



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



Sandeep Gangadharan, MD

(Associate Professor, Pediatrics)

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

OTHER RESEARCH FOCUSES - CONTINUED



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



Katherine Guttman, MD, MBE

(Assistant Professor, Pediatrics)

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



Emma Holmes, MD

(Assistant Professor, Pediatrics)

Research Areas: Machine learning applications in neonatology, physiologic waveforms, and 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

OTHER RESEARCH FOCUSES - CONTINUED



Kaustav Mukherjee, PhD

(Instructor, Cell, Developmental & Regenerative Biology)

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



Praveen Raju, MD, PhD

(Associate Professor, Neurology, and Pediatrics)

Research Areas: Pediatric brain tumors, developmental neurobiology, BBB drug delivery



Michael Rendl, MD

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

Research Areas: Stem cells, hair regeneration, morphogenesis



Felix Richter, MD, PhD

(Instructor, Pediatrics)

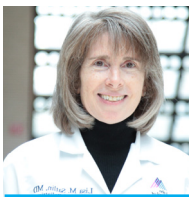
Research Areas: Neonatology, artificial intelligence, genetics



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

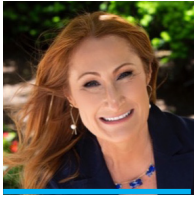


Christopher Sturgeon, PhD

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

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

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)

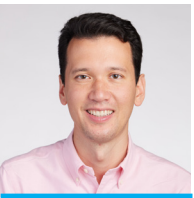
Research Areas: Biomarkers, patient-reported outcomes in juvenile idiopathic arthritis



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



**FACULTY
RESEARCH
INTERACTIONS**



Faculty Highlight: Brett R. Anderson, MD, MBA, MS



Michael Cassidy, PhD



Anna Chorniy, PhD



Sarah Crook, PhD



Sonny Duong, MD



Bruce D. Gelb, MD



Katherine Guttman, MD, MBE



Eyal Shemesh, MD



Sarah M. Wood, MD



Eric G. Zhou, PhD

Collaborator through the CCHSR

- Michael Cassidy, PhD
- Anna Chorniy, PhD
- Sarah Crook, PhD
- Katherine Guttman, MD, MBE
- Sarah M. Wood, MD
- Eric G. Zhou, PhD

Collaborator through the PCTO

- Eyal Shemesh, MD

Collaborators in mentorship and recruitment

- Sarah Crook, PhD
- Bruce D. Gelb, MD
- Lisa M. Satlin, MD

Formal mentorship

- Michael Cassidy, PhD
- Anna Chorniy, PhD
- Sarah Crook, PhD
- Sonny Duong, MD
- Eric Zhou, PhD

Informal mentor

- Katherine Guttman, MD, MBE

Co-mentor trainees

- Sarah Crook, PhD
- Bruce D. Gelb, MD

M-PI or Co-I on grants

- Sarah Crook, PhD (Co-I on grants)
- Bruce D. Gelb, MD (M-PI on grants)



Faculty Highlight: Marek Mlodzik, PhD



James J. Bieker, PhD



Tirtha K. Das, PhD



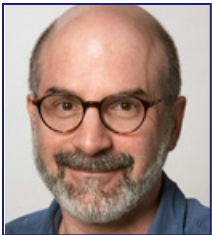
Nicole C. Dubois, PhD



Bruce D. Gelb, MD



Dirk Hubmacher, PhD



Robert S. Krauss, PhD



Kaustav Mukherjee, PhD

James J. Bieker, PhD

- Co-chairing several mentoring committees

Tirtha K. Das, PhD

- Mentor
- Collaborator using the Drosophila model system to study signaling in cancer and RASopathies

Nicole C. Dubois, PhD

- Mentor
- DRS student mentoring and course organization

Bruce D. Gelb, MD

- Collaborator within RASopathies context using Drosophila model system

Dirk Hubmacher, PhD

- Mentor

Robert S. Krauss, PhD

- DRS student mentoring and course organization

Kaustav Mukherjee, PhD

- Mentor



**AWARDS/HONORS
AND PUBLICATIONS**

FACULTY HONORS/AWARDS

Supinda Bunyavanich, MD, MPH, MPhil, Mount Sinai Faculty Council Senior Award

Lea K. Davis, PhD, Keynote speaker, President's Symposium at the Psychiatry Research Conference, Provo, Utah, January 2024

Silvia De Rubeis, PhD, Editor-in-chief, Neurogenetics (Springer Nature)

Bruce D. Gelb, MD, Visiting Professor at Duke University School of Medicine, Child Health Research Week, Pediatric Grand Rounds, April 9, 2024

Yuval Itan, PhD, Keynote Speaker, The International Symposium on Health Informatics and Bioinformatics, Istanbul, Turkey, December 19, 2024

Hugh A. Sampson, MD, Distinguished Author in Allergy and Immunology Award from the *Annals of Allergy, Asthma and Immunology*, the official journal of the ACAAI

Scott H. Sicherer, MD, Distinguished Clinician Award, American Academy of Allergy, Asthma and Immunology

Elvin Wagenblast, PhD, Career Development Award, Leukemia & Lymphoma Society, 2024

Erik Wambre, PhD, Visiting Professor at Northwestern University, Division of Allergy and Immunology, January 25, 2024

Sarah M. Wood, MD, American Academy of Pediatrics Section on Pediatric Trainees Leading Example for Aspiring Pediatricians (LEAP) Award Nominee

FACULTY PUBLICATIONS

Abid Z, Neuman MI, Hall M, **Anderson BR**, Dayan PS. **Epidemiology of emergency department visits for children with clinically significant cardiovascular disease.** *Pediatr Emerg Care.* 2024 Nov 6.

Crook S, Dragan K, Woo JL, Neidell M, Nash KA, Jiang P, ... **Anderson BR.** **Impact of social determinants of health on predictive models for outcomes after congenital heart surgery.** *J Am Coll Cardiol.* 2024 Jun 18;83(24):2440-54.

Coykendall VMN, Qian MF, Tellez K, Bautista A, **Bevacqua RJ**, Gu X, ... Kim SK. **Rfx6 maintains gene expression and function of adult human islet α -cells.** *Diabetes.* 2024 Mar 1;73(3):448-60.

Xue L*, **Mukherjee K***, Kelley KA, and **Bieker JJ.** **Generation, characterization, and use of EKLF(Klf1)/CRE knock-in mice for cell-restricted analyses.** *Frontiers in Hematology.* 2024; 2:1292589. [*co-first authors]

Jimenez-Cyrus D, Adusumilli VS, Stempel MH, Maday S, Ming GL, Song H, **Bond AM.** **Molecular cascade reveals sequential milestones underlying hippocampal neural stem cell development into an adult state.** *Cell Rep.* 2024 Jun 25;43(6):114339.

Dailamy A, Lyu W, Nourreddine S, Tong M, Rainaldi J, McDonald D, Panwala R, Muotri A, **Breen MS**, Zhang K, Mali P. **Charting and probing the activity of adars in human development and cell-fate specification.** *Nat Commun.* 2024 Nov 13;15(1):9818.

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Park MD, Le Berichel J, Hamon P, Wilk CM, Belabed M, Yatim N, ... **Brown BD**, ... Merad M. **Hematopoietic aging promotes cancer by fueling il-1 α -driven emergency myelopoiesis.** *Science.* 2024 Oct 25;386(6720):eadn0327.

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Knackstedt ED, Anderson SG, Anand R, Mitchell J, Arnon R, Book L, Ekong U, Elisofon SA, Furuya K, Himes R, Jain AK, Ovchinsky N, Sundaram SS, **Bucuvalas J**, Danziger-Isakov L. **Cytomegalovirus (cmv) prophylaxis in pediatric liver transplantation (plt): A comparison of strategies across the split consortium.** *Am J Transplant.* 2024 Oct 3.

Ho HE, Arditi Z, Radigan L, Grishina G, Zhang L, Chun Y, ... **Wang J, Sicherer S, Bunyavanich S. Saliva antibody profiles are associated with reaction threshold and severity of peanut allergic reactions.** *J Allergy Clin Immunol.* 2024 Sep;154(3):690-7.e4.

Zhang L, Chun Y, Arditi Z, Grishina G, Lo T, Wisotzkey K, ... **Wang J, Sampson HA, Sicherer S, Berin MC, Bunyavanich S. Joint transcriptomic and cytometric study of children with peanut allergy reveals molecular and cellular cross talk in reaction thresholds.** *J Allergy Clin Immunol.* 2024 Jun;153(6):1721-8.

Huang Y, Wang M, Ni H, Zhang J, Li A, Hu B, ... **Buxbaum JD**, ... Friedel RH. **Regulation of cell distancing in peri-plaque glial nets by plexin-b1 affects glial activation and amyloid compaction in Alzheimer's disease.** *Nat Neurosci.* 2024 Aug;27(8):1489-504.

Gao Y, Shonai D, Trn M, Zhao J, Soderblom EJ, Garcia-Moreno SA... **Buxbaum JD**, Soderling SH. **Proximity analysis of native proteomes reveals phenotypic modifiers in a mouse model of autism and related neurodevelopmental conditions.** *Nat Commun.* 2024 Aug 9;15(1):6801.

Cassidy M, Currie J, Glied S, Howland R. **Child mental health, homelessness, and the shelter system: Evidence from medicaid in new york city.** *Am J Epidemiol.* 2024 Sep 9.

Hawkes G, Beaumont RN, Li Z, Mandla R, Li X, Albert CM, ... **Chami N**, ... **Loos RJF**, ... Weedon MN. **Whole-genome sequencing in 333,100 individuals reveals rare non-coding single variant and aggregate associations with height.** *Nat Commun.* 2024 Oct 3;15(1):8549.

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Wang Y, Hermetz K, Burt A, **Lesueur C**, Panuwet P, Fiedler N, ... **Hao K, Chen J**, Marsit CJ. Prenatal exposure to pesticide mixtures and the placental transcriptome: Insights from trimester-specific, sex-specific and metabolite-scaled analyses in the sawasdee **cohort.** *Environ Res.* 2024 Dec 14;267:120637.

Chorniy A, Moffa MA, Seltzer RR. **Expanding access to home-based behavioral health services for children in foster care.** *Adm Policy Ment Health.* 2024 Jul;51(4):525-8.

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Pavlyha M, Li Y, **Crook S, Anderson BR**, Reyes-Soffer G. **Race/ethnicity and socioeconomic status affect the assessment of lipoprotein(a) levels in clinical practice.** *J Clin Lipidol.* 2024 Sep-Oct;18(5):e720-e8.

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Meng X, Navoly G, Giannakopoulou O, Levey DF, Koller D, Pathak GA, ... **Davis LK**, ... Kuchenbaecker K. **Multi-ancestry genome-wide association study of major depression aids locus discovery, fine mapping, gene prioritization and causal inference.** *Nat Genet.* 2024 Feb;56(2):222-33.

Braun A, Shekhar S, Levey DF, Straub P, Kraft J, Panagiotaropoulou GM, ... **Davis LK**, ... Ripke S. **Genome-wide meta-analysis of myasthenia gravis uncovers new loci and provides insights into polygenic prediction.** *Nat Commun.* 2024 Nov 13;15(1):9839.

Liu Y, Jiang S, Li Y, Zhao S, Yun Z, Zhao ZH, ... **De Rubeis S**, ... Peng H. **Neuronal diversity and stereotypy at multiple scales through whole brain morphometry.** *Nat Commun.* 2024 Nov 26;15(1):10269.

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Spencer EA, Bergstein S, Dolinger M, Pittman N, Kellar A, **Dunkin D**, Dubinsky MC. **Single-center experience with upadacitinib for adolescents with refractory inflammatory bowel disease.** *Inflamm Bowel Dis.* 2024 Nov 4;30(11):2057-63.

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Hao Y, Banker S, Trayvick J, Barkley S, Peters A, Thinakaran A, McLaughlin C, Gu X, **Foss-Feig J**, Schiller D. **Understanding depression in autism: The role of subjective perception and anterior cingulate cortex volume.** *Res Sq.* 2024 Sep 20.

Ushpol A, Je S, Christoff A, Nuthall G, Scholefield B, Morgan RW, Nadkarni V, **Gangadharan S**. **Evaluating post-cardiac arrest blood pressure thresholds associated with neurologic outcome in children: Insights from the pedires-q database.** *Resuscitation.* 2024 Dec 18:110468.

Garcia-Carmona Y, Chavez J, Gernez Y, Geyer JT, Bussel JB, **Cunningham-Rundles C**. **Unexpected diagnosis of whim syndrome in refractory autoimmune cytopenia.** *Blood Adv.* 2024 Oct 8;8(19):5126-36.

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Gluckman J, Levy T, Friedman K, Garces F, Filip-Dhima R, ... **Buxbaum JD**, ... **Kolevzon A**, **Gelb BD**. **Aortic root dilation and genotype associations in phelan-mcdermid syndrome.** *Am J Med Genet A.* 2024 Sep 11:e63872.

Xiao F, Zhang X, Morton SU, Kim SW, Fan Y, Gorham JM, ... **Gelb BD**, ... Pu WT. **Functional dissection of human cardiac enhancers and noncoding de novo variants in congenital heart disease.** *Nat Genet.* 2024 Mar;56(3):420-30.

Hu CY, Gutierrez-Avila I, He MZ, Lavigne É, Alcalá CS, Yitshak-Sade M, ... **Gennings C**, ... Rosa MJ. **Windows of susceptibility and joint effects of prenatal and postnatal ambient air pollution and temperature exposure on asthma and wheeze in Mexican children.** *Environ Int.* 2024 Nov;193:109122.

Agyapong PD, Jack D, Kaali S, Colicino E, Mujtaba MN, Chillrud SN, ... **Gennings C**, ... Lee AG. **Household air pollution and child lung function: The Ghana randomized air pollution and health study.** *Am J Respir Crit Care Med.* 2024 Mar 15;209(6):716-26.

Crowley JJ, Cappi C, Ochoa-Panaifo ME, Frederick RM, Kook M, ... **Buxbaum JD**, ... **Grice DE**, ... Storch EA. **Latin American trans-ancestry initiative for ocd genomics (latino): Study protocol.** *Am J Med Genet B Neuropsychiatr Genet.* 2024 Jun;195(4):e32962.

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GRANTS

AGENCY_NAME	Funding from New Grants (\$)	Funding from New & Existing Grants (\$)
National Heart, Lung, And Blood Institute/NIH/DHHS	3,414,895	4,950,951
National Institute On Aging/NIH/DHHS	2,583,913	2,583,913
National Institute Of Diabetes And Digestive And Kidney Diseases/NIH/DHHS	1,752,013	6,554,857
Johns Hopkins University Medical School	1,413,772	1,413,772
National Institute Of Mental Health/NIH/DHHS	859,577	6,627,648
National Institute Of Neurological Disorders And Stroke/NIH/DHHS	822,709	822,709
National Institute Of Allergy And Infectious Diseases/NIH/DHHS	615,416	2,867,365
National Institute Of Arthritis & Musculoskeletal & Skin Diseases/NIH/DHHS	522,200	2,646,850
National Institute Of General Medical Sciences/NIH/DHHS	470,347	1,136,657
National Cancer Institute/NIH/DHHS	441,178	441,178
National Institute On Drug Abuse/NIH/DHHS	391,833	391,833
Break Through T1D (formerly Juvenile Diabetes Research Foundation)	330,883	330,883
University Health Network, Canada	311,711	311,711
Edward P. Evans Foundation	250,000	250,000
V Foundation for Cancer Research	200,000	200,000
Children's Hospital Med.Center, Ohio	175,639	315,639
Columbia University	169,873	480,316
Cystic Fibrosis Foundation	167,991	167,991
Rockefeller University	120,001	120,001
Bristol-Myers Squibb Foundation, Inc.	120,000	120,000
Vanderbilt University Medical Center	112,004	264,464
The Henry and Marilyn Taub Foundation	100,000	100,000
Research Triangle Institute	86,919	86,919
Beth Israel Deaconess Medical Center	65,640	65,640
International FOXP1 Foundation	50,000	50,000
Alex's Lemonade Stand Foundation for Childhood Cancer	5,000	205,000
American Psychiatric Association Foundation	4,914	4,914
Klingenstein Third Generation Foundation	1,000	1,000
Office of the Director, National Institutes of Health/NIH/DHHS		6,962,150
National Institute Of Environmental Health Sciences/NIH/DHHS		2,360,438
National Institute Of Child Health And Human Development/NIH/DHHS		2,121,584
National Center for Complementary and Integrative Health/NIH/DHHS		711,098
National Institute Of Dental And Craniofacial Research/NIH/DHHS		659,276
National Institute Of Biomedical Imaging And Bioengineering/NIH/DHHS		539,312
Albert Einstein College Of Medicine		496,758
National Center for Advancing Translational Sciences/NIH/DHHS		490,366
University Of Pittsburgh		477,175
Emory University		377,690
Benaroya Research Institute At Virginia		346,183
Northwestern University		308,797
University Of Wisconsin-Madison		277,408
President and Fellows of Harvard College		268,345
Brigham And Women's Hospital		202,339
Damon Runyon Cancer Research Foundation		200,000
Leducq Foundation (Fondation Leducq)		154,934
University Of Colorado		142,952
University of Cambridge		129,979
Additional Ventures Foundation		124,764
Adventist Health System/Sunbelt, Inc.		117,142
BrightFocus Foundation		100,000
Food Allergy Research & Education		100,000
Job Research Foundation		100,000
Massachusetts General Hospital		91,750
Biomarin Pharmaceutical		85,592
CureSearch for Children's Cancer		75,000
Pew Charitable Trusts		75,000
Alzheimer's Association		72,030
Virginia Commonwealth University		66,701
Ann & Robert H. Lurie Children's Hospital of Chicago		51,810
Children's Hospital of Philadelphia		46,933
Vanderbilt University		28,333
European Commission		26,165
University Of North Carolina Medical School At Chapel Hill		25,835
Thrasher Research Fund		23,272
Boston Children's Hospital		21,725
University Of Southern California		17,491
Healthfirst		1,550
Total	15,559,428	51,990,088

OUTGOING MATERIAL TRANSFER AGREEMENTS/LICENSES

Research Focus	Outgoing Material Transfer Agreements (#)	Licenses (#)
Neurodevelopmental disorders	3	8
Cardiovascular disease	2	6
Diabetes and Obesity	0	5
Allergy and Asthma	1	8
Others	5	3
Total	11	30

Licenses	Total Number
Antigens/Antibodies	8
Reagents/Methods/Cell Lines	11
Genes/Adapters/Vectors/Oligonucleotides	6
Gene Testing/Therapeutics	3
Mouse and Cell Models	2
Total	30



PILOT PROJECTS FUNDED FOR 2024

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.



Jeronimo Lukin, PhD, Postdoctoral Fellow, Department of Psychiatry

Postdoctoral Fellow, Psychiatry

Seaver Autism Center for Research and Treatment, Friedman Brain Institute, The Mindich Child Health and Development Institute

Primary Mentor:

Silvia De Rubeis, PhD

Associate Professor, Psychiatry

Seaver Autism Center for Research and Treatment

Friedman Brain Institute

The Mindich Child Health and Development Institute

Secondary Mentor:

Zuhao Wu, PhD

Assistant Professor, Neuroscience

Weill Cornell Medicine Feil Family Brain & Mind Research Institute

FACULTY PILOT AWARDS

Three pilot projects were selected for \$75K in institutional funding for a one-year period starting March 1, 2024. 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).

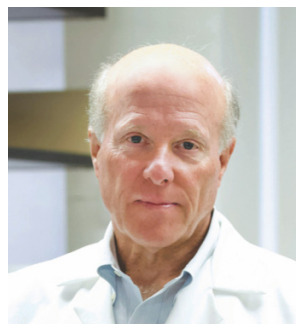
Project Title: Exploring the Function of p57KIP2 in Diseases of the Human Pancreatic Beta Cell

Principal Investigators: Lauryn Choleva, MD, MSc (Communicating PI) and Andrew F. Stewart, MD (Co-PI)



Lauryn Choleva, MD, MSc (Communicating PI)

*Assistant Professor, Pediatrics
Mindich Child Health and
Development Institute*



Andrew F. Stewart, MD (Co-PI)

*Director, Diabetes Obesity
Metabolism Institute
Mindich Child Health and
Development Institute*

Project Title: Identification and Characterization of Novel Tandem Repeat Expansions in Intellectual Disability

Principal Investigators: Alejandro Martin-Trujillo, PhD (Communicating PI), and Silvia De Rubeis, PhD (Co-PI)



Alejandro Martin-Trujillo, PhD (Communicating PI)
Assistant Professor, Genetics and Genomic Sciences



Silvia De Rubeis, PhD (Co-PI)
*Associate Professor, Psychiatry
Mindich Child Health and Development Institute
Friedman Brain Institute
Seaver Autism Center for Research and Treatment*



Project Title: Dissecting Natural Killer Cell Deficiencies in Down Syndrome Children

Principal Investigators: Elvin Wagenblast, PhD (Communicating PI) and Christopher Sturgeon, PhD (Co-PI)



Elvin Wagenblast, PhD (Communicating PI)
*Assistant Professor, Oncological Sciences and Pediatrics
Mindich Child Health and Development Institute
Black Family Stem Cell Institute
Tisch Cancer Institute*

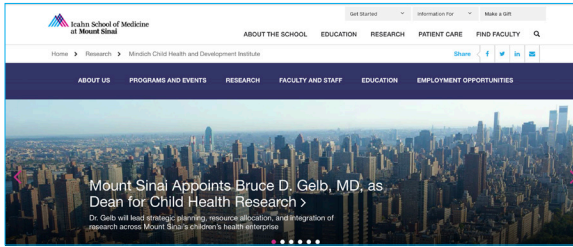


Christopher Sturgeon, PhD (Co-PI)
*Associate Professor, Cell, Developmental and Regenerative Biology and Medicine
Mindich Child Health and Development Institute
Black Family Stem Cell Institute*

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.

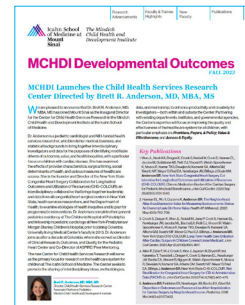
Website



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. Please visit 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 <http://icahn.mssm.edu/research/mindich/about/newsletters>.



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.

Twitter

Our tweets are streaming on our website in real time. Follow or tweet us @MindichCHDI or visit our website at www.mountsinai.org/mchdi.





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 2024, 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 PCTO

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

Endocrinology

Joan Han, MD

Indrajit Majumdar, MD

Gastroenterology

Marla Dubinsky, MD

David Dunkin, MD

Keith Benkov, MD

Nancy Pittman, MD

Michael Dolinger, MD

Elizabeth Spencer, MD

Nephrology

Jeffrey M. Saland, MD

Hillary Hotchkiss, MD

Neonatal ICU

Courtney Juliano, MD

Rheumatology

Rebecca Trachtman, MD

Cardiology

Erin Paul, MD

Brett R. Anderson, MD, MBA, MS

Neha Bansal, MD (New)

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

Alexander Kolevzon, MD (New)

Adult Divisions with Pediatric Trials:

Dermatology

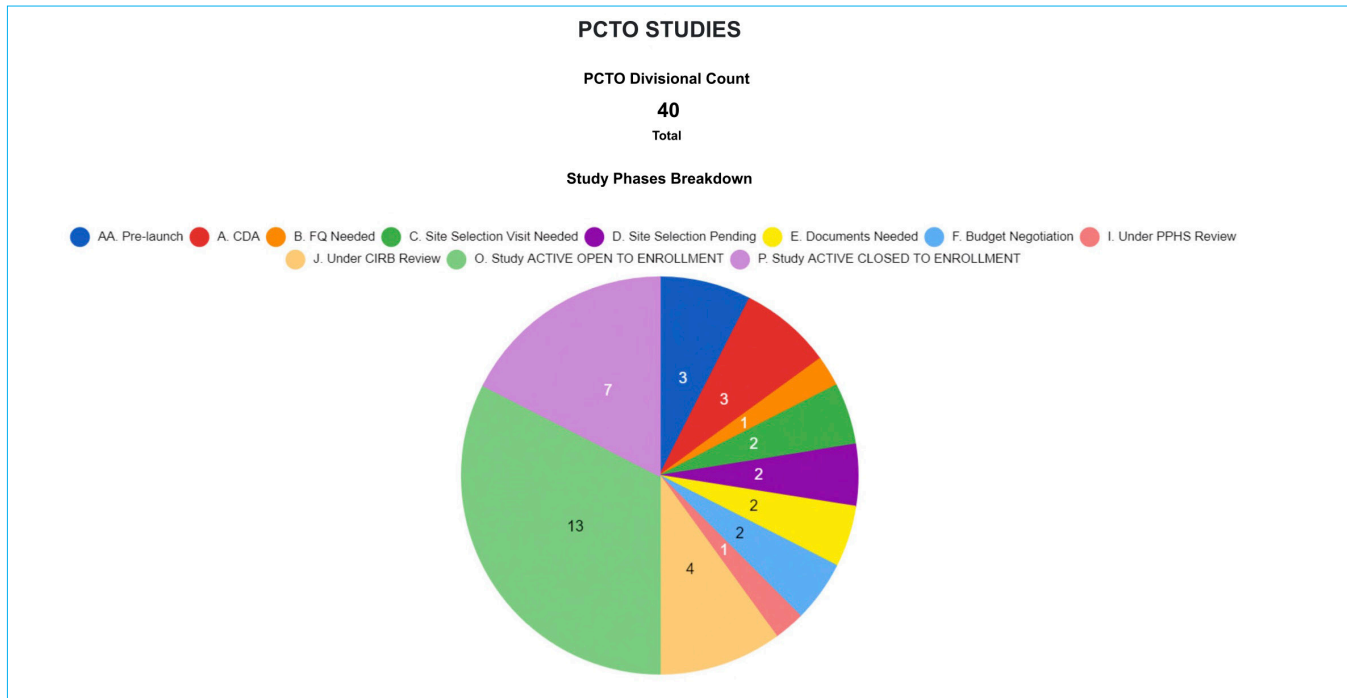
Emma Guttman, MD, PhD

Multiple Myeloma

Joshua Richter, MD

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 health care advancements.



Active Clinical Trials (20)

Pediatric Divisions

Cardiology – 1 (NIH sub-award)	Allergy – 3
Gastroenterology – 7	Rheumatology – 1
Endocrinology – 2	PICU – 2
Nephrology – 1	
NICU – 1	

Collaborations with Adult Divisions:

Pediatric Allergy and Adult Dermatology – 1
Pediatric Allergy and Multiple Myeloma – 1

Clinical Trials in Start-up Phase (20)

Pediatrics

Allergy – 8	Rheumatology – 1
Gastroenterology – 1	NICU – 2
Cardiology – 3	PICU – 1
Endocrinology – 1	General Pediatrics – 1
Seaver Autism Center – 2	

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 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.

Several years ago, the MCHDI created its own Undiagnosed Diseases Program (UDP), using philanthropic resources. Our UDP was based on the impressive model that William Gahl, a medical geneticist at NIH, had created to help patients struggling with rare, unsolved disorders. The success of Gahl's program at NIH led to the creation of an extramural program called the Undiagnosed Diseases Network (UDN). About 18 months ago, NIH announced a competition for a new round of funding for the UDN. Based on our strong track record with the MCHDI UDP plus our considerable expertise with implementing genomic medicine in a diverse population, we were awarded a UDN diagnostic center of excellence, one of only two new sites in the country and the first ever in the New York metropolitan region. The leaders of this project are Manisha Balwani, Chief of Medical Genetics, and Bruce Gelb.

The Mount Sinai UDN site is just completing its start-up phase and will start enrolling children and adults with rare, unsolved illnesses. We are working closely with our community partner, the Institute for Family Health, which oversees a network of Article 28 facilities in New York City and the Hudson Valley. As with the original MCHDI UDP, the new UDN site is expected to interface with a broad array of pediatric specialists and subspecialists to help pinpoint the causes of such unusual rare disorders, sometimes leading to the discovery of novel gene-disease pairs.

The Functional Genomics and Disease Modeling core, led by Tirtha K. Das, PhD, 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, c) Cancer.

During 2024, data from fly models generated from this unit have led to: i) one published manuscript, ii) one manuscript under review, iii) one prepared manuscript, and iv) expansion into multiple ongoing areas of investigation. Furthermore, studies performed by volunteers at the core have won state and national recognition. For example, a study focusing on genetic and therapeutic analysis of KRASG12D—a commonly mutated gene variant found in RASopathies and cancer—was selected as a top-40 nationwide finalist in the annual Regeneron Science Talent Search contest. Another new study on rare kinase fusion variants in cancer received honorable mention in the finals of the NYC Terra STEM fair.

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

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.



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 for 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 access. Her experience includes roles as Associate Director of Ambulatory Care Operations and Emergency Management Branch Director.

CENTER FOR CHILD HEALTH SERVICES RESEARCH

Sarah Crook, PhD

Assistant Professor, Population Health Sciences and Policy



Sarah Crook, PhD

Sarah Crook, PhD, is an Assistant Professor in the Department of Population Health. 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 cen-

ter'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.



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.

Ms. Sanchez will focus primarily on supporting the Center's initiatives and contribute to its studies on outcomes and health disparities for children and young adults with congenital heart disease.



Pengfei Jiang, MS

Manager, Data Engineering and Security

Pengfei Jiang, MS, serves as the Senior Data Analyst for the Center for Child Health Services Research. He plays a pivotal role in fostering a dynamic and efficient data envi-

ronment for the Center. 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. 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.

FACULTY

Michael Cassidy, PhD

Assistant Professor, Pediatrics and Population Health Sciences and Policy



Michael Cassidy, PhD, is an Assistant Professor of Pediatrics and Population Health Sciences 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 Ph.D. in Economics from Rutgers and an MPA. from Princeton.



Anna Chorniy, PhD

Assistant Professor, Pediatrics and Population Health Sciences 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.

CENTER FOR CHILD HEALTH SERVICES RESEARCH

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.



Eric G. Zhou, PhD

Instructor, Pediatrics and Population Health Science and Policy



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

child well-being 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 Ph.D. 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 4-6 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 that 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*

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