Icahn School of Medicine at Mount Sinai
The Mindich Child Health and Development Institute

MCHDI Developmental Outcomes

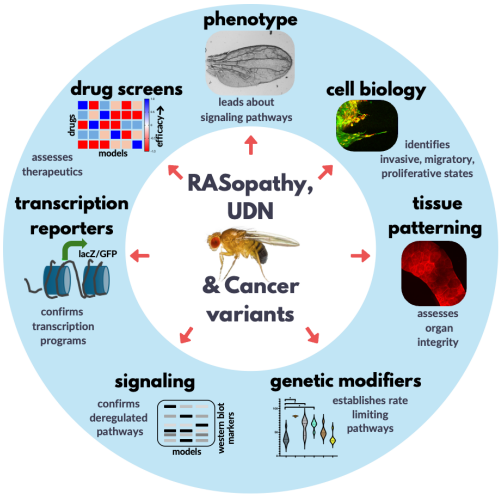
FALL 2025

Research Advancements: Functional Genomics

Modeling Variants of RASopathies, Cancer, and Pediatric Diseases using Drosophila

Animal models developed based on genomic data from patients have vastly improved our understanding of how gene variants cause disease. Good models need to be efficient, scalable, and reliable predictors of how diseases may progress in patients.

The fruit fly, Drosophila, has helped pioneer important discoveries in areas of heredity and organism development. It has a track record of identifying many key genes and mechanisms in multiple cellular signaling pathways involved in human disease. We leveraged the strengths of this whole-animal model system and developed a pipeline to provide a broad mechanistic insight of how variants drive disease progression in-vivo, as well as to identify therapeutics for these conditions.



The pipeline involves developing transgenic flies with exact mutations linked to disease in patients. These models are analyzed for changes in various whole animal parameters including whole tissue phenotypes, immunofluorescence signal of cellular and receptor tyrosine kinases (signaling pathways), nuclear reporters (transcription programs), cell biology (cell behavior), and tissue patterning (organ integrity). Insights from these assays allows for whole animal genetic modifier screens to identify rate limiting pathways and drug screens to identify optimal therapeutics. Taken together, mechanisms uncovered using these models can serve as important leads for more detailed studies in vertebrate models and/or potential application in the clinics.

RASopathy variants: dominant germline mutations in multiple genes of the RAS/MAPK pathway leads to different clinical syndromes of this disease. Development of RASopathy fly models have uncovered unique cellular signaling profiles for multiple variants of the PTPN11, RAF1, and KRAS genes as well as differential response to various clinical and pre-clinical drugs. Recently we showed that rigosertib, an oncological drug developed at the institute, can suppress disease phenotypes and improve animal survival of multiple fly RASopathy models. These findings were confirmed in relevant mouse models and showed a possible clinical utility for rigosertib, and further validated the strength of the experimental pipeline and our overall approach. In a separate study, to identify new classes of drugs for this disease, we screened a large collection of drug-like compounds from the Maybridge library and identified lead compounds with high efficacy towards multiple fly RASopathy models. Analysis of nuclear reporters and signaling pathway activity in fly tissues have established the mode of action of these new compounds paving the way for further studies for target validation in vertebrate models.

Cancer variants: kinase-fusion gene variants are often implicated as driver mutations in various cancer types. Our work on KIF5B-RET fusion oncogene, present in tumors of lung cancer patients, showed an emergent feature of formation of a multi receptor-tyrosine-kinase signaling hub that made this cancer type more aggressive and required more complex therapeutic approaches. Genetic modifier screens, using multiple structure activity relationship (SAR) variants and clinical therapy-resistant variants of this fusion oncogene, showed a unique dependence on a class of RTK's as well as specific intracellular adaptor proteins for disease progression. Clinical drugs and combinations targeting these RTK's and adaptor proteins showed high efficacy in fly models for these fusions, indicating additional actionable therapeutic strategies for this cancer.

In summary, since its inception a few years ago we have developed 20 new RASopathy fly models for various genes in the MAPK pathway encoding variants for MEK, RIT, SOS, SHOC, and also developed 5 models of rare kinase-fusion gene variants that arise in patients undergoing targeted lung cancer therapy. In addition to generating new mechanistic insights about the in-vivo function of these variants we have identified various classes of therapeutics for treatment of these diseases.

Tirtha K. Das, PhD
Director, Functional Genomics and Disease Modeling Core
Assistant Professor, Cell, Developmental & Regenerative Biology

An Introduction to YOUTH CARE, an Initiative to Support Patient-Centered Research

Patient-centered research, or patient-centered outcomes research (PCOR), involves the active collaboration of patients, caregivers, and other healthcare stakeholders in the research process to address everyday health and healthcare challenges. It prioritizes understanding patient preferences, values, and outcomes to help people make informed decisions about their health and ensure that research findings are relevant and useful to their lives. The key principles of PCOR include: 1) Patients, caregivers, and advocacy groups are involved in all stages of research, from defining research questions to interpreting results. 2) The research aims to understand how different treatments or care options impact patient-centered outcomes, experiences, symptoms, and quality of life. 3) The goal is to provide information that helps patients and their families make informed choices about their healthcare. 4) A common approach is to compare two or more treatment approaches or care options to determine which works best for specific patient populations. The process begins with patients and other stakeholders helping to define the health questions and challenges that the research should address. Patient input helps ensure that the research methods are relevant and capture meaningful outcomes. Patient-reported outcomes (PROs) are collected, alongside clinical measurements, to provide a comprehensive view of how treatments affect patients. Finally, research results are shared in ways that are accessible to both patients and clinicians.

To promote more patient-centered research led by faculty at the Mindich Child Health Development Institute, leaders at MCHDI launched YOUTH CARE. Under the leadership of Dr. Nita Vangeepuram, Associate Professor of Pediatrics and Population Health Science and Policy and Associate Director of Community Engagement for the Institute for Health Equity Research, YOUTH CARE is a stakeholder board which was convened to provide input from youth patients and their caregivers to help guide our research. Board members have important "lived experience" across many areas of child health research, including allergy and asthma,

Nita Vangeepuram, MD, MPH
Director, YOUTH CARE
Associate Professor, Pediatrics, Environmental Medicine & Public Health, and Population Health Science and Policy

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 includes diverse populations; and help share research findings with study participants, families, and the general public.

To guide development of the board, we first conducted a needs assessment with MCHDI faculty who conduct human subjects child health research and decided to include 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. 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 acknowledged on any presentations or publications resulting from studies reviewed. MCHDI faculty are encouraged to reach out to nita.vangeepuram@mssm.edu for more information.

References:

1. https://www.pcori.org/research-related-projects/about-our-research/research-we-fund/establishing-definition-patient-centered-outcomes-research/patient-centered-outcomes-research
2. https://www.pcori.org/

Jessica Ables, MD/PhD

Jessica 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 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 disease 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 to potential new treatments.

Jessica Ables, MD, PhD
Assistant Professor, Psychiatry and Neuroscience

Key Publications

1. Nwakama CA, Durand-de Cuttoli R, Oketokoun ZM, Brown SO, Haller JE, Méndez A, Jodeiri Farshbaf M, Cho YZ, Ahmed S, Leng S, **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. *=co-corresponding
2. Jodeiri Farshbaf M, Matos TA, Niblo K, Alokam Y, **Ables JL**. STZ-induced hyperglycemia differentially influences mitochondrial distribution and morphology in the habenulointerpeduncular circuit. *Front Cell Neurosci.* 2024 Dec 23:18:1432887.
3. **Ables JL,** Israel L, Wood O, Govindarajulu U, Fremont RT, Banerjee R, Liu H, Cohen J, Wang P, Kumar K, Lu G, DeVita RJ, Garcia-Ocaña A, Murrough JW, Stewart AF. A Phase 1 single ascending dose study of pure oral harmine in healthy volunteers. *J Psychopharmacol.* 2024 Oct;38(10):911-923.
4. Duncan A*, Heyer MP*, Ishikawa M*, Caligiuri SPB, Liu X, Chen Z, di Bonaventura MV, Elayouby KS, **Ables JL**, Howe WM, Bali P, Fillinger C, Williams M, O'Connor RM, Wang Z, Lu Q, Kamenecka TM, Ma'ayan A, O'Neill HC, Ibañez-Tallon I, Geurts AM, Kenny PJ. Habenular Tcf7l2 links nicotine addiction to diabetes. *Nature.* 2019 Oct 16;574:372-377.
5. **Ables JL**, Görlich A, Antolin-Fontes B, Wang C, Lipford SM, Riad MH, Ren J, Hu F, Luo M, Kenny PJ, Heintz N, Ibañez-Tallon I. Retrograde inhibition by a specific subset of interpeduncular alpha5 nicotinic neurons regulates nicotine preference. *PNAS*. 2017 Dec 5;114(49):13012-13017.

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

She directs the Newborn Screening program for metabolic diseases, the Mitochondrial disease clinic and is the Associate Director of the Lysosomal Disorders program.

Key Publications

1. **Ganesh J,** Donnelly C, Ligezka A, Preston G, Morava E, Breilyn M, Marin-Valencia I, Raynes H, Bansal N, Lamour J, Mintz C, Kozicz T. Cardiac transplant outcomes in a pediatric patient with novel homozygous variants in TOP3Acausing mitochondrial dysfunction. *Mol Genet Metab.* 2025 Sep 22;146(3):109236.
2. Scarpa M, Diaz GA, Giugliani R, Jones SA, Mengel E, Guffon N, Witters P, **Ganesh J,** Armstrong NM, Srivastava S, Kim Y. Long-Term Safety and Clinical Outcomes With Olipudase Alfa Enzyme Replacement Therapy in Children and Adolescents With Acid Sphingomyelinase Deficiency. J *Inherit Metab Dis.* 2025 Sep;48(5):e70086.
3. McNutt M, Rutsch F, Russo RS, Gasperini S, Batzios S, Teles EL, Brassier A, **Ganesh J,** Schulze A, Enns GM, Rudebeck M. Long-Term Efficacy and Tolerability of Pegzilarginase in Arginase 1 Deficiency: Results of Two International Multicentre Open-Label Extension Studies. *J Inherit Metab Dis.* 2025 Jul;48(4):e70066.

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 therapy 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.

Jaya Ganesh, MD
Professor, Genetics and Genomic Sciences

Key Publications

4. Ficicioglu C, Thomas JA, **Ganesh J,** Kudrow D, Lah M, Smith WE, Güner J, McDermott S, Vaidya SA, Wilkening L, Levy HL. Safety and efficacy of pegtibatinase enzyme replacement therapy in adults with classical homocystinuria in the COMPOSE phase 1/2 randomized trial. *Genet Med.* 2025 Aug;27(8):101456.

5. Sinha DB, Simpson WL, Ting A, Bier L, Freeman M, Mason LM, Diaz GA, **Ganesh J.** Benefits of early intervention with olipudase alfa in symptomatic children with acid sphingomyelinase deficiency: A sibling case-comparison study. *Mol Genet Metab Rep.* 2025 Apr 2;43:101210.

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 entitled, "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, 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.

Madeline H. Renny, MD, MS
Assistant Professor, Emergency Medicine, Pediatrics, and Population Health Science and Policy

Key Publications

1. **Renny MH,** Stecher Y, Vargas-Torres C, Zebrowski AM, Merchant RC. Trends in substance use-related emergency department visits by youth, 2018-2023. *Am J Emerg Med.* 2025 Jun;92:1-9.

2. **Renny MH,** Berger JC, Mei C, Loo GT, Ansah JA, Severe AD, Merchant RC. Substance Use among Youth Presenting to the Pediatric Emergency Department. *J Med Toxicol.* 2025 Jan;21(1):51-59.

3. **Renny MH,** Love JS, Walton MA, Levy S, Merchant RC. Emergency Department Screening and Interventions for Adolescents With Substance Use: A Narrative Review. *J Emerg Med.* 2024 Nov;67(5):e414-e424.

4. Hadland SE, Agarwal R, Raman SR, Smith MJ, Bryl A, Michel J, Kelley-Quon LI, Raval MV, **Renny MH,** Larson-Steckler B, Wexelblatt S, Wilder RT, Flinn SK. Opioid Prescribing for Acute Pain Management in Children and Adolescents in Outpatient Settings: Clinical Practice Guideline. *Pediatrics.* 2024 Sep 30:e2024068752.

5. **Renny MH,** Yin HS, Jent V, Hadland SE, Cerdá M. Temporal Trends in Opioid Prescribing Practices in Children, Adolescents, and Younger Adults in the US from 2006 to 2018. *JAMA Pediatr.* 2021;175(10):1043–1052.

TLC: Fostering Collaboration, Career Development, and Community at MCHDI

The Mindich Child Health and Development Institute (MCHDI) Trainee Leadership Committee (TLC) is dedicated to supporting the professional growth of our trainees. Our goal is to create opportunities for individuals at all stages and from all backgrounds to connect, exchange ideas, and build a strong sense of community within MCHDI.

In 2021–2022, the TLC launched the MCHDI Trainee Incubator Series, giving postdocs, PhD students, and master's students the chance to lead seminars and receive feedback on project proposals, grant applications, job talks, and conference presentations. This program was just the beginning of a growing set of TLC initiatives. Guided by input from trainees, we continue to develop new programming focused on:

1. Career development, grant writing, and data analysis
2. Encouraging collaboration across disciplines and training levels
3. Creating more opportunities for faculty–trainee networking

We value your feedback and aim to tailor our events and resources to what will be most useful—so please let us know what sessions you'd like to see!

Since 2017, the TLC has also run a pilot grant program designed to help postdoctoral/clinical fellows and PhD/MD-PhD students launch new independent projects—an important step toward academic independence. Over the past seven years, more than eleven trainees have successfully completed the program. This year's first awardee is Dr. John G. Hong, a research fellow the Department of Pediatrics mentored by Dr. Jaime Chu and Dr. Charles DeRossi. The second awardee is Dr. Rachana Nitin, a postdoctoral fellow within the Personalized Medicine Institute mentored by Dr. Lea K. Davis and Dr. Benajmin Glicksberg. Our awardees will share their research at the 13th annual MCHDI retreat this November. Looking ahead, applications for the 2026–2027 academic year will open next spring, and we strongly encourage all trainees with exciting proposals to apply.

We are also deeply grateful to past and present TLC members for their dedication and hard work. Last year's committee was led by Lauren Dierdorff, Shrey Patel, Aditi Prasad, and Silvia De Rubeis, all of whom continue to serve on the 2025 TLC committee. In addition to leading programs and events, one TLC member each year joins the planning committee for the MCHDI Annual Retreat. This year, Shrey will represent trainees on the retreat committee, ensuring their voices and perspectives are reflected.

We're excited for another meaningful and impactful year ahead with the MCHDI trainee community!

Lauren Dierdorff, BS
PhD Candidate, Psychiatry

Shrey Patel, BS
PhD Candidate, Biomedical Sciences

Aditi Prasad, MS
PhD Candidate, Developmental Regenerative and Stem Cell Biology

Silvia De Rubeis, PhD
Associate Professor, Psychiatry

Trainee Pilot Project: 2025 Awardees

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

Investigator:
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

Abstract: Chronic cholestasis in children is debilitating and devastating - progressive liver disease leads to complications of advanced fibrosis with liver transplantation as the only treatment option. While advances in genetic sequencing have identified monogenic causes, the mechanisms driving hepatic fibrosis in cholestatic environments remain poorly understood, limiting therapeutic development.

Among emerging areas of interest are ciliopathies—genetic disorders involving defective cilia, which are critical for biliary development. One such gene, NPHP3, encodes nephrocystin 3, a component of the ciliary complex. Mutations in NPHP3 cause ultra-rare syndromes with variable liver involvement, including cholestasis and congenital hepatic fibrosis. Although cholestasis is rarely reported, our team at Mount Sinai identified three pediatric cases of NPHP3-related liver disease, two of whom presented with cholestasis, underscoring the clinical need of establishing NPHP3 as a novel diagnostic entity.

To investigate the cellular mechanisms linking NPHP3 to cholestasis and fibrosis, we will perform single nuclear RNA sequencing on an explanted liver from an affected patient. This approach will allow us to analyze cholangiocytes—ciliated biliary epithelial cells central to cholestasis—and hepatic stellate cells, key drivers of fibrosis at a cellular level. Our goal is to determine whether NPHP3 is essential for normal bile duct function and fibrosis regulation, potentially revealing new antifibrotic targets in pediatric ciliopathies and for cholestatic diseases at large.

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

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

Investigator: Rachana Nitin, PhD, Postdoctoral Fellow, Personalized Medicine Institute

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

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

Abstract: Developmental Language Disorder (DLD) is a common childhood disorder affecting around 7% of children. However, it is underdiagnosed, with few children receiving timely intervention. A delayed trajectory of language development is a feature of DLD, and early language intervention has the potential to improve later educational and social outcomes for children with DLD.

Identifying early developmental timepoints from longitudinal medical record data which consistently differ between typical and atypical language development is critical for pin-pointing ages at which children could be identified for follow up with specialists, thus reducing diagnosis time and increasing access to intervention. First, I plan to identify pediatric DLD cases and controls from the Mount Sinai electronic health record (EHR) using an algorithm we previously developed called APT-DLD. APT-DLD reliably classifies instances of DLD from EHR data using diagnostic codes and dates. Further, in collaboration with Dr. Glicksberg, I will use large language models to mine clinical notes to accurately identify elements of language development milestones at different ages. The structured language development database generated from the extraction of milestones will be used to model language development trajectories and build developmental profiles. Finally, I will test the correlation between language developmental trajectories and DLD cases and controls, to identify the earliest timepoints at which language profiles between the two groups reliably diverge.

This research will help identify stable markers of early language development which can act as early clinical features of later DLD and will be invaluable for the future development of DLD early intervention screeners.

Rachana Nitin, PhD
Postdoctoral Fellow
Personalized Medicine Institute

Brett R. Anderson, MD, MBA, MS, NHLBI, R01, "Linking State Medicaid and Congenital Heart Surgical Registry Data: Building Capacity to Assess Disparities in Longitudinal Outcomes and Value for Children with Congenital Heart Disease."

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

John Bucuvalas, MD, Nominated for American Society of Transplantation Life Time Achievement Award.

Supinda Bunyavanich, MD, MPH, MPhil, NIAID, U01, "The Oral Environment in Food Allergy Development (ONEIDA)."

Michael Cassidy, PhD, MPA, 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."

Katherine Guttmann, MD, NICHD, K23, "Quality of communication with parents of critically ill infants."

Yuval Itan, PhD, NIAID, P01, "Novel Mechanisms of Genetic Errors of Immunity - Bioinformatics and Computational Biology Core."

Esra Karakose, PhD, NIH/NIDDK, R03, "Longitudinal single cell responses in human islet organoids to beta cell regenerative drugs."

Amy Kontorovich, MD, Pfizer grant, "Capturing undiagnosed transthyretin cardiac amyloidosis through expedited risk assessment and genetics care."

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

Behrang Mahjani, PhD, NIMH, R01, "Moderate effect size genes in autism spectrum disorder."

Nicole Ramsey MD PhD, Institute for Health Equity Research, Mount Sinai Catalyst Center Pilot Grant Awards, "Voices of Caregivers and Adolescents to Improve Food Allergy trials."

Madeline H. Renny, MD, MS, NIDA, K23, "Pediatric Emergency Department-initiated Support program To Link Care (PEDS-TLC) for youth with substance use."

Hugh Sampson, MD, EAACI Clinical Fellow Award 2025 at the upcoming European Academy of Allergy & Clinical Immunology meeting in Glasgow, Scotland.

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.

Elvin Wagenblast, PhD and **Sai Ma, PhD,** NCI, R21, "Characterizing DNA Methylation Dynamics in Trisomy 21-Associated Hematopoiesis and Leukemia."

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

Sarah Wood, MD, MSHP, Health Resources and Services Administration Mental and Behavioral Health Education and Training Grant, Department of Health and Human Services, "Expanding the MSAHC's trauma-informed psychology training program to serve marginalized adolescents and young adults."

Sarah Wood, MD, MSHP, Office for Victims of Crime (OVC), New York State Office of Victim Services (OVS) Victims of Crime Act (VOCA) Victim and Witness Assistance Grant Program.

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

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

Trainee and Volunteer Grants/Awards/Honors

Sanjana Pillay, PhD, NIDDK, Parent K99/R00, "Elucidate the role of higher-order chromatin organization during terminal differentiation in mouse erythropoiesis."

Stephanie Song, BA, NHLBI, F30 Individual Predoctoral NRSA for MD/PhD Fellowships, "Role of RNA-binding protein DDX3X in the endocardium during development and disease."

Miranda Wilson, BS, and Florence Marlow, PhD, 19th International Zebrafish Conference, Madison, WI, 2025. "Cell-type specific expression of rRNAs in sex determination and differentiation."

Publications

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Hoyt LR, Liu E, Olson EC, Jacobsen DR, Siniscalco ER, Krier-Burris RA, ... **Bunyavanich S**, ... Eisenbarth SC. Cysteinyl leukotrienes stimulate gut absorption of food allergens to promote anaphylaxis in mice. *Science.* 2025 Aug 7;389(6760):eadp0240.

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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 Sep 12.

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