



**Mount
Sinai**

*The Mindich
Child Health and
Development Institute*

Annual Report 2016



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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Message from the Director

On behalf of the Mindich Child Health and Development Institute (MCHDI), I am happy to present the ongoing progress and long-term goals of our institute. Our primary mission to advance children's health in the areas of allergy & asthma, cardiovascular disease, neurodevelopmental disorders, obesity & diabetes, and more serves as the driving force for our devoted community of scientists, physician-scientists, and trainees. During the first half of 2016, we held several meetings with our leadership council, advisory boards, faculty, and trainees to map out a comprehensive strategic plan in order to strengthen existing programs as well as broaden the scope of our work.

To this end, we realized that trainees play a critical role in contributing to the innovative, high-impact research conducted at the MCHDI. As such, one of our major aims last year was to provide more resources and support for our trainees. A trainee leadership committee was formed consisting of pre- and post-doctoral members. To date, they have organized a career development seminar and networking event, and will continue to host events to promote collaboration and growth among our elite group of trainees.

During 2016, the MCHDI continued to grow in terms of faculty numbers. We recruited one new external faculty member (Karen M. Wilson, MD, MPH) with the Department of Pediatrics and attracted five new internal faculty (Dusan Bogunovic, PhD; Lisa Eiland, MD; Marek Mlodzik, PhD; Susan Teitelbaum, PhD; and Jianlong Wang, PhD). We now total 60 faculty and 150+ trainees, authoring 360 publications.

The rapid advancement in children's environmental health at Mount Sinai has been unparalleled. Following the success of receiving nearly \$20 Million in grant funding from the Child Health Environmental Assessment Resource (CHEAR) grants, MCHDI members Robert O. Wright, MD, MPH; Rosalind J. Wright, MD, MPH; Susan Teitelbaum, PhD and Annemarie Stroustrup, MD, MPH received two other major NIH awards known as the Environmental Influences on Child Health Outcomes (ECHO) grants. Robert O. Wright and Rosalind J. Wright will be leading Mount Sinai's consortium to study the influence of chemical, nutritional, and social factors on child neurodevelopment, while Susan Teitelbaum and Annemarie Stroustrup will be collaborating with researchers at the Albert Einstein College of Medicine to examine the effects of exposure to chemicals on premature babies in neonatal intensive care units. Their collective efforts will lead to significant developments in pediatric environmental health.



I thank the dedicated leadership council, faculty, trainees, and staff who have contributed to the achievements of 2016. We look forward to 2017 as the MCHDI, along with the rest of the Icahn School of Medicine at Mount Sinai, work to advance the strategic plan that we have developed over this past year.

A handwritten signature in black ink that reads "B. Gelb". The signature is written in a cursive, flowing style.

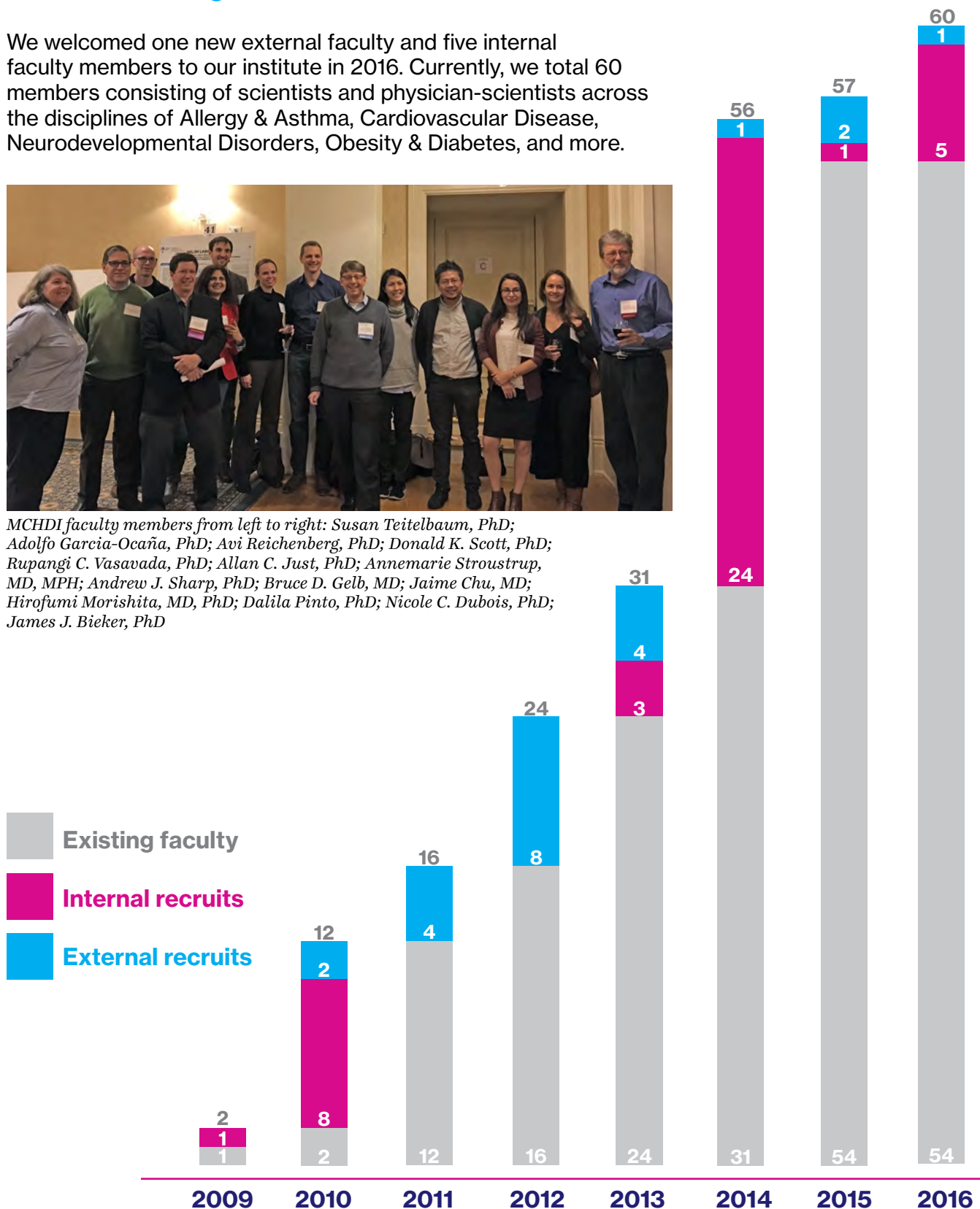
Bruce D. Gelb, Director

Faculty Growth

We welcomed one new external faculty and five internal faculty members to our institute in 2016. Currently, we total 60 members consisting of scientists and physician-scientists across the disciplines of Allergy & Asthma, Cardiovascular Disease, Neurodevelopmental Disorders, Obesity & Diabetes, and more.



MCHDI faculty members from left to right: Susan Teitelbaum, PhD; Adolfo Garcia-Ocaña, PhD; Avi Reichenberg, PhD; Donald K. Scott, PhD; Rupangi C. Vasavada, PhD; Allan C. Just, PhD; Annemarie Stroustrup, MD, MPH; Andrew J. Sharp, PhD; Bruce D. Gelb, MD; Jaime Chu, MD; Hirofumi Morishita, MD, PhD; Dalila Pinto, PhD; Nicole C. Dubois, PhD; James J. Bieker, PhD



Breakdown of new faculty recruits since our inception in 2009. In 2016, our institute recruited one new external faculty and five internal faculty members.

New Faculty

New External Faculty



*Karen M. Wilson, MD, MPH
Debra and Leon Black Division
Chief, General Pediatrics
Vice-Chair for Clinical and
Translational Research,
Pediatrics*

Karen M. Wilson, MD, MPH

Karen M. Wilson, MD, MPH is the Debra and Leon Black Division Chief of General Pediatrics, and the Vice-Chair for Clinical and Translational Research for the Department of Pediatrics at the Icahn School of Medicine at Mount Sinai. She received her undergraduate degree in psychology from St. Lawrence University, and a Master's in Public Health, and MD with Distinction in Research from the University of Rochester. She completed her Pediatric Residency and Academic General Pediatric fellowship also at the University of Rochester. Her primary research interests are in understanding the relationship between secondhand tobacco smoke exposure and severity of illness in children hospitalized for respiratory illness, and how to improve outcomes in hospitalized children. Dr. Wilson has an R01 from NCI to study an inpatient parent smoking cessation intervention, and she is one of the Principal Investigators and on the Speaker's Bureau of the AAP/Julius B. Richmond Center of Excellence, which is dedicated to eliminating children's exposure to tobacco and secondhand smoke. In addition, she is the Chair of the Academic Pediatric Association's Research Committee, and sits on their Board of Directors. Dr. Wilson is also the Chair of Pediatric Research in Inpatient Settings Network Executive Council, and Deputy Editor of *Hospital Pediatrics*.

New Internal Faculty



*Dusan Bogunovic, PhD
Assistant Professor,
Microbiology and Pediatrics*

Dusan Bogunovic, PhD

Dusan Bogunovic, PhD is a tenure-track Assistant Professor in the Microbiology and Pediatrics Departments of the Icahn School of Medicine at Mount Sinai. He completed his PhD thesis at NYU Medical School on the role of immunity in late stage melanoma. Dr. Bogunovic identified an algorithm which uses immune and mitotic parameters to predict survival in metastatic melanoma. He also studied the innate immune signaling in dendritic cells as a function of their ability to mount an adaptive immune defense against melanoma. Subsequently, during his postdoctoral fellowship at The Rockefeller University he discovered genetic errors in ISG15 in otherwise healthy children who suffered from environmental mycobacterial disease. Since starting his laboratory, his team has defined an essential role for free intracellular ISG15 and USP18 in regulation of Type I Interferon induced inflammation. Recently they discovered that ISG15 deficient children have augmented anti-viral responses. Finally, they identified USP18 deficient children and detailed the molecular mechanisms behind the Type I IFN inflammation. The hypothesis of the lab is that inter-individual variability in susceptibility to infectious agents and/or ability to control inflammation can also be explained by the immune genetic composition of the host. To dissect these phenotypes his laboratory uses genomic, genetic, molecular biology, cellular biology, immunology and clinical tools.



*Lisa Eiland, MD
Assistant Professor, Pediatrics*

Lisa Eiland, MD

Lisa Eiland, MD is an Assistant Professor in the Division of Newborn Medicine within the Department of Pediatrics. As a neonatologist, she is intrigued by the potential of neonatal intensive care unit (NICU) stressors to alter neurodevelopment and contribute to the increased prevalence of adverse neurodevelopmental outcomes in preterm infants. Using the rodent early life stress model of maternal separation, she has researched the effects of early life stress on the anatomy and function of the limbic system. Specifically, her research demonstrated stress related alterations of pyramidal neurons in the hippocampus, amygdala and prefrontal cortex, that paralleled increased depressive and anxiety like behaviors and impaired spatial memory. Currently, with funding provided by the Nurture Science Program, she serves as site principal investigator for a multisite randomized controlled trial that explores whether fostering early maternal-infant connectedness in preterm infants impacts neurodevelopment.

Beyond her research interests, Dr. Eiland serves as the site director for the division of Newborn Medicine at Mount Sinai West. She has developed parental education curriculum to help families better understand the illnesses faced by their infants and is working to establish a NICU family advisory council to offer further support to families during their NICU stay.



*Marek Mlodzik, PhD
Chair, Developmental and
Regenerative Biology
Professor, Developmental
and Regenerative Biology,
Oncological Sciences and
Ophthalmology*

Marek Mlodzik, PhD

Marek Mlodzik, PhD is the Chair and Professor of Developmental and Regenerative Biology (DRB), and Professor of Oncological Sciences and Ophthalmology. He received his undergraduate degree in Biology II: Molecular and Cell Biology, Genetics, Biochemistry and Biophysics and PhD from the University of Basel, Switzerland. He completed his PhD thesis in 1987 in the lab of Walter Gehring, where he identified and analyzed the first maternal homeobox gene, Caudal. He then joined Gerald M. Rubin, at the University of California in Berkeley, for his postdoctoral studies with focus on retinal cell type specification mechanisms in the *Drosophila* eye, including the identification of the first *Drosophila* nuclear hormone receptor gene. In 1991, he joined as faculty the European Molecular Biology Laboratory/EMBL in Heidelberg, Germany, with a research focus on developmental signaling pathways using the *Drosophila* eye as a model system. In 2000, he joined the Icahn School of Medicine at Mount Sinai (formerly known as the Mount Sinai School of Medicine) as a Professor. In 2007, he became the Founding Chair of the Department of DRB. His laboratory studies the establishment of epithelial planar cell polarity (PCP) regulated by Wnt/Frizzled-PCP signaling and regulatory mechanisms of Wnt-signaling specificity between the PCP and canonical beta-catenin pathways, and their cross-talk with Notch and RTK/EGF-Receptor signaling. To achieve this, they are using a combination of *Drosophila* genetics and in vivo studies, cell culture experiments, and biochemistry, which is further enhanced through collaborations in vertebrate models such as zebrafish or mouse.



*Susan Teitelbaum, PhD
Associate Professor,
Environmental Medicine &
Public Health*

Susan Teitelbaum, PhD

Susan Teitelbaum, PhD is an Associate Professor of Environmental Medicine & Public Health. As an environmental and cancer epidemiologist, her research accomplishments have been in two important health areas, breast cancer and childhood growth and development. Involved as a key investigator from its inception, the Long Island Breast Cancer Study Project has become one of the most successful and productive breast cancer case-control studies funded by NCI/NIEHS; there have been over 80 peer-reviewed publications and numerous spinoff grants, including several she has received. In an effort to better understand the early risk factors of breast cancer, her research has expanded to include childhood growth and development since earlier pubertal development is an established breast cancer risk factor. This led to her involvement in another groundbreaking epidemiologic investigation, Growing Up Healthy, an NIEHS/NCI funded prospective cohort study, part of a nationwide consortium investigating the environment's role in girls' early pubertal development. They have confirmed that the age of pubertal development has decreased compared to reports of only a decade ago and identified associations between endocrine disrupting chemicals and perturbations in girls' growth and development. Beyond her personal research program, she works with the World Trade Center (WTC) Health Program Data Center as Deputy Director; her work with this group has resulted in several important publications on WTC responder health. Most recently, she leads the NIEHS Data Center (DC) for the Children's Health Exposure Analysis Resource (CHEAR). The CHEAR DC provides a data repository and statistical analysis, data integration, and interpretation services to CHEAR researchers.



*Jianlong Wang, PhD
Associate Professor,
Developmental and Regenerative
Biology*

Jianlong Wang, PhD

Jianlong Wang, PhD is an Associate Professor of Developmental and Regenerative Biology. He received his PhD from the University of Massachusetts and completed his post-doctoral fellowship in Stem Cell Biology at the Harvard Medical School and Dana-Farber Cancer Institute. He is the recipient of the Irma T. Hirsch and Weill-Caulier Trusts Career Scientist Award and one of the recipients of the MCHDI pilot grant award this year along with co-PI and MCHDI faculty member, Martin J. Walsh, PhD. His lab studies the molecular mechanisms underlying pluripotency and reprogramming. They employ both proteomic and genomic approaches to identify and study pluripotency protein-protein interaction and transcriptional regulatory networks that govern stem cell pluripotency and somatic cell reprogramming. Insights from these studies will facilitate efficient derivation/generation and optimal propagation of embryonic/induced pluripotent stem cells (ESCs/iPSCs) for their safe application in disease therapeutics and regenerative medicine. His current research includes transcriptional/post-transcriptional control and epigenetic regulation of stem cell pluripotency and somatic cell reprogramming. As a PI on several New York State-funded stem cell grants and the existing NIH-funded R01 grant, Dr. Wang laid the groundwork for his proposed pilot research by developing novel biochemical affinity purification approaches for studying pluripotency protein complexes in embryonic stem cells (ESCs) and induced pluripotent stem cells (iPSCs), and by discovering many novel pluripotency transcription factors and epigenetic regulators including miRNAs that are critical for maintenance and/or establishment of ESCs/iPSCs.

Faculty Research Areas

Asthma and Allergy



M. Cecilia Berin, PhD (Associate Professor, Pediatrics)
Research Areas: Immune mechanisms of food allergy and regulation of immune tolerance
Faculty Interactions: Rosalind J. Wright, David Dunkin, Hugh A. Sampson, Scott H. Sicherer, Anna Nowak-Wegrzyn, Supinda Bunyavanich



Supinda Bunyavanich, MD, MPH (Assistant Professor, Pediatrics & Genetics and Genomic Sciences)
Research Areas: Integrative genomics of asthma and allergic diseases
Faculty Interactions: Hugh A. Sampson, Andrew J. Sharp, Scott H. Sicherer, Xiu-Min Li, Madhan Masilamani



Xiu-Min Li, MD (Professor, Pediatrics)
Research Areas: Integrative medicine for induction of immune tolerance for food allergy, asthma and Inflammatory Bowel Disease
Faculty Interactions: Hugh A. Sampson, Julie Wang, Madhan Masilamani, Scott H. Sicherer, Anna Nowak-Wegrzyn, Jia Chen, Martin J. Walsh, David Dunkin, Supinda Bunyavanich



Madhan Masilamani, PhD (Associate Professor, Pediatrics)
Research Areas: Food allergy, anti-inflammatory phytochemicals, T cell peptide immunotherapy
Faculty Interactions: Supinda Bunyavanich, Xiu-Min Li, Anna Nowak-Wegrzyn, Hugh A. Sampson



Anna Nowak-Wegrzyn, MD (Associate Professor, Pediatrics)
Research Areas: Food allergy, FPIES, oral immunotherapy, anaphylaxis, milk and egg allergy
Faculty Interactions: M. Cecilia Berin, Supinda Bunyavanich, Hugh A. Sampson, Julie Wang, Xiu-Min Li, Scott H. Sicherer, Madhan Masilamani



Hugh A. Sampson, MD (Kurt Hirshhorn Professor, Pediatrics)
Research Areas: Immunopathogenesis of food allergy and anaphylaxis
Faculty Interactions: M. Cecilia Berin, Madhan Masilamani, Supinda Bunyavanich, David Dunkin, Scott H. Sicherer, Xiu-Min Li, Julie Wang, Anna Nowak-Wegrzyn, Rosalind J. Wright



Scott H. Sicherer, MD (Elliot and Roslyn Jaffe Professor, Pediatrics)
Research Areas: Food allergy epidemiology, treatments, natural course, quality of life
Faculty Interactions: Eyal Shemesh, Supinda Bunyavanich, M. Cecilia Berin, Hugh A. Sampson, Julie Wang, Xiu-Min Li, Anna Nowak-Wegrzyn



Julie Wang, MD (Associate Professor, Pediatrics)
Research Areas: Novel therapeutics for food allergy, epidemiology and management of food allergy in minority, urban populations
Faculty Interactions: Hugh A. Sampson, Scott H. Sicherer, Xiu-Min Li, Anna Nowak-Wegrzyn

Asthma and Allergy continued



Karen M. Wilson, MD, MPH (Debra and Leon Black Division Chief, General Pediatrics; Vice-Chair for Clinical and Translational Research, Pediatrics)

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

Faculty Interactions: Rosalind J. Wright

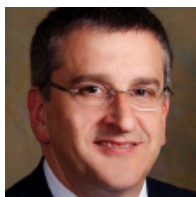


Rosalind J. Wright, MD, MPH (Dean, Translational Biomedical Research; Director, Clinical and Translational Science Award; Horace W. Goldsmith Professor, Children's Health Research; Professor, Pediatrics & Environmental Medicine & Public Health)

Research Areas: Developmental epidemiology, environmental and chemical exposures, social and psychological influences in neurodevelopmental diseases, health disparities

Faculty Interactions: Robert O. Wright, Manish Arora, Allan C. Just, Chris Gennings, Annemarie Stroustrup, M. Cecilia Berin, Jia Chen, Karen M. Wilson, Hugh A. Sampson

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

Faculty Interactions: Bruce D. Gelb



Chen-Leng Cai, PhD (Associate Professor, Developmental and Regenerative Biology)

Research Areas: Heart development and regeneration

Faculty Interactions: Bruce D. Gelb, Nicole C. Dubois, Yong Zhao, Anne Moon, Martin J. Walsh, Jianlong Wang



Nicole C. Dubois, PhD (Assistant Professor, Developmental and Regenerative Biology)

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

Faculty Interactions: Bruce D. Gelb, Yong Zhao, Chen-Leng Cai, Robert S. Krauss, James J. Bieker, Andrew J. Sharp, Martin J. Walsh, Michael Rendl



Bruce D. Gelb, MD (Gogel Family Professor and Director, Mindich Child Health and Development Institute; Professor, Pediatrics & Genetics and Genomic Sciences)

Research Areas: Genetics of cardiovascular diseases, stem cell research

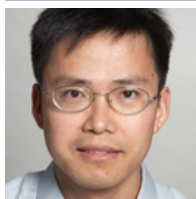
Faculty Interactions: Ross L. Cagan, Nicole C. Dubois, Alex Kolevzon, Andrew J. Sharp, Dusan Bogunovic, Chen-Leng Cai, Yong Zhao, Megan K. Horton, Harold S. Bernstein, Anne Moon



Anne Moon, MD (Adjunct Professor, Pediatrics)

Research Areas: Developmental biology of congenital heart disease and limb defects, functions of Tbx and Fibroblast Growth Factors

Faculty Interactions: Bruce D. Gelb, Chen-Leng Cai, Yong Zhao



Yong Zhao, MD, PhD (Assistant Professor, Genetic and Genomic Sciences)

Research Areas: Genetics and epigenetics of heart disease

Faculty Interactions: Bruce D. Gelb, Chen-Leng Cai, Nicole C. Dubois, Brian D. Brown, Anne Moon

Neurodevelopmental Disorders



Manish Arora, PhD, BDS, MPH (Associate Professor, Environmental Medicine & Public Health & Dentistry)

Research Areas: Environmental epidemiology and exposure biology

Faculty Interactions: Robert O. Wright, Rosalind J. Wright, Hirofumi Morishita, Megan K. Horton, Chris Gennings, Jia Chen, Allan C. Just, Lisa M. Satlin, Annemarie Stroustrup, Shanna H. Swan, Philip J. Landrigan, Jeffrey M. Saland, Avi Reichenberg



Joseph D. Buxbaum, PhD (Deputy Chair, Department of Psychiatry; Director, Seaver Autism Center for Research and Treatment; Professor, Psychiatry, Neuroscience, & Genetic and Genomic Sciences)

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

Faculty Interactions: Alex Kolevzon, Hiro Morishita, Coro Paisan-Ruiz, Andrew J. Sharp, Shanna H. Swan, Dorothy E. Grice, Avi Reichenberg, Ross L. Cagan, Patrizia Casaccia, Dalila Pinto, Eyal Shemesh



Patrizia Casaccia, MD, PhD (Professor, Genetics and Genomic Sciences, Neuroscience, & Neurology)

Research Areas: Epigenetics, myelin formation and mechanisms of neurodegeneration in Multiple Sclerosis

Faculty Interactions: Andrew J. Sharp, Joseph D. Buxbaum, Dani Dumitriu



Jia Chen, ScD (Professor, Pediatrics, Environmental Medicine & Public Health, Medicine, & Oncological Sciences)

Research Areas: Environmental epigenetics, molecular epidemiology

Faculty Interactions: Robert O. Wright, Manish Arora, Rosalind J. Wright, Luca Lambertini, Nadia Micali, Chris Gennings



Dani Dumitriu, MD, PhD (Assistant Professor, Neuroscience)

Research Areas: Functional and structural connectomics underlying resilience to mouse social defeat

Faculty Interactions: Megan K. Horton, Hirofumi Morishita, Patrizia Casaccia, Vilma Gabbay, Lisa M. Satlin, Robert O. Wright



Lisa Eiland, MD (Assistant Professor, Pediatrics)

Research Areas: Stress and neurodevelopment

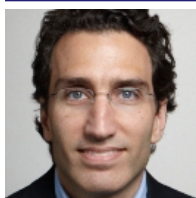
Faculty Interactions: Annemarie Stroustrup



Megan K. Horton, PhD, MPH (Assistant Professor, Environmental Medicine & Public Health)

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

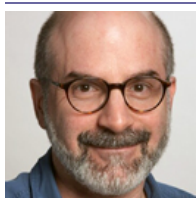
Faculty Interactions: Bruce D. Gelb, Robert O. Wright, Chris Gennings, Annemarie Stroustrup, Allan C. Just, Shanna H. Swan, Manish Arora, Dani Dumitriu



Alex Kolevzon, MD (Director, Child and Adolescent Psychiatry; Associate Professor, Psychiatry & Pediatrics)

Research Areas: Autism spectrum and other neurodevelopmental disorders

Faculty Interactions: Joseph D. Buxbaum, Bruce D. Gelb, Avi Reichenberg, Nadia Micali, Dalila Pinto, Jeffrey M. Saland, Eyal Shemesh



Robert S. Krauss, PhD (Professor, Developmental and Regenerative Biology & Oncological Sciences)

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

Faculty Interactions: Nicole C. Dubois, Michael Rendl, James J. Bieker, Marek Mlodzik

Neurodevelopmental Disorders *continued*



Luca Lambertini, PhD, MPH (Assistant Professor, Environmental Medicine & Public Health & Obstetrics, Gynecology and Reproductive Science)
Research Areas: Placental biomarkers of altered fetal and child development
Faculty Interactions: Dalila Pinto, Jeffrey M. Saland, Eyal Shemesh, Jia Chen, Andrew J. Sharp, Susan Teitelbaum, Philip J. Landrigan



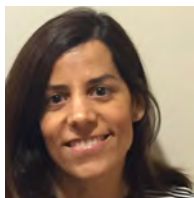
Philip J. Landrigan, MD, MSc, DIH (Professor, Environmental Medicine & Public Health & Pediatrics)
Research Areas: Global environmental health, children's environmental health, drugs in development and therapeutics
Faculty Interactions: Robert O. Wright, Susan Teitelbaum, Manish Arora, Luca Lambertini



Marek Mlodzik, PhD (Professor and Chair, Developmental and 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
Faculty Interactions: Ross L. Cagan, Robert S. Krauss



Hirofumi Morishita, MD, PhD (Assistant Professor, Psychiatry, Ophthalmology & Neuroscience)
Research Areas: Mechanisms of perceptual and cognitive development, drug repurposing for neurodevelopmental disorders
Faculty Interactions: Manish Arora, Joseph D. Buxbaum, Dani Dumitriu



Coro Paisán-Ruiz, PhD (Assistant Professor, Neurology, Psychiatry, & Genetics and Genomic Sciences)
Research Areas: Genetics of movement disorders, zebrafish models of neurodegeneration
Faculty Interactions: Joseph D. Buxbaum



Dalila Pinto, PhD (Assistant Professor, Psychiatry & Genetics and Genomic Sciences)
Research Areas: Genetics and genomics of neurodevelopmental disorders (such as autism, epilepsy, intellectual disability), structural variation, transcriptomics, gene regulation, non-coding RNA
Faculty Interactions: Bruce D. Gelb, Joseph D. Buxbaum, Alex Kolevzon, Martin J. Walsh, Eyal Shemesh, Luca Lambertini



Andrew J. Sharp, PhD (Associate Professor, Genetics and Genomic Sciences)
Research Areas: Epigenomics, transcriptomics, genome function, structural variation, imprinting, congenital disorders
Faculty Interactions: Bruce D. Gelb, Nicole C. Dubois, Patrizia Casaccia, Supinda Bunyavanich, Joseph D. Buxbaum, Jia Chen, Luca Lambertini



Annemarie Stroustrup, MD, MPH (Associate Professor, Pediatrics & Environmental Medicine & Public Health)
Research Areas: Neurodevelopment, perinatal environmental exposures
Faculty Interactions: Robert O. Wright, Rosalind J. Wright, Susan Teitelbaum, Chris Gennings, Manish Arora, Megan K. Horton, Shanna H. Swan, Allan C. Just, Lisa M. Satlin, Lisa Eiland



Shanna H. Swan, PhD (Professor, Environmental Medicine & Public Health)
Research Areas: Prenatal exposures, sexually dimorphic development, phthalates, stress, anogenital distance, neurodevelopment, analgesics
Faculty Interactions: Joseph D. Buxbaum, Robert O. Wright, Manish Arora, Dorothy Grice, Alex Kolevzon, Avi Reichenberg

Neurodevelopmental Disorders *continued*



Robert O. Wright, MD, MPH (Ethel Wise Professor and Chair, Preventive Medicine; Professor, Pediatrics)

Research Areas: Environmental causes of neurodevelopmental disorders and child obesity

Faculty Interactions: Rosalind J. Wright, Manish Arora, Chris Gennings, Allan C. Just, Megan K. Horton, Avi Reichenberg, Annemarie Stroustrup, Lisa M. Satlin, Jia Chen, Dani Dumitriu, Susan Teitelbaum, Shanna H. Swan

Obesity and Diabetes



Brian D. Brown, PhD (Associate Professor, Genetics and Genomic Sciences)

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

Faculty Interactions: Yong Zhao



Ross L. Cagan, PhD (Director, Center for Personalized Cancer Therapeutics; Professor, Developmental and Regenerative Biology, Oncological Sciences & Ophthalmology)

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

Faculty Interactions: Bruce D. Gelb, Joseph D. Buxbaum, Marek Mlodzik



Adolfo García-Ocaña, PhD (Professor, Medicine)

Research Areas: Diabetes, pancreatic beta cell biology

Faculty Interactions: Rupangi C. Vasavada, Donald K. Scott, Martin J. Walsh



Allan C. Just, PhD (Assistant Professor, Environmental Medicine & Public Health)

Research Areas: Epigenomics, environmental exposures, endocrine disruptors, air pollution, obesity, birth outcomes

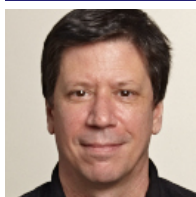
Faculty Interactions: Robert O. Wright, Rosalind J. Wright, Manish Arora, Chris Gennings, Annemarie Stroustrup, Shanna H. Swan, Megan K. Horton



Ruth J.F. Loos, PhD (Professor, Environmental Medicine & Public Health)

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

Faculty Interactions: Nadia Micali, Susan Teitelbaum, Martin J. Walsh



Donald K. Scott, PhD (Professor, Medicine)

Research Areas: Obesity and diabetes

Faculty Interactions: Adolfo García-Ocaña, Rupangi C. Vasavada, Martin J. Walsh, Jaime Chu

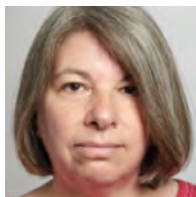


Rupangi C. Vasavada, PhD (Associate Professor, Medicine & Diabetes, Obesity and Metabolism Institute)

Research Areas: Diabetes, pancreatic beta cell biology, growth factors, cell signaling

Faculty Interactions: Adolfo García-Ocaña, Donald K. Scott

Obesity and Diabetes *continued*



Susan Teitelbaum, PhD (Associate Professor, Environmental Medicine & Public Health)
Research Areas: Environmental chemical exposure assessment, pubertal development, physical growth and development
Faculty Interactions: Jia Chen, Manish Arora, Philip J. Landrigan, Luca Lambertini, Annemarie Stroustrup, Shanna H. Swan, Robert O. Wright, Rosalind J. Wright, Allan C. Just, Ruth J.F. Loos, Chris Gennings



Martin J. Walsh, PhD (Professor (pending), Departments of Pharmacological Sciences, Genetics and Genomic Sciences and Pediatrics and Tisch Cancer Institute)
Research Areas: Chromatin biology, RNA biology and Gene transcription in cancer, early development and metabolism
Faculty Interactions: Nicole C. Dubois, Dalila Pinto, Donald K. Scott, Ruth J.F. Loos, Chen-Leng Cai, Adolfo Garcia-Ocaña, Xiu-Min Li, Jianlong Wang

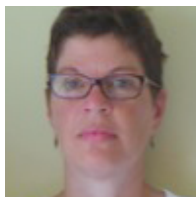
Psychiatric Disorders



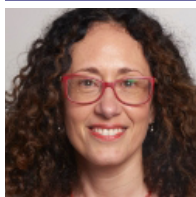
Barbara Coffey, MD (Professor, Psychiatry)
Research Areas: Tic disorders, Tourette's disorder and its comorbid disorders including ADHD, OCD, trichotillomania, anxiety and depression, PANDAS, PANS
Faculty Interactions: Vilma Gabbay, Dorothy E. Grice



Vilma Gabbay, MD (Associate Professor, Psychiatry & Neuroscience)
Research Areas: Pediatric mood disorders, neuroimaging
Faculty Interactions: Barbara Coffey, Eyal Shemesh, Dani Dumitriu



Dorothy E. Grice, MD (Professor, Psychiatry)
Research Areas: Genetic and epidemiological studies of OCD, Tourette disorder, autism and related childhood-onset neuropsychiatric disorders, prenatal exposures, including smoking, functional analysis of identified risk genes
Faculty Interactions: Avi Reichenberg, Joseph D. Buxbaum, Shanna H. Swan, Barbara Coffey



Nadia Micali, MD, PhD (Associate Professor, Psychiatry)
Research Areas: Eating disorders development, risk factors (neurobiology, genetics, intergenerational risk), and outcomes, developmental aspects of eating behavior and obesity, epidemiology of childhood mental health disorders, childhood feeding disorders
Faculty Interactions: Ruth J.F. Loos, Avi Reichenberg, Alex Kolevzon



Avi Reichenberg, PhD (Professor, Psychiatry & Environmental Medicine & Public Health)
Research Areas: Autism, schizophrenia, other psychiatric disorders
Faculty Interactions: Joseph D. Buxbaum, Alex Kolevzon, Dorothy E. Grice, Robert O. Wright, Manish Arora, Chris Gennings, Shanna H. Swan, Nadia Micali



Eyal Shemesh, MD (Associate Professor, Pediatrics & Psychiatry)
Research Areas: Measurement and biological correlates of self-care behaviors
Faculty Interactions: Joseph D. Buxbaum, Alex Kolevzon, Vilma Gabbay, Scott H. Sicherer, Jeffrey M. Saland

Other Research Focuses



James J. Bieker, PhD (Professor, Developmental and Regenerative Biology)

Research Areas: Transcriptional regulation of gene expression in erythroid cells, derivation of marked stem cells

Faculty Interactions: Robert S. Krauss, Nicole C. Dubois



Dusan Bogunovic, PhD (Assistant Professor, Microbiology & Pediatrics)

Research Areas: Genetics of infectious and inflammatory diseases, Type I Interferons, Pseudo-TORCH syndrome, Neurolisteriosis

Faculty Interactions: Bruce D. Gelb



Jaime Chu, MD (Assistant Professor, Pediatrics)

Research Areas: Disorders of glycosylation, cancer metabolism, liver fibrosis

Faculty Interactions: Donald K. Scott



David Dunkin, MD (Assistant Professor, Pediatrics)

Research Areas: Tolerance induction and therapeutics in Inflammatory Bowel Disease

Faculty Interactions: Hugh A. Sampson, M. Cecilia Berin, Xiu-Min Li



Chris Gennings, PhD (Research Professor, Environmental Medicine & Public Health & Population Health Science and Policy)

Research Areas: Biostatistical methods development for environmental health

Faculty Interactions: Robert O. Wright, Rosalind J. Wright, Megan K. Horton, Shanna H. Swan, Allan C. Just, Manish Arora, Annemarie Stroustrup, Avi Reichenberg, Jia Chen



Michael Rendl, MD (Associate Professor, Developmental and Regenerative Biology & Dermatology)

Research Areas: Stem cells, hair regeneration, morphogenesis

Faculty Interactions: Robert S. Krauss, Nicole C. Dubois



Jeffrey M. Saland, MD (Associate Professor, Pediatrics)

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

Faculty Interactions: Manish Arora, Eyal Shemesh, Alex Kolevzon, Lisa M. Satlin



Lisa M. Satlin, MD (Herbert H. Lehman Professor and Chair, Pediatrics)

Research Areas: Ontogeny and mechanoregulation of epithelial ion channels in secretory epithelia

Faculty Interactions: Annemarie Stroustrup, Robert O. Wright, Manish Arora, Jeffrey M. Saland, Dani Dumitriu

Other Research Focuses continued



Jianlong Wang, PhD (Associate Professor, Developmental and Regenerative Biology)

Research Areas: Stem cell pluripotency, somatic cell reprogramming, epigenetic control, transcriptional regulation

Faculty Interactions: Martin J. Walsh, Chen-Leng Cai, Nicole C. Dubois, Yong Zhao



Birte Wistinghausen, MD (Associate Professor, Pediatrics)

Research Areas: Pediatric and adolescent Non-Hodgkin-Lymphoma, immunodeficiency associated lymphomas, post-transplant lymphoproliferative syndrome

Faculty Interactions: TBA

Awards and Publications

Honors/Awards

Dusan Bogunovic, PhD, International Cytokine and Interferon Society, Milstein Award for Young Investigators

Dusan Bogunovic, PhD, American Society for Microbiology, Young Investigator Award

Joseph D. Buxbaum, PhD, International Society of Psychiatric Genetics, 2016 Richard D. Todd Memorial Award

Jaime Chu, MD, Gilead Sciences, Research Scholars Program in Liver Disease Award

Adolfo García-Ocaña, PhD, Icahn School of Medicine at Mount Sinai, Organizer of Fifth Annual NYC Regional Diabetes Meeting

Adolfo García-Ocaña, PhD, American Diabetes Association Scientific Sessions Meeting Planning Committee (Islet Biology/Insulin Secretion), Co-Chair, 2016-2018

Bruce D. Gelb, MD, American Society of Human Genetics, Elected Member, Board of Directors

Philip J. Landrigan, MD, MSc, DIH, Juntendo University, Tokyo, Japan, Araki Foundation Award for Social Medicine Promotion

Philip J. Landrigan, MD, MSc, DIH, Asbestos Disease Awareness Association, Dr. Irving Selikoff Lifetime Achievement Award, 2016

Philip J. Landrigan, MD, MSc, DIH, National Institute of Environmental Health Science (NIEHS). Champion of Environmental Health Science Research Award, 2016

Philip J. Landrigan, MD, MSc, DIH, National Council for Science and the Environment's (NCSE), Lifetime Achievement Award, January 2017

Xiu-Min Li, MD, Henan University of Chinese Medicine, The Honored Professor Award

Xiu-Min Li, MD, Future of Health Technology Summit, Massachusetts Institute of Technology, Future of Health Technology Award 2016

Nadia Micali, MD, PhD, MSc, Brain and Behavior Research Foundation, Independent Investigator Award

Nadia Micali, MD, PhD, MSc, National Alliance for Research on Schizophrenia and Depression, Independent Investigator Award

Anna Nowak-Wegrzyn, MD, 2016 Gail Shapiro Memorial Lectureship Award by AAAAI

Anna Nowak-Wegrzyn, MD, Elected to the Allergy and Immunology Board of Directors

Donald K. Scott, PhD, Juvenile Diabetes Research Foundation, Innovation award: Enhanced transplant efficiency and function of human beta cells with ChREBP-alpha

Annemarie Stroustrup, MD, MPH, Appointed Interim Chief, Division of Newborn Medicine, Kravis Children's Hospital at Mount Sinai and Interim Director, Newborn Services for the Mount Sinai Health System

Select Publications

Goswami R, Blazquez AB, Kosoy R, Rahman AH, **Nowak-Wegrzyn A, Berin MC**. Systemic Innate Immune Activation in Food Protein Induced Enterocolitis Syndrome (FPIES). *J Allergy Clin Immunol*. [In press]

Tordesillas L, Mondoulet L, Blazquez AB, Benhamou PH, **Sampson HA, Berin MC**. **Epicutaneous immunotherapy induces gastrointestinal IAP+ regulatory T cells and prevents food-induced anaphylaxis**. *J Allergy Clin Immunol*. 2016 Jun 11.

Austin C, Smith TM, Farahani RM, Hinde K, Carter EA, Lee J, ... **Wright RJ, Wright RO, Arora M**. **Uncovering system-specific stress signatures in primate teeth with multimodal imaging**. *Scientific Reports*. 2016 Jan 4;6:18802.

Gnanapragasam MN, McGrath KE, Catherman S, Xue L, Palis J, **Bieker JJ**. **Ekf1/klf1-regulated cell cycle exit is essential for erythroblast enucleation**. *Blood*. 2016 Sep 22;128(12):1631-41.

Chung CY, Sun Z, Mullokandov G, Bosch A, Qadeer ZA, Cihan E, ... **Brown BD**, ... Bernstein E. **Cbx8 acts non-canonically with wdr5 to promote mammary tumorigenesis**. *Cell Rep*. 2016 Jul 12;16(2):472-86.

Kidd BA, Wroblewska A, Boland MR, Agudo J, Merad M, Tatonetti NP, **Brown BD**, Dudley JT. **Mapping the effects of drugs on the immune system**. *Nature Biotechnology*. 2016 Jan;34(1):47-54.

Meuwissen M, Schot R, Oudesluijs G, Tinschert S, Speer SD, Li Z, ... **Bogunovic D***, Grazia Mancini G*. **USP18 Deficiency Underlies a Novel Type I Interferonopathy Leading to Severe Pseudo-TORCH Syndrome.** *Journal of experimental medicine*. 2016. [In press] *Equal contribution

Speer SD, Payelle-Brogard B, Buta S, Li Z, Vigant F, Gardner TJ, ... **Bogunovic D***. **ISG15 deficiency and increased viral resistance in humans but not mice.** *Nature Communications*. 2016. [In press] *Equal contribution

Bunyavanich S, Shen N, Grishin A, Wood R, Burks W, Dawson P, ... **Sampson H, Sicherer S**, Clemente JC. **Early-life gut microbiome composition and milk allergy resolution.** *J Allergy Clin Immunol*. 2016 Oct;138(4):1122-1130. doi: 10.1016/j.jaci.2016.03.041.

Bunyavanich S, Rifas-Shiman SL, PlattsMills TA, Workman L, Sordillo JE, Camargo CA, ... Litonjua AA. **Prenatal, perinatal, and childhood vitamin D exposure and their association with childhood allergic rhinitis and allergic sensitization.** *The Journal of Allergy and Clinical Immunology*. 2016 Apr;137(4):1063-70.e2.

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Ionita-Laza I, McCallum K, Xu B, **Buxbaum JD**. **A spectral approach integrating functional genomic annotations for coding and noncoding variants.** *Nature Genetics*. 2016 Feb;48(2):214-20.

Levinson S, **Cagan RL**. **Drosophila cancer models identify functional differences between ret fusions.** *Cell Rep*. 2016 Sep 13;16(11):3052-61.

Yan J, Zhang L, Sultana N, Oh JG, Wu B, Hajjar RJ, ... **Cai CL**. **A series of robust genetic indicators for definitive identification of cardiomyocytes.** *J Mol Cell Cardiol*. 2016 Aug;97:278-85.

Moyon S, Huynh JL, Dutta D, Zhang F, Ma D, Yoo S, ... **Casaccia P**. **Functional characterization of DNA methylation in the oligodendrocyte lineage.** *Cell Reports*. 2016. [In press]

Gopalakrishnan K, **Teitelbaum SL, Lambertini L**, Wetmur J, Manservigi F, Falcioni L, ... **Chen J**. **Changes in mammary histology and transcriptome profiles by low-dose exposure to environmental phenols at critical windows of development.** *Environ Res*. 2016 Oct 28;152:233-243.

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Dunkin D, Berin MC, Mondoulet L, Hovhannisyan Z, Iuga A, Larcher T, ... **Sampson H**. **O-014 treatment of colitis by epicutaneous immunotherapy in a murine model.** *Inflammatory Bowel Diseases*. 2016 Mar;22 Suppl 1:S5.

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Grants

Agency

	Funding from New Grants (\$)	Funding from Existing & New Grants (\$)
National Institute Of Health Office Of The Director/NIH/DHHS	\$1,584,360	\$3,572,139
National Institute Of Neurological Disorders And Stroke/NIH/DHHS	1,162,933	1,533,714
Massachusetts General Hospital	829,469	829,469
Columbia University	819,956	888,030
Emory University	772,131	772,131
National Heart, Lung, And Blood Institute/NIH/DHHS	516,610	2,476,899
National Institute Of Diabetes And Digestive And Kidney Diseases/NIH/DHHS	414,755	2,026,000
National Institute Of General Medical Sciences/NIH/DHHS	406,800	728,850
National Institute Of Arthritis & Musculoskeletal & Skin Diseases/NIH/DHHS	371,309	730,411
University Of North Carolina	252,745	416,850
Albert Einstein College Of Medicine	206,688	634,038
New England Research Institute	100,000	123,198
Cincinnati Children'S Hospital	76,466	76,466
Northwestern University	68,213	68,213
Aimmune Therapeutics, Inc.	56,468	56,468
University Of California, San Francisco	50,000	162,851
American Parkinson Disease Association	50,000	50,000
Mary Kay Ash Foundation	50,000	50,000
University Of Washington	49,238	49,238
HAL Allergy	46,334	46,334
University Of Chicago	41,240	41,240
Astellas Pharma Us, Inc.	41,077	41,077
Drexel University	34,714	34,714
Janssen Research & Development, LLC	20,930	20,930
Neurocine Biosciences, Inc.	20,482	20,482
SynapDx Corporation	13,812	13,812
Phadia	10,836	10,836
Benaroya Research Institute At Virginia	9,405	237,337
Feinstein Institute For Medical Research	9,075	9,075
University of Nottingham	8,160	8,160
St. Jude Children's Research Hospital	1,100	1,100
Hoffmann-La Roche Inc.		12,694
Children's Hospital of Philadelphia		16,270
Weill (Joan And Sanford I.) Medical College Of Cornell University		19,952
UKCRC Centre for Diet and Activity Research (CEDAR)		33,232
Brain and Behavior Research Foundation		35,000
Washington University		48,855
Food Allergy Initiative		52,418
American Heart Association - Founders Affiliate		66,000
Hirschl/Weill-Caulier Trust		70,000
European Commission		75,625
Dana-Farber Cancer Institute		80,000
Sean Parker Foundation		88,900
Human Frontiers Of Science Program		100,000
Human Frontier Science Program Organization		112,500
Food Allergy Research & Education		120,000
University Of Pittsburgh		138,990
Duke University		167,121
Queens College Of Cuny		178,207
National Multiple Sclerosis Society		181,959
Juvenile Diabetes Research Foundation		200,000
National Institute Of Biomedical Imaging and Bioengineering/NIH/DHHS		252,976
Department Of The Army		296,625
Boston Children's Hospital		306,532
Biogen Idec Inc		410,261
National Institute Of Dental And Craniofacial Research/NIH/DHHS		416,275
DBV Technologies		476,778
New York State Office Of Science, Technology, And Academic Research		500,000
National Human Genome Research Institute/NIH/DHHS		1,101,031
National Eye Institute/NIH/DHHS		1,235,135
Seaver Foundation		1,250,001
National Institute Of Child Health And Human Development/NIH/DHHS		1,819,808
National Institute Of Mental Health/NIH/DHHS		3,074,729
National Institute Of Environmental Health Sciences/NIH/DHHS		3,170,793
National Institute Of Allergy And Infectious Diseases/NIH/DHHS		4,601,691
Total	\$8,095,306	\$36,440,420

Material Transfer Agreements

Research Focus

	Outgoing Material Transfer Agreements (#)	Technology Licenses (#)
Neurodevelopmental disorders	3	4
Cardiovascular disease	1	4
Diabetes and Obesity	2	5
Allergy and Asthma	4	9
Others	0	1
Total	10	23

Licenses

Licenses

	Total Number
Antigens/Antibodies	9
Reagents/Methods/Tools	10
Genes	3
Therapeutics	1
Total	23

Pilot Program Awardees

Three pilot projects were selected for \$70K in institutional funding for a one year period starting January 1, 2017. Research topics covered high impact areas including birth defects, asthma, and diabetes affecting youth. 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).

Pilot Projects Funded for 2017

▲ **Project Title: Gene-environment interaction in defects of forebrain and facial patterning: potential role of THC**

Principal Investigators: Robert S. Krauss, PhD; Yasmin Hurd, PhD

▲ **Project Title: Identifying the Regulatory Mechanisms Underlying an Accurate Asthma Biomarker**

Principal Investigators: Supinda Bunyavanich, MD, MPH; Gaurav Pandey, PhD; Madhan Masilamani, PhD

▲ **Project Title: Does a chronic metabolic stress in childhood accelerate the aging of young pancreatic beta cells?**

Principal Investigators: Donald K. Scott, PhD; Adolfo Garcia-Ocaña, PhD; Martin J. Walsh, PhD



Robert S. Krauss, PhD, Professor, Developmental and Regenerative Biology and Oncological Sciences



Supinda Bunyavanich, MD, MPH, Assistant Professor, Pediatrics and Genetics and Genomic Sciences



Madhan Masilamani, PhD, Associate Professor, Pediatrics



Donald K. Scott, PhD, Professor, Medicine



Adolfo Garcia-Ocaña, PhD, Professor, Medicine



Martin J. Walsh, PhD, Associate Professor, Pharmacological Sciences, Pediatrics, and Genetics and Genomic Sciences

Annual Retreat

The 4th Annual MCHDI Retreat was held at the Harmonie Club on November 22, 2016. Approximately 120 faculty members, trainees, and guests were in attendance for a full day of exciting talks, poster sessions, and discussion panels. Dr. Jean-Laurent Casanova, MD, PhD started the day with an in-depth keynote talk on the genetics of childhood infectious diseases. This was followed by presentations from our newly-selected pilot recipients: Donald K. Scott, PhD presented on childhood chronic metabolic stress and its effect on pancreatic beta cells, Supinda Bunyavanich, MD, MPH discussed her proposed study of identifying the regulatory mechanisms underlying asthma, and Robert S. Krauss, PhD explained the role of gene-environment interactions in utero in determining risk factors for Holoprosencephaly. Morning talks were followed by an informative panel discussion on translational science moderated by James J. Bieker, PhD. The panel offered multiple perspectives from experts in diverse fields: Bruce D. Gelb (Cardiology), Hugh A. Sampson (Allergies and Immunology), and Brian D. Brown (Genetics/Biotechnology). The afternoon session resumed with short talks by the Young Investigators Competition finalists. Diana Guallar, PhD, Post-doctoral fellow (Jianlong Wang laboratory) and Evan Bardot, PhD candidate (Nicole C. Dubois laboratory) were the final winners of their respective post- and pre- doctoral divisions. The day ended with the parent's perspective segment sharing a family's experience on living with an immunodeficiency, which continued the theme of childhood infectious diseases introduced during the keynote talk. We invited Dr. Charlotte Cunningham-Rundles, MD, PhD and her patient family, Edwin and Cathy Franco, to describe their challenges in getting a proper diagnosis for their daughter, Lauryn, who carries a STAT1 gain of function mutation. We are thankful for our physicians and physician-scientists at Mount Sinai who work tirelessly to help those children like Lauryn who have uncommon conditions that are difficult to identify.



Trainee Leadership Committee

One of the main goals implemented this year was to strengthen and expand the institute's support for trainees. Several strategic planning meetings were organized throughout Q1/Q2, including a trainee specific brainstorming session. It was agreed that forming a dedicated group of leaders to build the MCHDI community of young scientists and improve availability of resources would greatly facilitate the development of our growing network of trainees. During the summer, the trainee leadership committee (TLC) was officially created comprising of a mix of post-doctoral and pre-doctoral members: Evan Bardot, PhD candidate, Department of Developmental and Regenerative Biology (PI: Nicole Dubois, pre-doctoral candidate), Charles DeRossi, PhD, Department of Pediatrics (PI: Jaime Chu, post-doctoral fellow), Felix Richter, MD/PhD candidate, Department of Pediatrics (PI: Bruce D. Gelb, pre-doctoral candidate), Alison Sanders, PhD, Department of Environmental Medicine and Public Health (PI: Robert Wright, post-doctoral fellow), and Jeanette Stingone, PhD, MPH, Department of Environmental Medicine and Public Health (PI: Susan Teitelbaum, post-doctoral fellow). Their mission is to create career development workshops, training resources, and social events that promote scientific interaction. The committee has already begun planning and executing several initiatives including a trainee social event, workshop focused on negotiation in academia, and providing shared resources to facilitate grant writing.



Trainee Leadership Committee from left to right: Charles DeRossi, PhD; Evan Bardot, PhD Candidate; Jeanette Stingone, PhD, MPH; Felix Richter, MD/PhD Candidate; Alison Sanders, PhD

Communications

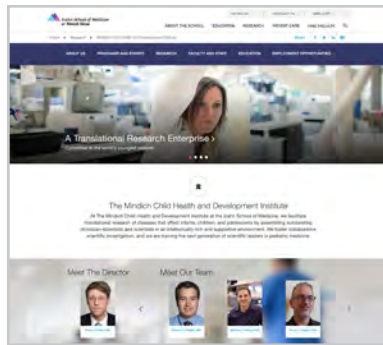
MCHDI delivers the latest updates on research advancements, events and news, both internally and externally via various communication channels. Below is information about the MCHDI website, newsletter and social media platforms:

Website ▲ In 2016, MCHDI launched a revamped website with information about our research, faculty, programs & events, annual reports, newsletters and more. In addition, new sections were added dedicated to trainees, events calendar and other innovative features. The Laboratories & Research Groups page currently lists dedicated lab/group websites. For more information, please visit icahn.mssm.edu/research/mindich

Newsletter ▲ The MCHDI Developmental Outcomes is a bi-annual newsletter distributed internally to faculty, trainees, and other Institute affiliates to highlight important research breakthroughs, publications, awards, and events within MCHDI. View our latest newsletters featured on icahn.mssm.edu/research/mindich/about/newsletters

Facebook ▲ Our official MCHDI Facebook page was launched in 2014 and currently has 470+ 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” our page at www.facebook.com/mindichchdi

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



MCHDI website



MCHDI newsletter



MCHDI Facebook



MCHDI Twitter

Shared Resources

Grant Forward

Grant Forward 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 e-mails alert, and tailored grant recommendations. Grant Forward subscriptions for MCHDI faculty and trainees are covered by our Institute. To sign up please visit: 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) system. 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. The ability to genotype DNA has enabled further inquiry into the genetic basis of childhood diseases. 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 comprised of samples from diverse racial and ethnic groups.

For more information please visit: www.icahn.mssm.edu/research/institutes/institute-for-personalized-medicine/innovation-and-technology/biome-platform

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

Transdisciplinary Center on Health Effects of Early Environmental Exposures (TCEEE)

The TCEEE was established to address environmental health impacts leading to disease from infancy through adolescence. This aim overlaps with MCHDI's main research areas of asthma, neurodevelopmental disorders, obesity, and diabetes, as well as the role of chemical, genetic, nutritional, and social exposures in disease risk. The TCEEE is led by MCHDI members Dr. Robert O. Wright (Program Director) and Dr. Chris Gennings (Deputy Director) and also offers three core shared facilities: 1) The Integrated Health Sciences Facility Core (IHSFC), led by Dr. Robert O. Wright; 2) The Phenotyping and Stress Assessment Facility Core (PSAFC), led by MCHDI member Dr. Rosalind J. Wright; and 3) The Epidemiology/Statistics/Bioinformatics Core led by Drs. Paolo Boffetta and Chris Gennings. The TCEEE includes the Senator Frank R. Lautenberg Environmental Health Sciences Laboratory, directed by Dr. Robert O. Wright, a shared facility funded by the MCHDI and the Children's Environmental Health Center (CEHC). For more information on the TCEEE's core facilities, visit their website at tceee.icahn.mssm.edu/core-facilities/



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