

Newsletter



FROM THE INTERIM CENTER DIRECTOR...

I am excited to share these updates from the GENI Center. As of August, GENI now has more than 50 members. Launched in 2022, GENI is focused on childhood obesity and the associated comorbidities such as cardiometabolic disease, diabetes, steatotic liver disease (MASLD & MASH). With its concentration of GI/endocrine/metabolism expertise, GENI also serves as a research home for feeding disorders and pediatric disorders affecting those systems. In pursuit of GENI's mission, I am delighted to introduce two recent faculty members, Daniel Hsia, MD, and Jessica Reilly, MD, FAAP, who bring considerable experience in the study and treatment of pediatric diabetes and obesity. For those conducting pediatric obesity-related translational research using animal models, I am happy to announce the addition of metabolic cages to the Department of Pediatrics Animal Physiology Core, which will be available later this Fall. I would like to call your attention to the Feeding Lab Corner, where Will Sharp provides updates on an exciting new feeding intervention program. The GENI Center Seminar and Research in Progress Series successfully kicked off in August with a lecture from Daniel Hsia and continues in October with a visit and seminar by Dr. Timothy Osborne, Associate Dean for Basic Research, Johns Hopkins All Children's Hospital. Please join me in commending the GENI members on their recent accomplishments.

Best,

Paul



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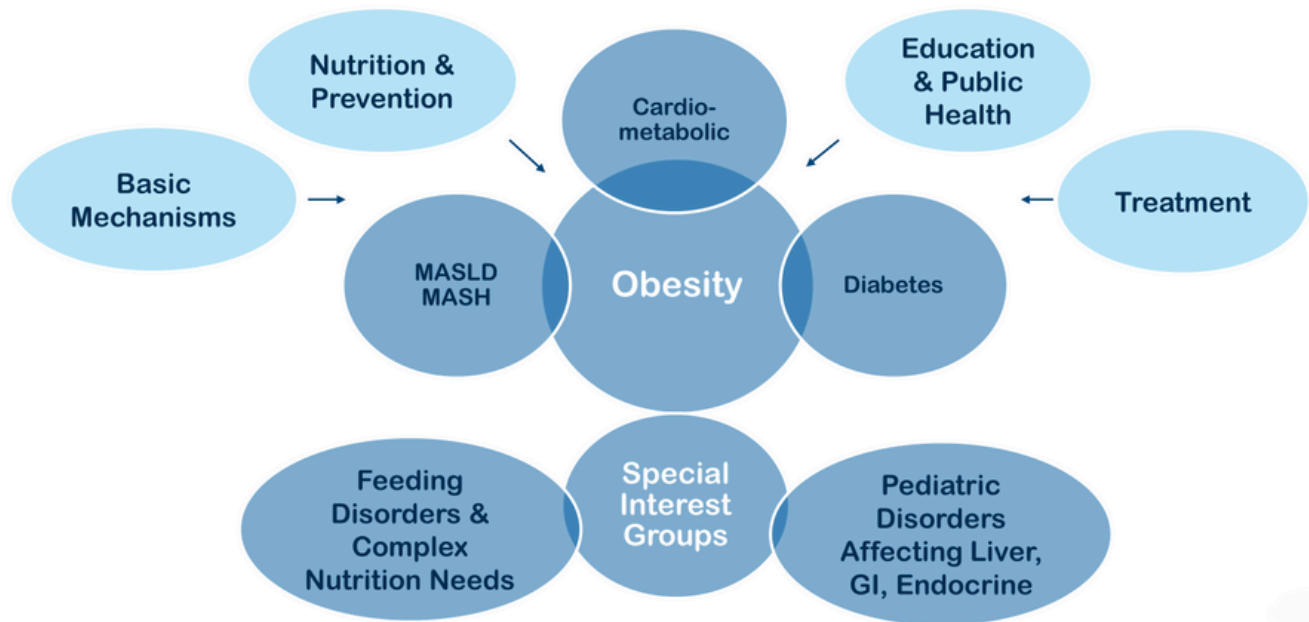
Feeding Lab Corner

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GENI Research Areas



GENI Mission: To discover and address the nutritional and metabolic factors each child requires for a long, healthy and productive life.

To carry out GENI's mission, main priorities for research address **pediatric obesity** and associated comorbidities including:

- Cardiometabolic diseases
- Diabetes
- MASLD/MASH

GENI also serves as home to nutritional, endocrine, GI and liver, and metabolic research. These other areas of research include:

- Feeding disorders
- Childhood genetic and developmental disorders affecting liver, GI, endocrine systems ("orphans")

GENI holds GI/endocrine/metabolism expertise that complements the focus of other Centers in the pediatric research ecosystem.



Daniel S. Hsia, MD

Dr. Daniel Hsia came to Emory earlier this year and joined GENI as a primary member in April. Before coming to Emory, Dr. Hsia was an associate professor at LSU's Pennington Biomedical Research Center in the Joint Diabetes, Endocrinology and Metabolism Program, as well as adjunct professor at the LSU Health Sciences Center.

Dr. Hsia is currently Associate Chief in the Division of Endocrinology in the Department of Pediatrics in the Emory + Children's Pediatric Institute. His research focuses on prevention and intervention strategies for diabetes and obesity across the lifespan. He is especially interested in expanding treatment options for children with diabetes and obesity by translating approved therapies into the pediatric population.



NEW MEMBER SPOTLIGHT

Jessica L. Reilly, MD, FAAP

Dr. Jessica Reilly came to Emory in November 2023 and joined GENI as a primary member in December 2023. She is a board-certified pediatrician who serves as the Medical Director of the Strong4Life Clinic and Bariatric Program.

Dr. Reilly has a particular focus on children with weight-related comorbidities, including pre-diabetes, dyslipidemia, hypertension, obstructive sleep apnea and metabolic dysfunction-associated steatotic liver disease. She educates patients and families on the complex interplay of genetics, biology and environment, resulting in a person's tendency to carry extra weight.

Dr. Reilly's primary research areas of interest include treating pediatric obesity as a chronic disease as well as its comorbidities with a spectrum of interventions including pharmacotherapy, bariatric surgery, and intensive lifestyle intervention.



Both these new members are poised to be catalysts for new and stronger relationships in GENI Research Areas of diabetes and weight-related disorders.



GENI Accomplishments



Dr. **Rheinallt Jones**, Director of the Emory Gnotobiotic Animal Core, was granted a patent for *Lactococcus Bacteria and Uses Thereof* which relates to methods of using beneficial bacterial strains to manage, treat, or prevent obesity, fatty liver disease, harmful ionizing radiation, and other conditions or ailments. This patent will add to evidence corroborating the efficacy of beneficial bacteria to promote health.



Dr. **Paul Dawson**, GENI's Interim Center Director, received a score in the top 1st percentile for his R01 application entitled "Hepatoprotective mechanisms of systemic bile acid transporter inhibitors." The project was awarded (funded for five years through NIH/NIDDK) with the goal of developing game-changing new therapies for cholestatic liver disease.

Dr. **Rene Romero**, Professor of Pediatrics and Pediatric Hepatologist at Children's, was recognized as this year's honoree at the Georgia Transplant Foundation's Celebrate Life Gala. His impact on and dedication to the transplant community can be felt by colleagues, patients and their families.



Dr. **Eric Ortlund**, Professor of Biochemistry in the School of Medicine, was the recipient for Emory's Office of Technology Transfer's Deal of the Year Award at the 2024 Annual Celebration of Technology and Innovation. Discovery of liver receptor homolog-1 (LRH-1) modulators has been difficult, due in part to the tendency for synthetic compounds to bind unpredictably within the lipophilic binding pocket. Dr. Ortlund and his research team used a structure-guided approach to exploit a newly discovered polar interaction to lock agonists in a consistent orientation. This enabled the discovery of the first low nanomolar LRH-1 agonist, which has proved to be 100 times more potent than the best previous modulator. In 2023, Emory University executed an exclusive high net worth license with Allonix Therapeutics for this technology.



Dr. **Andrew Muir**, Division Chief of Pediatric Endocrinology, was listed in *Atlanta* magazine's '2024 Top Doctors' issue in the area of pediatric endocrinology.

Dr. **Nikhila Raol**, associate professor in the Department of Otolaryngology-Head and Neck Surgery, was listed in *Atlanta* magazine's '2024 Top Doctors' issue in the area of pediatric otolaryngology.



Dr. **Peijian He** had a paper accepted to the journal *Blood* entitled "Targeting PKCa alleviates iron overload in diabetes and hemochromatosis through the inhibition of ferroportin." The authors showed that protein kinase C alpha (PKCa) plays a crucial role in intestinal iron absorption through the regulation of iron exporter ferroportin. Targeting this pathway by inhibiting PKCa, the authors effectively reduced the iron overload associated with diabetes in mouse preclinical models.



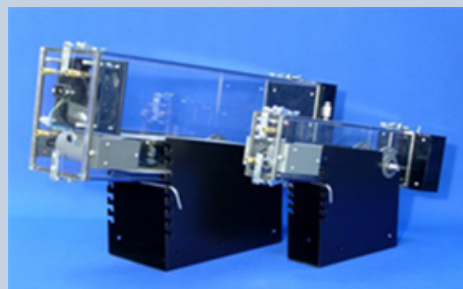
Animal Physiology Core and GENI Metabolic Cages - Coming Soon

Columbus Instruments CLAMS



Features

- **Activity**
X, Y & Z axis monitoring
- **Feeding**
Mass monitoring
- **Drinking**
Volume Monitoring
- **Body Mass**
Resolves 0.1g
- **Running Wheel**
Rotation Monitoring
- **Sleep Detection**
Scores Events and Duration
- **Food Access Control**
Mass & Event monitoring
- **Environmental Control**
of Temperature and Lighting
- **Calorimetric Assessment**
by Oxymax
- **Environmental Monitoring**
of Temperature



These cages will be available to researchers for a subsidized rate.

Feeding Lab

(GENI Special Interest Group)



Corner

William Sharp, PhD, Director of the Children's Multidisciplinary Feeding Program and GENI member, was awarded a one-year grant from the Georgia Research Alliance to pilot a training curriculum centered around a treatment manual developed by program staff. The treatment manual describes a feeding intervention program called the Managing Eating Aversions and Limited variety (MEAL) Plan - Revised. The first phase of the project involved training board-certified behavior analysts (BCBAs) over the course of two days, 3 hours per day, to use the MEAL PlanR. Three virtual pilot training sessions, each with 5 BCBA trainees, were conducted in July and August. The 15 BCBAs paid for the training and received continuing education credits towards their certification as well as a copy of the treatment manual and parent handbook. Trainees will be followed and monitored after the training; implementation data will be obtained from them at 3- and 6-month time points.

The mission and vision of MEAL PlanR is to provide a comprehensive training center for BCBAs and other health providers serving children with autism spectrum disorder (ASD) and related disabilities with co-occurring feeding difficulties using a parent-as-co-therapist model of care. To this end, the second phase of the GRA grant involves developing a business plan and company proforma with growth targets, staffing, and leadership structure. It is hoped that the MEAL PlanR training center will provide an evidence-based structured feeding treatment that the provider community desperately needs.



Phase 2 of the GRA grant starts October 1!

GENI Events



Dr. Daniel Hsia kicked off GENI's new Research in Progress seminar series on August 8, 2024.

Please click to watch:

[8/8/2024 GENI Research in Progress - Hsia](#)

The next Research in Progress seminar will be held December 12 in HSRB I E260, 3:00pm.



Thursday, October 10

3:00PM HSRB II N557

[Register here](#)

GENI Seminar

Timothy F. Osborne, PhD

Professor, Departments of Medicine and
Biological Chemistry

Johns Hopkins University School of Medicine
Director, Institute for Fundamental Biomedical
Research

Associate Dean for Basic Research
Johns Hopkins All Children's Hospital



***Intersection of Trained Immunity and Metabolism in Macrophages
Through SETDB2***

GENI and Children's Publication Citation

Publications and research posters related to GENI and/or that benefitted from Pediatric Research Alliance resources should include "Children's Healthcare of Atlanta" in the Affiliations portion of the citation (appearing under the author line of the article or poster).

The proper affiliation citation is: **Center for Gastroenterology, Endocrinology, & Nutrition Innovation (GENI) of Children's Healthcare of Atlanta and Emory University Department of Pediatrics, Atlanta, GA USA**. Other examples of acceptable formats for citation are available [here](#).

This requirement is vital to ensure recognition of our work by both Emory and Children's and applies to all Center members, whether lab-based or non-lab based. Children's has been a significant supporter of the research operations that make all of our work possible and should be acknowledged.

Research Wows



Don't forget to share your latest research achievements through our very brief "[Research Wows](#)" [submission form](#). This information will be used for a) internal and external reporting on metrics and impact, and b) potential news and media coverage.

"Research Wows" FAQ's:

- **What type of information should I share?**
 - Impactful publications that have been accepted or published
 - New, major grants that have been awarded
 - New, major professional/service awards, distinctions, or recognitions received
 - Other noteworthy research-related achievements (e.g., patents, IND, clinical trials)
- **Who will receive this information?**
 - Pediatric research center Program Managers and Center Directors
 - Pediatric research leadership
 - Marketing and communications teams
- **When should I share my "Research Wows"?**
 - As soon as possible! While we will accept your "Research Wows" at any time for purposes such as internal reporting, the following timing is important to keep in mind for news and media purposes:
 - Accepted for publication in a journal
 - About to receive a notice of award for funding
 - Research that has received funding and is about to start but no data has been collected yet

Click here to submit your "Research Wows": <https://forms.office.com/r/Md9FCaYbTc> or email Debra Hamilton, GENI Program Manager, at drhamil@emory.edu.



Pediatric Research Alliance Pilot Grants

- For faculty and centers in the Pediatric Research Alliance.
- Designed to stimulate new research projects, build new collaborations, and increase extramural funding for pediatric research.

Three types of awards are available:

Type 1: **Junior Faculty Focused (JFF) Award** - \$50,000 per award

Type 2: **Center Award** - \$50,000 per award

Type 3: **Program Planning Pilot (P*3) Awards** - up to \$100,000 per award

Application Process:

Letters of Intent (LOIs) are required and must be submitted by the April deadline of the year the project period starts.

The LOIs will be evaluated based on the feasibility of the proposed science leading to the development of the applicant's research career.

Project Period: October 1 - September 30

Congratulations to Interim Center Director Paul Dawson for being awarded a new \$3.15 million, 5-year grant from the NIH/NIDDK based in part on preliminary data obtained using 2022 Center Pilot funding!

