



News



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From the Center Director

I am delighted to share this GENI research newsletter with all of you. We have had several exceptional speakers come through over the past year, along with a great GENI presence at the June 9th Pediatric Research Day at the Aquarium including a Best Abstract Award to **Dr. Dunia Hatabah** (mentored by **Dr. Claudia Morris**). Note the upcoming Pediatric Digestive Health Conference on August 11-12, co-organized by GENI members **Dr. Barbara McElhanon** and **Dr. Nikhila Raol**. Please also note the Honorary Doctorate given by Hebrew University to GENI member **Dr. Raymond F. Schinazi**. To keep you apprised of the important and integrative research of GENI members, see recent publications by many of our members. It is through the concerted efforts of each of the GENI members that we will continue to work on achieving the missions of the Center. Finally, I encourage all of you to note GENI-associated meetings coming up this Fall (AASLD and NASPGHAN). I would like to share all your achievements and meeting notifications in future newsletters, so please send them to Debra when they are available.

Best to all,

Saul

GENI Events - Spring 2023

- In February, GENI welcomed **Christopher Newgard, PhD**, Duke University Medical Center, to Emory. Dr. Newgard is Director of the Duke Molecular Physiology Institute. He talked about "[The role of branched-chain amino acids in cardiometabolic diseases](#)" (click for recording).
- GENI also had the honor of welcoming **Jorge Bezerra, MD**, to Emory in May. Dr. Bezerra is a professor and chair of the pediatrics department at University of Texas Southwestern Medical Center and is the Pediatrician-in-Chief at Children's Medical Center. His seminar focused on the developmental basis of biliary atresia (BA) and was well-attended.

Biliary Atresia: Controversies, Insights, Treatments June 12, 2023

A Symposium Honoring Saul J. Karpen, MD, PhD

View recordings: [Morning Session](#) / [Afternoon Session](#)

- The **Biliary Atresia Symposium: Controversies, Insights, Treatments** honored GENI's own Center Director, **Saul J. Karpen, MD, PhD**, in June. This special symposium featured 11 expert researchers from around the world who have been making significant impacts on the debilitating disease. Presentation topics included genetic contribution discoveries, practical population screening modalities, variable presentations of BA observed worldwide, current and future therapeutic landscape, and advantages of registries and consortia. Interactive forums drew on the speakers' knowledge and expertise to discuss their viewpoints on key unknowns and expectations of research and clinical opportunities.
- Pictured below: **Dr. Saul Karpen** (5th from left) with critical thinkers (L-R) Binita Kamath, Dominick Hellen, Sanjiv Harpavat, Moreshwar Desai, Henkjan Verkade, Paul Dawson, Richard Thompson, Kathleen Loomes, Stephen Guthery, and Ron Sokol (missing: Ekkehard Sturm).



Upcoming Events

2023 Pediatric Digestive Health Conference

Feeding, Eating, and Swallowing Disorders:

Contributing Medical and Psychological Factors from Birth through Early Adulthood

Friday and Saturday, **August 11 and 12, 2023**

Emory University

Health Sciences Research Building I

Auditorium & Cafe

Registration
closes
**AUGUST 8
5PM!**

Register for the 2023 Pediatric Digestive Health Conference [HERE!](#)



Conference Chairs: Barbara McElhanon, MD and Nikhila Raol, MD, MPH, FAAP
Children's Healthcare of Atlanta, Emory University SOM

Keynote Speakers:

- **Maureen Lefton-Greif, PhD, CCC-SLP, BCS-S**, Johns Hopkins University SOM
 - Pediatric Dysphagia: What We Know and Need to Know
- **Amanda Muir, MD, MTR**, Children's Hospital of Philadelphia
 - Obstacles for Feeding in Eosinophilic Esophagitis
- **Cheryl Hartzell, MD**, Cincinnati Children's Hospital
 - It's All in Their Head! Management of Pediatric Abdominal Pain

Faculty Speakers:

- **Shanelle Clarke, MD**, Children's Healthcare of Atlanta, Emory University SOM
 - Feeding Difficulties in Infants with Cardiac Disease
- **Nikhila Raol, MD, MPH, FAAP**, Children's Healthcare of Atlanta, Emory Univ. SOM
 - Small Problems in Infants: The Tongue Tie Debate
- **Rashelle Berry, MPH, MS, RDN, CSP, LD**, Children's Healthcare of Atlanta
 - Nutrition/GA Perspective in Feeding Issues in Infancy
- **Hillary Bashaw, MD, MS**, Children's Healthcare of Atlanta, Emory University SOM
 - Food is Medicine: Evidence towards Nutritional Interventions to Treat Disease
- **Kaitlin Proctor, PhD**, Children's Healthcare of Atlanta, Emory University SOM
 - ARFID as a Treatable Complication of Pediatric Food Allergy: The Intersection of Medically Required Food Avoidance and Highly Restrictive Food Intake
- **Hana Zickgraf, PhD**, Children's Healthcare of Atlanta, Emory University SOM
 - Mechanisms and Clinical Presentations of Avoidant/Restrictive Food Intake Disorder: Implications for Treatment
- **Leslie Schlapfer, MS, RD, CSP, LD**, Children's Healthcare of Atlanta
 - Nutrition Perspectives in ARFID

Save the Date

GENI Visiting Professor Sanjiv Harpavat, MD, PhD

Baylor College of Medicine, Texas Children's Hospital

October 17-18, 2023

Grand Rounds and T32 Presentations

Q2 Publications by GENI Faculty

Publications were submitted by 7 GENI members. Congratulations to all!!

From **Dr. Claudia Morris'** lab:

Rees CA, Kisenge R, Ideh RC, Kamara J, Coleman Y, Samma A, Godfrey E, Manji HK, Sudfeld CR, Westbrook A, Niescierenko M, **Morris CR**, Whitney CG, Breiman RF, Manji KP, Duggan CP. Predictive Value of Clinician Impression for Post-Discharge Mortality and Readmission among Neonates, Infants, and Children in Dar es Salaam, Tanzania and Monrovia, Liberia. *BMJ Paediatrics Open*, 2023 Jun;**7**:e001972.

<http://dx.doi.org/10.1136/bmjpo-2023-001972>.

Fraser Doh K, Chaudhary S, Ruest S, Shaahinfar A, Chun T, Cooper N, Fein J, Feng A, Feske-Kirby K, Figueroa J, Gutman C, Phelan-Grupp J, Kanan G, Keathley N, McGlamry K, Myers S, Nance ML, Russell K, Rowker K, Sheline E, Simon HK, **Morris CR**. Variability in Firearm Injury among Major Pediatric Trauma Centers Across the USA. *Trauma Surgery & Acute Care Open*, 2023 May;**8**(1):e001014. <http://dx.doi.org/10.1136/tsaco-2022-001014>. PMID: 37266305.

Rees CA, Brousseau DC, Ahmad FA, Bennett J, Bhatt S, Bogie A, Brown KM, Casper TC, Chapman LL, Chumpitazi CE, Cohen DM, Dampier C, Ellison AM, Grasemann H, Hatabah D, Hickey RW, Hsu LL, Bakshi N, Leibovich S, Patil P, Powell EC, Richards R, Sarnaik S, Weiner DL, and **Morris CR** on behalf of the SCD Arginine Study Group and PECARN. Intranasal Fentanyl and Discharge from the Emergency Department Among Children with Sickle Cell Disease and Vaso-occlusive Pain: A Multicenter Pediatric Emergency Medicine Perspective. *Am J Hematol*, 2023 Apr;**98**(4):620-627. <https://doi.org/10.1002/ajh.26837>. PMID: 36606705.

Astles R, Liu Z, Gillespie S, Lai K, Mailis A, **Morris CR**, Lane PA, Krishnamurti L, Bakshi N. Sex and frequency of pain episodes are associated with acute pain trajectories in adolescents with sickle cell disease. *Pain Reports*, in press (accepted for publication April 2023).

Reyes LZ, Winterberg PD, George RP, Kelleman M, Harris F, Brown LA, **Morris CR**. Dysregulated Arginine Metabolism Correlates with Structural and Functional Myocardial Changes in Chronic Kidney Disease. *Nutrients*, in press (accepted for publication May 2023).

Sumner M, Florin T, Kuppermann N, Xie J, Tancredi D, Freedman SB on behalf of the Pediatric Emergency Research Network (PERN) and Pediatric Emergency Research Canada (PERC) – COVID-19 Study Teams (includes **Morris CR**). Liver Transaminase Concentrations in Children with Acute SARS-CoV-2 Infection. *Clinical Biochemistry*, in press (accepted for publication May 2023).

Fan LK, Bai S, Du C, Bass M, Jones K, Sherry W, **Morris CR**, Oster ME, Shane A, Jaggi P. Distinguishing Features Between Incomplete Kawasaki Disease and Non-Severe Multisystem Inflammatory Syndrome in Children. *Hospital Pediatrics*, in press (accepted for publication June 2023).



Southeastern Pediatric Research Conference: Best Overall Abstract Award



On June 9, 2023, the Best Overall Abstract Award was presented to Dunia Hatabah, MD, post-doctoral fellow, for the poster entitled "Low arginine bioavailability and clinical outcomes in children with sickle cell disease hospitalized with vaso-occlusive pain episodes" at the 12th Annual Southeastern Pediatric Research Conference. Other authors were Nitya Bakshi, Lou Ann Brown, Frank Harris, Deb Leake, Rawan Korman, Chris A. Rees, Mark Griffiths, Carlton Dampier, and **Claudia A. Morris**, Dr. Hatabah's mentor and GENI Center Member.

Pictured at the 12th Annual Southeastern Pediatric Research Conference (L-R): **Dr. Saul Karpen**, **Dr. Dunia Hatabah**, Dr. Erica Johnson, and Dr. Jaydev Desai.

Q2 Publications (cont'd)

From **Dr. Parminder Suchdev's** research labs:

Kanu FA, Jefferds MED, Williams AM, Addo OY, **Suchdev PS**, Sharma AJ. Association between Hemoglobin and Elevation among School-aged Children: A Verification of Proposed Adjustments. *American Journal of Clinical Nutrition*, 2023 Jul;118(1):114-120. <https://doi.org/10.1016/j.ajcnut.2023.04.014>. PMID: 37059418.

Madrid L, Vyas KJ, Kancherla V, Leulseged H, **Suchdev PS et al.** Neural tube defects as a cause of death among stillbirths and children younger than 5 years in sub-Saharan Africa and South-East Asia: an analysis of the CHAMPS network. *Lancet Glob Health*, 2023 Jul;11(7):e1041-1052. [https://doi.org/10.1016/S2214-109X\(23\)00191-2](https://doi.org/10.1016/S2214-109X(23)00191-2). PMID: 37271162.

Luo H, Geng J, Zeiler M, Nieckula E, Sandalinas F, Williams A, Young MF, **Suchdev PS**. A Practical Guide to Adjust Micronutrient Biomarkers for Inflammation Using the BRINDA Method. *Journal of Nutrition*, 2023 Apr;153(4):1265-1272. <https://doi.org/10.1016/j.tjnut.2023.02.016>. PMID: 36792034.

Luo H, Beal T, Blake T, Zeiler M, Geng J, Werner ER, Addo OY, **Suchdev PS**, Young MF. Streamlining micronutrient biomarker statistical analysis in populations: an introduction to the SAMBA R package. *Journal of Nutrition*, in press (accepted June 2023). PMID: 37354979.

From **Dr. Thomas Ziegler's** lab:

Lamon-Fava S, Liu M, Dunlop BW, Kinkead B, Schettler, PJ, Felger JC, **Ziegler T**, Fava M, Rapaport MH. Clinical response to EPA supplementation in patients with major depressive disorder is associated with higher plasma concentrations of pro-resolving lipid mediators. *Neuropsychopharmacology*, 2023;48:929-935. <https://doi.org/10.1038/s41386-022-01527-7>.

Gundogan K, Sahin GG, Ergul SS, Ozer NT, **Ziegler TR et al.** Evaluation of whole blood thiamine pyrophosphate concentrations in critically ill patients receiving chronic diuretic therapy prior to admission to Turkish intensive care units: A pragmatic, multicenter, prospective study. *Journal of Critical Care*, 2023 May;77:154326. <https://doi.org/10.1016/j.jcrc.2023.154326>.

Heindel JJ, **Alvarez, JA**, Atlas E, Cave MC, Chatzi VL, **Ziegler TR et al.** Obesogens and obesity: State-of-the-Science and future directions summary form a healthy environment and endocrine disruptors strategies workshop. *American Journal of Clinical Nutrition*, 2023 May;118(1):329-337. <https://doi.org/10.1016/j.ajcnut.2023.05.024>.



Honorary doctorate awarded to Dr. Schinazi

On June 15, 2023, the Hebrew University of Jerusalem (HU) presented **Raymond F. Schinazi, PhD**, with a prestigious honorary doctorate degree. Dr. Schinazi is Director of the Biochemical Pharmacology Laboratory, Director of the HIV-Cure Scientific Working Group, and the Frances Winship Walters Professor of Pediatrics at Emory. His breakthroughs in virology, renowned HIV research, and immense contributions to global health led the University to confer the Degree of Doctor of Philosophiae Honoris Causa upon him.

Dr. Schinazi (center) is pictured with HU's President, Asher Cohen (left), and HU's Rector, Prof. Tamir Sheafer (right).



Q2 Publications (cont'd)

From **Dr. William Sharp's** Multidisciplinary Feeding Program Team:

Dempster R, Huston P, Castillo A, **Sharp WG**. Changes in medical charges following intensive multidisciplinary intervention for pediatric gastrostomy tube dependence. *Journal of Pediatric Gastroenterology and Nutrition*, 2023 Apr;76(4):77-80. <https://doi.org/10.1097/MPG.0000000000003719>.

Proctor KB, Ramos A, Herbert LJ. "The peanut butter didn't attack me": Food allergen proximity challenges to improve quality of life. *Annals of Allergy, Asthma, and Immunology*, 2023;131(1):9-10. <https://doi.org/10.1016/j.anai.2023.03.027>.

Islam N, Hathaway KL, Anderson BS, **Sharp WG**, Loechner KJ. Brief report: Decreased bone health in children with autism spectrum disorder and avoidant restrictive food intake disorder. *Journal of Autism and Developmental Disorders*, 2023 May. <https://doi.org/10.1007/s10803-023-05976-x>.

Pickard K, Burrell TL, Brasher S, Buckley D, Gillespie S, **Sharp W**, Scahill L. Examining adaptations necessary to support the implementation of a parent-mediated intervention for children with autism spectrum disorder and moderate feeding problems. *Autism*, 2023 Apr. <https://doi.org/10.1177/13623613231166181>.

From **Dr. Eric Ortlund's** lab:

Druzak SA, Tardelli M, Mays SG, Bejjani M, Mo X, Cato ML, Tillman MC, Sugiyama A, Fu H, Cohen DE, **Ortlund EA**. Ligand dependent interaction between PC-TP and PPAR δ mitigates diet-induced hepatic steatosis in male mice. *Nature Communications*, 2023 May;14(1):2748. <https://doi.org/10.1038/s41467-023-38010-w>.

Maner-Smith KM, Ferranti E, Dunlop A, Corwin E, **Ortlund EA**. African American Women with Cardiometabolic Complications of Pregnancy Have Decreased Serum Abundance of Specialized Pro-Resolving Lipid Mediators and Endocannabinoids. *Nutrients*, 2023;15(1):140. <https://doi.org/10.3390/nu15010140>.

Druzak S, Iffrig E, Roberts BR, Zhang T, Fibben KS, Sakurai Y, **Ortlund EA et al.** Multiplatform analyses reveal distinct drivers of systemic pathogenesis in adult versus pediatric severe acute COVID-19. *Nature Communications*, 2023 Apr;14(1):1638. <https://doi.org/10.1038/s41467-023-37269-3>.

He H, Sugiyama A, Snyder NW, Teneche MG, Liu X, Maner-Smith KM, Goessling W, Hagen SJ, **Ortlund EA**, Najafi-Shoushtari SH, Acuna, M, Cohen DE. Acyl-CoA thioesterase 12 suppresses YAP-mediated hepatocarcinogenesis by limiting glycerolipid biosynthesis. *Cancer Letters*, 2023;565:216210. <https://doi.org/10.1016/j.canlet.2023.216210>.

Patel A, Kumar S, Lai L, Chakravarthy C, Valanparambil R, Reddy ES, **Ortlund EA et al.** Molecular basis of SARS-CoV-2 Omicron variant evasion from shared neutralizing antibody response. *Structure*, 2023;31:1-11. <https://doi.org/10.1016/j.str.2023.04.010>.

Wynne ME, Ogunbona O, Lane AR, Gokhale A, Zlatich SA, Xu C, Wen Z, **Ortlund EA, et al.** APOE expression and secretion are modulated by mitochondrial dysfunction. *Elife*, 2023 May;12:e85779. <https://doi.org/10.7554/eLife.85779>.

Head PE, Kapoor-Vazirani P, Ganji NP, Zhang H, Rath SK, Luong NC, **Ortlund EA, et al.** DNA-PK is activated by SIRT2 deacetylation to promote DNA double-strand break repair by non-homologous end joining. *Nucleic Acids Res*, 2023; <https://doi.org/10.1093/nar/gkad549>.



Q2 Publications (cont'd)

From **Dr. Saul Karpen's** research lab:

Vuppalanchi R, **Karpen SJ**. Treating Itch in Primary Biliary Cholangitis: A GLIMMER of Hope That Needs a Nugget of Validation. *Clin Gastroenterol Hepatol*, 2023;21(7):1706-7. <https://doi.org/10.1016/j.cgh.2022.11.034>. PMID: 36516956.

Sanyal AJ, Williams SA, Lavine JE, Neuschwander-Tetri BA, Alexander L, Ostroff R, Biegel H, Kowdley KV, Chalasani N, Dasarathy S, Diehl AM, Loomba R, Hameed B, Behling C, Kleiner DE, **Karpen SJ**, Williams J, Jia Y, Yates KP, Tonascia J. Defining the serum proteomic signature of hepatic steatosis, inflammation, ballooning and fibrosis in non-alcoholic fatty liver disease. *Journal of Hepatology*, 2023 Apr;78(4):693-703. <https://doi.org/10.1016/j.jhep.2022.11.029>. PMID: 36528237.

Hellen DJ, Bennett A, Malla S, Klindt C, Rao A, **Dawson PA, Karpen SJ**. Liver-restricted deletion of the biliary atresia candidate gene Pkd1l1 causes bile duct dysmorphogenesis and ciliopathy. *Hepatology*, 2023 Apr;77(4):1274-1286. <https://doi.org/10.1097/HEP.0000000000000029>. PMID: 36645229.

Truong JK, Li J, Li Q, Pachura K, Rao A, Gumber S, Fuchs CD, Feranchak AP, **Karpen SJ**, Trauner M, **Dawson PA**. Active enterohepatic cycling is not required for the choleretic actions of 24-norUrsodeoxycholic acid in mice. *JCI Insight*, 2023;8(6)e149360. <https://doi.org/10.1172/jci.insight.149360>. PMID: 36787187.

Virk MK, Mian MUM, Bashir DA, Wilkes JK, Schlingmann T, Flores S, Kennedy C, Lam F, Arikan AA, Nguyen T, Mysore K, Galvan NTN, Coss-Bu J, **Karpen SJ**, Harpavat S, Desai MS. Elevated bile acids are associated with left ventricular structural changes in biliary atresia. *Hepatology Communications*, 2023 May;7(5)e0109. <https://doi.org/10.1097/HC9.0000000000000109>. PMID: 37058680.

Otumala AE, Hellen DJ, Luna CA, Delgado P, Dissanayaka A, Ugwumadu C, Oshinowo O, Islam MM, Shen L, **Karpen SJ**, Myers DR. Opportunities and considerations for studying liver disease with microphysiological systems on a chip. *Lab on a Chip*, 2023 Jun;23(13):2877-2898. <https://doi.org/10.1039/D2LC00940D>. PMID: 3728262.

Sutton H, **Karpen SJ**, Kamath B. Pediatric Cholestatic Diseases: Common and Unique Pathogenic Mechanisms. *Annual Review of Pathology: Mechanisms of Disease*, in press (accepted for publication May 2023).

Hellen DJ, **Karpen SJ**. LiverQuant: An improved method for quantitative analysis of liver pathology. *Bio-protocols*, in press (accepted for publication May 2023).



Funding Opportunity: NIDDK Catalyst Award RFA-DK-23-014

The NIDDK Catalyst Award initiative is focused on innovation and not geared toward NIDDK PIs proposing their typical R01 work. The proposals are NOT aims based and are not to include multi-disciplinary teams like RC2s. Like the OD Pioneer Awards, the Catalyst awards do not permit multi-PI submissions; however co-investigators/collaborators can be included to provide needed expertise. To be eligible, the Catalyst PI must commit 4 CM of effort for 5 years.

This RFA is a partnership between two NIDDK Divisions: DEM (Diabetes, Endocrinology and Metabolic Diseases) and DDN (Digestive Diseases and Nutrition).

For Division of Diabetes, Endocrinology and Metabolic Diseases-related inquiries:

Carol Haft, Ph.D.

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

Telephone: 301-594-7689

Email: haftc@mail.nih.gov

For Division of Digestive Diseases and Nutrition-related inquiries:

David Saslowsky, Ph.D.

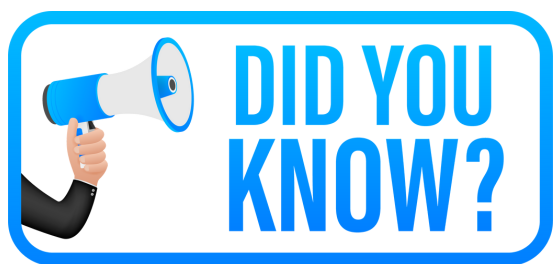
National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

Telephone: 301-594-8876

Email: david.saslowsky@nih.gov

See <https://grants.nih.gov/grants/guide/rfa-files/RFA-DK-23-014.html> for more information.

APPLICATION DUE September 28, 2023



AASLD

Nov. 10-14, 2023

The Liver Meeting®



Hynes Convention Center in Boston

Early Bird Registration Opens: Late July

Late-Breaking Abstract Submission: Sept. 14-26



2023 NASPGHAN / CPNP / APGNN Annual Meeting

October 4 – 7, 2023 ♦ Hilton San Diego Bayfront ♦ San Diego, CA

