



NHS Student Newsletter

Fall 2021

Dear NHS Students, Faculty, and Alumni,

We hope you had a wonderful fall and that your evenings of sipping hot coco and reading non-academic books next to a fire (or a candle for most) are upon you. We have two NHS students graduating this December: Larelle Bookhart and Miranda Cook. We wish Larelle and Miranda the best in their future endeavors. You will be surely missed! We also welcomed seven new students to the program: Katelyn Chiang, Moses Ekwueme, Lucia Gonzalez Ramirez, Lan Tran, Chin-An "Simon" Yang, Jiada "James" Zhan, and Xinyu "Jocelyn" Zhu. Glad to have you as part of the NHS team!

Although some parts of NHS life have returned to normalcy this fall, there have still been some challenges. However, we all know NHS students thrive in challenging situations (Nutrition 1 & 2 to name a few...). Thus, this newsletter highlights many of our NHS student's achievements and hard work put in throughout a once again difficult year. Students - congratulations on making it through the semester! Be sure to take some relaxation during this holiday season!

To everyone - we hope that you and your loved ones stay healthy this winter break and we look forward to

seeing you again in the coming year!

Cheers,

Wilhemina and Ben

NHS ACCOMPLISHMENTS

Melissa Chapnick (2nd year)

Melissa had three conference abstracts accepted to ASN:

Melissa Chapnick, Jenna Diaz, Arianna Boshara, Jennifer Powers, David Gibson, Carlos Andres Gallegos-Riofrío, Christine Stewart, Chessa Lutter, William Waters, Lora Iannotti. Eggs Introduced Early in Complementary Feeding and Egg Specific IgE Antibodies: A Randomized Controlled Trial in Ecuador
Abstract Topical Area: Maternal, Perinatal and Pediatric Nutrition

Melissa Chapnick, Michael Galvin, Sherlie Jean-Louis, Henri-Claude Saintelmond, Emmanuel Gyimah, Sandra Lee, Lora Iannotti. Ze Lekòl: Contextual Factors Affecting Use of Eggs in School Feeding in Cap-Haïtien, Haiti

Abstract Topical Area: Global Nutrition

Yan Bai, Lieven Huybregts, Lora Iannotti, **Melissa Chapnick**, Andrew Jones, Derek Headey, William Masters. The Economics of Feeding Infants: Least-Cost Nutrient Adequate Diets from 6 to 23 Months of Age Using Breastmilk and Locally Available Foods in 31 Low-Income Countries

Abstract Topical Area: Global Nutrition

Natalia E Poveda-Rey (4th year)

Natalia had a paper published recently:

Poveda, NE., Hartwig, FP., Victora, CG., Adair, LS., Barros, FC., Bhargava, SK., Horta, BL., Lee, NR., Martorell, R., Mazariegos, M., Menezes, AMB., Norris, SA., Richter, LM., Sachdev, HS., Stein, A., Wehrmeister, FC., Stein, AD. & COHORTS Group. Patterns of growth in childhood in relation to adult

schooling attainment and IQ in 6 birth cohorts in low and middle-income countries: evidence from COHORTS. The Journal of Nutrition, Volume 151, Issue 8, August 2021, Pages 2342–2352, <https://doi.org/10.1093/jn/nxab096>

She was one of the 12 Science ATL Communication Fellows for 2021:

(<https://scienceatl.org/scicommfellow/>). This professional development training in science communication for Atlanta-area graduate students and post-docs from different fields of knowledge aims to provide the skills that contribute to closing the communication gap between scientists and the public.

She has also been accepted to an oral session at the Population Association of America Annual Meeting (PAA2022) next April on the topic: “**Individual and contextual predictors of body mass index and waist circumference in Colombian adults: A multilevel analysis of the National Nutrition Survey 2015**”

Candice Duong (4th year)

Candice recently published an article and presented at a conference:

Duong MC, Nguyen-Viet H, Grace D, Ty C, Samkol P, Young MF. Perceived food environment is associated with low consumption of meat, fruits and vegetables in mothers and children living in urban Cambodia. Public Health Nutrition; 2021; 1-29. <https://doi.org/10.1017/S1368980021004122>

Duong MC, Patel S, Nguyen-Viet H, Grace D, Ty C, Samkol P, Young MF. Market access and child nutrition in Cambodia. *CDC Health and Place*, Atlanta, United States, November 2021

Sonia Tandon (4th year)

Sonia had three manuscripts published this year:

Tandon S, Gonzalez-Casanova I, Barraza-Villarreal A, Romieu I, Demmelmair H, Jones DP, Koletzko B, Stein AD, Ramakrishnan U. Infant Metabolome in Relation to Prenatal DHA Supplementation and Maternal Single-Nucleotide Polymorphism rs174602: Secondary Analysis of a Randomized Controlled Trial in Mexico. J Nutr. 2021 Nov 2;151(11):3339-3349. <https://doi.org/10.1093/jn/nxab276>. PMID: 34494106; PMCID: PMC8562085.

Rouphael NG, Lai L, **Tandon S**, McCullough MP, Kong Y, Kabbani S, Natrajan MS, Xu Y, Zhu Y, Wang D, O'Shea J, Sherman A, Yu T, Henry S, McAllister D, Stadlbauer D, Khurana S, Golding H, Krammer F,

Mulligan MJ, Prausnitz MR. Immunologic mechanisms of seasonal influenza vaccination administered by microneedle patch from a randomized phase I trial. NPJ Vaccines. 2021 Jul 14;6(1):89. <https://doi.org/10.1038/s41541-021-00353-0>. PMID: 34262052; PMCID: PMC8280206.

Gonzalez Casanova I, Schoen M, **Tandon S**, Stein AD, Barraza Villarreal A, DiGirolamo AM, Demmelmair H, Ramirez Silva I, Feregrino RG, Rzehak P, Stevenson I, Standl M, Schnaas L, Romieu I, Koletzko B, Ramakrishnan U. Maternal FADS2 single nucleotide polymorphism modified the impact of prenatal docosahexaenoic acid (DHA) supplementation on child neurodevelopment at 5 years: Follow-up of a randomized clinical trial. Clin Nutr. 2021 Oct;40(10):5339-5345. <https://doi.org/10.1016/j.clnu.2021.08.026>. Epub 2021 Sep 11. PMID: 34543890.

Miranda Cook (5th year)

Miranda had a paper published recently:

Cook M, Ward R, Newman T, Berney S, et al. Food Security and Clinical Outcomes of the 2017 *Georgia Fruit and Vegetable Prescription* Program. Journal of Nutrition Education and Behavior. 2021; Volume 53, Issue 9, 770 – 778. <https://doi.org/10.1016/j.jneb.2021.06.010>

ROTATION OPPORTUNITIES

(AGGREGATED HERE SO YOU DON'T HAVE TO SEARCH THROUGH HUNDREDS OF ARCHIVED EMAILS)

Dietary diversity and food security in the HAPIN trial: Rotation/Data Analysis Opportunity for Spring/Summer 2022

Dr. Sheela Sinharoy (Assistant Professor, Hubert Department of Global Health) is seeking a student to support analysis of data related to dietary diversity and food security in the Household Air Pollution Intervention Network (HAPIN) trial. HAPIN is a randomized control trial taking place in four countries: Guatemala, Peru, India, and Rwanda. The rotation will include cross-sectional analysis of baseline data collected from pregnant women in each study site, as well as examining the impact of the intervention on dietary intake and food security using endline data. Each of these analyses will contribute to the production of manuscripts for publication, with opportunities for authorship.

For further information, contact Dr. Sheela Sinharoy at: sheela.sinharoy@emory.edu

Metabolic Nutrition NHS Graduate rotation openings – 2022 year

PI: Rani H Singh, PhD RD; Professor, Director of Emory Metabolic Nutrition Program

Location: Metabolic Nutrition Program within the Department of Human Genetics, Woodruff Memorial Research Building. (<https://med.emory.edu/departments/human-genetics/research/labs/singh/index.html>)

Overview: We have opportunities for clinical, service, data-driven and public health projects that reinforce the relationship between nutrition and health outcomes. In particular, we focus on inherited metabolic disorders (IMD) that require medical nutrition therapy (MNT). Dr. Singh and the research dietitians provide services at the GCRC Bionutrition research core and support several Emory investigators. Other key projects include research-based Annual Metabolic Camp (<https://metcamp.net/>), MNT4P (<https://mnt4p.org/>), Southeast Regional Genetics Network (SERN) IMD clinical guideline development (<https://southeastgenetics.org/for-professionals/nutrition-management-guidelines/>), and professional continuing education (<https://med.emory.edu/departments/human-genetics/education/index.html>).

Students will also have opportunity to write nutrition proposals to assess impact of nutrition interventions in IMD while utilizing the NIH funded GCRC Bionutrition core. This provides occasion to study body composition, dietary data analysis, activity and endurance, metabolomics, other biochemical markers and to develop feeding studies.

Specific rotation topics available: The following list are project opportunities available for rotation students (rotations have opportunity to lead to thesis work if there is student interest).

- 1) Analysis of demographics, socioeconomics, impact and efficacy of MNT4P program on Georgia state families impacted by IMD
- 2) Analysis of data collected from prior Metabolic camps. Available data may be analyzed cross-sectionally, as Day 1 vs Day 5 of camp, or longitudinally across several years of prior camps. Data includes various biomarkers, detailed diet record analysis, measures of compliance, demographics and socioeconomic status (SES).
- 3) Methodological research comparing methods for body composition and biochemical assessment.
- 4) Exposure to indirect calorimetry (energy expenditure), bioelectrical impedance (BIA), dual-energy X-ray absorptiometry (DXA), exercise testing, anthropometry (skinfold, circumference), food record analysis (Nutrition Data System for Research (NDSR) program), protocol development, and feeding studies through the metabolic kitchen.

Contact: Students interested in a rotation should email Dr. Teresa Douglas (tddougl@emory.edu) or Rosalynn Blair (rborlaz@emory.edu).

Changes in Diagnosis of Type 2 Diabetes in Children during the COVID Pandemic

Project Description: Type 2 diabetes is a metabolic disorder characterized by peripheral insulin resistance which leads to increased glucose levels in the body. If untreated, these high glucose levels can lead to damage of the small blood vessels supplying vital organs such as the eyes and kidneys. Historically, type 2 diabetes was more frequently observed in adults. However, recent trends in clinical practice suggest that pediatric patients may also be at risk of developing type 2 diabetes. Further, during the COVID-19 pandemic, our clinical practice saw an increase in the number of newly diagnosed patients. This project aims to characterize these patients to better understand risk factors leading to the development of type 2 diabetes in youth and complications that may occur in this population. Additionally, we hope to gain insight about the impact of the pandemic itself on patient care.

Scope of work: We are looking for a student interested in working with us to analyze a data set of approximately 830 patients who were diagnosed with type 2 diabetes in the year preceding the onset of COVID-19 pandemic (2019) and compare patient characteristics with those diagnosed in 2020 and 2021. Relevant variables will include age at diagnosis, race/ethnicity, reported family history, presence of diabetes-related complications (such as dyslipidemia, diabetic ketoacidosis, fatty liver disease), lab values (such as hemoglobin A1C) and prescribed medications (insulin, metformin, etc).

For more information, contact: **Dr. Solveig Argeseanu Cunningham** at: sargese@emory.edu

Qualitative Data Analysis: Breastfeeding practices of LBW infants

Topic: Early nutrition feeding practices among vulnerable infants in Ethiopia,

Timeline: Spring 2022 (few meetings in fall to prep and discussion with data collection team),

Mentors: **Melissa Young** (Global Health) and **John Cranmer** (SON)

Project Objective: To improve the quality of vulnerable infant nutrition support in the government "Saving Little Lives" facilities. We will first assess existing practice, strategies and supports for LBW infant feeding at government facilities. Next, we will use these preliminary findings to influence breast feeding support strategies provided by the government's SLL program in Amhara, Ethiopia facilities.

Project data: Qualitative interviews with 50 respondents (30 in-depth interviews with caregivers of a LBW infant (< 2000 grams), 10 in-depth interviews with caregivers of a healthy infants (> 2000 grams) and 10

in-depth interviews with facility staff).

Student Role: Lead qualitative data analysis and aid in write up of key findings.

For more information, contact: **Dr. Melissa Young** at: melissa.young@emory.edu

GRANTS AND FELLOWSHIPS

Post-Doctoral Clinical Research Fellowship in Genetic Metabolic Nutrition & Inherited Metabolic Disorders

Rani H. Singh, PhD, RD, LD, and team at Genetic Metabolic Nutrition Research & MNT4P Program in Emory SOM Department of Human Genetics offer a full-time 2-year Post-Doctoral Clinical Research Fellowship.

The post-doctoral fellow primarily works on research projects and activities related to genetics nutrition and inherited metabolic disorders (IMD)/inborn errors of metabolism (IEM). The post doc also assists with clinical support, as well as development of online education and training programs for healthcare providers. In addition, the fellow teaches classes and mentors graduate level students. Fellow learns skills in professional manuscript writing, grant/fellowship writing, and clinical and educational training project design and management. After successful completion of training, the postdoctoral fellow may have an opportunity to be considered for a potential faculty position in the Department of Human Genetics.

“Rare disease and genetic based nutrition therapy are often overlooked areas of research and patient care, despite a clear need. As a post-doctoral fellow in the DOHG Metabolic Nutrition Program, I was granted opportunity to dive into researching disease natural history, impact of nutrition therapies, and health outcomes for patients with IMD. My time as a post-doctoral fellow in the DOHG Metabolic Nutrition Program allowed me to make a difference in the IMD field and provided the necessary foundation so I can continue to make a difference as my career progresses.”

*Teresa D. Douglas, PhD, MS
Associate Staff Scientist*

PhD, RDs with interest in nutrition/nutritional biochemistry should consider applying for this training

program. Prospective applicants should have a research interest in clinical nutrition, outcomes research, developing evidence-based guidelines, and creating training modules for clinicians.

For application information about our next Post-Doctoral Fellowship start date (expected September 1, 2022), contact Rosalynn Blair at rborlaz@emory.edu.

To learn about all of our training opportunities in Genetic Metabolic Nutrition & Inherited Metabolic Disorders, please visit our website <https://med.emory.edu/departments/human-genetics/research/singh/nutrition-training.html>

Post-Doctoral Positions: Texas A&M AgriLife Research

Texas A&M AgriLife Research is hiring 16 Postdoctoral Research Fellows through a cluster-hire to work on various research projects with a focus on advancing health through agriculture. The postdoctoral fellows will be advised by top scientists at Texas A&M University/AgriLife, Prairie View A&M University, and US Department of Agriculture (USDA) Agricultural Research Service (ARS).

Overview: The positions are associated with The Institute for Advancing Health Through Agriculture (IHA, <https://iha.tamu.edu/>), a new organizational unit within Texas A&M AgriLife Research established to advance research that connects production agriculture with human, environmental and economic health outcomes. IHA has three focus areas: Responsive Agriculture, Precision Nutrition, and Healthy Living. Collectively, these focus areas bring together experts across a myriad of disciplines (including agriculture, nutrition, behavioral and life sciences, public health, engineering, data and computation science, and economics) working collaboratively to develop solutions to many of the most pressing issues facing the food and agriculture systems today in a manner that can support human, environmental, and economic health. The Postdoctoral Fellows Program is designed to support the mission of the IHA and to enhance collaborations between Texas A&M AgriLife Research, Prairie View A&M University, and USDA-ARS scientists. The postdoctoral fellows and advisors will coordinate efforts across different positions and locations and institutions.

For more information click [here](#).

JOB OPPORTUNITIES

Senior Micronutrient Specialist

McKing Consulting Corporation is seeking a senior micronutrient specialist to actively engage with CDC's International Micronutrient Malnutrition Prevention and Control (IMMPaCt) program and liaise with Ministries of Health and country offices of other global partners. The program goal is to eliminate vitamin and mineral deficiencies (iron, iodine, vitamin A, folic acid, and zinc deficiency) as public health problem. The incumbent will support projects in countries identified by CDC. The incumbent will provide technical assistance and training in micronutrient monitoring, evaluation and surveillance; develop and provide program guidance; carry out technical activities needed to advance and scale up interventions; conduct complex statistical analyses; and publish in peer reviewed journals. Efforts will be carried out with scientific technical support from CDC and will include working closely with country-based project staff and liaisons.

For more information click [here](#).

Assistant Professor in Public Health and Nutrition - Colorado State University

The Department of Food Science and Human Nutrition at Colorado State University (CSU) invites applications for an Assistant Professor. The 9-month tenure track appointment will begin on August 15, 2022. They are seeking applicants with expertise in behavioral sciences at the individual, policy, systems and/or environmental levels as it relates to nutrition, health promotion and disease prevention. Candidates with a research focus in the priority areas of dissemination and implementation science; innovative behavioral or environmental intervention strategies and methodology; dietetics; food systems and sustainability; food security; health equity; rural health or systems science are encouraged to apply. All areas of community/public health nutrition will be considered, with emphasis on the candidate's capability of directing an innovative and impactful research program. The successful candidate is expected to establish a nationally recognized, externally funded interdisciplinary research program, to integrate their research into existing Department and University priority areas, and to teach and mentor undergraduate and graduate students. The position will have outstanding Department and College of Health and Human Sciences support, strong research and teaching infrastructure, and access to collaborative opportunities both within CSU and with its partners, including the Cooperative Extension, Center for Healthy Aging, Prevention Research Center, Colorado Clinical and Translational Sciences Institute, Colorado School of Public Health, and the University of Colorado School of Medicine.

For more information click [here](#).

Assistant Professor in Food, Bioprocess, and Nutrition Science - North Carolina State University

The Department of Food, Bioprocessing and Nutrition Sciences seeks a highly-qualified candidate for an Assistant Professor position in the area of Food Systems Sustainability. This will be a tenure-track position with an 80% research and 20% teaching appointment. The incumbent will be expected to develop an internationally recognized, multidisciplinary, externally-funded research program in the area of food systems waste and/or sustainability that involves aspects of processing, microbiology, chemistry, and engineering. This includes an expectation to train graduate and undergraduate students via research and internship experiences.

For more information, click [here](#).

PEDAGOGY OPPORTUNITIES

Technology in Pedagogy, Curriculum, and Research (TPC+R)

TPC+R is a 6-week TATTO extension program opportunity for graduate students to explore using new technologies in their teaching and research. Participants will discuss practical and theoretical models for digital scholarship while receiving assistance in developing materials for their own courses and/or research. Applications are due December 31, 2021. More information available [here](#).

FIELD-RELATED CONFERENCES

ASPEN 2022 Nutrition Science & Practice Conference

When: March 26-29, 2022

Where: Seattle, Washington & Virtual

More information [here](#).

Nutrition 2022 (American Society for Nutrition)

When: June 14-15, 2022

Where: Virtual

More information [here](#).

SNEB 2022 (Society for Nutrition Education and Behavior)

When: July 29-Aug 1, 2022

Where: Atlanta, Ga

Abstracts due February 14th 2022

More information [here](#).

FACULTY SPOTLIGHT



Jessica A. Alvarez, PhD, RD.

Associate Professor of Medicine,

Division of Endocrinology, Metabolism & Lipids, Emory University School of Medicine

Describe your academic path to your current position? How long have you been at Emory?

I'm currently an Associate Professor of Medicine in the Emory School of Medicine, Department of Medicine, Division of Endocrinology. I started at Emory as a Postdoctoral Fellow under Dr. Vin Tangpricha 10 years ago. Before that, I got my undergraduate degree at Louisiana State University (Geaux Tigers!),

followed by training as a registered dietitian, as well as Master's in Clinical Nutrition and PhD in Nutrition Sciences at University of Alabama-Birmingham.

What is your particular area of research and how did you become interested in it?

Broadly, my research focuses on nutrition and body composition in clinical diseases, such as cystic fibrosis (CF) and HIV. About 50% of my research is dedicated to using nutrition research tools to be able to generate evidence-based guidelines to improve the lives of individuals with CF. I began working in CF as a Master's student doing a pediatric clinical rotation, where I realized how important nutrition was for survival and quality of life in this disease. I briefly left the CF world while working on my PhD, but as fate would have it, my first post-doc research experience was to work on a new grant led by Dr. Tangpricha to look at vitamin D in patients with CF, and I've been working with this population since.

What did you enjoy the most about your graduate school experience?

The lifelong friendships I made. Some of my best friends are now my colleagues in science, and my graduate school mentor will be a forever mentor.

Do you have any professional development advice for NHS students?

Scientific manuscripts at this stage are currency for students (and will continue to be as you climb the academic ladder), so write, write, write. That being said, find an outlet outside of science/your project that lets you break away every once in a while.

Describe any challenging and exciting parts of your current position?

Obtaining grant funding to keep a lab running is the most challenging, but so rewarding when it happens! Right now, being on tenure track, it can be challenging to balance all aspects required for tenure: scholarship (grants and papers), service (committee work), and teaching. Most exciting and rewarding for me is watching students succeed, whether it be a poster or oral presentation, a publication, a grant, or a dissertation defense!

What do you like to do in your free time?

I've got 2 kiddos at home: a 5 yr old son and a 9 yr old daughter, so a lot of my free time is making sure I spend quality time with them. For "me time," I love to read books (fiction only), run (really more of a jog) on the weekends, and CrossFit in the early mornings.

Describe any potential rotation opportunities?

- Nutritional Metabolomics in Cystic Fibrosis (data analysis)
- Stool Metagenomics in HIV (primary data collection)
- Metabolomics in Diabetic Foot Ulcer (primary data collection)
- Use of Medical Records to Assess Body Composition in Cystic Fibrosis (primary data collection)

NHS ACTIVITIES

The fall semester offered opportunities for many NHS students to be reunited. This also included a chance to meet many of the 2nd and 1st year students for the first time in person.





In November, a few NHS students masked up and helped distribute over 12,000 pounds of fresh produce to 261 patients and their families at the Brookhaven Grady clinic. The project, run by Grady Health System - Food as Medicine aims to address food insecurity among Grady's most vulnerable patients and their families.



Stay happy & healthy! We'll see you in May!



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|Dec 2021 Newsletter|

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