***Allison Livia Buti Shapiro, PhD, MPH***

**POSITION:** Assistant Professor

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Section of Endocrinology | Department of Pediatrics

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**EDUCATION**

2003-2006 Bachelor of Science, Biology, Chemistry

University of Portland, Portland, OR

2008-2010 Master of Public Health, Epidemiology and Biostatistics

Oregon Health and Science University, Portland, OR

Advisor: *Dennis McCarty, PhD*

2011-2015 Doctor of Philosophy, (Lifecourse) Epidemiology

University of Colorado Anschutz Medical Campus, Aurora, CO

Advisor: *Dana Dabelea, MD, PhD*

2015-2019 Postdoctoral Fellowship, Pediatric Neuroimaging, Neurodevelopment

University of Colorado Anschutz Medical Campus, Aurora, CO

Advisor: *Jason Tregellas, PhD*

**ACADEMIC APPOINTMENTS**

2020- **Assistant Professor**, Department of Pediatrics, Section of Endocrinology, *University of Colorado Anschutz Medical Campus*

2022- **Director of Clinical Research in Pediatric Endocrinology**, Section of Endocrinology, Department of Pediatrics, *Children’s Hospital Colorado*, *University of Colorado Anschutz Medical Campus*

**HONORS, SPECIAL RECOGNITIONS AND AWARDS**

2013 Miriam Orleans Graduate Research Assistance Fund Award

2011-2015 Colorado School of Public Health-Graduate School Epidemiology Award

2014 American Diabetes Association, Michaela Modan Memorial Award

2014 Translational Placental Biology Travel Award

2016 Rocky Mountain Mathematics Consortium Conference Travel Award

2021 American Diabetes Association, Young Investigator Award

2021 American Diabetes Association, Michaela Modan Memorial Award

2023 Fellowship Mentor of the Year in Pediatric Endocrinology at CU Anschutz

2023-2024 American Pediatric Society and Society for Pediatric Research Journeys & Frontiers in Pediatric Research program participant (nominated and competitively selected)

**MAJOR COMMITTESS AND SERVICE RESPONSIBILITIES**

2021- Member, Executive Committee, Developmental Psychobiology Research Group

2022- Member, Publications Committee, Diabetes Prevention Program Observational Study

2022- Member, Ancillary Studies Committee, Diabetes Prevention Program Observational Study

2023-2024 Academic Editor, *Pediatric Diabetes*

2023- Co-Chair, ‘-Omics Working Group, Diabetes Prevention Program Observational Study

**REVIEW AND REFEREE WORK**

2014-2015 Organizer, Nutrition Epidemiology Journal Club

2016-2017 Science Judge, Graduate Experience for Multicultural Students (GEMS) Summer Program

2016-2017 Organizer, Department of Epidemiology Seminar Series, Colorado School of Public Health

2017 Applicant Evaluator, Graduate Experience for Multicultural Students (GEMS) Summer Program

2016-2018 MPH Program Preceptor, Department of Epidemiology, Colorado School of Public Health

2017-2019 Organizer, Developmental Psychobiology Writing Group

2017-2019 Ad-hoc reviewer, *American Journal of Preventive Medicine*

2017-2020 Ad-hoc reviewer, *Nutrients*

2018- Ad-hoc reviewer, *Diabetologia*

2018- Ad-hoc reviewer, *PLoS ONE*

2019- Ad-hoc reviewer, *Pediatric Diabetes*

2019- Ad-hoc reviewer, *Obesity*

2020-2023 Abstract reviewer, American Diabetes Association Scientific Sessions

2021- Protocol reviewer, University of Colorado Scientific Advisory & Review Committee

2021 Applicant reviewer, Pediatric Endocrine Society Fellowship Award

2022 Applicant reviewer, Colorado Clinical and Translation Sciences Institute (CCTSI) Pre-K Program

2022- Ad-hoc reviewer, *Appetite*

2022- Organizer, Neuroendocrinology Journal Club

2022 Applicant reviewer, New York Regional Center for Diabetes Translation Research Pilot and Feasibility Program

2023-2024 Ad-hoc reviewer, *Diabetes Care*

2023-2024 Applicant reviewer, CCTSI Child and Maternal Health Pilot Program

2023 MPH Program Preceptor, Department of Epidemiology, Colorado School of Public Health

**INVITED EXTRAMURAL LECTURES, PRESENTATIONS AND VISITING PROFESSORSHIPS**

Local

2016 Department of Radiology, Annual Research Conference, University of Colorado, Title: “Obesity in Pregnancy Influences Postnatal Brain Myelination Trajectories”

2016 Department of Endocrinology and Metabolism, Friedman Laboratory, University of Colorado, Title: “Glutathione in the Infant Brain and Neurocognitive Outcomes”

2017 Department of Endocrinology and Metabolism, Friedman Laboratory, University of Colorado, Title: “Leveraging Brain fMRI to Study Fetal Programming of Metabolic Disease”

2017 Department of Biostatistics and Bioinformatics, Imaging Working Group, University of Colorado, Title: “Leveraging Brain fMRI to Study Fetal Programming of Metabolic Disease”

2018 Department of Psychiatry, Annual Research Conference, University of Colorado, Title: “Relating Disinhibited Eating Behaviors to Resting State Functional Connectivity in Young Children”

2018 Developmental Psychobiology Research Group, Annual Research Conference, University of Colorado, Title: “Childhood Metabolic Markers are Associated with Performance on Cognitive Tasks in Young Children”

2019 Developmental Psychobiology Research Group, Seminar, University of Colorado, Title: “Hypothalamic Nutrient Sensing: Developmental Implications for Disinhibited Eating Behaviors”

2019 Lifecourse Epidemiology of Adiposity and Diabetes Center, Mini Summit, University of Colorado, Title: “Neural Underpinnings of Disinhibited Eating Behaviors in Children and Youth”

2020 Pediatric Endocrinology Summer Education Series, Department of Pediatrics, University of Colorado, Title(s): 1) “Neuroimaging and Metabolism”, 2) “Introduction to Epidemiology and Study Design”

2020 Pediatric Endocrinology Research Group, Department of Pediatrics, University of Colorado, Title: “Pediatric Obesity and the Brain”

2021 Department of Clinical Nutrition, Children’s Hospital Colorado, Title: “The Gut-Brain Axis”

National

2018 Diabetes Research Group (PI: Robert Sherwin), Yale University, Title: “Neural Correlates of Hedonically-Motivated Eating Behavior in Young Children”

2020 Schur Laboratory Group (PI: Ellen Schur), University of Washington, Title: “Energy Homeostasis and the Brain”

2022 82nd Scientific Sessions of the American Diabetes Association, Symposium on Diabetes and Cognition Across the Lifespan, Title: “Youth-Onset Type 2 Diabetes and Cognition”

International

2024 60th European Association for the Study of Diabetes Annual Meeting, Symposium on Youth-Onset Type 2 Diabetes Mellitus: A Key Challenge for the Future, Title: “Youth-Onset Type 2 Diabetes Brain Health and Cognition – What We Do and Don’t Know”

**TEACHING RECORD**

Teaching Positions

2016-2017 **Assistant Instructor**, Introduction to Epidemiology (EPID 6630), *Department of Epidemiology, Colorado School of Public Health, University of Colorado Denver*

2014-2015 **Teaching Assistant,** Maternal and Child Health Epidemiology (EPID 6644), 3.0 credit hour, *Department of Epidemiology, Colorado School of Public Health, University of Colorado Denver*

2012-2015 **Teaching Assistant**, Introduction to Epidemiology (EPID 6630), *Department of Epidemiology, Colorado School of Public Health, University of Colorado Denver*

2009-2011 **Teaching Assistant**, Data Management, continuing education, *Summer Research Training Institute for American Indian and Alaska Native Health Professionals, Northwest Indian Health Board*

Graduate School Guest Lecturer

2020 Colorado Clinical and Translational Sciences Institute, Dietetics Internship Program, University of Colorado, Title: “The Gut-Brain Axis”

2021 Master of Modern Human Anatomy Graduate Seminar, University of Colorado, Title: “Neuroimaging: the basics”

2022 Master of Modern Human Anatomy Graduate Seminar, University of Colorado, Title: “Youth-Onset Diabetes and Cognition”

2023 Master of Modern Human Anatomy Graduate Seminar, University of Colorado, Title: “Diabetes Pathophysiology in Older Adults with pre-Diabetes or Type 2 Diabetes and Dementia Risk”

**GRANT SUPPORT**

Active Research Support

1. K01DK120562 Shapiro (PI) NIH-NIDDK 1/2020-12/2024

**The neural underpinnings of disinhibited eating behavior in adolescents with and without obesity**

The primary goal of this mentored career training award is to conduct focused research and training in experimental methods for functional neuroimaging, clinical trial design and implementation, and disinhibited eating behaviors. This K01 will facilitate the expansion of my research program into investigating the specific contributions of central homeostatic mechanisms to disinhibited eating behavior and obesity in youth.

Role: PI

2. Shapiro (MPI) American College of Radiology Fund for Collaborative Research in Imaging 6/2022-6/2025

**Preclinical imaging biomarkers of Alzheimer’s Disease neuropathology in young adults with youth-onset diabetes: a proof-of-concept study**

It is well known and accepted that diabetes that develops in adulthood significantly increases a person’s risk for Alzheimer’s Disease and its related dementias (AD/ADRD). However, very little is known about how diabetes that develops in childhood and adolescence, or youth-onset diabetes (Y-DM), affects the risk for and possible early-onset of AD/ADRD later in life. This study seeks to document early neuropathological indicators of AD/ADRD in young adults with Y-DM.

Role: MPI

3. U19AG078558 Luchsinger/Nathan/Temporosa (MPI) National Institute on Aging 9/2022-8/2027

**Association of glycemia and related factors and complications with cognitive impairment and AD/ADRD biomarkers (Project 2; Sub-Project #7575)**

The goal of Project 2 (Dabelea, Project Lead; Shapiro, Project Co-Lead) of the U19 titled, “Alzheimer's Disease and Alzheimer's Disease Related Dementias in Prediabetes and Type 2 Diabetes: The Diabetes Prevention Program Outcomes Study AD/ADRD Project”, is to study the associations of type 2 diabetes related factors with risk for cognitive decline, mild cognitive impairment (MCI), dementia, and related neuropathologies, among persons with pre- diabetes and type 2 diabetes in the Diabetes Prevention Program Outcomes Study (DPPOS).

Role: Project 2 Co-Lead, Colorado Clinic Site Co-I

5. Shapiro (MPI) Joint LEAD Center/CU-Cancer Center Pilot 2/2024 – 1/2025

**Exploring brain, cognitive, and behavioral contributions to obesity in youth with Craniopharyngioma: a pilot study.** Over 50% of children and youth with Adamantinomatous Craniopharyngioma (ACP), a benign brain tumor of the pituitary, develop obesity, which puts them at significant risk for obesity-related morbidity from metabolic and cardiovascular disease. Hypothalamic involvement, or damage to the hypothalamus, has been linked to risk for obesity in ACP. However, beyond hypothalamic structural damage, our understanding of the neural, cognitive, and behavioral substrates driving obesity risk in ACP are poorly understood. To address these limitations, the purpose of this study is to preliminarily evaluate a potential pathway linking hypothalamic structural damage and obesity via intermediate disruption to hypothalamic function, cognition, and eating behavior in children and youth with ACP.

6. 1R03AG088803-01 Shapiro (PI) National Institute on Aging 8/2024-7/2026

**Proteomic markers of risk for cognitive impairment in people with type 2 diabetes.** The overarching goal of this pilot project is to characterize the plasma proteome in people with type 2 diabetes (T2D), with and without mild cognitive impairment (MCI), as a first step toward identifying risk biomarkers for cognitive impairment syndromes in people with T2D.

Completed Research Support

1. TL1 TR000155 Sokol (PI) NIH-NCATS 9/2013-1/2014

**Training in Clinical and Translational Sciences**

This predoctoral fellowship program incorporated a broad reaching intra and inter-institutional program to enhance training of clinical and translational scientists, and collaboration across the communities of the state of Colorado and the surrounding region. The goal of this fellowship was to support my dissertation research efforts via protected research time. Additionally, through this program and its associated training requirements, I obtained a Clinical and Translational Science Certificate.

Role: Trainee

2. Small Research Project Grant Shapiro (PI) A.S.P.E.N. Rhoads Foundation 1/2014-12/2014

**Exploring the mediating roles of SIRT1 and PPARγ in the relationship between maternal dietary niacin and infant adiposity**

The goal of this grant was to provide financial support for laboratory measures proposed as part of the second aim of my dissertation project. Funding was used to purchase assays to measure umbilical cord tissue SIRT1 protein concentration and SIRT1 enzyme activity.

Role: PI

3. 14PRE18230008 Shapiro (PI) American Heart Association 1/2014-12/2015

**Exploring the mediating roles of SIRT1 and PPARγ in the relationship between maternal dietary niacin and infant adiposity**

The primary goal of the American Heart Association fellowship was to support my dissertation research efforts via protected research time. My dissertation project explored a potential molecular mechanism linking maternal diet in pregnancy and infant adiposity using epidemiologic and basic science approaches in a pre-birth cohort of 1,410 mother-infant dyads. Population-level analyses were used to explore the association between maternal niacin intake and neonatal fat mass at birth. To elucidate the role of SIRT1 and PPARγ as protein mediators of the hypothesized association, protein analysis and cell culture experiments were also conducted.

Role: Trainee

4. R01-DK068001 Dabelea (PI) NIH-NIDDK 7/2012-6/2017

**Exploring Fetal Origins Hypothesis in Diverse Youth (Exploring Perinatal Outcomes among Children EPOCH)**

This project will follow the EPOCH cohort of youth exposed and not exposed to GDM in utero to explore the effects of fetal over-nutrition on childhood growth, development and distribution of adiposity, cardiovascular risk factors, and metabolic abnormalities among youth who are 12-19 years old. Dr. Shapiro’s specific contribution is in manuscript development and ancillary grant preparation.

Role: Postdoctoral Research Fellow

5. T32-MH015442 Laudenslauger (PI) NIH-NIMH 7/2017-12/2019

**Training in Developmental Psychobiology, Psychopathology and Behavior**

The goal of this postdoctoral fellowship is to receive training in key areas, including 1) the underlying neurobiology of cognitive development; and 2) neuroimaging methodology.

Role: Postdoctoral Research Fellow

6. TDER1464 Shapiro (PI) NIMH Pediatric Research Loan Repayment 8/2018-7/2020

**Functional Brain Networks and Cognition in Children Exposed to Maternal Obesity *In Utero***

The central goal of this proposal is to investigate neuronal connectivity within the executive control and default mode networks in young children born to mothers with and without obesity in pregnancy, and to test the relationship between network connectivity and performance on executive function tasks.

Role: PI

7. DPEF Shapiro (PI) Developmental Psychobiology Endowment Fund 1/2018-12/2020

**Hypothalamic BOLD Signal in Response to a Glucose Load in Adults**

In exploring the role of the brain in metabolic disease and obesity risk this pilot award aims to 1) determine the extent to which obesity impacts the neuronal connectivity between the hypothalamus and the salience and reward networks under an energy surplus condition, and 2) test the relationship between connectivity strength of the hypothalamus with the salience and reward networks under an energy surplus condition and disinhibited eating behaviors among obese and non-obese young adults.

Role: PI

8. DK127208-01 D’Agostino (PI) NIH-NIDDK 12/2019-11/2021

**Closeout of the SEARCH for Diabetes in Youth Cohort Study**

The primary goal of this bridge funding is for SEARCH investigators to lead in the development and submission of a minimum of 5-7 manuscripts leveraging the use of existing SEARCH data and present SEARCH study results at scientific meetings.

Role: Co-I

9. TDER1464 Shapiro (PI) NIH-NIMH 8/2020-7/2021

**Renewal-NIMH Pediatric Research Loan Repayment**

This renewal of my previous NIMH Pediatric Research Loan Repayment will support my loan repayment efforts during my K01 project period.

Role: PI

10. CO-J-21-12 Shapiro (PI) Colorado Clinical and Translational Research Institute 5/2021-4/2023

**Implementation of a novel, interdisciplinary protocol to study the pancreatic-hypothalamic axis in vivo in human adults**

In this junior faculty CO-Pilot award, we will implement a novel design that induces endogenous insulin secretion via a hyperglycemic clamp with concomitant measurement of the hypothalamic neuronal response via functional magnetic resonance imaging in young adults with and without obesity to estimate hypothalamic insulin sensitivity. This study will be the first step toward understanding hypothalamic insulin sensitivity and its role in the pancreatic-hypothalamic axis in vivo.

Role: PI

11. UL1 TR002535 Sokol (PI) Colorado Clinical and Translational Research Institute 6/2021-5/2023

**Micro Grant Program Award Supplement to CO-J-21-12**

This microgrant provides additional funds to CO-J-21-12 to support research nursing services, clamp procedures, blood collection and analyses.

Role: PI

12. UL1 TR002535 Sokol (PI) Colorado Clinical and Translational Research Institute 4/2020-3/2024

**Micro Grant Program Award Supplement to K01-DK120562**

This microgrant provides additional funds to K01-DK120562 to support research nursing services, blood collection and analyses.

Role: PI

13. CO-M-23-19 Pauley (PI) Colorado Clinical and Translational Research Institute 5/2023-4/2024

**Establishing relationships between plasma biomarkers of neurodegeneration and diabetic**

**retinopathy in type 1 diabetes**

In this mentored CO-Pilot award, Dr. Pauley will examine relationships between plasma biomarkers of neurodegeneration and diabetic retinopathy in adults with type 1 diabetes (T1D). These results will inform future studies surrounding biomarkers as risk predictors for neurodegenerative disease and dementias in those with T1D.

Role: Co-Mentor

**BIBLIOGRAPHY**

Peer Reviewed Articles

1. **Buti AL**, Eakins D, Fussell H, Kunkel L, McCarty D. (2013). Clinician attitudes, social norms and intentions to use a computer-assisted intervention. *Journal of Substance Abuse Treatment*, 44(4), 433-437.

2. Campbell B, **Buti AL**, Fussell H, McCarty D, Guydish J. (2013). Therapist Predictors of Treatment Delivery Fidelity in a Community Based Trial of 12-Step Facilitation. *The American Journal of Drug Abuse and Alcoholism*, 39(5), 304-311.

3. Starling AP, Brinton JT, Glueck DH, **Shapiro AL**, Harrod CS, Lynch AM, Siega-Riz AM, Dabelea D. (2014). Associations of maternal BMI and gestational weight gain with neonatal adiposity in the Healthy Start study. *American Journal of Clinical Nutrition*, 101(2), 302-309.

4. **Shapiro AL**, Schmiege SJ, Brinton JT, Glueck D, Crume TL, Friedman JE, Dabelea D. (2015). Testing the fuel-mediated hypothesis: Maternal insulin resistance and glucose mediate the association between maternal and neonatal adiposity, The Healthy Start study. *Diabetologia*, 58(5), 937-941.

5. Boyle KE, Patinkin ZW, **Shapiro AL**, Baker PR, Dabelea D, Friedman JE. (2015). Mesenchymal Stem Cells from Infants Born to Obese Mothers Exhibit Greater Potential for Adipogenesis: The Healthy Start BabyBUMP Project. *Diabetes*, 65(3), 647-659.

6. Albino J, **Shapiro AL**, Henderson W, Tiwari T. Brega A, Thomas JF, Bryant LL, Braun PA, Quissell DO. (2015). Validation of the Sense of Coherence Scale in an American Indian Population. *Journal of Psychological Assessment*, 28(4), 386-393.

7. Crume TS, **Shapiro AL**, Brinton JT, Glueck DH, Martinez M, Kohn M, Friedman JE, Dabelea D. (2015). Maternal Fuels and Metabolic Measures during Pregnancy and Neonatal Body Composition: The Healthy Start Study. *Journal of Clinical Endocrinology and Metabolism*, 100(4), 1672-1680.

8. Lemas DJ, Brinton JT, **Shapiro AL**, Friedman JE, Glueck DH, Dabelea D. (2015). Associations of maternal weight status prior and during pregnancy with neonatal cardio-metabolic markers at birth: The Healthy Start Study. *International Journal of Obesity*. 39(10), 1437-1442.

9. **Shapiro AL**, Boyle KE, Dabelea D, Patinkin Z, Glueck D, Barbour LA, Norris J, Friedman JE. (2016). Nicotinamide promotes adipogenesis in umbilical cord-derived mesenchymal stem cells and corresponds to neonatal adiposity: The Healthy Start BabyBUMP Project. *PLoS ONE,* 11(7), e0159575.

10. **Shapiro AL**, Kaar JL, Crume TL, Starling AP, Siega-Riz AM, Ringham B, Glueck D, Norris J, Barbour L, Friedman JE, Dabelea D. (2016). Maternal Diet Quality in Pregnancy and Neonatal Adiposity: The Healthy Start Study. *International Journal of Obesity*, 40(7), 1056-1062.

11. Sauder KA, Starling AP, **Shapiro AL**, Kaar JL, Ringham BM, Glueck DH, Dabelea D. (2016). Exploring the association between maternal prenatal multivitamin use and early infant growth: The Healthy Start Study. *Pediatric Obesity*, 11(5), 434-441.

12. Sauder KA, Starling AP, **Shapiro AL**, Kaar JL, Ringham BM, Glueck DH, Leiferman JA, Siega-Riz AM, Dabelea D. (2016). Diet, physical activity and mental health status are associated with dysglycaemia in pregnancy: The Healthy Start Study. *Diabetes Medicine*, 33(5), 663-667.

13. Sauder KA, Starling AP, **Shapiro AL**, Kaar JL, Ringham BM, Glueck DH, Dabelea D. (2016). Exploring the association between maternal prenatal multivitamin use and early infant growth: The Healthy Start Study. *Pediatric Obesity*, 11(5), 434-441.

14. Kaar JL, **Shapiro AL**, Fell DM, Johnson SL. (2016). Parental Feeding Practices, Food Neophobia, and Child Food Preferences: What combination of factors results in children eating a variety of foods? *Food Quality and Preference*, 50, 57-64.

15. Boyle KE, Patinkin Z, **Shapiro AL**, Bader C, Vanderlinden L, Kechris K, Janssen R, Ford R, Smith B, Steinberg G, Davidson E, Yang I, Dabelea D, Friedman JE. (2017). Maternal obesity alters fatty acid oxidation, AMPK activity, and associated DNA methylation in mesenchymal stem cells from human infants. *Molecular Metabolism*, 6(11), 1503-1516.

16. Sauder KA, Koeppen HJ, **Shapiro AL**, Kalata KE, Stamatoiu AV, Ringhma BM, Glueck DH, Norris, JM, Dabelea D. (2017). Prenatal Vitamin D Intake, Cord Blood 25-Hydroxyvitamin D, and Offspring Body Composition: The Healthy Start Study. *Nutrients*, 9(7), e790.

17. Baker PR, Patinkin Z, **Shapiro AL**, De La Houssaye B, Woontner M, Boyle KE, Vanderlinden L, Dabelea D, Friedman JE. (2017). Maternal Obesity and Increased Neonatal Adiposity are Associated with Altered Infant Mesenchymal Stem Cell Metabolism and Energy Sensing. *Journal of Clinical Investigation Insight*, 2(21), e94200.

18. Starling AP, Sauder KA, Kaar JL, **Shapiro AL**, Siega-Riz AM, Dabelea D. (2017). Maternal dietary patterns during pregnancy are associated with newborn body composition. *Journal of Nutrition*, 147(7), 1334-1339.

19. **Shapiro AL**, Ringham BM, Glueck DH, Norris JM, Barbour LA, Friedman JE, Dabelea D. (2017). Maternal dietary niacin intake during pregnancy is not associated with infant adiposity at birth: The Healthy Start Study. *Maternal and Child Health Journal*, 21(8), 1662-1668.

20. Starling AP, **Shapiro AL**, Sauder KA, Kaar JL, Ringham BM, Glueck DH, Galan HL, Dabelea D. (2017). Blood pressure during pregnancy, neonatal size and altered body composition: The Healthy Start study. *Journal of Perinatology*, 37(5), 502-506.

21. **Shapiro AL**, Sauder KA, Tregellas JR, Legget KT, Gravitz SL, Ringham BM, Glueck DH, Johnson SL, Dabelea D. (2017). Exposure to Maternal Diabetes in utero and Offspring Eating Behavior: The EPOCH Study. *Appetite*, 1(116), 610-615.

22. Baker PR 2nd, Patinkin Z, **Shapiro AL**, De La Houssaye BA, Woontner M, Boyle KE, Vanderlinden L, Dabelea D, Friedman JE. (2017). Maternal obesity and increased neonatal adiposity correspond with altered infant mesenchymal stem cell metabolism. *JCI Insight*, 2(21).

23. **Shapiro AL,** Johnson SL, Sutton B, Legget KT, Dabelea D, Tregellas JR. (2019). Eating in the absence of hunger in young children is related to brain reward network hyperactivity and reduced functional connectivity in executive control networks. *Pediatric Obesity*, 14(6), e12502.

24. **Shapiro AL**, Wilkening G, Aalborg J, Ringham BM, Glueck DH, Tregellas JR, Dabelea D. (2019). Childhood metabolic biomarkers are associated with performance on cognitive tasks in young children. *Journal of Pediatrics*, 211, 92-97.

25. Moore, BF, **Shapiro AL**, Wilkening G, Magzamen S, Starling AP, Allhouse WB, Adgate JL, Ringham BM, Glueck DH, Dabelea D. (2020) Fetal exposure to tobacco and offspring neurodevelopment in the Healthy Start study. *Journal of Pediatrics*, 218, 28-34.

26. **Shapiro AL**, Moore B, Sutton B, Wilkening G, Dabelea D, Tregellas JR. (2020). In utero exposure to maternal overweight and obesity alters offspring neuronal activity and functional connectivity in middle-childhood. *Obesity*, 28(9),1718-1725.

27. Johnson SL, **Shapiro AL**, Moding KJ, Flescher A, Davis K, Fisher, JO. (2021). Infant and Toddler Consumption of Sweetened and Unsweetened Lipid Nutrient Supplements after 2-Week Home Repeated Exposures. *Journal of Nutrition*, 54(7), 684-690.

28. **Shapiro AL**, Dabelea D, Stafford J, D’Agostino R, Pihoker C, Liese A, Shah A, Bellatore A, Lawrence J, Henkin L, Saydah S, Linder B, Wilkening, G, SEARCH for Diabetes in Youth Study Group. (2021). Cognitive function in youth-onset Type 1 and Type 2 Diabetes, a comparison: The SEARCH for diabetes in youth study. *Diabetes Care*, 44(6), 1273-1280.

29. **Shapiro AL\*,** Tommerdahl KL\*, Nehus EJ, Bjornstad P. (2022). Early Microvascular Complications in Type 1 and Type 2 Diabetes: Recent Developments and Updates. *Pediatric Nephrology*, 37(1), 79-93. \*indicates shared first authorship.

30. Moore BF, Sauder KA, Hebert ET, Hoyt AT, Starling AP, Wymore EM, **Shapiro AL**, Kinney GL, Crume T, Dabelea D. (2022). Fetal exposure to cannabis and childhood metabolic outcomes: The Healthy Start study. *Journal of Clinical Endocrinology and Metabolism*, 107(7), e2862–e2869.

31. **Shapiro AL**, Lawless M, Flesher A, Lattanzi K, Charlifue-Smith R, Johnson SL. (2022). Acceptance of a novel food is related to young children’s food-related receptive but not expressive language. *Journal of Nutrition Education and Behavior,* 54(7), 684-690.

32. **Shapiro AL**, Bellatorre A, Dabelea D, Stafford J, D’Agostino R, Shah A, Urbina EM, Barrett CE, Pihoker C, Marcovina S, Liese A, Mottl AK, Jensen ET, Wilkening G. (2023). Diabetes complications and cognitive function in youth with Type 1 or Type 2 diabetes: the SEARCH for Diabetes in Youth Study. *Pediatric Diabetes*. Article ID 4860831. PMCID: PMC11068325

33. Brown AD, Liese AD, **Shapiro AL**, Frongillo EA, Wilkening G, Fridriksson J, Merchant AT, Henkin L, Jensen ET, Reboussin BA, Shah AS, Marcovina S, Dolan LM, Dabelea D, Pihoker C, Mendoza JA. (2023). Household Food Insecurity and Cognitive Function in Youth and Young Adults with Type 1 or Type 2 Diabetes. *Pediatric Diabetes*. Article ID 6382663.

34. Dark HE, Paterson C, Daya GN, Peng Z, Duggan MR, Bilgel M, An Y, Moghekar A, Davatzikos C, Resnick SM, Loupy K , Simpson M, Candia J, Mosley T, Coresh J, Palta P, Ferrucci L, **Shapiro ALB**, Williams SA, Walker KA. (2023). Proteomic indicators of health predict Alzheimer’s disease biomarker levels and dementia risk. *Annals of Neurology*, 95(2), 260-273. PMCID: PMC10842994.

35. Mlodnicka A, Mansolf M, Chandran A, Aris IM, Calub CA, Ahmad S, **Shapiro A**, Cochran D, Restrepo B, Schmidt R, Hertz-Picciotto I, Bennett D, Gold DR, O'Shea TM, Leve L, Schweitzer JB; program collaborators for Environmental influences on Child Health Outcomes. (2024). Prediction of internalizing and externalizing symptoms in late childhood from attention-deficit/hyperactivity disorder symptoms in early childhood. *Dev Psychopathol*, 27:1-10. doi: 10.1017/S0954579424000695. Epub ahead of print. PMID: 38532736.

36. Zhang A, Furgeson S, **Shapiro A**, Bjornstad P, You Z, Kendrick K. (2024). Assessing Cognition in Chronic Kidney Disease using the NIH Toolbox. *Kidney360*. PMID: 38568010. Epub ahead of print.

37. **Shapiro AL**, Tjaden AH, Edelstein SL, Kahn SE, Srikanthan P, Knowler WC, Venditti EM, Golden SH, Carmichael O, Luchsinger JA, DPP Research Group. (2024). The association of the insulin response to oral glucose and insulin sensitivity with cognition in adults with pre-diabetes: the Diabetes Prevention Program Outcomes Study. *Journal of Diabetes and it’s Complications*, 38(6), 108764. PMID: 38701667. Epub ahead of print.

38. Morales S, Bowers ME, Shuffrey L, Ziegler K, Troller-Renfree S, Hernandez A, Leach SC, McGrath M, Ola C, Leve LD, Nozadi SS, Swingler MM, Lai JS, Schweitzer JB, Fifer W, Camargo CA, Khurana Hershey GK, **Shapiro AL**, Keating DP, Hartert TV, Deoni S, Ferrara A, Elliott AJ. (2024). Maternal education prospectively predicts child neurocognitive function: An ECHO study. *Developmental Psychology*. PMID: 38407105. Epub ahead of print. \*Editor’s choice.

39. **Shapiro AL**, Lawless MC, Charlifue-Smith R, Johnson SL. (2024). Complementary food exposure and children's early understanding of food words: The Approaching Eating through Language (APPEAL) Study. Accepted at *Frontiers in Nutrition*.

40. **Shapiro AL**, Coughlan C, Bettcher BM, Pauley M, Kim J, Bjornstad P, Rajic B, Truong J, Bell C, Choi YJ, Walker K, Potter H, Liese AD, Dabelea D, Whitlow CT. (2024). Biomarkers of neurodegeneration and Alzheimer’s disease neuropathology in adolescents and young adults with youth-onset type 1 or type 2 diabetes: a proof-of-concept study. *Endocrines*. 5(2), 197–213. PMCID: PMC11101213

41. Bettcher BM, Lopez Paniagua D, Wang Y, McConnell BV, Coughlan C, Carlisle TC, Thaker AA, Lippitt W, Filley CM, Pelak VS, **Shapiro ALB**, Heffernan KS, Potter H, Solano A, Boyd J, Carlson NE. (2024). Synergistic Effects of GFAP and Aβ42: Implications for White Matter Integrity and Verbal Memory Across the Cognitive Spectrum. Accepted at *Brain, Behavior, & Immunity-Health*.

Book Chapters

1. Lewy A, Emens J, Songer J, Laurie A, Sims N, Fiala S, **Buti AL**. Winter depression: Integrating mood, circadian rhythms, and the sleep/wake and light/dark cycles into a bio-psycho-social-environmental model. In: Barth SE, Wright KP, editors. Sleep medicine clinics: Circadian rhythm sleep disorders. W.B. Saunders Company, 2009.

2. Lewy A, Emens J, Songer J, Laurie A, Sims N, Fiala S, **Buti AL**. The phase-shift hypothesis and the bio-psycho-social-environmental model. In: Partonen T, Pandi- Perumal SR, editors. Seasonal affective disorder: biology and clinics. Oxford: Oxford University Press, 2010.

3. **Shapiro AL** and Powell T. Placental Amino Acid Transport Alterations in Response to Maternal Nutrition. In: Duttaroy AK and Basak S, editors. Human Placental Trophoblast: Impact of Maternal Nutrition. CRC press, Taylor & Francis group, USA. 2015.

4. **Shapiro AL,** Pettit DJ and Dabelea D. Developmental Outcomes of Infants Exposed to Maternal Obesity and Diabetes In-Utero. In: Reece A, editor. Diabetes and Obesity in Women: Adolescence, Pregnancy, and Menopause. Wolters Kluwer. 2019.

Digital and Other Products of Scholarship

1. Shearrer G and **Shapiro AL**. (2022). Insulin Brain [computer program]. DOI: [10.5281/zenodo.6544495](https://zenodo.org/record/6544495#.ZCH5gezMI-Q)

2. **Shapiro AL**. A commentary on: Incidence Trends of New-Onset Diabetes in Children and Adolescents Before and During the COVID-19 Pandemic: Findings From Florida. PracticeUpdate website. Available at: <https://www.practiceupdate.com/content/trends-in-the-incidence-of-new-onset-diabetes-in-children-and-adolescents-before-and-during-the-covid-19-pandemic/145302/65/8/1>. Accessed December 14, 2022.

Competitive Scientific Abstracts

1. **Buti A**, Fu R, Oliver C, Rieckmann T, Lewy C. (2011). Gender and Attitudes of First- and Fourth-Year Medical Students toward Patients with Alcohol and Drug Use Issues. *119th Annual Convention of the American Psychological Association*. Poster.

2. **Buti A**, Schmiege S, Crume TL, Friedman JE, Dabelea D. (2014). Maternal Insulin Resistance and Fuels Mediate the Association Between Maternal BMI and Neonatal Body Composition: The Healthy Start Study. *American Diabetes Association 74th Scientific Sessions*.

3. **Shapiro AL**, Boyle KE, Dabelea D, Patinkin Z, Glueck D, Barbour LA, Norris J, Friedman JE. (2015). Nicotinamide promotes adipogenesis in umbilical cord-derived mesenchymal stem cells and corresponds to neonatal adiposity: The Healthy Start study. *American Diabetes Association 75th Scientific Sessions*.

4. **Shapiro AL**, Kaar J, Crume T, StarlingA, RinghamB, GlueckD, Siega-RizAM, Dabelea D. (2015). Maternal Diet Quality in Pregnancy Influences Neonatal Adiposity: The Healthy Start Study. *European Diabetes Epidemiology Group*. Poster.

5. **Shapiro AL**, Kaar J, Crume T, StarlingA, RinghamB, GlueckD, Siega-RizAM, Dabelea D. (2015). Maternal Diet Quality and Obesity in Pregnancy Jointly Influence Neonatal Adiposity: The Healthy Start Study. *Experimental Biology*. Poster.

6. **Shapiro AL**, Sauder KA, Tregellas JR, Legget KT, Gravitz SL, Ringham BM, Glueck DH, Johnson SL, Dabelea D. (2017). Exposure to Maternal Diabetes in utero and Offspring Eating Behavior: The EPOCH Study. *American Diabetes Association 77th Scientific Sessions*.

7. **Shapiro AL**, Wilkening GN, Tregellas JR, Aalborg J, Ringham BM, Glueck DH, Stamatoiu A, Banning A, Dabelea D. (2018). Childhood metabolic markers are associated with performance on cognitive tasks in young children: The Healthy Start Study. *American Diabetes Association 78th Scientific Sessions*.

8. **Shapiro AL**, Johnson SL, Sutton B, Wilkening GN, Legget KT, Dabelea D, Tregellas JR. (2018). Relating disinhibited eating behaviors to resting state functional connectivity in young children. *American Diabetes Association 78th Scientific Sessions*.

9. **Shapiro AL**, Gravitz S, Jensen A, Sutton B, Tregellas JR. (2019). Disinhibited eating behavior is associated with hypothalamic neuronal response to an energy surplus in healthy adults. *Keystone Symposia on Molecular and Cellular Biology: Functional Neurocircuitry of Feeding and Feeding Disorders (J8)*. Poster.

10. **Shapiro AL**, Gravitz S, Jensen A, Sutton B, Tregellas JR. (2019). Hypothalamic neuronal response to an energy surplus is suppressed in adults with overweight and obesity. *Neuroimaging and Modulation in Obesity and Diabetes Research 10th Anniversary Meeting*. Poster.

11. **Shapiro AL**, Dabelea D, Stafford JM, D’Agostino R, Pihoker C, Liese A, Shah AS, Bellatorre A, Lawrence JM, Henkin L, Wilkening G; SEARCH for Diabetes in Youth Study Group. (2020). Cognition in Young Adults with Youth-Onset Type 1 and Type 2 Diabetes: The SEARCH for Diabetes in Youth Study. *American Diabetes Association 80th Scientific Sessions*. Oral.

12. **Shapiro AL**, Bellatorre A, Dabelea D, Stafford JM, D’Agostino R, Shah AS, Urbina EM, Barrett CE, Pihoker C, Marcovina S, Liese A, Mottl AK, Jensen ET, Wilkening G; SEARCH for Diabetes in Youth Study Group. (2021). Diabetes complications and cognitive function in youth with Type 1 and Type 2 diabetes: the SEARCH for Diabetes in Youth Study. *American Diabetes Association 81st Scientific Sessions*. Oral.

13. **Shapiro AL**, Flesher A, Lattanzi K, Charlifue-Smith R, Johnson SL. (2021). Young children’s food-related receptive language and acceptance of a novel food. *American Society for Nutrition*. Poster.

14. **Shapiro AL**, Lawless MC, Johnson SL. (2022). First foods and children’s early language acquisition: The Approaching Eating through Language (APPEAL) Study. *Society for the Study of Ingestive Behaviors*. Poster.

15. **Shapiro AL**, Shearrer GE, Hall LA, Rajic B, Tregellas JR, Cree-Green M, Nadeau KJ. (2022). A Novel In Vivo Model to Measure Human Hypothalamic Insulin Sensitivity: The Brain-Body Connection Study. *Obesity Week 2022, The Obesity Society*. Poster.

16. Shearrer GE, Akhmadjonova M, Hall LA, Rajic B, Tregellas JR, Cree-Green M, Nadeau KJ, **Shapiro AL**. (2022). The putamen increases influence over a brain network during insulin pulsation: The Brain-Body Connection Study. *Obesity Week 2022, The Obesity Society*. Poster.

17. Colon-Soto J, Hall LA, Cuddy QJ, Spencer KP, Johnson SL, Nadeau KJ, **Shapiro AL**. (2022). Satiety responsiveness and disinhibited eating behavior in adolescents with and without obesity. *Obesity Week 2022, The Obesity Society*. Poster.

18. **Shapiro AL**, Bellatorre A, Stafford JM, Malik F, Liese AD, Pettitt DJ, Dabelea D. (2023). Longitudinal trajectories of fasting C-peptide in youth-onset type 2 diabetes: The SEARCH for Diabetes in Youth Study. *American Diabetes Association 83rd Scientific Sessions*. Poster.

19. **Shapiro AL**, Coughlan C, Birznieks C, Vigers TB, Pauley ME, Snell-Bergen JK, Macdonald AA, Tommerdahl KL, Van Raalte D, De Boer I, Nelson RG, Pyle L, Nadeau KJ, Bjornstad P. (2023). Impaired Insulin Sensitivity Relates to Preclinical Biomarkers of Neurodegenerative Disease in Young Adults With and Without Type 1 Diabetes (T1D). *American Diabetes Association 83rd Scientific Sessions.* Poster.

20. **Shapiro AL**, Hogan Tjaden A, Edelstein S, Kahn SE, Srikanthan P, Knowler WC, Venditti EM, Golden SH, Carmichael O, Luchsinger JA. (2023). The Impact of Insulin Secretion and Insulin Sensitivity on Cognition in Adults with Prediabetes—The Diabetes Prevention Program Outcomes Study (DPPOS). *American Diabetes Association 83rd Scientific Sessions.* Oral.

21. **Shapiro AL**, Coughlan C, Kim J, Potter H, Bjornstad P, Pauley ME, Rajic B, Truong J, Glueck D, Harrall K, Barkus RA, Tan J, Thaker A, Bettcher B, Walker KA, Liese A, Dabelea D, Whitlow CT. (2023). Preclinical biomarkers of Alzheimer’s disease neuropathology in young adults with youth-onset diabetes (YDM): a proof-of-concept study. *American Diabetes Association 83rd Scientific Sessions.* Poster.

22. **Shapiro AL** on behalf of the SEARCH for Diabetes in Youth Study Group. (2023). Genetic and clinical predictors of longitudinal trajectories of fasting C-peptide in youth-onset type 2 diabetes. *European Diabetes Epidemiology Group*. Oral.

23. Spencer K, Cuddy Q, Hall L, Rajic B, Nadeau KJ, Tregellas J, Johnson SL, **Shapiro AL**. (2023). Glucose-Stimulated GLP-1 Secretion and Functional Brain Connectivity in Adolescents. *Obesity Week 2023, The Obesity Society*. Oral.

24. Cuddy Q, Spencer K, Hall L, Rajic B, Nadeau KJ, Tregellas J, Johnson SL, **Shapiro AL**. (2023). An fMRI Study Examining the Association Between Brain Connectivity and Satiety Responsiveness in Adolescents. *Obesity Week 2023, The Obesity Society*. Poster.

Non-Competitive Scientific Abstracts

1. **Buti A**, Fu R, Oliver C, Rieckmann T, Lewy C. (2010). Measuring Attitudes of First- and Fourth-Year Medical Students toward Patients with Alcohol and Other Drug Use Disorders. *North West Institute on Addiction Studies*.

2. **Buti A**, Fiala S, McCarthy M, Nielson C, Haney B. (2010). Association between Serum Vitamin D Levels and Self-reported Mental Health. *Oregon Health & Science 27th Annual Student Research Forum*.

3. **Buti A**, Fussell H, Gholson M, Kunkel LE, McCarty D. (2010). Commitment to Implementation of a Clinical Trial Protocol: Variation by Protocol and Employment Role. *Addiction Health Services Research Conference*.

Research Media Highlights

1. KUNC Radio Interview via In The NoCoA by Ariel Lavery and Erin O’Toole. “CU researcher finds a troubling link between youth diabetes and Alzheimer’s”. Available at: <https://www.kunc.org/podcast/inthenoco/2024-06-04/a-cu-researcher-finds-a-troubling-link-between-youth-diabetes-and-alzheimers>