

# LAURA ROSOK

Predoctoral Neuroscience Student

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## Personal Statement

My experience in conducting MRI, EEG, and other cognitive and visual research in children, combined with my ability to mentor others, lead groups, coordinate studies, and share my work effectively via journal publications and presentations, has primed me to be a self-starter who is comfortable taking charge, collaborating with others, and informing both scientists and non-scientists of the impact that our research may have on public wellbeing.

## Education

Fall 2021 – Present

**University of Illinois Urbana-Champaign**

Predoctoral Neuroscience Student

Research Area: Visual and Cognitive Function in Children: Diet and Developmental Effects

Advisor: Dr. Naiman Khan, Ph.D., R.D.

Spring 2020

**University of Miami, Coral Gables, FL**

B.S. in Neuroscience

Senior Honors Thesis: "Major depressive disorder and the default mode network: a resting-state fMRI analysis"

Spring 2020

**University of Miami, Coral Gables, FL**

B.M. in Vocal Jazz Performance

Senior Recital: a performance displaying the culmination of my musical growth at UM

Total Undergraduate Course Credits: 194

\*Reflective of two complete degrees with no overlap in course credits, as opposed to a double major

## Awards

Spring 2023

**Nadine Barrie Smith Memorial Fellowship - \$4000**

Awarded by the Beckman Institute for Advanced Science and Technology, this fellowship provides support throughout one summer of research.

Spring 2023

**National Science Foundation Graduate Research Fellowship Program – Honorable Mention**

Out of over 12,000 students who applied, 2555 (~21%) were offered awards and only 801 (~7%) received honorable mention.

Spring 2023

**American Society for Nutrition 2023 Conference Awards**

- Finalist in the Clinical Emerging Leader Award Competition
- Finalist in the Emerging Leaders in Nutrition Science Poster Competition

Summer 2022

**Egg Nutrition Center Research Grant - \$25,000**

*Macular Carotenoids and Brain Structure and Function in School-Aged Children: funding the Liver and Brain (LiBra) Study*, a project examining brain structure and function in relation to macular pigment in school-aged children using sMRI, rs-fMRI, tb-fMRI, and heterochromatic flicker photometry.

Fall 2022

**People's Choice Poster**

Awarded at the University of Illinois Urbana-Champaign Neuroscience Program's Society for Neuroscience (SfN) Preview Poster & Reception Night.

Spring 2020

**Neuroscience Honors**

Awarded upon completion and acceptance of Senior Honors Thesis.

2015-2020

**President's Music Scholarships I and II - \$36,000/year**

Received these scholarships every year of undergraduate studies.

## Publications

### Manuscripts

- **Rosok L**, Cannavale C, Keye S, Holscher H, Renzi-Hammond L, Khan N. Skin and macular carotenoids and relations to academic achievement among school-aged children. Submitted and with editor at *Nutritional Neuroscience*.
- Keye S, Kinder C, **Rosok L**, Walk A, Khan N. Neuroelectric Indices of Premotor Planning and Adiposity are Selectively Related to Balance in Children. Submitted to *Journal of Psychophysiology*.
- Cannavale C, Keye S, **Rosok L**, Martell S, Holthaus T, Raine L, Mullen S, Holscher H, Hillman C, Kramer A, Cohen N, Hammond B, Renzi-Hammond L, Khan N. Macular Pigment Optical Density and Skin Carotenoids in a Midwestern Childhood Sample. *Journal of Nutrition*. <https://doi.org/10.1016/j.tjn.2023.06.006>
- Walk A, Cannavale C, Keye S, **Rosok L**, Edwards C, Khan N. Weight Status Impacts Children's Incidental Statistical Learning. *International Journal of Psychophysiology*. 2023 May; 187:34-42. <https://doi.org/10.1016/j.ijpsycho.2023.02.003>.
- Cannavale C, Keye S, **Rosok L**, Martell S, Holthaus T, Reeser G, Raine L, Mullen S, Cohen N, Hillman C, Hammond B, Renzi-Hammond L, Khan N. Enhancing children's cognitive function

and achievement through carotenoid consumption: the integrated Childhood Ocular Nutrition Study (iCONS) protocol. *Contemporary Clinical Trials*. 2022 Nov; 122:106964. <https://doi.org/10.1016/j.cct.2022.106964>

## Abstracts

- **Rosok L**, Fifiield L, Sarma R, Keye S, Walk A, Khan N. Skin Carotenoids and Mismatch Negativity. Society for Psychophysiological Research 2023 Annual Meeting in New Orleans (Poster presentation in October 2023).
- **Rosok L**, Fifiield L, Sarma R, Keye S, Walk A, Khan N. Greater increases in Skin Carotenoids are related to greater improvements in Cognition among toddlers across six months. American Society for Nutrition's 2023 Conference in Boston (Oral presentation).
- **Rosok L**, Fifiield L, Sarma R, Keye S, Walk A, Khan N. Skin carotenoids are related to cognition among toddlers: preliminary findings from the Early Life Influences on Attention Study (ELIAS). Personalized Nutrition Initiative 2022 Innovation Day at the University of Illinois Urbana-Champaign (Poster presentation).
- **Rosok L**, Fifiield L, Sarma R, Keye S, Walk A, Khan N. Interrelationships between mismatch negativity and visual evoked potentials and cognitive, language, and motor development among toddlers. Society for Neuroscience 2022 conference in San Diego (Poster presentation).
- **Rosok L**, Cannavale C, Keye S, Edwards C, Khan N. Skin Carotenoids and relations to intellectual abilities and academic achievement among school-aged children. *Current Developments in Nutrition*. June 2022; Volume 6, Issue Supplement\_1, Page 66. doi:10.1093/cdn/nzaco49.012. American Society for Nutrition's 2022 Live Online conference (Oral presentation).
- **Rosok L**, Goodman Z, Nomi J, Uddin L. Major depressive disorder and the default mode network: a resting-state fMRI analysis. Senior thesis accepted to the University of Miami's 2020 Research, Creativity, and Innovation Forum, but conference was cancelled due to COVID-19.
- Keye S, Kinder C, **Rosok L**, Khan N. Neuroelectric Indices of Pre-Motor Planning are Selectively Related to Balance in Children. Society for Psychophysiological Research 2023 Annual Meeting in New Orleans (awaiting acceptance).
- Sarma R, Fifiield L, **Rosok L**, Keye S, Walk A, Khan N. Maternal physical activity during pregnancy linked with better receptive and expressive communications in toddlers. American Society for Nutrition's 2023 Conference in Boston.
- Cannavale C, Keye S, **Rosok L**, Martell S, Holthaus T, Raine L, Mullen S, Holscher H, Hillman C, Kramer A, Hammond B, Renzi-Hammond L, Khan N. Macular Pigment Optical Density and Skin Carotenoids in a Midwestern Childhood Sample. American Society for Nutrition's 2023 Conference in Boston.
- Keye S, Holthaus T, Cannavale C, **Rosok L**, Lamblin E, Renzi-Hammond L, Holscher H, Khan N. MIND Diet Pattern is Selectively Associated with Attentional Control in Preadolescent Children. American Society for Nutrition's 2023 Conference in Boston.

- Cannavale C, Keye S, **Rosok L**, Martell S, Holthaus T, Khan N. Macular and skin carotenoids are negatively associated with body mass index in school-aged children. Personalized Nutrition Initiative 2022 Innovation Day at the University of Illinois Urbana-Champaign.
- Martell S, Kim J, Mehta T, **Rosok L**, Erdman, Jr. J, Adamson B, Motl R, Khan N. Lutein Consumption Effects on Carotenoid Status and Cognition among Persons with Multiple Sclerosis. Society for Neuroscience 2022 conference in San Diego and Personalized Nutrition Initiative 2022 Innovation Day at the University of Illinois Urbana-Champaign.
- Fifield L, **Rosok L**, Sarma R, Keye S, Walk A, Khan N. Skin Carotenoids Are Related to Cognitive and Motor Skills Among Toddlers. *Current Developments in Nutrition*. June 2022; Volume 6, Issue Supplement\_1, Page 59, doi:10.1093/cdn/nzaco49.005. American Society for Nutrition's 2022 Live Online conference.

## Related Experience

July 2021 – Present

### Neurocognitive Health Behavior (NHB) Laboratory

University of Illinois Urbana-Champaign

Advisor: Dr. Naiman Khan, Ph.D., R.D.

Graduate Research Assistant

- Assist with recruitment, coordination, data collection, and analysis of cognitive and nutritional data involving human subjects using EEG, MRI, blood markers, cognitive and motor batteries, and carotenoid assessments (i.e., reflection spectroscopy and heterochromatic flicker photometry)
- Collaborate with other collegiate laboratories, including Dr. Ryan Dilger's Nutrition, Health, and Neuroscience Laboratory at the University of Illinois Urbana-Champaign (troubleshoot MRI processing techniques) and Dr. Lisa Renzi-Hammond's Laboratory at the University of Georgia (update heterochromatic flicker photometry protocol)
- Mentor all undergraduate students in the laboratory by leading trainings and overseeing proficiency of the following procedures: EEG cap placement, cognitive and motor battery administration, carotenoid assessment, anthropometric data collection, and data entry. In addition, was responsible for preparing two undergraduate students to present at the 2023 Undergraduate Research Symposium, who received Honorable Mention for their poster
- Project lead for multiple on-going IRB-approved human subject studies:
  - ELIAS (Early Life Influences on Attention Study): a longitudinal 12-month study examining the cognitive, motor, and nutritional development of toddlers; in charge of recruitment, coordination, data collection, data organization and analysis, and monthly meetings to track study progress; personally ran over **100 participant visits for ELIAS**
  - LiBra (Liver and Brain Study): a cross-sectional study aiming to assess the relationship between macular pigment and brain structure and function using structural and functional MRI in children between 7-13 years old; in charge of coordination, data collection, and data organization and analysis; personally ran over **70 participant visits for LiBra**
  - iCONS (Integrated Childhood Ocular Nutrition Study): an NIH-funded 9-month lutein and zeaxanthin supplementation randomized-controlled double-blind trial that

examines the cognitive function and macular carotenoids of preadolescent children; assist with data collection, organization, and analysis; personally ran over **75 participant visits for iCONS**

May 2023 – Present

### **AbbVie Mentorship**

University of Illinois Urbana-Champaign – AbbVie Collaboration

- Applied for and received an opportunity to be paired with a mid-career PhD-level Principal Data Scientist at AbbVie as part of a formal program between UIUC and AbbVie
- Involves monthly 1:1 meetings and coaching, assignments, discussion of career options, as well as in-person events and networking
- The goal of this mentorship is to provide information and personal connections that will aid in acquiring a position in industry

March 2023 – May 2023

### **Brain Awareness Volunteer**

University of Illinois Urbana-Champaign

- Coordinated, organized, and led visits to local elementary schools, during which children learn about the brain and participate in engaging activities
- Taught and engaged with over 100 school-aged children

January 2019 – May 2020

### **Brain Connectivity & Cognition Lab (BCCL)**

University of Miami

Advisor: Dr. Lucina Uddin, Ph.D.

Undergraduate Research Assistant

- BCCL conducts research projects regarding typically developing children and children with autism spectrum disorder (ASD); these projects involve the analysis of fMRI scans to determine differences in brain connectivity
- Performed quality control of over 50 fMRI scans using FSL, entered patient data using FileMaker Pro and X2Go, and helped lab prepare for marketing events and conferences; completed a neuroscience senior honors thesis on the relationship between major depressive disorder and the default-mode network

## **Other Experience**

2014 - Present

### **Jazz Vocalist**

Seattle, WA, Miami, FL, and Chicago, IL

Freelance Musician

- Book gigs with the intent of creating profitable and entertaining events; contact music venues, hire and rehearse with musicians,

negotiate pay, write and produce music; record vocals for advertisements and other music projects; won the Seattle Kobe Sister City Association Vocal Jazz Competition in 2014 that paid for a trip to perform in Kobe, Japan; released an [album in 2016](#). More recently released a [single](#) in January 2023.

August 2023

**Kappa Kappa Gamma**

University of Illinois Urbana-Champaign

Sorority House Director

- Reside on site and oversee staff, schedule maintenance and repairs, enforce fire safety protocols, ensure house member safety, and answer to the house board