

Dr. Nicholas Wagner invites applications for a postdoctoral fellow position in the Department of Psychological and Brain Sciences at Boston University. The fellow will join the Biobehavioral and Social-Emotional Development (BASE) Lab (<https://www.bu.edu/cdl/baselab/>) and have the opportunity to work on multiple federally-funded research projects (described below). Research in the BASE lab broadly focuses on understanding the systems and processes that promote psychosocial adaptation or contribute to the emergence of psychopathology across development. Specifically, we examine how early experiences and children's self-regulation shape trajectories across various domains of adaptive functioning, including social competence, prosocial and empathic behaviors, and school success, and maladaptive functioning, including aggression, callous-unemotional traits, and anxiety. The BASE Lab is committed to increasing justice, equity, diversity, and inclusion in the psychological sciences, and the person who fills this position will have opportunities to engage in these efforts if they so choose. Candidates from underrepresented and marginalized social identity positions are encouraged to apply.

Position Summary and Description of Projects

This position prepares post-doctoral scholars to conduct independent research in developmental psychopathology, neurophysiological mechanisms underlying social-emotional (dys)regulation, and risk and protective factors across development. An emphasis will also be placed on integrating measures of behavioral and neurophysiological functioning, as well as the application of advanced quantitative methodologies. This position will provide multiple opportunities for interdisciplinary collaboration and publication. The postdoctoral fellow will have opportunities to analyze data, write papers and grants, obtain mentoring from faculty, and mentor graduate and undergraduate students to advance their research program. This position may be funded and supported for up to 2 years pending performance and the availability of funding.

We are seeking applicants whose research interests include individual differences in the development of emotion and emotion regulation, temperament, social functioning including social information processing, and risk processing underlying the emergence and stability of socioemotional difficulties and/or psychopathology. The ideal applicant will study across multiple levels of influence and will integrate multiple methods including behavioral observations, computer-based tasks (e.g., eye-tracking), and neurophysiological measures (e.g., EEG, ECG, EDA, etc.). Specific research opportunities include but are not limited to:

(1) Identifying early risk factors across levels of influence (e.g., psychobiology, temperament, social experiences) for psychopathology. Work on this topic will include involvement in the planning and execution of a new study (R01MH125904) which will use cutting edge methodology (i.e., eye-tracking, psychophysiology) to examine mechanisms underlying variation in threat sensitivity and social affiliation as well as whether and how these processes differentiate risk for externalizing and internalizing psychopathology, including callous-unemotional traits and anxiety. These topics will also be explored using existing datasets including in the context of a new study (pending R21MH126162) which will use machine learning techniques to elucidate risk for callous-unemotional traits. These projects will allow opportunities for close collaboration with colleagues at the University of Pennsylvania including Dr. Rebecca Waller.

(2) Examining Neurophysiological Predictors of Treatment Response to an Early Intervention for Socially Inhibited Preschoolers. This study (R03MH123762; R01MH103253) examines the influences of parents' neurophysiological reactivity and regulation on parenting behaviors which are known mechanics contributors to the development of children's BI and risk for anxiety. In addition, this study explores predictors of treatment response in the context of a multi-component parenting intervention. This project allows for opportunities to collaborate with colleagues at UMD including Drs. Kenneth Rubin and Andrea Chronis-Tuscano.

(3) Gut Microbiota and Behavioral Inhibition in Childhood: The Role of Early Stress and Brain Development. This study (R01HM122526) examines the influences of psychosocial stress on children's microbiome and brain development across the first five years of life and tests how these gut-brain pathways

mediate links between stress and risk for anxiety disorders. The BASE lab is specifically focused on the longitudinal assessment of fear and other methodological aspects of the study. This project allows for opportunities to collaborate with colleagues at UNC-CH (MPI: Propper, Sheridan, Mills-Koonce), MSU (MPI: Knickmeyer), and UW (Short).

(4) Additional Opportunities. Additional opportunities to work with existing datasets will be available, as will opportunities for teaching, funded conference travel, and participation in writing and quantitative analysis workshops. Support with navigating the job market and establishing an independent program of research will also be provided.

Essential Functions

- Data analysis.
- Writing scientific papers and grant proposals.
- Study planning, coordination, and management.
- Opportunities for collaboration and mentorship.

Preferred Qualifications and Expertise

- Ph.D. in a relevant discipline (e.g., developmental, quantitative, or clinical areas) by start date.
- Prior project management experience, including managing data for large, longitudinal studies.
- Expertise in neurophysiology and longitudinal data, including measures of autonomic nervous system functioning (e.g., RSA, skin conductance), temperament, and/or attention (e.g., eye-tracking).
- Experience with behavioral data collection including observational and computerized task-based methodologies.
- Strong interpersonal skills.
- Prior clinical, developmental, and/or quantitative research experience.
- Expertise in advanced quantitative methods including approaches for analyzing longitudinal and/or experimental data.
- Strong organization and administrative skills, detail-orientation and conscientiousness to include data management, statistical analyses, and the completion of manuscripts in a timely manner.
- Critical thinking skills along with the ability to discuss and solve problems and issues that may arise.
- Experience working in fast-paced, collaborative environments.
- Experience, knowledge, and/ or research interest in developmental psychopathology, children's mental health, as well as developmental psychology and risk mechanisms.

Salary and Benefits

Position is contingent on available funding. Salary will be based on NIH guidelines. For more information regarding available benefits please visit: <https://www.bu.edu/hr/employee-resources/benefits/>

Deadline and Instructions

Start date is flexible. Application materials will be accepted on a rolling basis and should be sent to Dr. Nicholas Wagner at njwagner [at] bu.edu

Requested Materials:

- Resume/CV
- Letter of intent detailing relevant experience and identifying specific research projects of interest
- Writing sample(s)
- List of three references