Annie Brandes-Aitken

NSF Graduate Research Fellow
Developmental Psychology. New York University
aba396@nyu.edu 303 653 4404

Education

Ph.D. in Developmental Psychology 2022 (anticipated)
New York University
New York, NY

B.S. in Psychology with Honors, Minor in Statistics 2014
California Polytechnic State University
San Luis Obispo, CA

Research Experience

NSF Graduate Research Fellow
Neuroscience and Education Laboratory 2017-present
New York University
Advisors: Clancy Blair, PhD & Natalie Brito, PhD

Research Assistant
Education and Neuroscience Lab, Neuroscape Center 2015-2017
University of California, San Francisco
Advisors: Melina Uncapher, PhD & Adam Gazzaley PhD, MD

Research Coordinator
Sensory Neurodevelopment and Autism Program 2014-2017
University of California, San Francisco
Advisors: Elysa Marco, MD & Joaquin A. Anguera, PhD

Undergraduate Research Student
Department of Psychology 2012-2014
California Polytechnic State University
Advisors: Laura Freberg, PhD & Carrie Langner, PhD

Summer Research Assistant
Language Lab & Psychoinformatics Lab 2013
University of Colorado, Boulder
Advisors: Eliana Colunga, PhD & Tal Yarkoni, PhD

Peer Reviewed Publications

Braren, S., Perry, R., Ribner, A., **Brandes-Aitken, A.N.**, Brito, N., Blair, C.Prenatal Mother-Father Cortisol Co-regulation Predicts Infant Executive Functions at 24 Months (2021). Developmental Psychobiology.

Brandes-Aitken, A.N., Braren, S., Vogel, S., Perry, R., Brito, N., Blair, C. Within-Person Changes in Basal Cortisol and Caregiving Modulate Executive Attention across Infancy (2021). Development and Psychopathology.

Vogel, S., Perry,R., **Brandes-Aitken, A.N.**, Braren,S., Blair, C. Deprivation and threat as developmental mediators in the relation between early life socioeconomic status and executive functioning outcomes in early childhood (2021). Developmental Cognitive Neuroscience.

Braren, S. **Brandes-Aitken, A.N.**, Perry,R., Williams,K., Lyons, K., Rowe-Harriott, S., Blair, C., Baseline Hypothalamic–Pituitary–Adrenal Axis and Parasympathetic Nervous System Activity Interact to Predict Executive Functions in Low-Income Children. (2021). Mind, Brain, and Educaiton.

Brandes-Aitken, A.N., Braren, S., Gandhi, J., Rowe-Harriott, S., Perry, R., Blair, C., Joint attention partially mediates the longitudinal relation between attuned caregiving and executive functions for low-income children (2020). Developmental Psychology.

Perry, R., Braren, S., Opendak, M., **Brandes-Aitken, A.N.**, Chopra, D., Sullivan, R., Blair, C. Elevated infant cortisol is necessary but not sufficient for transmission of environmental risk to infant social development: Cross-species evidence of mother–infant physiological social transmission. (2020). Development and Psychopathology.

Maternal Psychological Stress Moderates Diurnal Cortisol Linkage in Expectant Fathers and Mothers during Late Pregnancy. Braren, S., **Brandes-Aitken, A.N.**, Ribner, A., Perry, R., Blair, C. (2019). Psychoneuroendocrinology.

Perry, R.,Braren, S., Rincon-Cortes, M., **Brandes-Aitken, A.N.**, Chopra, D., Sullivan, R., Blair, C. Enhancing Executive Functions through Social Interactions: Causal Evidence Using a Cross-Species Model. (2019). Frontiers in Psychology.

Perry, R., Rincon-Cortes, M., Braren, S., **Brandes-Aitken, A.N.**, Opendak, M., Pollonini, G., Chopra, D., Raver, C.C., Alberini, C., Blair, C., Sullivan, R. Corticosterone administration targeting a hypo-reactive HPA axis rescues a socially avoidant phenotype in scarcity-adversity reared rats. (2019). Developmental Cognitive Neuroscience.

Brandes-Aitken, A.N., Braren, S., Swingler, M., Voegtline, K., Blair, C., Sustained Attention in Infancy: A Foundation for the Development of Self-Regulation in Children from Low-SES Backgrounds (2019). Journal of Experimental Child Psychology.

Payabvash, S., Palacios, E., Owen, J.P., Wang, M.B., Tavassoli, T., Gerdes, M.R., **Brandes Aitken, A.N.**,Marco, E. and Mukherjee, P. (2019).White Matter Connectome Correlates of Auditory Over-Responsivity: Edge Density Imaging and Machine-learning Classifiers. Frontiers in Integrative Neuroscience.

Tavassoli, T., **Brandes-Aitken A. N.**, Chu, R., Porter, L., Schoen, S., Miller, L.J., Gerdes, M.R., Owen, J., Mukherjee, P., Marco, E.J. (2019). Sensory over-responsivity: parent report, direct assessment measures, and neural architecture. Molecular Autism.

Payabvash, S., Palacios, E., Owen, J.P., Wang, M.B., Tavassoli, T., Gerdes, M.R., **Brandes Aitken, A.**, Cuneo, D., Marco, E. and Mukherjee, P. (2019). White Matter Connectome Edge Density in Children with Autism Spectrum Disorders: Potential Imaging Biomarkers Using Machine Learning Models. Brain Connectivity.

Brandes-Aitken, A. N., Anguera,J.A., Chang, Y.S., Demopoulos, C., Owen, J.P., Mukherjee, P., Gazzaley, A., Marco, E (2018). White Matter Microstructure Associations of Cognitive and Visuomotor Control in Children: A Sensory Processing Perspective. Frontiers in Integrative Neuroscience.

Marco, E.J., **Brandes-Aitken,A.N.**, Prakas Nair, V., de Gente, G., Thomas, S., Sherr, E.H (2018). Prevalence of de novo neurodevelopment mutations and SNP enrichment in children with Sensory Processing Dysfunction (SPD): A prospective cohort study. BMC Medical Genomics.

Brandes-Aitken, A. N., Anguera,J.A,. Rolle, C.E., Desai, S. S., Skinner, S.S., Gazzaley, A., Marco, E. (2018). Characterizing cognitive & visuomotor control in children with sensory processing dysfunction & autism. Neuropsychology. 32(2); 148-160.

Anguera,J.A., ***Brandes-Aitken, A. N.*** (*co-first authored*), Antovich, A. D. Rolle, C.E., Desai, S. S., Marco, E. J. (2017). A pilot study to determine the feasibility of enhancing cognitive abilities in children with sensory processing dysfunction. PLoS One. 12(4); 1-19.

Demopoulos, C., Yu, N., Tripp, J., **Brandes-Aitken, A. N.**, Desai, S. S., Hill,S. S., Antovich, A. D., Harris, J., Honma, S., Mizuiri, D., Nagarajan, S., Marco, E. J. (2017). Imaging Auditory and Somatosensory Cortical Responses in Children with Autism and Sensory Processing Dysfunction. Frontiers in human neuroscience. 11; 259.

Anguera, J.A., **Brandes-Aitken, A. N.**, Rolle, C.E., Skinner, S.N., Desai, S.S., Bower, J,D., Martucci, E.W., Chung, W.K., Sherr, E.H., Marco, E.J. (2016). Characterizing cognitive control abilities in children with 16p11.2 deletion using adaptive "video game" technology: a pilot study. Translational Psychiatry. 6(9):e893.

Chang,Y.S., Gratiot,M., Owen,J.P., **Brandes-Aitken, A. N.**, Desai, S.S., Hill, S. S., Arnett, A.B., Harris, J., Marco, E.J., Mukherjee, P (2015). White matter microstructure is associated with auditory and tactile processing in children with and without sensory processing disorder. Frontiers in Neuroanatomy. 9:196.

Demopoulos, C., **Brandes-Aitken, A. N.**, Desai, S. S., Hill, S. S., Antovich, A. D., Harris, J., & Marco, E. J. (2015). Shared and Divergent Auditory and Tactile Processing in Children with Autism and Children with Sensory Processing Dysfunction Relative to Typically Developing Peers. Journal of the International Neuropsychological Society, 21(06), 444-454.

Publications Under Review

Brandes-Aitken, A.N., Brito, N., Blair, C. Bridging Theory with Neuroscience to Understand how the Social Environment Dynamically Shapes Attention in Infancy

Publications in Preperation

Brandes-Aitken, A.N., Braren, S., Brito, N. Caregiver Cumulative Cortisol Predicts Differential Frontal Cortex Maturation: Evidence from Resting EEG Trajectories

Published Abstracts and Conference Presentations:

Brandes-Aitken, A., Braren, S., Greaves, A., Brito, N. (2021). Caregiver Hair Cortisol Predicts Differential Patterns of Longitudinal EEG Activity Across Infancy. Talk presented at the International Society for Developmental Psychobiology. Chicago, IL.

Brandes-Aitken, A., Braren, S., Greaves, A., Brito, N. (2021). Parent cortisol and the neural underpinnings of attention and emotion regulation in infancy. Talk presented at the Society for Research in Child Development. Virtual Conference.

Brandes-Aitken, A., Braren, S., Greaves, A., Brito, N. (2020). Contributions of Cumulative Parent Cortisol to the Neural Underpinnings of Infant Attention and Emotion Regulation. Talk presented at the International Congress of Infant Studies. Virtual Conference.

Brandes-Aitken, A., Braren, S., Vogel, S., Perry, R., Blair, C. (2019). Linking Chronic Physiological Stress in Infancy to Sustained Attention in Toddlerhood and Working Memory in Early Childhood. International Society for Developmental Psychobiology. Chicago, IL.

Brandes-Aitken, A., Braren, S., Greaves, A., Perry, R., Brito, N. (2019). Contributions of Cumulative Parent Cortisol, Language in the Home, and Socioeconomic Status to 3-Month Infant Resting EEG Power. FLUX Society. New York, New York.

Brandes-Aitken, A., Braren, S., Blair, C. (2019). Examining Longitudinal Associations of Socioeconomic Risk, Infant Attention and Early Childhood Self-Regulation. Talk presented at the Eastern Psychologial Association, New York, NY.

Brandes-Aitken, A., Braren, S., Blair, C. (2019). Influences of Poverty-Related Risk and Physiological Stress on Childhood Self-Regulation: Mediation through Infant Attention. Talk presented at the Society for Research in Child Development. Baltimore, MD.

Brandes-Aitken, A., Braren, S., Swingler, M., Voegtline, K., Blair, C. (2018). Attention in Infancy: A Foundation for the Development of Self-Regulation in Children from Low-SES Environments. International Society for Developmental Psychobiology. San Diego, CA.

Brandes-Aitken, A., Braren, S., Blair, C. (2018). Detection of Novelty in Infants from Low-SES Backgrounds: A Functional Near-Infrared Spectroscopy Study. FLUX Society. Berlin, Germany.

Brandes-Aitken, A., Braren, S., Blair, C. (2018). Joint Attention Mediates the Effects of Poverty and Parenting on Executive Functioning, Inattention and Academic Readiness. American Psychological Science Annual Convention. San Francisco, CA.

Brandes-Aitken, A., Braren, S., Blair, C. (2018). Physiological and Neurocognitive Predictors of Childhood Executive Functioning Development in Low-Income Communities. FLUX Society Satellite Conference. Chapel Hill, NC.

Braren, S., **Brandes-Aitken, A.**, Blair, C. (2018). Relations Between Hypothalamic-Pituitary-Adrenal Axis and Autonomic Nervous System Activity and Children's Executive Functions in Environments of Early-life Stress. Cognitive Neuroscience Society (CNS), Boston, MA.

Brandes-Aitken, A., Anguera, J., Owen, J., Mukherjee, P., Marco, E. (2017). Assessing White Matter Correlates of Cognitive and Visuomotor Control in Children with SPD. American Academy of Child and Adolescent Psychiatry (AACAP), Washington D.C.

Brandes-Aitken, A., Anguera, J., Owen, J., Mukherjee, P., Marco, E. (2017). Assessing Visuomotor Deficits in Children with SPD. International Meeting for Autism Research (IMFAR), San Francisco, CA.

Marco, E., **Brandes-Aitken, A.**, Tavassoli, T., Miller, L. J., Schoen, S. A., Owen, J., Mukherjee, P. (2017). Can Parent Report and Direct Assessment Measures Enhance Sensory Over- Responsivity Phenotyping and Inform the Neural Underpinnings of Sensory Processing Symptoms? International Meeting for Autism Research (IMFAR), San Francisco, CA.

Demopoulos, C., Yu, N., Tripp, J., **Brandes-Aitken, A.**, Desai, S., Hill, S. S., Antovich, A. D., Harris, J., Honma, S., Mizuiri, D., Mota Miranda, N. G., Nagarajan, S., Marco, E. (2017). Evidence for Domain Specificity of Cortical Auditory and Somatosensory Response Delays in ASD. International Meeting for Autism Research (IMFAR), San Francisco, CA.

Brandes-Aitken, A., Anguera, J., Rolle, C., Antovich, A., Desai, S., Marco, E. (2016). Differentially Identifying and Remediating Attention Deficits in Children Affected by Sensory Processing Dysfunction. Society for Neuroscience. San Diego, CA.

Anguera, J, **Brandes-Aitken, A.**, Rolle, C., Wu, B., Marco, E., Gazzaley, A. (2016). Attention training in children with SPD. International Meeting for Autism Research (IMFAR), Baltimore, MD.

Brandes-Aitken, A., Skinner, S., Martucci, E., Bowers, J., Anguera, J. Gazzaley, A., Marco, E. (2016). Engaging and adaptive assessment for attention in 16p11.2 deletion carriers. International Meeting for Autism Research (IMFAR), Baltimore, MD.

Marco, E.J., de Gente, G., Thomas, S., **Brandes-Aitken, A. N.**, Sherr, E.H. (2016). Using Whole Exome Sequencing to investigate the genetics of Sensory Processing Disorders. International Meeting for Autism Research (IMFAR), Baltimore, MD.

Anguera, J., **Brandes-Aitken, A.**, Rolle, C.,Wu, B., Marco, E., Gazzaley, A. (2015). Attention training in children with SPD. Bay Area Autism Consortium Symposium, Redwood City, CA.

Brandes-Aitken, A., Demopoulos, C., Desai, S., Marco, E. (2015). Shared and Divergent Sensory Processing in children with ASD and SPD. Bay Area Autism Consortium Symposium, Redwood City, CA.

Brandes-Aitken, A., Skinner, S., Martucci, E., Bowers, J., Anguera, J. Gazzaley, A., Marco, E. (2015). Engaging and adaptive assessment for attention in 16p11.2 deletion carriers. Bay Area Autism Consortium Symposium, Redwood City, CA.

Rolle, C., Anguera, J., **Brandes-Aitken, A**, Wu, B,, Marco, E,, Multi-tasking training in children with Sensory Processing Disorder, (2015), Entertainment Software & Cognitive Neurotherapeutics Society (ESCoNS) Conference, San Francisco, CA.

Brandes-Aitken, A., Freberg, L. Early to bed and early to rise, does it really make a man healthy, wealthy and wise? (2014). The Annual Meeting of the Western Psychological Science. Portland, Oregon.

Brandes-Aitken, A., Freberg, L. Loneliness and Health Promoting Behaviors – the Role of Motivation and Discipline. (2014). The annual meeting of the American Psychological Science. San Francisco, CA.

Williams, J., Hernandez, A., **Brandes-Aitken, A.** Evidence for an Innate Desire for Concealment when Sleeping (2014). The annual meeting of the American Psychological Science. San Francisco, CA.

Anguera, J.A., Rolle, C., Desai, S., **Brandes-Aitken, A.**, Gibbons, J., Harris, J., Gazzaley, A., & Marco,E. The influence of distraction on discrimination and visuomotor tracking in sensory processing deficient & autistic children. (2013) Entertainment Software & Cognitive Neurotherapeutics Society (ESCoNS) Conference, Los Angeles, CA.

Invited Talks & Lectures

Brandes-Aitken, A., Brito, N. (2020/2021). Introduction to EEG Methods in Research. Talk presented to neurology medical residents at New York University School of Medicine. New York, NY.

Brandes-Aitken, A., Blair, C. (2019). Associations of Early Cognitive Control in Infancy. Talk presented at the Bezos Family Foundation Summit, Scottsdale, AZ.

Honors, Awards & Fellowships

Travel Award, International Society for Developmental Psychobiology 2021
Chicago, IL

Felix M. Warburg Memorial Steinhardt Scholarship 2021
New York University

Travel Award, Society for Improving Psych. Science 2019
Rotterdam, NL

Linda & Arthur Carter Steinhardt Scholarship 2019
New York University

Travel Award, International Society for Developmental Psychobiology 2018
San Diego, CA

Graduate Research Fellowship 2017-2020
National Science Foundation

Best Research Presentation Award 2015
Bay Area Autism Symposium

Research Travel Award 2014
Cal Poly

Graduated Magna Cum Laude 2014
Cal Poly

Psy Chi Honor Society 2011-2014
Cal Poly

Consulting Experience and Professional Services

Brooklyn College 2021-Present
Adjunct Lecturer

Social Creatures 2020-Present
Community Impact Director

Silicea Labs 2020
Data Science Consultant

UCSD Empathy Research Study 2020
Statistician Consultant

Volunteer Outreach Experience

Quality Undergraduate Education and Scholarly Training (QUEST) program 2019
Mentor

Brain Awareness Week Panel on Neuroscience and Policy 2018
Organizer and Co-Moderator

Scientist Action and Advocacy Network 2018-Present
Member

Girls Advancing in STEM 2016-2017
Mentor/Speaker

Cal Poly NCAA Athletic & Academics Department 2013-2014
Statistics Tutor

Intensive Autism Therapy 2009-2011
Assistant Autism Therapist

Ad Hoc Reviewing

Developmental Science 2021
Developmental Psychology 2020
Developmental Science (co-reviewed with C.B.) 2018
Psychiatry Research 2018

Trainings and Certifications

Functional Near-Infrared Spectroscopy (fNIRS) Training 2017
Martinos Institute for Biomedical Engineering at Harvard University

Autism Diagnostic Observation Session Research Certified 2015
University of Washington

MRI Training and Research Certified 2014
University of California, San Francisco

References

Clancy Blair, PhD
Professor of Psychology
New York University
Clancy.Blair@nyu.edu

Natalie Brito, PhD
Assistant Professor of Deveopmental Psychology
New York University
Natalie.Brito@nyu.edu

Elysa Marco, MD
Associate Professor of Neurology
University of California, San Francisco
elysa.marco@ucsf.edu

Joaquin Anguera, PhD
Assistant Professor of Neurology
University of California, San Francisco
joaquin.anguera@ucsf.edu

Melina Uncapher, PhD
Assistant Professor of Neurology

University of California, San Francisco
melina.uncapher@ucsf.edu

Laura Freberg, PhD
Professor of Psychology
California Polytechnic State University
lfreberg@calpoly.edu