

Annie Aitken

Neuroscience and Education Lab

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Education

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| May 2022 (anticipated) | Ph.D. in Developmental Psychology
<i>New York University</i>
New York, NY |
| March 2014 | B.S. in Psychology with Honors, Minor in Statistics
<i>California Polytechnic State University</i>
San Luis Obispo, CA |

Research Experience

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| 2017-Present | NSF Graduate Research Fellow
Neuroscience and Education Laboratory
New York University
PIs: Clancy Blair, PhD & C. Cybele Raver, PhD |
| 2015-2017 | Research Assistant
Education and Neuroscience Lab, Neuroscape Center
University of California, San Francisco
PIs: Melina Uncapher, PhD & Adam Gazzaley PhD, MD |
| 2014-2017 | Research Coordinator
Sensory Neurodevelopment and Autism Program
University of California, San Francisco
PIs: Elysa Marco, MD & Joaquin A. Anguera, PhD |
| 2013-2014 | Undergraduate Independent Researcher
Department of Psychology
California Polytechnic State University
Advisor: Laura Freberg, PhD |
| 2012-2014 | Undergraduate Research Assistant
Cognitive and Evolutionary Psychology Lab
California Polytechnic State University
PI: Jason Williams, PhD |
| 2013-2014 | Undergraduate Research Assistant
Cultural and Emotional Psychology Lab
California Polytechnic State University
PI: Carrie Langner, PhD |
| 2013 | Summer Research Assistant
Language Lab
University of Colorado, Boulder
PI: Eliana Colunga, PhD |

- 2013 Summer Research Assistant
 Psychoinformatics Lab
 University of Colorado, Boulder
 PI: Tal Yarkoni, PhD
- 2012 Summer Research Assistant
 Sensory Neurodevelopment and Autism Program
 University of California, San Francisco
 PI: Elysa Marco, MD

Empirical Publications

- Brandes-Aitken, A.N.**, Anguera, J.A., Chang, Y.S., Demopoulos, C., Desai, S.S., Antovich, A.A., Owen, J.P., Mukherjee, P., Marco, E.J. Common White Matter Microstructure Associations of Cognitive and Visuomotor Control (in preparation).
- Tavassoli, T., **Brandes-Aitken, A.N.**, Chu, R., Porter, R., Schoen, S., Miller, L.J., Chang, Y.S., Owen, J., Mukherjee, P., Marco, E.J. Sensory Over-Responsivity: Comparing Parent Report with Direct Assessment Measures and Exploring the Neural Architecture (in preparation).
- Marco, E.J., **Brandes-Aitken, A. N.**, Prakas Nair, V., de Gente, G., Thomas, S., Sherr, E.H. Prevalence of de novo neurodevelopment mutations and SNP enrichment in children with Sensory Processing Dysfunction (SPD): A prospective cohort study (in preparation).
- Brandes-Aitken, A. N.**, Anguera, J.A., Rolle, C.E., Desai, S. S., Skinner, S.S., Gazzaley, A., Marco, E. (2017). Characterizing cognitive & visuomotor control in children with sensory processing dysfunction & autism. *Neuropsychology*.
- Anguera, J.A.,*, **Brandes-Aitken, A. N***, 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.

Quantitative & Technical Skills

Statistics	Repeated measure methods (ANOVA, linear mixed models, interaction contrasts), multivariate methods (multivariate linear & polynomial regression, MANOVA), categorical analyses, ROC curve analysis, random response models, methods of missing data imputation
Research Methods	Experimental intervention longitudinal analysis, pseudo-randomized experimental designs, multi-factorial experimental design and survey research
Programming/ Software	Process EEG data using MatLab & Analyzer, Python internship in 2013, Data analysis in R and SPSS. Completed courses using SAS, Minitab, STATA and JMP
Brain Imaging	Administered electroencephalography (EEG) and magnetic resonance imaging (MRI) scans to over 40 children

Conference Presentations

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.

Marco, E.J*., de Gente, G*., Thomas, S., **Brandes-Aitken, A. N.**, Sherr, E.H. (2015). Using Whole Exome Sequencing to investigate the genetics of Sensory Processing Disorders. 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.

Anguera, J.A., Rolle, C., Desai, S., **Brandes-Aitken, A.**, Gibbons, J., Harris, J., Gazzaley, A., Marco, E.J. The influence of distraction on discrimination and visuomotor tracking in sensory deficient processing & autistic children (2013). International Meeting for Autism Research (IMFAR), San Sebastian, Spain.

Professional Experience

2016-Present	Mentor/Speaker for Young Women in STEM
2013-2014	Statistics Tutor for NCAA Athletes
2009-2011	Assistant Autism Therapist

Honors and Certifications

2017	National Science Foundation Graduate Research Fellowship
2015	ADOS-2 Research Certified
2015	Winner of Best Research Presentation at the Bay Area
2014	Autism Symposium
2014	Graduated Magna Cum Laude
2014	MRI Training and Certification
2011-2014	Psy Chi Honor Society

Fluency in Psychological Assessments

Autism Diagnostic Observation Session 2 (ADOS-2)

WISC-IV

Woodcock-Johnson

Graphesthesia, Van Frey Hairs, two-point discrimination and Von Boven Domes (tests of tactile processing)

Beery Visual Motor Integration

Differential Screening Test for processing

References

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Professor of Psychology
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Jason Williams, PhD
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jwilli26@calpoly.edu