

Shea J. Andrews, Ph.D

Department of Psychiatry and Behavioral Sciences
University of California, San Francisco
675 18th St, San Francisco, CA 94107
+1 646-251-1913; shea.andrews@ucsf.edu

EDUCATION

- 2013 – 2017 Ph.D., Medical Sciences,
The Australian National University, ACT, Australia
- 2007 – 2012 BS, Major in Genetics with Honours Class I in Biochemistry
University of Queensland, QLD, Australia
- 2007 – 2010 BA, dual Major in Journalism and Mass Communication, and Political
Science
University of Queensland, QLD, Australia

RESEARCH EXPERIENCE

- 2022 – pres Assistant Professor
Department of Psychiatry and Behavioral Sciences
University of California San Francisco, San Francisco, CA
- 2021 – 2022 Instructor
Ronald M. Loeb Center for Alzheimer's Disease
Icahn School of Medicine at Mount Sinai, New York, NY
Laboratory of Dr. Alison Goate
Project: Using genomics to identify risk factors for Alzheimer's disease.
- 2018 – 2021 Postdoctoral research fellow
Ronald M. Loeb Center for Alzheimer's Disease
Icahn School of Medicine at Mount Sinai, New York, NY
Laboratory of Dr. Alison Goate
Project: Genetic variation in Alzheimer's disease and dementia endophenotypes.
- 2016 – 2017 Postdoctoral research fellow
Centre for Research on Ageing, Health and Wellbeing,
Australian National University, Canberra, Australia
Laboratory of Dr. Kaarin Anstey
Project: Cognitive Resilience: Exploring how non-genetic risk factors moderate genetic predisposition to dementia.
- 2013 – 2016 Graduate student researcher

John Curtin School of Medical Research
Australian National University, Canberra, Australia
Laboratory of Dr. Simon Easteal
Project: Predicting cognitive decline: Genetic, environmental and lifestyle risk factors.

2011 – 2012 Honors student researcher
School of Chemistry and Molecular Biosciences
University of Queensland, Brisbane, Australia
Laboratory of Dr. Joe Rothnagel
Project: Characterization of peptides encoded by upstream open reading frames.

PUBLICATIONS

My Bibliography: www.ncbi.nlm.nih.gov/myncbi/shea.andrews.1/bibliography/public/
PlumX Research Impact: <https://plu.mx/mtsinai/u/sandrews>

Original Research

1. **Andrews SJ**, Das D, Anstey KJ, Easteal S. (2015). *Interactive effect of APOE genotype and blood pressure on cognitive decline: The PATH through life project.* Journal of Alzheimer's Disease. 44(4): 1087-98.
2. Vélez JI, Lopera F, Sepulveda-Falla D, Patel HR, Johar AS, Chuah A, Tobón C, Rivera D, Villegas A, Cai Y, Peng K, Arkell R, Castellanos FX, **Andrews SJ**, et al. (2015). *APOE* E2 allele delays age of onset in PSEN1 E280A Alzheimer's disease.* Molecular Psychiatry. 21(7):916-24
3. **Andrews SJ**, Das D, Cherbuin N, Anstey KJ, Easteal S. (2016). *Association of genetic risk factors with cognitive decline: The PATH through life project.* Neurobiology of Aging. 41:150-158.
4. McDermott KL, McFall GP, **Andrews SJ**, Anstey KJ, Dixon RA. (2016). *Memory Resilience to Alzheimer's Genetic Risk: Sex Effects in Predictor Profiles.* J Gerontol B Psychol Sci Soc Sci.
5. **Andrews SJ**, Das D, Anstey KJ, Easteal S. (2017). *Association of AKAP6 and MIR2113 with cognitive performance in a population based sample of older adults.* Genes, Brain and Behavior. 16(4): 472-478
6. **Andrews SJ**, Das D, Anstey KJ, Easteal S (2017). *Late Onset Alzheimer's disease risk variants in cognitive decline: The PATH Through Life Study.* Journal of Alzheimer's disease. 57:423-436.
7. **Andrews SJ**, Eramudugolla R, Velez JI, Cherbuin N, Easteal S, Anstey KJ. (2017). *Validating the role of the Australian National University Alzheimer's Disease Risk Index (ANU-ADRI) and a genetic risk score in progression to cognitive impairment in a population-based cohort of older adults followed for 12 years.* Alzheimer's Research & Therapy. 9:1-16

8. Watts A, **Andrews SJ**, Anstey KJ. (2018). *Sex Differences in the Impact of BDNF Genotype on the Longitudinal Relationship between Physical Activity and Cognitive Performance*. *Gerontology*. 64:361–372.
9. **Andrews SJ**, Ismail Z, and Anstey K, Mortby ME. (2018). *Association of Alzheimer's genetic loci with mild behavioral impairment*. *American Journal of Medical Genetics Part B Neuropsychiatric Genetics*. 177(8):727-735.
10. **Andrew SJ**, McFall G, Dixon R, Cherbuin N, Eramudugolla R, Anstey K. (2018). *Alzheimer's environmental and genetic risk scores are differentially associated with general cognitive ability and dementia severity*. *Alzheimer Disease & Associated Disorders*. 33(2):95-103.
11. **Andrews SJ** & Goate A. (2019). *Mendelian randomization indicates that TNF is not causally associated with Alzheimer's disease*. *Neurobiology of Aging*. 84:241.e1-241.e3
12. **Andrews SJ**, Goate A & Anstey K. (2019). *Association between alcohol consumption and Alzheimer's disease: A Mendelian Randomization Study*. *Alzheimer's & Dementia*. 16, 345–353 (2019).
13. Peters R, Yasar S, Anderson C, **Andrews SJ**... et al. (2020). *An investigation of antihypertensive class, dementia and cognitive decline. A meta-analysis*. *Neurology*. 94(3)
14. **Andrews SJ**, Fulton-Howard B, Patterson C, McFall GP, Gross A, Michaelis EK, Goate A, Swerdlow RH, Pa J, and for the Alzheimer's Disease Neuroimaging Initiative. (2020). *Mitochondrial Interactions Influence Alzheimer's Disease Risk*. *Neurobiology of Aging*. 87:138.e7-138.e14
15. Burns R, **Andrews SJ**, Cherbuin N, Anstey K. (2020). *Role of apolipoprotein E epsilon 4 (APOE*ε4) as an independent risk factor for incident depression over a 12-year period in cognitively intact adults across the lifespan*. *BJPsych Open*. 6(3):e47
16. Swerdlow RH, Hui D, Chalise P, Sharma P, Wang X, **Andrews SJ**, Pa J, Mahnken JD, Jill Morris J, Wilkins HM, Burns JM, Michaelis ML, Michaelis EK (2020). *Exploratory analysis of mtDNA haplogroups in two Alzheimer's longitudinal cohorts*. *Alzheimer's & Dementia*. 16:1164–1172.
17. Logan Dumitrescu... **Andrews SJ**... et al. (2020) *Genetic Variants and Functional Pathways Associated with Resilience to Alzheimer's Disease*. *Brain*. 143, 2561–2575.
18. **Andrews SJ**, Fulton-Howard B, O'Reilly P, Marcora E, Goate A. (2021). *Causal Associations Between Modifiable Risk Factors and the Alzheimer's Phenome*. *Annals of Neurology* 89:54–65.
19. Lyon, M. S, **Andrews SJ**, Elsworth B, Gaunt TR, Hemani G, Marcora E. (2021). *The variant call format provides efficient and robust storage of GWAS summary statistics*. *Genome Biology*. 22(32).
20. Fadista J, Kraven L, Karjalainen J, **Andrews SJ**, Geller F, Baillie JK, Wain LV, Jenkins RG, Feenstra B. (2020). *Shared genetic etiology between idiopathic pulmonary fibrosis and COVID-19 severity*. *Ebiomedicine* 65:103277.

21. Horguslouoglu-Moloch E, Neff R, Song W, ... **Andrews SJ**... et al. *Integrative Metabolomics-Genomics Approach Reveals Key Metabolic Pathways and Regulators of Alzheimer's Disease*. *Alzheimer's & Dementia*. 18, 1260–1278 (2022).
22. McInerney WT, Fulton-Howard B, Patterson C, Paliwal D, Jermiin LS, Patel HR, Swerdlow RH, Pa J, Goate A, Eastel S, **Andrews SJ**. (2021). *A globally diverse reference alignment and panel for imputation of mitochondrial DNA variants*. *BMC Bioinformatics*. 22(417).
23. The COVID-19 Host Genetics Initiative. (2021). *Mapping the human genetic architecture of COVID-19 by worldwide meta-analysis*. *Nature*. 600:472–477.
24. Paliwal D, McInerney WT, Pa J, Swerdlow RH, Eastel S, **Andrews SJ**. (2021). *Mitochondrial pathway polygenic risk scores are associated with Alzheimer's Disease*. *Neurobiology of Aging*. 108:213-222.
25. Farrell, K. et al. (2021). *Genome-wide association study and functional validation implicates JADE1 in tauopathy*. *Acta neuropathol*. 143(1):33-53.
26. The COVID-19 Host Genetics Initiative. *A first update on mapping the human genetic architecture of COVID-19*. *Nature* 608, E1–E10 (2022).
27. Watts A, Charlise P, Hu J, Hui D, Pa J, **Andrews SJ**, Michaelis EK, Swerdlow RH. *A Mitochondrial DNA Haplogroup Defines Patterns of Five-Year Cognitive Change*. *J Alzheimer's Dis* 1–10 (2022).
28. Harerimana NV, Paliwal D, Romero Molina C, Bennet D, Pa J, Goate A, Swerdlow RH, **Andrews SJ**. (2022) *The Role of Mitochondrial genome abundance in Alzheimer's Disease*. *Alzheimer's & Dementia*.

Reviews

1. **Andrews SJ** and Rothnagel J. (2014). *Emerging evidence for functional peptides encoded by short open reading frames*. *Nature Reviews Genetics*. 15(3): 193-204.
2. **Andrews SJ**, Fulton-Howard B, Goate A. (2019). *Protective Variants in Alzheimer's Disease*. *Current Genetic Medicine Reports*. 7(1):1-12.
3. **Andrews SJ**, McFall G, Booth A, Dixon R, Anstey K (2019). *Association of Alzheimer's Disease Genetic Risk Loci with Cognitive Performance and Decline: A Systematic Review*. *Journal of Alzheimer's Disease*. 69(4):1109-1136.
4. Pa J, **Andrews SJ**, Swerdlow R. (2019). *Mitochondria and Alzheimer's: Is PTCD1 the Smoking Gun?* *Trends in Neurosciences*. 11(42):759-762.
5. **Andrews SJ**, Fulton-Howard B, Goate A. (2020). *Interpretation of risk loci from genome-wide association studies of Alzheimer's disease*. *Lancet Neurology*. 19(4):326-335
6. Novikova G, **Andrews SJ**, Renton A, Marcora E. (2021). *Beyond association: successes and challenges in linking non-coding genetic variation to functional consequences that modulate Alzheimer's disease risk*. *Molecular Neurodegeneration*. 16(27).
7. Romero-Molina C, Garrett F, **Andrews SJ**, Marcora E & Goate AM. (2022). *Microglial efferocytosis: Diving into the Alzheimer's disease gene pool*. *Neuron* 110, 3513–3533.

Preprints

1. Cochran NJ, Acosta-Uribe J, Esposito BT, Madrigal L, Aguillon D, Giraldo MM, Taylor JW, Bradley J, Fulton-Howard B, **Andrews SJ**, ... *et al.* Genetic Associations with Age at Dementia Onset in the PSEN1 E280A Colombian Kindred. *MedRxiv* 2020.09.23.20198424 (2022) doi:10.1101/2020.09.23.20198424.
2. The COVID-19 Host Genetics Initiative. (2022). A second update on mapping the human genetic architecture of COVID-19. *MedRxiv*. doi:10.1101/2022.12.24.22283874.

GRANTS & FELLOWSHIPS

- 2022 – 2025 ABA-22-969581. Ancestry-specific effects of APOE on AD endophenotypes and risk factors
Role: PI
- 2021 – 2025 NIA K99/R00AG070109A. NIH Pathway to Independence Award (K99/R00). *Elucidating the causal associations underlying Alzheimer's disease*.
Role: PI
- 2020 – 2023 AARF-20-675804. Alzheimer's Association Research Fellowship. *Assessing the causal role of mitochondria in Alzheimer's disease*.
Role: PI
- 2013 – 2017 Australian National University Australian Postgraduate Award (APA) Scholarship

HONOURS & AWARDS

- 2021 Freidman Brain Institute Exceptional Achievement Postdoc Award.
- 2019 Charleston Conference on Alzheimer's Disease.
- 2017 ARC Centre of Excellence in Population Aging Research (CEPAR) Early Career Research Fellow Travel Scheme.
- 2017 Australian National University Early Career Research Travel Grants.
- 2017 Advanced Psychometrics Methods in Cognitive Aging Research 2017 Travel Fellowship.
- 2015 Vice-Chancellor's HDR Travel Grants.
- 2012 University of Queensland Biochemistry Alumni Prize.

PRESENTATIONS

Oral Presentations

- 2022 Novel genetic associations underlying symptom severity and infection susceptibility to SARS-CoV-2.
American Society of Human Genetics
Los Angeles, CA.

- 2018 Mitochondrial Haplogroups and a Nuclear Encoded Mitochondrial Polygenic Risk Score Interact to Influence Dementia Risk.
Heartland Center for Mitochondrial Medicine Symposium.
Kansas City, MO.

Invited Seminars

- 2022 Using Genetics to uncover risk factors for Alzheimer's disease
NeuroGenomics and Informatics Center,
Washington University in St. Louis
- 2016 Predicting cognitive decline in aging: genetic, environmental and lifestyle risk factors.
Icahn School of Medicine at Mount Siani
New York, NY, USA
- 2017 Genetics of Alzheimer's disease.
University of Alberta, AB, Canada
- 2017 Predicting cognitive decline in aging: genetic, environmental and lifestyle risk factors.
University of Edinburgh, United Kingdom
- 2017 Thesis by Publication – an alternate way to complete your PhD.
John Curtin School of Medical Research Student Writing Retreat
Kiola, NSW, Australia.

Poster Presentations

- 2012 ComBio 2012 Conference – Adelaide Australia
- 2014 Genetics Society of Australiasia – Sydney, Australia
- 2014 Australian Society for Medical Research New Investigator Forum –
Canberra, Australia
- 2015 Alzheimer's Association International Conference – Washington D.C, USA
- 2016 Cognitive Aging Conference 2016 – Atlanta, USA
- 2016 Campus Alberta Neuroscience International Conference on Promoting
Healthy Brain Aging and Preventing Dementia – Banff, Canada
- 2016 Alzheimer's Association International Conference – Toronto, Canada
- 2017 Alzheimer's Association International Conference – London, UK
- 2018 Campus Alberta Neuroscience 2018 International Conference on
Promoting Healthy Brain Aging and Preventing Dementia – Banff, Canada
- 2018 Alzheimer's Association International Conference – Chicago, USA
- 2019 International Mendelian Randomization Conference – Bristol, UK
- 2020 Alzheimer's Association International Conference – Virtual
- 2021 Alzheimer's Association International Conference – Virtual
- 2022 Alzheimer's Association International Conference – San Diego, USA

MENTORING

- 2017 – 2018 Janet Maccora. Ph.D candidate, Australian National University

- 2017 – pres Tim McInerney. Ph.D candidate, Australian National University
2018 Lauren Stalbow. Ph.D rotation student
2018 Alanna Cote. Ph.D rotation student
2019 Emily Wei. High School summer student
2019 Devashi Paliwal. Honours student, Australian National University,
Graduated with First Class Honours
2020 Jessica Raviv. B.S summer student
2020 – 2021 Devashi Paliwal. Medical School Research Project. Australian National
University
2021 Jahnvi Patel. B.S summer student
2022 – pres Brian Alveraz. Masters Student, Icahn School of Medicine at Mount Sinai
2022 – pres Jack Taylor. PhD Student, University of California San Francisco.
2022 – pres Aadrita Chatterjee. Undergraduate Volunteer. University of California,
Berkley

TEACHING

- 2017 Lecture in Methods in Applied Epidemiological Research
Study Design
The Australian National University, Research School on Population Health.
2017 – 2018 Lecture in Life Course Approaches to Human Ageing
Genetics in Human Disease
The Australian National University, Research School on Population Health.
2021 Lecture in Ageing and Neurodegeneration
Genetic Approaches to Alzheimer's Disease Susceptibility
Icahn School of Medicine at Mount Sinai

SERVICE TO PROFESSION

Editorial Duties

- 2013 – 2014 Sub-editor, ANU Undergraduate Research Journal
2015 – 2018 Associate Editor, Journal of Alzheimer's disease
2020 – 2021 Associate Editor, Journal of Alzheimer's disease

Peer Review (selected)

Publons: <https://publons.com/researcher/3251119/she-a-andrews/>

Nature Reviews Neuroscience

Annals of Neurology

Lancet Neurology

JAMA Neurology

Journal of Alzheimer's disease

Neurobiology of Aging

PLoS One

REFEREES

Professor Alison Goate

Ronald Loeb Center for Alzheimer's Disease
Icahn School of Medicine at Mount Sinai
New York, NY, USA

Alison.goate@mssm.edu

Professor Kaarin J. Anstey

ARC Centre of Excellence in Population Ageing Research
University of New South Wales
Sydney, NSW, Australia

k.anstey@unsw.edu.au

Emeritus Professor Simon Easteal

John Curtin School of Medical Research
The Australian National University
Canberra, ACT, Australia

Simon.Easteal@anu.edu.au

Professor Roger Dixon

Department of Psychology
University of Alberta
Edmonton, AB, Canada

rdixon@ualberta.ca