BECKI GREEN, PHD

Passionate researcher with a strong background in data science and epidemiology. Pronouns: she/her.

🎓 EDUCATION

2022 | 2019

PhD, Neuroscience

Institute of Psychiatry, Psychology and Neuroscience - King's College London

· NIHR Biomedical Research Centre PhD studentship. Project: *"Linking blood metabolites to early dementia using systems biology"*, Supervisors: Dr Petroula Proitsi & Professor Marcus Richards.

2018 | 2017

MSc, Genes, Environment and Development in Psychology and Psychiatry

Institute of Psychiatry, Psychology and Neuroscience - King's College London

· Project: *"Investigating relationships between hypothalamic pituitary axis polygenic scores, stressful life events, and anxiety and depression."* Supervisor: Professor Edmund Sonuga-Barke.

2015 | 2014

MSc, Biomedical Sciences Research

Medical Sciences - University of Bristol

· Project: *"Developing and evaluating the use of a cognitive-motor task as a quantitative measure of fatigue using functional fMRI in healthy volunteers."* Supervisor: Dr Jade Thai.

2013 | 2010

BSc, Physiological Science

Medical Sciences - University of Bristol

· Project: *"Investigating the role of glucose toxicity in the development of Alzheimer's disease"*. Supervisor: Professor Elek Molnar.

💻 RESEARCH & INDUSTRY EXPERIENCE

2100 | 2023

Principal Scientist (Epidemiology) - Start Dec 2023

UK Health Security Agency

· I will be managing scientific and administrative staff within the team, overseeing the maintenance, development, statistical analysis, research outputs, and reporting from flu and COVID-19 surveillance datasets.

2023 | 2022

Postdoctoral Research Fellow

MRC Unit for Lifelong Health and Ageing at UCL

· Investigating relationships between common infections, brain health, and neuropathologies in large population-based cohort studies (led by Dr Dylan Williams). Contributing to the CONVALESCENCE consortium exploring risk factors of long COVID.

2023 | 2022

Visiting Research Fellow

Maurice Wohl Clinical Neuroscience Institute - King's College London

CONTACT

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🐦 becki_e_green

⬡ github.com/beckigreen

🔗 beckigreen.netlify.app

in linkedin.com/in/rebecca-e-green

KEY SKILLS

Data preprocessing and analysis

Coding (R, Python, SQL, bash, git, GitHub/GitLab, Juptyer, RMarkdown)

Reproducible research

Science communication

Mentoring and teaching

HOBBIES

Adventure sports, music, comedy, travel.

RESOURCES

CV made with the R package pagedown. Code available here.

2022
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2021

DECOVID Project Collaborator

The Alan Turing Institute

· Characterising electronic health record data collected during the COVID-19 pandemic in two large hospital trusts. Creating reproducible pipelines to enable collaboration across teams. Assessing data quality and evaluating against a data ethics framework. Led by Dr Kirstie Whitaker.

2021

Transfer Learning Project Collaborator

The Alan Turing Institute

· Developing and applying transfer learning methodologies to build prediction models for dementia. Led by Professor David Llewellyn.

2019
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2018

Freelance Editor/Science Writer

Cactus Communications - Worldwide

· Editing, formatting, and proofreading scientific manuscripts prior to journal submission in the field of Life Sciences.

2017
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2016

Assistant Research Officer

NIHR Clinical Research Network West of England - Bristol

· Managing the set up and delivery of primary care clinical research studies in 59 sites. Leading events to promote patient and public involvement. Undertaking audits into research delivery and performance.

2016

Research Assistant (Healthcare)

NIHR Clinical Research Network West of England - Bristol

· Supporting the delivery of clinical trials. Leading study specific training and utilising clinical skills to carry out and document trials.

👥 SUPERVISION & MANAGEMENT EXPERIENCE

2025
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2022

PhD (tertiary supervisor)

UCL

· *"The relationship between common infections, education, and Alzheimer's Disease"*

2023

Health Data Science Black Internship Programme

HDR UK & MRC Unit for Lifelong Health and Ageing at UCL

· Line management for two interns (8-weeks)

2023

MSc Cardiovascular Sciences (primary supervisor)

UCL

· *"Investigating associations between herpesviruses and arterial stiffness"*

2021

MSc Developmental Psychopathology (co-supervisor)

King's College London

· *"Investigating the presence of shared genetic architecture between Major Depressive Disorder and Alzheimer's Disease"*

2019

MSc Neurosience (co-supervisor)

King's College London

· *"Assessing Genetic Overlap and Causality Between Blood Plasma Proteins and Alzheimer's Disease".*

TEACHING EXPERIENCE

2022
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2021

Module Lead
BSc, King's College London

- **Courses:** Big Data in Python (BSc; 2021, 2022)
- Course design and material creation, seminar and practical leader, marking, forum management, evaluation and feedback.

2021
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2019

Graduate Teaching Assistant
BSc & MSc, King's College London

- **Courses:** Origins of Individual Differences (BSc; 2019, 2020, 2021), Statistics in R (MSc; 2021), Big Data in Python (BSc; 2020), Research Methods (MSc & BSc; 2019, 2020), Mendelian Randomisation (MSc; 2019, 2020).
- Material creation, seminar and practical leader, marking, evaluation and feedback.

2021
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2019

Workshop Assistant
Global researchers

- **Courses:** Reproducible Reporting Using Markdown (DEMON Network; 2021), Polygenic Summer School (King's College London; 2019).
- Assisting with design and delivery.

VOLUNTEER WORK

2019
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2018

Rethink Mental Illness - London, UK
Raising funds and participating in photoshoots and blogs to encourage others to fundraise.

2017
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2014

Crisis at Christmas - Birmingham, UK
Assisting with the set up and delivery of food, shelter and entertainment for Crisis service users over the Christmas period.

2014
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2012

Kissing it Better - Warwick, UK
Assisting and implementing strategies to improve care environments for inpatients with dementia.

2012
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2010

Cherry Trees Care Home - Alcester, UK
Assisting with care and entertainment in a local nursing home for individuals with dementia.

PRESENTATIONS

Conferences (International)
Presented work from UCL and King's College London at International Conferences:

- **2023:** Alzheimer's Association International Conference (Amsterdam, Netherlands)
- **2021:** Alzheimer's Association International Conference (Amsterdam, Netherlands - Virtual)
- **2020:** International Society of Clinical Biostatistics Annual Conference (Krakow, Poland - Virtual)
- **2019:** World Congress of Psychiatric Genetics (Los Angeles, USA)

Conferences (National)

Presented work from UCL and King's College London at National Conferences:

· <u>2021:</u> Turing Research Showcase (Alan Turing Institute)
· <u>2020:</u> Alzheimer's Research UK Conference (Cardiff, Wales - Virtual)
· <u>2019:</u> Maudsley BRC Annual Conference (London, UK)

Seminars & Events

Speaker (and invited speaker) for a range of seminars and audiences:

· <u>2023:</u> DEMON Network, Biomarkers Working Group (Worldwide) *Invited speaker*, RANG Seminar (UCL) *Invited speaker*, Mendels Coffee Club (UCL)
· <u>2022:</u> DEMON Network, Prevention Working Group (Worldwide) *Invited speaker*, Leeds OMICS Research in Progress Seminar (University of Leeds) *Invited speaker*
· <u>2021:</u> Turing Community Week (Alan Turing Institute); Turing Student Seminar (Alan Turing Institute)
· <u>2020:</u> Maurice Wohl Centre Seminar (King's College London), Dementia Platforms UK Datathon (University of Oxford).

PUBLIC ENGAGEMENT

Charities and Events

Speaker at a charity event, research open day, and volunteering at a public event:

· <u>2023:</u> Volunteer at New Scientist Live (London, UK)
· <u>2022:</u> Talk at Kissing it Better charity *Invited speaker to discuss long-term health conditions and academic careers*
· <u>2019:</u> Talk at Dementia Research Open Day (King's College London)

🏆 GRANTS & AWARDS

2023

Guarantors of Brain Travel Grant - £600

Brain

2022 | 2021

Alan Turing Institute Enrichment Scholarship

The Alan Turing Institute

· Awarded funding to carry out my research at the Institute, with access to facilities, mentoring, and courses.

2021 | 2020

Alan Turing Institute Engage (Virtual Enrichment) Scholarship

The Alan Turing Institute

2019 | 2022

NIHR Biomedical Research Centre PhD Studentship

NIHR Maudsley Biomedical Research Centre, South London and Maudsley NHS Trust

2019

Guarantors of Brain Travel Grant - £1000

Brain

2018

King's Experience Interdisciplinary Award in Art, Science & Mental Health

King's College London

👥 LEADERSHIP ROLES

2022

Application Panel Reviewer for the Turing Enrichment Scheme
The Alan Turing Institute

2021
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2020

Turing Steering Group: Student Member
The Alan Turing Institute

2015
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2014

MSc Student Council Representatitve
University of Bristol

2013
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2012

Co-chair and Co-founder of MedSciSoc (BSc Medical Sciences Society)
University of Bristol

📖 PUBLICATIONS

2023

Common infections and neuroimaging markers of dementia in three UK cohort studies
medRxiv

· <u>Green, R.</u>, Sudre, C., Warren-Gash, C., Butt, J., Waterboer, T., Hughes, A.D., ... Williams, D.M.

2023

Investigating the genetic relationship between depression symptoms and Alzheimer's Disease in clinically diagnosed and proxy cases
medRxiv

· Gilchrist, L., Spargo, T., <u>Green, R.</u>, Coleman, J., Howard, D., Thorp, J., ... Proitsi, P.

2023

Investigating associations between blood metabolites, later life brain imaging measures, and genetic risk for Alzheimer's disease
Alzheimer's Research & Therapy

· <u>Green, R.</u>, Lord, J., Scelsi, M.A., Xu, J., Wong, A., Naomi-James, S., ... Protisi, P.

2023

Multiomics profiling of human plasma and CSF reveals ATN derived networks and highlights causal links in Alzheimer's disease
Alzheimer's and Dementia

· Shi, L., Xu, J., <u>Green, R.</u>, Wretlind, A., Homann, J., Buckley, N.J., ... Legido-Quigley, C.

2022

Metabolic correlates of late midlife cognitive outcomes: findings from the 1946 British Birth Cohort
Brain Communications

· <u>Green, R.</u>, Lord, J., Xu, J., Maddock, J., Kim, M., Dobson, R., ... Protisi, P.

2021

Sex-Specific Metabolic Pathways Were Associated with Alzheimer's Disease (AD) Endophenotypes in the European Medical Information Framework for AD Multimodal Biomarker Discovery Cohort

Biomedicines

· Xu, J., Green, R., Kim, M., Lord, J., Ebshiana, A., Westwood, S., … Legido-Quigley, C.

2021

Assessing Genetic Overlap and Causality Between Blood Plasma Proteins and Alzheimer's Disease

Journal of Alzheimer's Disease

· Handy, A., Lord, J., Green, R., Xu, J., Aarsland, D., Velayudhan, L., … Proitsi, P.

2021

Disentangling independent and mediated causal relationships between blood metabolites, cognitive factors, and Alzheimer's Disease

Biological Psychiatry: Global Open Science

· Lord, J., Green, R., Choi, S.W., Hubel, C., Aarsland, D., Velayudhan, L., … Proitsi, P.

2021

Mendelian randomization identifies blood metabolites previously linked to midlife cognition as causal candidates in Alzheimer's disease

PNAS

· Lord, J., Jermy, B., Green, R., Wong, A., Xu, J., Legido-Quigley, C., … Proitsi, P.

2020

Integrated lipidomics and proteomics network analysis highlights lipid and immunity pathways associated with Alzheimer's disease

Translational Neurodegeneration

· Xu, J., Bankov, G., Min, K., Wretlind, A., Lord, J., Green, R., … Legido-Quigley, C.

2019

Investigating the role of blood metabolites as biomarkers of cognitive function and dementia in the MRC 1946 British Birth Cohort

European Neuropsychopharmacology [Conference Abstract]

· Green, R., Lord, J., Maddock, J., Kim, M., Dobson, R., Legido-Quigley, C., … Proitsi, P.

2019

Investigating the role of modifiable risk factors on the causal pathway to Alzheimer's disease

European Neuropsychopharmacology [Conference Abstract]

· Lord, J., Green, R., Hubel, C., Richards, M., Sham, P., Legido-Quigley, C., … Proitsi, P.

📖 BOOK CHAPTERS

2019

The Turing Way: A Handbook for Reproducible Data Science

Cowrote Creating Project Repositories and virtual collaboration [WIP] chapters. Reviewed multiple chapters.

· The Turing Way Community, Arnold, B., Bowler, L., Gibson, A.,, Herterich, P., Higman, R., … Whitaker, K.