

BECKI GREEN, PHD

Passionate postdoctoral researcher with a keen interest in applying statistical methods to better understand factors influencing health and disease. Pronouns: she/her.

EDUCATION

2022
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2019

● PhD, Neuroscience

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

- Project: *"Linking blood metabolites to early dementia using systems biology"*, Supervisors: Dr Petroula Proitsi & Professor Marcus Richards. Funders: [NIHR Biomedical Research Centre PhD studentship](#)
- Utilising network, pathway, and metabolome-wide approaches to highlight key metabolites associated with early markers of dementia - including imaging, blood, and cognition measures - in large cohort studies. Using statistical genetics approaches, such as Mendelian randomisation and polygenic scores, to further understand the nature of these relationships.

2018
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2017

● MSc, Genes, Environment and Development in Psychology and Psychiatry

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

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

2015
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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
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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

2024
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2022

● Postdoctoral Research Fellow

MRC Unit for Lifelong Health and Ageing - UCL

- Investigating relationships between common infections, brain health, and neuropathologies in large population-based cohort studies. Contributing to large consortia exploring risk factors and consequences of long COVID. Creating projects for students and providing research supervision. Managing multiple research projects and responsibilities.

CONTACT

✉ rebecca.e.green@ucl.ac.uk

🐦 [becki_e_green](https://twitter.com/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, Jupyter, 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
 - Working with and characterising electronic health record data collected during the COVID-19 pandemic in two large hospital trusts. Creating reproducible pipelines to enable collaboration across research 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 map non-overlapping features and 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. Championing research in the West of England, and 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 in the West of England as well as utilising clinical skills to carry out and document trials.



SUPERVISION EXPERIENCE

- 2023
 - **MSc Supervision (primary supervisor)**
MSc Cardiovascular Sciences
 - *"Investigating associations between herpesviruses and arterial stiffness"* - Shan Kong.
- 2021
 - **MSc Supervision (day to day)**
MSc Developmental Psychology & Psychopathology
 - *"Investigating the presence of shared genetic architecture between Major Depressive Disorder and Alzheimer's Disease"* - Lachlan Gilchrist. Lachlan is now a PhD researcher in the same research group.
- 2019
 - **MSc Supervision (day to day)**
MSc Neuroscience
 - *"Assessing Genetic Overlap and Causality Between Blood Plasma Proteins and Alzheimer's Disease"* - Alex Handy. Alex's MSc work has now been [published](#).




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.

ORAL PRESENTATIONS

- 2022
 - **Kissing it Better charity [Invited speaker to discuss academic careers]**
 Warwickshire
- 2022
 - **DEMON Network (Prevention Working Group) [Invited speaker]**
- 2022
 - **Leeds OMICS Research in Progress Seminar [Invited speaker]**
 University of Leeds
- 2021
 - **Turing Community Week**
 The Alan Turing Institute

- 2021 • **Turing Student Seminar** 📍 The Alan Turing Institute
- 2021 • **Research Showcase** 📍 The Alan Turing Institute
- 2020 • **Maurice Wohl Clinical Neuroscience Institute Centre Talk** 📍 King's College London
- 2020 • **Maudsley BRC Training Conference** 📍 King's College London
- 2020 • **Dementias Platform UK Datathon** 📍 University of Oxford (virtual)
- 2020 • **International Society of Clinical Biostatistics Annual Conference [Invited speaker]** 📍 Krakow (virtual)
- 2019 • **Maudsley BRC Annual Conference** 📍 King's College London
- 2019 • **Dementia Research Open Day (Patients & Public)** 📍 King's College London



POSTER ONLY PRESENTATIONS

- 2020 • **Alzheimer's Association International Conference** 📍 Amsterdam (virtual)
- 2020 • **Alzheimer's Research UK Conference** 📍 Cardiff (virtual)
- 2019 • **World Congress of Psychiatric Genetics** 📍 Anaheim, USA



GRANTS & AWARDS

- 2022
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2021 • **Enrichment Scholarship Student**
The Alan Turing Institute
• Awarded funding to carry out my research at the Institute, with access to facilities, mentoring, and courses.
- 2021
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2020 • **Engage (Virtual Enrichment) Scholarship Student**
The Alan Turing Institute
- 2019
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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 |
2020 ● **Turing Steering Group: Student Member**
The Alan Turing Institute
- 2015 |
2014 ● **MSc Student Council Representative**
University of Bristol
- 2013 |
2012 ● **Co-chair and Co-founder of MedSciSoc (BSc Medical Sciences Society)**
University of Bristol



COURSES

- **ONS Accredited Researcher**
Expiry date: 14/07/2027
- **Courses ranging from statistical genetics to software engineering, and a national datathon.**
Highlights: Mendelian Randomisation, Research Software Engineering, Ethical Data Science, High Performance and High Throughput Computing, Data Skills for Open Research, Dementias Platforms UK Datathon, Prediction Modelling, Machine Learning, Advanced Python for Biologists, Molecular Pathways and Networks.



MEMBERSHIP

- **International Society of Clinical Biostatistics**
Member
- **Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART)**
Member



PUBLICATIONS

- 2023 ● **Multomics profiling of human plasma and CSF reveals ATN derived networks and highlights causal links in Alzheimer's disease**
Alzheimer's and Dementia [in print]
• Shi, L., Xu, J., Green, R., Wretling, A., Homann, J., Buckley, N.J., ... Legido-Quigley, C.

- 2022 ● **Investigating associations between blood metabolites, later life brain imaging measures, and genetic risk for Alzheimer's disease**
Under review
• Green, R., Lord, J., Scelsi, M.A., Xu, J., Wong, A., Naomi-James, S., ... Protisi, P.
- 2022 ● **Metabolic correlates of late midlife cognitive outcomes: findings from the 1946 British Birth Cohort**
Brain Communications
• Green, R., 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., Wretling, 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.