

# BECKI GREEN, PHD

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

## EDUCATION

2022  
|  
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 (Distinction, 78%)

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 of long COVID using electronic health records. Creating projects for MSc students and providing research supervision. Managing multiple research projects and responsibilities.

## CONTACT

✉ [rebecca.e.green@ucl.ac.uk](mailto:rebecca.e.green@ucl.ac.uk)

🐦 [becki\\_e\\_green](https://twitter.com/becki_e_green)

🔗 [github.com/beckigreen](https://github.com/beckigreen)

🌐 [beckigreen.netlify.app](https://beckigreen.netlify.app)

in [linkedin.com/in/rebecca-e-green](https://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

- Supervision for an MSc project: *"Investigating associations between herpesviruses and arterial stiffness"* - Dr Lingshan Kong.

2021

### MSc Supervision (day to day)

MSc Developmental Psychology & Psychopathology

- Supervision for an MSc project: *"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

- Supervision for an MSc project: *"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	<b>Turing Student Seminar</b>	📍 The Alan Turing Institute
2021	<b>Research Showcase</b>	📍 The Alan Turing Institute
2020	<b>Maurice Wohl Clinical Neuroscience Institute Centre Talk</b>	📍 King's College London
2020	<b>Maudsley BRC Training Conference</b>	📍 King's College London
2020	<b>Dementias Platform UK Datathon</b>	📍 University of Oxford (virtual)
2020	<b>International Society of Clinical Biostatistics Annual Conference [Invited speaker]</b>	📍 Krakow (virtual)
2019	<b>Maudsley BRC Annual Conference</b>	📍 King's College London
2019	<b>Dementia Research Open Day (Patients &amp; Public)</b>	📍 King's College London



## POSTER ONLY PRESENTATIONS

2020	<b>Alzheimer's Association International Conference</b>	📍 Amsterdam (virtual)
2020	<b>Alzheimer's Research UK Conference</b>	📍 Cardiff (virtual)
2019	<b>World Congress of Psychiatric Genetics</b>	📍 Anaheim, USA



## GRANTS & AWARDS

2022   2021	<b>Enrichment Scholarship Student</b> The Alan Turing Institute • Awarded funding to carry out my research at the Institute, with access to facilities, mentoring, and courses.
2021   2020	<b>Engage (Virtual Enrichment) Scholarship Student</b> The Alan Turing Institute
2019   2022	<b>NIHR Biomedical Research Centre PhD Studentship</b> NIHR Maudsley Biomedical Research Centre, South London and Maudsley NHS Trust
2019	<b>Guarantors of Brain Travel Grant - £1000</b> 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

**Turing Steering Group: Student Member**

The Alan Turing Institute

2020

2015

**MSc Student Council Representative**

University of Bristol

2014

2013

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

2012

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	<p><b>Investigating associations between blood metabolites, later life brain imaging measures, and genetic risk for Alzheimer's disease</b></p> <p>Under review</p> <p>• <u>Green, R.</u>, Lord, J., Scelsi, M.A., Xu, J., Wong, A., Naomi-James, S., ... Protisi, P.</p>
2022	<p><b>Metabolic correlates of late midlife cognitive outcomes: findings from the 1946 British Birth Cohort</b></p> <p>Brain Communications</p> <p>• <u>Green, R.</u>, Lord, J., Xu, J., Maddock, J., Kim, M., Dobson, R., ... Protisi, P.</p>
2021	<p><b>Sex-Specific Metabolic Pathways Were Associated with Alzheimer's Disease (AD) Endophenotypes in the European Medical Information Framework for AD Multimodal Biomarker Discovery Cohort</b></p> <p>Biomedicines</p> <p>• Xu, J., <u>Green, R.</u>, Kim, M., Lord, J., Ebshiana, A., Westwood, S., ... Legido-Quigley, C.</p>
2021	<p><b>Assessing Genetic Overlap and Causality Between Blood Plasma Proteins and Alzheimer's Disease</b></p> <p>Journal of Alzheimer's Disease</p> <p>• Handy, A., Lord, J., <u>Green, R.</u>, Xu, J., Aarsland, D., Velayudhan, L., ... Proitsi, P.</p>
2021	<p><b>Disentangling independent and mediated causal relationships between blood metabolites, cognitive factors, and Alzheimer's Disease</b></p> <p>Biological Psychiatry: Global Open Science</p> <p>• Lord, J., <u>Green, R.</u>, Choi, S.W., Hubel, C., Aarsland, D., Velayudhan, L., ... Proitsi, P.</p>
2021	<p><b>Mendelian randomization identifies blood metabolites previously linked to midlife cognition as causal candidates in Alzheimer's disease</b></p> <p>PNAS</p> <p>• Lord, J., Jermy, B., <u>Green, R.</u>, Wong, A., Xu, J., Legido-Quigley, C., ... Proitsi, P.</p>
2020	<p><b>Integrated lipidomics and proteomics network analysis highlights lipid and immunity pathways associated with Alzheimer's disease</b></p> <p>Translational Neurodegeneration</p> <p>• Xu, J., Bankov, G., Min, K., Wretling, A., Lord, J., <u>Green, R.</u>, ... Legido-Quigley, C.</p>
2019	<p><b>Investigating the role of blood metabolites as biomarkers of cognitive function and dementia in the MRC 1946 British Birth Cohort</b></p> <p>European Neuropsychopharmacology [Conference Abstract]</p> <p>• <u>Green, R.</u>, Lord, J., Maddock, J., Kim, M., Dobson, R., Legido-Quigley, C., ... Proitsi, P.</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.