# BECKI GREEN, PHD

Epidemiologist with a strong background in data science, highly motivated by improving public health. Pronouns: she/her.

# **EDUCATION**

2022 | 2019

PhD, Neuroscience

Maurice Wohl Clinical Neuroscience Institute - King's College London

• NIHR Biomedical Research Centre PhD studentship. Project: "Linking blood metabolites to early dementia using systems biology".

MSc, Genes, Environment and Development in Psychology and Psychiatry

2018 | 2017

2015

2010

**MSc, Biomedical Sciences Research**Medical Sciences - University of Bristol

SGDP Centre - King's College London

2014

BSc, Physiological Science

Medical Sciences - University of Bristol

# ☐ EMPLOYMENT

Present | 2023

Principal Scientist (Epidemiology)

**UK Health Security Agency** 

- Managing a team of senior scientists working on the surveillance of respiratory viruses in the community and secondary care.
- Overseeing the development, analysis, and international/national outputs from these surveillance systems, including as official statistics forming part of the weekly and annual national surveillance reports.
- Providing expert advice on surveillance data in response to enquiries or requests.
- Supervising and leading on research projects.

Present | 2023 Honorary Research Fellow in Epidemiology

MRC Unit for Lifelong Health and Ageing at UCL

• Contributing to PhD supervision for a project in the field of infections and dementia.

2023

Postdoctoral Research Fellow in Epidemiology

MRC Unit for Lifelong Health and Ageing at UCL

- Working on several projects primarily investigating relationships between common infections & dementia, as well as risk factors of long COVID as part of one of the UK's national core studies.
- Supervising or co-supervising MSc/PhD projects.
- Leading the set up and delivery of the HDR UK Black Internship Programme in the department, including line management and project supervision of internships.

2022 | 2021 DECOVID Project Collaborator

The Alan Turing Institute

- Characterising electronic health record data collected during the COVID-19 pandemic in two large hospital trusts.
- Assessing data quality and creating reproducible pipelines to enable collaboration across teams.

### **CONTACT**

- bgreen0242@gmail.com
- github.com/beckigreen
- **in** linkedin.com/in/rebecca-e-green

## **KEY SKILLS**

Mentoring and supervision

Coding (Highly skilled with R, Python, git, GitHub/GitLab; Competent with Stata, SQL, bash)

Data analysis & reproducible research

Team and community building

Science communication

### RESOURCES

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

# 2022 2019

## **Big Data Module Lead & Graduate Teaching Assistant**

King's College London

- Module lead: Big Data in Python (BSc). Responsible for course design and material creation, seminar and practical leader or assistant, marking, forum management.
- Teaching assistant: Multiple modules encompassing research methods and statistics. Examples include Statistics in R (MSc), Reproducible Reporting in Markdown (external), Mendelian Randomisation (MSc), Research Methods (MSc/BSc).

2019 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 2016

#### **Assistant Research Officer**

NIHR Clinical Research Network West of England - Bristol

• Managing the set up and delivery of clinical research studies in primary care sites in the West of England.

2016

#### **Research Assistant (Healthcare)**

NIHR Clinical Research Network West of England - Bristol

· Using clinical (acquired through hospital placements) and research skills to support with data collection and documentation for a variety of clinical research studies across the West of England.

# PRESENTATIONS

#### Conferences

Presented at international and national conferences (oral and/or poster):

- 2023: Alzheimer's Association International Conference
- 2021: Alzheimer's Association International Conference
- 2020: International Society of Clinical Biostatistics Annual Conference; Alzheimer's Research UK Conference
- 2019: World Congress of Psychiatric Genetics; Maudsley BRC Annual Conference

### **Seminars & Events**

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

- 2024: Population Health Sciences PhD Symposium (Careers event) (UCL)
- 2023: DEMON Network, Biomarkers Working Group (Worldwide) Invited speaker, New Scientist Live Science Booth (London), RANG Seminar (UCL) Invited speaker, Mendels Coffee Club (UCL)
- 2022: DEMON Network, Prevention Working Group (Worldwide) Invited speaker, Epidemiological Methods Meeting (UCL); Leeds OMICS Research in Progress Seminar (University of Leeds) Invited speaker
- 2021: Turing Community Week (Alan Turing Institute); Turing Student Seminar (Alan Turing Institute)
- 2020: Maurice Wohl Centre Seminar (King's College London); Dementia Platforms UK Datathon (University of Oxford)



# T GRANTS & AWARDS

#### Grants

Project grants & travel grants

- Co-PI for a successful project grant of approx. £250,000 (2023; awarded prior to move to UKHSA with involvement discontinued following award due to new role).
- Travel awards: Guarantors of Brain £600 (2023); Guarantors of Brain £1000 (2019); Alzheimer's Research UK (2019).

## **Scholarships**

PhD and additional scholarships

- Twice awarded the prestigious Alan Turing Institute Enrichment Scholarship to enhance my research through collaborations with the Institute (2020,2021).
- NIHR Biomedical Research Centre PhD Studentship (2019-2022).

# ■ PUBLICATIONS & PREPRINTS

- Depression symptom-specific genetic associations in clinically diagnosed and proxy case Alzheimer's Disease
  In press
  - Gilchrist, L., Spargo, T., Green, R., Coleman, J., Howard, D., Thorp, J., ... Proitsi, P.
- Setting thresholds to determine COVID-19 activity levels using the mean standard deviation (MSD) method, England, 2022–2024

Eurosurveillance

- Sinnathamby, M., .. Green, R. .. Allen, A.
- Associations of several common infections with amyloid-β pathology in vivo: a population-based study

  AAIC [Conference Abstract]
  - Felici, C., Green, R., Warren-Gash, C., Butt, J., Waterboer, T., Hughes, A.D., ... Williams, D.M.
- No clear evidence for relationships of Apolipoprotein E genotype with measures of common infections in three UK cohorts

medRxiv

- Green, R., Fernandez-Sanles, A., Felici, C., Warren-Gash, C., Butt, J., Waterboer, T., ... Williams, D.M.
- 2024 Common infections and neuroimaging markers of dementia in three UK cohort studies

Alzheimer's and Dementia

- Green, R., Sudre, C., Warren-Gash, C., Butt, J., Waterboer, T., Hughes, A.D., ... Williams, D.M.
- Investigating the genetic relationship between depression symptoms and Alzheimer's Disease in clinically diagnosed and proxy cases

medRxiv

- Gilchrist, L., Spargo, T., Green, R., Coleman, J., Howard, D., Thorp, J., ... Proitsi, P.
- Investigating associations between blood metabolites, later life brain imaging measures, and genetic risk for Alzheimer's disease

Alzheimer's Research & Therapy

- Green, R., Lord, J., Scelsi, M.A., Xu, J., Wong, A., Naomi-James, S., ... Protisi, P.
- 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.
- 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.
- Sex-Specific Metabolic Pathways Were Associated with Alzheimer's Disease (AD) Endophenotypes in the EMIF for AD Multimodal Biomarker Discovery Cohort

Biomedicines

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

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.
- 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.
- 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.
- 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**

• 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.