

Gibran Hemani

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PRESENT APPOINTMENT

MRC Integrative Epidemiology Unit, University of Bristol

UK

Professor 2023, Associate Professor 2021, Senior Research Fellow 2018, Research Fellow 2014 (Advisor: George Davey Smith)

Jan-14 to present

PREVIOUS APPOINTMENTS

Queensland Brain Institute, University of Queensland

Australia

Post doctoral statistical geneticist (Advisor: Peter Visscher)

Jan-12 to Dec-13

ACADEMIC QUALIFICATIONS

University of Bristol

Bristol

Fellow of the Higher Education Academy, UK

Sep-19 to Sep-21

University of Edinburgh

Edinburgh

PhD in Quantitative Genetics (Advisors: Chris Haley and Sara Knott)

Oct-07 to Aug-11

- Genetics Society 'Best PhD thesis in population and quantitative genetics' 2011

University of Nottingham

Nottingham

BSc (hons) Genetics (2:1)

Sep-03 to Jun-06

SPECIAL AWARDS, HONOURS AND DISTINCTIONS

Rising Stars of Science Award

Research.com

Ranked 2nd nationally and 137th internationally for H-index within 12 years of first paper

2022

Fellow of the Higher Education Academy.

CREATE, UoB

2022

Highly Cited Researcher Award

Clarivate / Web of Science

Top 1% of researchers internationally (assigned 'Cross-field' category)

2021-2023

Sir Kenneth Mather Memorial prize

The Genetics Society

Best PhD thesis in quantitative and population genetics

2011

PUBLICATIONS SUMMARY

- H-index: **71**
- i10-index: **152**
- Number of publications since independence (2018): **168**

A full list of publications since independence is at the end of the document.

RESEARCH GRANTS

Total income as PI, from 5 grant(s): **3,548,749 GBP**

Total income as CI, from 7 grant(s): **4,021,252 GBP**

Current income as PI, from 1 grant(s): **1,971,091 GBP**

Current income as CI, from 2 grant(s): **2,540,580 GBP**

Building the OpenGWAS platform towards a sustainable model for scientific discovery and translation

Wellcome Trust

2023

- Amount: 100,000 GBP ; Role: Co-PI ; Dates: 2023-07-18 to 2024-07-18 ; Proportion: 0%

IEU3 - Programme 1 Mendelian randomisation

MRC

2022

- Amount: 1,971,091 GBP ; Role: PI ; Dates: 2023-04-01 to 2028-03-31 ; Proportion: 100%

BRC2 - Translational Population Science Theme

NIHR

2022

- Amount: 1,912,067 GBP ; Role: Co-I ; Dates: 2022-12-01 to 2027-11-30 ; Proportion: 0%

Causes and consequences of mental disorders: The environmental and genetic influences of parents on offspring.

NIH

2022

- Amount: 766,480 USD ; Role: Co-I ; Dates: 2022-07-15 to 2027-05-31 ; Proportion: 5%

Aetiological Epidemiology

Biogen

2020

- Amount: 284,525 GBP ; Role: Co-I ; Dates: 2020-09-01 to 2022-08-31 ; Proportion: 5%

The causal map of the human phenome

Wellcome Trust and Royal Society, Sir Henry Dale Fellowship

2017

- Amount: 1,356,578 GBP ; Role: PI ; Dates: 2018-01-04 to 2023-06-30 ; Proportion: 100%

Classifying mechanisms of pleiotropy to improve causal modelling

BBSRC and GlaxoSmithKline, CASE studentship

2017

- Amount: 100,000 GBP ; Role: PI ; Dates: 2017-10-01 to 2021-09-30 ; Proportion: 5%

Pathways to self-harm: Biological mechanisms and genetic contribution

Medical Research Council and Medical Research Foundation

2017

- Amount: 372,334 GBP ; Role: Co-I ; Dates: 2017-10-01 to 2019-10-01 ; Proportion: 5%

Identification of Traits and Biomarkers for Prediction of Huntington's Disease Phenotypes using Novel causal analysis Methodologies

Cure Huntington's Disease Initiative

2017

- Amount: 117,059 GBP ; Role: Co-I ; Dates: 2017-04-01 to 2019-03-31 ; Proportion: 10%

Translation of MR for drug target identification

GlaxoSmithKline

2017

- Amount: 349,099 GBP ; Role: Co-I ; Dates: 2017-01-01 to 2020-01-01 ; Proportion: 5%

Translation of MR for drug target identification

Biogen

2017

- Amount: 436,165 USD ; Role: Co-I ; Dates: 2017-01-01 to 2020-01-01 ; Proportion: 5%

Dissecting genetic interactions in gene expression

University of Queensland, Early Career Research Grant

2013

- Amount: 34,000 AUD ; Role: PI ; Dates: 2013-01-01 to 2013-12-31 ; Proportion: 2%

Dissecting genetic interactions in complex traits

CASE Studentship, BBSRC and Monsanto

2007

- Amount: 100,000 GBP ; Role: PI ; Dates: 2007-09-01 to 2011-08-30 ; Proportion: 100%

INDICATIONS OF EXTERNAL RECOGNITION

Editorships

PLoS Computational Biology

Invited guest editor

2017

Appointment to national or international bodies

PLoS Computational Biology

Expert evaluation panel for the Our Future Health study

2021

Invited member of the Genotype Chip Design Committee for the Our Future Health Study, that will be used to genotype up to 5 million people in the UK

2019 - 2021

Invitations for degree examinations

Richard Packer

PhD thesis external examiner

University of Leicester

2022

Jisu Shin

Dissertation of Master of precision medicine external examiner

University of South
Australia

2020

Edward Steere

Dissertation of Master of Science in Engineering external examiner

Witswatersrand University,
SA

2016

Invited lectures

NIH/NIDA Genetics and Epigenetics meeting, Maryland USA

Primer in Mendelian randomisation

Invited talk

2024

ECNP Network workshop, University of Muenster, Germany

Mendelian randomisation for causal inference of molecular phenotypes on complex traits

Invited talk

2024

American Society of Human Genetics

The importance of families in future biobanks

Invited talk

2023

University of Galway

The future of genetic biobanks

Invited talk

2023

University of Edinburgh

Recent developments in Mendelian randomisation

Invited talk

2023

Epigenomics of Common Disease 2023, Cambridge <i>Challenges and future directions for causal inference of molecular traits</i>	Invited talk 2023
Centre for Health Sciences Education conference, Bristol <i>Workshop: Decolonising the Medical School Curriculums</i>	Invited workshop 2023
BenevolentAI seminar series <i>The MR-Base and OpenGWAS projects</i>	Invited talk 2022
Cure Huntington's Disease Initiative seminar series <i>Exploring the assumptions in Mendelian randomisation</i>	Invited talk 2022
BILT Compassionate Conference <i>Decolonising the Bristol medical school curriculum</i>	Conference plenary 2022
Mendel @ 200 conference, Bristol <i>Contemporary genome-wide association studies in the light of Mendelian inheritance</i>	Conference plenary 2022
Broad Institute (Harvard and MIT) methods seminar <i>Within-sibship GWAS for Mendelian randomisation</i>	Invited talk 2022
DECOLWEEK, Bristol <i>Decolonising your discipline</i>	Invited panel member 2021
Mendelian Randomization conference, Bristol <i>Results from large scale consortia</i>	Invited session chair 2021
GSK seminar series <i>Mendelian randomisation for molecular exposures</i>	Invited talk 2021
Channing Network seminar series, Harvard University <i>Using Mendelian randomisation to detect causal influences of molecular features on complex traits</i>	Invited talk 2021
The Trøndelag Health Study, Norway <i>Multi-omics in longitudinal cohorts</i>	Invited workshop lead 2020
International Agency for Research on Cancer, France <i>Collider bias in Covid-19 research</i>	Invited talk 2020
Elizabeth Blackwell Institute data week keynote <i>New data on Covid-19 is undermined by old statistical problems</i>	Invited talk 2020
GRC Quantitative Genetics conference, Italy <i>Genetic architecture of complex traits</i>	Invited session chair 2019
Mendelian Randomization conference, Bristol <i>Genetics of DNA methylation</i>	Conference plenary 2019
SEGEN, University of Oxford <i>Automating Mendelian randomization</i>	Invited talk 2018
Edinburgh Alliance in Quantitative Genetics <i>Machine learning in Mendelian randomization</i>	Invited talk 2018
University College London <i>Causal graph of the human phenome]</i>	Invited talk 2018

Related administration

Leading group on Covid-19 epidemiology

MRC IEU

2020-2021

- Initiated project, and recruited group of 12 researchers
- Provided analysis of ZOE symptom tracker app for external collaborators
- Culminated in four publications, numerous presentations including to SAGE and HDRUK

Member of the UoB Covid modelling subgroup

University of Bristol

2020-2021

Initiating the OpenGWAS consortium

MRC IEU

2020 to present

- The OpenGWAS data infrastructure receives 2 million queries per week
- The consortium brings together researchers who develop software for GWAS summary data
- Plans to expand the invitation to international collaborators

SEGEN conference organiser

South of England Genetic Epidemiology Group

2019

- Organised the long-running SEGEN conference to be held in Bristol for the first time

Leading work package on MR method development (programme 1)

MRC IEU

2018-2023

- Line managing one post doctoral scientist

Leading statistics and informatics theme in epigenetics programme 4

MRC IEU

2018-2022

Leading Hemani research group

MRC IEU

2018 to present

- Four post-docs and four PhD students
- Weekly group meetings including pastoral and career support

ALSPAC Board of Directors

ALSPAC

2017 to present

Leading genetics work package

ALSPAC

2017 to present

- Line managing one post doctoral scientist

ACADEMIC LEADERSHIP AND CITIZENSHIP

Academic leadership in the University

MRC Integrative Epidemiology Unit 3.0

Programme Leader

University of Bristol

2023-2028

- Co-leading (with George Davey Smith) Programme 1 of seven programmes within the unit

Medical Anti-Racism Taskforce

Group member

University of Bristol

2020 to present

- Leading Special interest group on decolonising the curriculum

UoB Covid-19 Situation Report

Software developer

University of Bristol

2020 to present

- Web app developed for internal use that provides daily updates and case mapping
- Used daily by the Incident Management Team in targeting Covid-19 actions

Decolonising the medical school curriculum

Co-lead

University of Bristol

2020 to present

- Co-leading (with Jo Hartland) a group of 10 volunteers to develop, pilot and deploy a curriculum review framework for the medical school (<http://decolbms.org.uk>)

BRMS Equality Diversity Inclusion group

Group member

University of Bristol

2018 to present

- Working in career progression subgroup

USS pension calculator

Software developer

University of Bristol

2018 to present

- Developed a web-app that allows members of the USS pension scheme to calculate changes to the pension under proposed valuation changes
- Used widely by universities across the country
- <http://www.uss-pension-model.com/>

Teaching peer review

Reviewer

University of Bristol

2018

- Causal inference short course, University of Bristol

Professional activities outside the University

- 2021 - Expert evaluation panel for the Our Future Health study
- 2019 - Invited member of the Genotype Chip Design Committee for the Our Future Health Study, that will be used to genotype up to 5 million people in the UK
- 2017 - Regular peer review for various grant bodies including the MRC, Wellcome Trust, Cancer Research UK
- 2012 - Regular contributor to open source software projects (e.g. see <https://github.com/explodecomputer/random-metal> and <https://github.com/explodecomputer/ldsc/>)
- 2011 - Regular peer review for 20+ academic journals

Contributions to society

- 2017 - Hosting asylum seekers and refugees, working with Bristol City Council and the *Refugees at Home* charity
- 2015 - Contributing member to the charity *Statisticians Without Borders*
- 2014 - Provide web and software support to local vegan organisations

Entrepreneurship, enterprise and partnerships

- 2015 - I have formal partnerships with GlaxoSmithKlein, Biogen, Pfizer and CHDI that arose through developing the MR-Base platform. This has led to five post-doctoral positions and one PhD position being funded by these organisations, and the development of a standardised contract system to enable future such collaborations to occur.

Good citizenship

- 2023 Bristol Medical School representative of the University Research Institute task and finish group
- 2022 - Member of the University of Bristol Senate (class 4 - Academic Staff)
- 2020 - Leading a Special Interest Group on Decolonising the Curriculum, which will bring in a framework for all courses across the medical school for dealing with implicit bias within their learning materials
- 2020 - Member of the Bristol Clear mentoring scheme (currently mentoring two early career researchers)
- 2020 Developed software for the University's Incident Management Team which maps new Covid-19 cases amongst students across the region in real time. This software is used in daily team management meetings
- 2016 - Participated in numerous mock interview panels for research fellowships
- 2015 - Extensive software development for the MRC IEU research community, most notably the MR-Base and OpenGWAS software platforms which I created and maintain for others to use. I am pleased that this has grown to be a platform for numerous research papers, and contributed substantially to research grants, many of which I am not named on
- 2014 - Voluntary curation and documentation of shared data resources
- 2014 - Web and software development for the ALSPAC project (e.g. see <http://variables.alspac.bris.ac.uk/> and <https://github.com/explodecomputer/alspac>)
- 2014 - Throughout my time in Bristol I have made it a priority to provide informal training to early career researchers, particularly in genetics, software development and reproducible research.