

Matthew Lee

FOHS initial review 2017-2018

Initial reviewer: Nicholas Timpson

Postgraduate Research Student (PGR) to complete

Title of Thesis / Research Project

What lies behind the causal impact of body mass index (BMI) level and change on human health? Added value from complementary study design and deep metabolomic phenotyping

Maximum submission date

If known, please enter the date by which you must have submitted your final thesis. This would usually include the normal period of study for your degree plus a 'writing-up' period.

Select the [?] for guidance from your faculty.

?

The University's [Regulations and Code of Practice for Research Degree Programmes](#) states the normal minimum and maximum period of study permitted for all Bristol research degree programmes. If you have suspended or extended your studies, your submission deadline will change accordingly.

Your expected end date is shown on your [Studentinfo](#) page but contact your school/faculty office if you have any queries about this.

Hide

03/10/2021

Research progress

Please use this space to summarise the main achievements or tasks relating to your research that you have completed during the review period. You may wish to include details of literature reviews, fieldwork, data collection and analysis, research completed, and mini projects undertaken. You may find it useful to refer to any agreed objectives in your 'Objectives' section.

I have spent the 6 months mainly training and getting to grips with 'pop health science' - this has involved attending short courses, reading, going to seminars, and working with other PhD students to understand concepts I'm unfamiliar with. I have developed a good group of friends doing PhDs within the IEU as well as in different departments like Experimental Psychology and Biomedical Sciences who I can call on for support and advice - I think this is really important for my PhD but also for my future career. Additionally I have made good contacts with postdocs within the IEU.

My research so far has consisted mainly of conducting MR analysis of body mass index to metabolites - I am interested in understanding the causal pathways that lead from high BMI to disease. This work is aimed to be written up as a paper. I have spoken with people in biomedical sciences about using this MR work to provide direction for zebra fish experiments and hope to follow this up in the coming years.

This work has also been looking at 'favourable adiposity' with Professor Tim Fraylings group in Exeter - this work is currently at a cross roads and we are working as a group to figure out the next steps

I am working with a statistician to produce a visualisation tool for my MR work and other work from the Timpson group - this is ongoing work and will be included as part of the paper for the MR -> metabolite work

I am working on finishing up a manuscript of work on Glycosuria in ALSPAC and NFCB - this is my first work on a manuscript and has been a good learning experience as i have had to work with a group at Imperial to get information for the manuscript.

I have been reading and developing my ideas for my main project looking at BMI and causal associations with disease. I have become more and more interested in using MR as a tool to investigate and evaluate pathways that lead from an exposure to disease; I am particularly keen to follow these findings up in wet lab experiments and have developed contacts with 3 labs in biomedical sciences where I can potentially take this work in the future

I have begun a Systematic review of all MR studies in which measures of adiposity are used as an exposure- this is work with Luke McGuinness - the search strategy has been finished and we plan to finish screening by April 1st.

I have worked with Tom Battram on testing and replicating scripts for his paper on CVD.

Personal and professional development

Please list any skills training and researcher development activities undertaken during the review period. You can extract details of any completed courses, workshops, self-help learning, and other activities or events from your Skills Training and Development section, and include further information here if you wish.

As well as the types of activities listed above, you may wish to include details of other lectures, seminars or conferences you have attended, plus details of any research visits, placements or secondments you have undertaken, either at Bristol or elsewhere (including in industry or other laboratories etc.).

Select the [?] for guidance from your faculty.



Consider the benefits of completing / attending each activity and highlight these where appropriate. For example, has this activity enabled you to become a more effective researcher or to communicate your research more successfully? You may have improved certain skills, or increased your awareness of a particular aspect of your research, or yourself.

Further information:

The University recognises the importance of the development of the research and generic skills of postgraduate students, both in order to increase effectiveness as researchers during their studies and to underpin their subsequent careers. Training in research skills is the cornerstone of a research student's development, while transferable skills are widely recognised as essential in most forms of employment, including academia.

Title	Activity type	Date completed	Benefits
intro to stata	short course	19/03/2018	none really- i havent used stata since and cant imagine i will use it in the future, but i have the course materials so i can brush up if i do need to

intro to r	short course	19/03/2018	not really helpful as it was just a day, but i use r for everything so it was worth going to so i had some training
intro to stats	short course	19/03/2018	much more comfortable with stats now than i was, but still need to go back every now and then and read the course materials for it to sink in
Speaking with Confidence- Pete Moore	graduate studies programme	19/03/2018	how to speak with confidence when presenting
version control using Git	ACRC course	19/03/2018	i know how to do this so when it comes to me actually doing it ill be able to
Statistics book club	book club	19/03/2018	discussing the book 'essential medical statistics' - it's good and theres nice discussion about questions and methods so im learning
advanced epigenetic epidemiology	short course	19/03/2018	beta testing the short course to be delivered at the end of the epigenetic epidemiology short course this year. learnt some advance epigenetic epi
How to run an EWAS	one day course	19/03/2018	learnt how to run an EWAS using Gemma Sharps protocol
Epidemiology book club	book club	19/03/2018	discussing the book 'Essential epidemiology'
Word 2013 level 3: Word for theses	Bristol Doctoral College	19/03/2018	how to use word for writing large documents- when it comes to it i'll not need to go in this again, its pretty simple once you know the basics
SSCM, Introduction to Endnote with Cath Borwick	graduate studies programme	19/03/2018	i can use endnote now

Introduction to Linux	ARCR course	19/03/2018	ive been on this course twice - first time it didnt really sink in but the second time it has and i feel much more comfortable using the command line
Python 1: Beginning Python	ACRC course	19/03/2018	dont think ill ever need to use python, but it was similar to command line/R so it was nice practice
Introduction to HPC	ACRC course	19/03/2018	i know how blue crystal works now
introduction to the media and public engagement	graduate studies programme	19/03/2018	this was pointless- i only went for the media bit and they didnt turn up
introduction to pure and open access	bristol doctoral college	19/03/2018	kinda pointless- common sense on pure and i already know what open access is
Epi(genetic) epidemiology book club	journal club	19/03/2018	journal club
ICEP journal club	journal club	19/03/2018	journal club
Cell and Molecular Medicine seminars	seminars	19/03/2018	seminars from internal/external speakers - mainly just go to the cancer ones (they dont have many others) - good networking opportunity
Biochemistry seminars	seminars	19/03/2018	seminars from internal/external speakers - mainly go to ones related to genetics/metabolomics etc - good networking opportunity
early career cancer forum	seminars	19/03/2018	seminars from internal/external speakers - all about cancer - good networking opportunity

IEU seminars	seminars	19/03/2018	seminars
stats discussion group	seminars	19/03/2018	seminars focussing on statistics
data science group	informal seminars and discussions	19/03/2018	discussion on data science within the IEU mainly, looking at papers and what theyve done and seeing if we can do it better - basically running through problems and discussing the issues
GW4 phd interviews	PhD interviews	19/03/2018	I helped at the GW4 PhD interviews and did some good networking with the higher ups
GW4 pop health symposium	symposium	19/03/2018	I was on the organising committee for the GW4 Pop Health event Lavinia was organising- we cancelled this because of strike action

Public Engagement	PERFORM - EU Horizon 2020	19/03/2018	<p>PERFORM - this is a European Union Horizon 2020 project to train ECRs and PhD students in public engagement techniques- the Bristol PERFORM project has been training us in science busking and i have attended a number of trianing sessions covering ethics, responsible research and innovation, philosophy of science etc so that i am able to communicate these topics to the public. I was partnered with a school and went in for 4 sessions to deliver busking activities about my research. This has now finished. This has been good as ive been able to have seminars and discussions with professors in the philosophy department and ethics department which ive never had before, and i think ive really benefitted from that. The whole experience was actually worth it, and i feel like ive learnt a lot and grown as a researcher- ive definitely become much better at giving feedback on myself as weve had to provide weekly feedback on teh workshops weve delivered at the schools.</p>
Public Engagement	Bristol Neuroscience Festival	19/03/2018	<p>Bristol Neuroscience Festival - i am on the organising committee. my role has been to organise hands on activities and posters. I will have a stand on teh saturday of the festival explaining the work of the IEU and what population research is and how we can use it for neuroscience and health.</p>
Public Engagement	Creative Reactions Bristol	19/03/2018	<p>Creative Reactions Bristol - i am on the organising committee, no one has a defined role so i kind of do everything. Creative Reactions is a project that pairs artists and scientists together to create artworks based on the scientists research. we have 80 people taking part, and have organised for a 2 week exhibition in May with workshops, talks, and activities.</p>

Public Engagement	Youth centre partnership	19/03/2018	Creative Youth Network and IEU partnership- this is a work in progress, the premise is that a partnership will be established between the IEU and creative youth network to deliver workshops and activities. I have been awarded a grant for this. I am talking to the students union to get some undergraduates to help me get this off the ground and up and running.
Grant	MRC grant	19/03/2018	MRC grant- i applied for and was awarded ?5,000 from the MRC to deliver creative reactions bristol
Grant	Biochemical Society grant	19/03/2018	Biochemical Society grant- i applied for and was awarded ?500 from the Biochemical Society to establish a partnership between the IEU and creative youth network to deliver workshops and activities based on our research
Grant (under review)	Genetics Society grant	19/03/2018	Genetics society- grant under review for ?500 to be used to create artwork that explores the research of team Timpson - this grant activity will link in with both Creative Reactions and the Youth Centre Partnership
Public Engagement	BBC Radio	19/03/2018	BBC radio- i went on BBC radio Bristol with Nancy McBride to talk about the neuroscience festival and our research in the IEU - we are trying to make this a regular thing
Public Engagement	BCFM Radio	19/03/2018	BCFM radio- i went on BCFM radio with Charlie Hatcher to talk about the neuroscience festival and our research in the IEU

Presenting your research

Have you presented or published your work during the review period?

Please provide details of any research presentations you have given for poster sessions; conferences; departmental seminars; competitions (such as 3 Minute Thesis / Pecha Kucha); and any other internal / external research events.

You may also wish to list any published articles, papers or other written pieces which you have authored / co-authored; or to highlight other ways in which you have communicated your research such as a website or blog. You may find it useful to refer to your profile on [Pure](#) to help you complete this section.

Select the [?] for guidance from your faculty.



Activities included here should be those where you have presented or published work relating to your own research. If you are at the early stages of your degree, you may not have a lot to include in this section - if you have not presented or published your research during the review period please note 'none'.

Please remember to include local presentations within your School or Faculty.

Further information:

Pure is the University's recognised space for uploading your research output and achievements. Research communication activities and outputs such as those listed above can be listed in Pure and will feed into your public [Explore Bristol Research](#) profile.

Have you presented or published your work during the review period? - no, I have signed up to present a poster at the Pop Health Science Institute Annual symposium

Please provide details of any research presentations you have given for poster sessions; conferences; departmental seminars; competitions (such as 3 Minute Thesis / Pecha Kucha); and any other internal / external research events. - N/A

Summary / further comments

Please use this space if you would like to provide any further information.

Please note that this is not the appropriate place to note personal Extenuating Circumstances outside of your studies.

Select the [?] for guidance from your faculty.



If you have experienced extenuating circumstances such as medical or health issues, bereavement, trauma, or caring responsibilities, please discuss these with your supervisor or contact your school.

Please contact a postgraduate tutor or the School's Graduate Director if you wish to discuss any issues or find out more about the Faculty's Extenuating Circumstances policy and procedure.

Lindsey Gaunt gave me some money for public engagement work

I think i could have done a lot more with this first 6 months but what that could have been im not sure. I could definitely have spent more time reading, i think thats been my weakest aspect, ive not read at all as much as i had hoped. I think in another 6 months time i will be able to say what i could have done with this time, and how i could have spent it more efficiently - but in terms of getting to grips with the new environment (coming from a wet lab its very different) i think i have that down now, and i just need to start focussing on my main project.

Research objectives

What are the key research objectives or tasks you aim to complete during the next 6 months? You may wish to include details of literature reviews, fieldwork, data collection and analysis, research, or mini projects that you intend to undertake. You may also find it useful to add some of these objectives to your 'Objectives' section to help you monitor progress.

1. Finish systematic review abstract screening and data collection - begin data synthesis with the aim of writing up over Christmas
2. Submit glycosuria paper to Wellcome Open Research
3. Finish visualisation tool with Osama
4. Finish work on BMI -> metabolites and have manuscript written up for co-authors
5. Develop ideas for main project
 - a. Deciphering mechanistic pathways that lead from obesity (BMI) to disease using MR
 - b. Investigate differential distribution of adipose tissue and disease incidence/risk - cancer
 - c. Favourable adiposity - what is it, why would we use it, why is BMI better/worse
 - d. Correlating MRI with DXA data to proxy DXA for MRI and investigate fat distributions in relation to MR BMI->metabolite results
 - e. Take MR investigations into wet lab
6. Somehow get back on BBC radio to talk about my research and the IEU
7. Learn how to do a GWAS - gwas of religiosity would be cool
8. Explore professional internship opportunities -
 - a. parliament - POST, UKRI, Department for Health
 - b. European Union
 - c. WHO
 - d. public health England
 - e. BBC - science
 - f. academy of medical sciences
 - g. British science association
 - h. Wellcome Trust - policy
9. Explore lab visit opportunities
 - a. Claudia langenberg, MRC epidemiology unit, Cambridge
10. Application for GW4 training supplement fund

Planned training and development

Have you booked onto any training courses, workshops or seminars during the next 6 months , or do you intend to undertake any other types of skills training or development activities? You may find it useful to refer to your Skills Training and Development section to map the activities you have already undertaken and identify potential areas for development.

Intro to linear and logistic regression short course
Mendelian randomization short course

Further comments

Do you have any other comments relating to your planned activities for the next 6 months?

there are too many things i want to do in the next 6 months and this is a problem, i need to be more focussed. i think discussing my priorities with my supervisors will help me decide what it is i should be focussing on

If you are satisfied that you have completed your comments and wish to make no further changes, please click **Save and Submit** at the bottom of this form.

Guidance for Supervisor(s)

Please use this space to comment on the progress made by the postgraduate research student during the review period, and to highlight any particular logistical or operational circumstances which have affected the student's progress during the review period such as: time spent away on a visit or placement; access to specialist machinery / expertise; access to data; Non-Disclosure Agreements (NDAs) / Confidential Disclosure Agreements (CDAs); or a change of supervisor.

Select the [?] for guidance from your faculty.



Faculty Guidance for Supervisor:

Please comment on the progress of your postgraduate research student during the review period and rate their progress as poor / satisfactory / good / excellent. Please note any specific areas that the research student should focus on over the coming year.

Initial reviewer to complete.

Any Cause for Concern?

Guidance for Supervisors

Does the postgraduate research student appear to be on track to complete their research within the normal study period for the award? Please provide details of any concerns you may have about their progress.

Initial reviewer to complete.

If you are satisfied that you have completed your comments and wish to make no further changes, please click **Save and Submit** at the bottom of this form.

PGR / PGR Tutor

Guidance for Postgraduate Research Student

Having read the feedback from your Supervisor(s), do you have any further comments to make? You may wish to respond to specific comments, note your agreement with the feedback provided, or communicate any concerns you have about your progress.

Guidance for PGR Tutor

Please specifically comment on progress and any difficulties raised and action has/is being taken.

Where applicable, please use this space to summarise any concerns raised during the review process.