NIHR Health Protection Research Unit in Gastrointestinal Infections

NHS National Institute for Health Research

Newsletter

Summer 2016 Issue 03

NEWS



PROFESSOR BECOMES DAME IN NEW YEAR HONOURS

Our congratulations to Margaret Whitehead, Theme Leader of the HPRU GI People Theme and Head of the University of Liverpool's Department of Public Health and Policy, who was awarded a damehood in the New Year Honours List for services to Public Health.

Dame Margaret Whitehead, DBE has been honoured for her outstanding contribution to society's understanding of health inequalities, with a significant influence on public health internationally. Over the last 30 years, Margaret has made a distinctive and unique contribution to the field of public health, in particular to the study of the social determinants of health and health inequalities. The range of her work is unparalleled in this field, covering the whole spectrum from 'ethics to action'.



OUTSTANDING CONTRIBUTION TO RESEARCH IMPACT AWARD

HPRU GI Director Sarah O'Brien has been recognised for her contribution to research impact at a University of Liverpool Celebrating Success awards ceremony hosted by Vice-Chancellor Professor Janet Beer. The awards recognise, celebrate and promote excellence by academic, professional service and support staff across the University of Liverpool. The 'Outstanding Contribution to Research Impact' award was jointly awarded to Professors Sarah O'Brien and Stuart Carter.



HPRU GI ANNUAL SCIENTIFIC MEETING

The 2016 Annual Scientific Meeting of the NIHR Health Protection Research Unit in Gastrointestinal Infections was held at the Oxford Martin School and Hertford College, University of Oxford on 14 and 15 March 2016. Keynote talks from Professor Derrick Crook, Director of Public Health England's









Public Health England







National Infection Service and Professor Mark Achtman of the University of Warwick accompanied presentations from HPRU GI PhD students and researchers representing the six research themes. The HPRU GI Annual Scientific Meeting Dinner, held at Hertford College Dining Hall, was followed by an After Dinner Speech from Professor Lord Krebs Kt FRS FMedSci ML on 'Do science and politics mix?' The HPRU GI External Advisory Panel's annual meeting was held at Hertford College on 15 March, and included open discussions with HPRU GI PhD students, research staff and Theme Leaders.

We would like to thank everyone involved for their efforts in making the event a success, including Martin Maiden and Andrea Kastner at the University of Oxford. Thank you also to the meeting delegates who have completed the post-meeting survey.

The 2017 HPRU GI Annual Scientific Meeting and External Advisory Panel meeting will be held in Liverpool in early March 2017. The meeting dates and venue will be advised in due course.

We Public Health England

Applied Epidemiology Scientific Conference 2016 Application of scientific methods to improve and protect health 22-23 March 2016, Warwick University

PUBLIC HEALTH ENGLAND APPLIED EPIDEMIOLOGY SCIENTIFIC CONFERENCE

PHE's 2016 Applied Epidemiology Scientific Conference 'Application of scientific methods to improve and protect health' was held on 22-23 March 2016 at the University of Warwick. The purpose of this conference was to support high quality and innovative science through the sharing of good practice including the work of the NIHR Health Protection Research Units, with a mix of plenary sessions, posters and parallel sessions. Sarah O'Brien, Iain Lake and Madison Pearce gave presentations at the event, and Richard Elson presented a poster. Presentation abstracts are available <u>here</u>.



BMJ BLOG BY PROFESSOR PAUL HUNTER

HPRU GI Theme Leader Paul Hunter has had his first blog published, by the BMJ, on 'Zika virus would be able to spread in Europe'. Paul's blog is available at <u>http://blogs.bmj.com/bmj/2016/05/23/paul-hunter-</u>zika-virus-would-be-able-to-spread-in-europe/







Our website address is <u>www.hprugi.nihr.ac.uk</u> and Twitter name is <u>@HPRUgi</u> Please don't forget to let us know about any news items, public engagement events, or anything similar, for the website, Twitter and next edition of this newsletter.









EVENTS

Professor Miren Iturriza-Gómara's Inaugural Lecture - 'That familiar gut feeling... gone viral'

5.30 pm for 6.00 pm, Thursday 9 June 2016, Liverpool Medical Institution, 114 Mount Pleasant, Liverpool, L3 5SR In this inaugural lecture, Miren will talk about how molecular detection methods have informed global disease

burden estimates of the leading viral causes of gastroenteritis, while at the same time creating diagnostic challenges. She will then address some of the problems we face in effectively controlling viral gastroenteritis in different populations.

All welcome - please RSVP to Doreen Owen at dmowen@liverpool.ac.uk

An Introduction to Systematic Reviews and Meta-Analysis

9.00 am - 4.45 pm, Tuesday 28 June 2016, The Foresight Centre, 1 Brownlow Street, Liverpool, L69 3GL

Dr David Taylor-Robinson and Dr Daniel Pope

This one day course is ideal for staff and students wanting to critically appraise systematic reviews and gain experience in the methodology and conduct of systematic reviews and meta-analysis. Delivered by experienced systematic reviewers in the field of global public health, the course involves presentations, case-studies and hands-on practical experience. Included outcomes from the course are:

- Ability to develop and refine research questions for a systematic review
- Understanding the processes in the conduct of a systematic review (including quality appraisal of studies)
- Understanding the role of systematic reviews in health practice and policy
- Understanding the processes in the conduct of evidence synthesis using meta-analysis
- Gaining skills in the conduct of meta-analysis using Cochrane RevMan software

Course Fees (lunch and refreshments included): £150 Standard / £120 NIHR HPRU GI Member / £120 NIHR HPRU EZI Member

Please note: You will need to bring your own laptop, and software download details will be provided prior to the course date.

Places are limited and strictly by registration only. Registration closes 10 June 2016.

To register for the course please visit http://bit.ly/1sPeSDZ

For further information please contact <u>hprugi@liverpool.ac.uk</u>

North West Zoonoses Group (NWZG) Annual Conference - 'Emerging Themes in Zoonoses'

10.00 am - 3.30 pm, Wednesday 6 July 2016, Sherrington Lecture Theatre, University of Liverpool, Ashton Street, Liverpool, L69 3GE

The 2016 NWZG Annual Conference will take place on 6 July at the Sherrington Building on the main University of Liverpool campus. Emerging themes include Antimicrobial Resistance, Emerging Risk Assessment, and Risk Based Policy. The programme for the day is in the final stages of development.

Cost: £25 including lunch and refreshments (students free).









Bookings for the event can be made via http://tinyurl.com/NWZG2016

Bookings can also be made by purchase order; if required please contact Marie McIntyre at

k.m.mcintyre@liverpool.ac.uk

This event is supported by the NIHR HPRU in Gastrointestinal Infections and the NIHR HPRU in Emerging and Zoonotic Infections.

Public Health England Annual Conference 2016 - 'Evidence into action'

13-14 September 2016, University of Warwick

The Public Health England Annual Conference 2016 will bring together over 1,400 participants from a wide range of organisations, to learn, network and share knowledge and experience.

The theme of this year's conference is 'Evidence into action', and the conference will promote and showcase the application and translation of science and research, to support effective local and national action to improve public health. The conference will be of interest to representatives from across the health and social care system interested in applied prevention research, programmes and policy.

It is now possible to book to attend one or both days of the conference, and there is also an option to join the preconference workshops. Please note that in previous years places have been greatly oversubscribed, and so booking early is advised.

For full details of how to register, please visit the conference website at http://bit.ly/24kTkLa.

STAFF UPDATES

We would like to welcome John Harris who has started with us as Lecturer in Health Protection, and Sarah McGarrol who has joined us as a Post-Doctoral Research Associate in Health Inequalities within the People Theme. Both John and Sarah are based at the Farr Institute@HeRC at the University of Liverpool. Welcome also to Alexandra Kaley who has joined us as a Research Assistant within the People Theme, based at Lancaster University, and Karen Fuentes who has joined us as Research Assistant within the Places Theme, based at PHE.

STUDENT NEWS

Natalie Adams gave an oral presentation at the PHE seminar series held on 1 April 2016, on the 'Shiga Toxin– Producing *Escherichia coli* O157, England and Wales, 1983–2012' paper which was published in January 2016. Natalie also presented a poster and gave a two-minute oral summary on 'Socioeconomic inequalities in GI infections in the UK' at the LiLaC (Liverpool and Lancaster Universities Collaboration for Public Health Research) Annual Meeting held on 4 May 2016.









PhD Student Profile: Clare Barker

Clare is in the first year of a PhD studentship within the Pathogens Theme, exploring the genomics of *Campylobacter* outbreak strains archived at Public Health England, with supervisors Martin Maiden of the University of Oxford and Tim Dallman of Public Health England. Clare has worked within the field of bacterial genomics for several years following a degree in Cellular and Molecular Medicine from the University of Bristol; first studying the natural history of the gastrointestinal pathogen *Shigella flexneri* for her Masters project at Cardiff University in collaboration with the Wellcome Trust Sanger Institute, and later working alongside Public Health Wales to examine the population genomics of *E. coli* causing blood infections in Wales.



PhD Student Profile: Rebecca Inman

Rebecca started in the Pathways Theme PhD studentship 'Understanding and preventing transmission of Shiga toxin-producing Escherichia coli: A cause of major childhood ill health' in October 2015, with supervisors Lee Hooper, Paul Hunter and Erica Kintz of the University of East Anglia. Rebecca is a graduate in Biology from the University of Bath, with experience in microbial evolution and genetics. Rebecca has previously worked for a pharmaceutical company in Belgium, assisting on a project that aimed to characterise and purify membrane proteins involved in Alzheimer's disease. In addition to being a full-time PhD student, Rebecca is also a keen and prizewinning baker.



PhD Student Profile: Thomas Inns

Thomas began his Pathways Theme PhD studentship 'Investigating the burden and transmission of acute gastroenteritis in care homes' in January 2016, with supervisors Sarah O'Brien, Miren Iturriza-Gomara and John Harris of the University of Liverpool, and Roberto Vivancos of Public Health England. Thomas is a graduate of the London School of Hygiene and Tropical Medicine, and an alumnus of the UK Field Epidemiology Training Programme. He has experience of infectious disease surveillance and outbreak investigation and currently works for Public Health England. Outside of work, he enjoys tennis, football and cycling.



PhD Student Profile: Suzie Rotheram

Suzie started in the People Theme PhD studentship 'Risk, vulnerability and consequences of gastrointestinal infections in disadvantaged neighbourhoods in the North West of England' in November 2015, with supervisors Professor Dame Margaret Whitehead and Dr Jessie Cooper of the Department of Public Health and Policy at the University of Liverpool. Suzie is a Bristol Veterinary graduate who has worked in mixed and small animal practice in the UK and overseas in Mongolia. Before starting the PhD she completed a Master of Public Health in Liverpool. Outside of the PhD Suzie enjoys cycling and walking with her family.











New HPRU GI PhD Students

Welcome to Adedoyin Awofisayo-Okuyelu, Richard Elson, Saskia Neuert and Helen Hughes, who have joined us on HPRU GI PhD studentships. Their profiles will be featured in a future HPRU GI newsletter.

PUBLIC INVOLVEMENT AND ENGAGEMENT, IMPACT AND KNOWLEDGE EXCHANGE

Public Involvement and Engagement Activities

The NIHR expects that all HPRU researchers are involved in public involvement and engagement. There are numerous ways in which researchers can get involved, including the following events - please contact https://www.hprugi@liverpool.ac.uk for further information.

Infectious Science

The first in a series of HPRU 'Infectious Science' events was held on 3 March 2016 at The Vines public house in Liverpool. This free-of-charge evening event, attended by 60 members of the public, featured six fast-paced scientific TEDx-style talks from HPRU researchers on topics such as tick bites and Zika virus. The objective of the event is to encourage people from all ages and backgrounds to take an interest in infections, and the event provides an opportunity for HPRU researchers to develop their public engagement skills.

The date of the next Infectious Science event will be advertised shortly. Please contact Raquel Medialdea Carrera at raquelmc@liverpool.ac.uk if you would like to present your Gastrointestinal Infections research at a future Infectious Science event.

Norwich Science Festival

A new Norwich Science Festival will be held from 18-30 October 2016. The event will build on previous science activity, and is aimed at showcasing the world-class science being carried out in Norwich. A Science in Norwich day is planned for 23 October 2016 as part of the Festival.

Please visit <u>www.theforumnorwich.co.uk/norwichsciencefestival</u> for further information.

Science Live

Connecting event organisers, volunteers and speakers to arrange live science events, brought to you by the British Science Association, and supported by the Wellcome Trust.

Science Live is an event platform that aims to connect each part of the science event equation: the public, the speakers, the volunteers and the organisers. Science Live has been established to help more people throughout the UK arrange and discover events, leading to many more people engaging with, understanding and enjoying science. If you wish to organise an event in your local area, speak at a public event about your research, or volunteer at an event in your area, please visit <u>http://www.sciencelive.net/</u>.

STEM Ambassador Gary Barker of the Institute of Food Research gave a talk on 'Inside Risk' on 11 November 2015 to approximately 25 Sixth Form students as part of a Norwich Research Park <u>Inside Science</u> workshop.









Public Health England David James Allen presented on 'Norovirus Vaccines' at the Federation of Infection Societies Annual Conference held in November 2015 at the SECC in Glasgow.

Arjan Narbad gave presentations at the SEMSF Committee meeting in Norwich on Microbiome in January 2016, and at the 2nd Microbiome R&D and Business Collaboration Congress: Asia held in Kuala Lumpur in February 2016.

Noel McCarthy presented at the Microbiology Society's Annual Conference which was held from 21-24 March 2016 at the Arena and Convention Centre in Liverpool.

If you are involved in any relevant activities, please inform the HPRU GI Administration Team at <u>hprugi@liverpool.ac.uk</u>. Please provide the activity title, brief description, date, audience (schools, public, etc), audience numbers, and any photographs or additional information.

NIHR COMMUNICATIONS

NIHR support for complex reviews

A new service offering specialist expert advice for those producing complex systematic reviews is now available. It can provide advice on methodological fields such as Diagnostic Test Accuracy, Economic Evaluations or Network Meta-Analysis.

The Complex Review Support Unit has been set up by the NIHR Systematic Reviews Programme and is a collaboration between London School of Hygiene and Tropical Medicine, University of Leicester and University of Glasgow, which is the lead.

To find out more and to access support, please visit <u>www.nets.nihr.ac.uk/programmes/sr/support-for-complex-</u> reviews.

Acknowledging HPRU in Publications -Publication Approval and Acknowledgments

Acknowledging the NIHR HPRU is vital as we need to capture all your relevant work. If it says HPRU in the address it can be counted as an output for the Unit.

Anything HPRU related that is published by any HPRU in Gastrointestinal Infections researcher should have the following included as an address, in addition to your usual address:

- NIHR Health Protection Research Unit in Gastrointestinal Infections, University of Liverpool, L69 7BE
- NIHR Health Protection Research Unit in Gastrointestinal Infections, Lancaster University, UK
- NIHR Health Protection Research Unit in Gastrointestinal Infections, University of Oxford, UK
- NIHR Health Protection Research Unit in Gastrointestinal Infections, University of East Anglia, UK
- NIHR Health Protection Research Unit in Gastrointestinal Infections, Institute of Food Research, UK
- NIHR Health Protection Research Unit in Gastrointestinal Infections, Colindale, UK

Where a publication is a result of work directly funded by the HPRU this too needs to be acknowledged.











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UPDATED VERSION: Disclaimer for work directly funded by the NIHR

The research was funded by the National Institute for Health Research Health Protection Research Unit (NIHR HPRU) in Gastrointestinal Infections at the University of Liverpool in partnership with Public Health England (PHE), and in collaboration with University of East Anglia, University of Oxford and the Institute of Food Research. [Name of researcher] is based at [Collaborator]. The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR, the Department of Health or Public Health England.

Disclaimer for work not directly funded by the NIHR but where they have been acknowledged in the address:

The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR, the Department of Health or Public Health England.

Submission: A draft of research articles should be submitted to NIHR at the same time as submission for publication or at least 28 days before the date intended for publication, whichever is earlier.

UPDATED INSTRUCTIONS: Please submit your paper directly to <u>chiara.gasparini@nihr.ac.uk</u> copying in <u>hprugi@liverpool.ac.uk</u> to the email so that a record of outputs can be maintained. Please include details of the publication/journal the article is to be submitted to.

UPDATE: DISSEMINATION OF RESULTS: NIHR would now like sight of any publication or work where the results of HPRU research are being disseminated (book chapters, abstracts from congress participation or poster presentations for example) to ensure the correct acknowledgments are being used, since these too are deemed to be research outputs. Again **please submit these directly to** <u>chiara.gasparini@nihr.ac.uk</u> **copying in** <u>hprugi@liverpool.ac.uk</u> **to the email.**

New templates for HPRU presentations and posters will be circulated shortly.

PUBLICATIONS

Congratulations to the following who have published in recent months.

Connor TR, <u>Barker CR</u>, Baker KS, Weill FX, Talukder KA, Smith AM, Baker S, Gouali M, Pham Thanh D, Jahan Azmi I, Dias da Silveira W, Semmler T, Wieler LH, <u>Jenkins C</u>, Cravioto A, Faruque SM, Parkhill J, Wook Kim D, Keddy KH, Thomson NR. **Species-wide whole genome sequencing reveals historical global spread and recent local persistence in Shigella flexneri.** Elife. 2015 Aug 4;4:e07335. doi: 10.7554/eLife.07335. Available from: https://elifesciences.org/content/4/e07335









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Hungerford D, Vivancos R; EuroRotaNet network members, Read JM, Pitzer VE, Cunliffe N, French N, Iturriza-Gómara M. In-season and out-of-season variation of rotavirus genotype distribution and age of infection across 12 European countries before the introduction of routine vaccination, 2007/08 to 2012/13. Eurosurveillance. 2016;21(2). doi: 10.2807/1560-7917.ES.2016.21.2.30106.

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Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4821255/

NB If you have published, but it has not been listed here, please let us know about it!









GRANT SUCCESS

HPRU members have been successful in obtaining the following research funding.

Name	Details	Funder	Award
Dr Kathie Grant	Closing gaps for performing a risk assessment on Listeria monocytogenes in ready-to-eat (RTE) foods: activity 3, the comparison of isolates from different compartments along the food chain, and from humans using whole genome sequencing (WGS) analysis	EFSA	€420,000
Dr Kathie Grant	ENGAGE (Establishing Next Generation sequencing Ability for Genomic analysis in Europe)	EFSA	€498,760.60
Professor Miren Iturriza-Gómara	Impact of maternally derived antibodies and infant microbiota on the immunogenicity of rotavirus vaccines in African, Indian and European infants	Medical Research Council, the Department for International Development and India's Department of Biotechnology through The Newton Fund	£1,117,637
Professor Miren Iturriza-Gómara	EuroRotaNet: Rotavirus Strain Surveillance in Europe	Glaxosmithkline Biologicals S.A.	£121,751.41
Professor Miren Iturriza-Gómara	EuroRotaNet: Rotavirus Strain Surveillance in Europe	Sanofi Pasteur MSD, SNC	£121,751.41
Professor Miren Iturriza-Gómara	Predictors of rotavirus vaccine virus replication, immune response and clinical protection following oral rotavirus vaccination in Malawian children	Wellcome Trust	£61,409
Professor Noel McCarthy	Exploring the joint analysis of large routine data with integrated epidemiology and pathogen genomic datasets from outbreaks of GI pathogens	Food Standards Agency	£40,932
Dr Marie McIntyre	Modelling the spatial distribution of Chikungunya in Europe and North America using presence- data	University of Liverpool Internal Interdisciplinary Network Fund	£4,003
Professor Sarah O'Brien	Assessing the contribution made by the food chain to the burden of UK-acquired norovirus infection	Food Standards Agency	£48,986
Professor Sarah O'Brien Dr Jon Read	Development of New Mathematical Sciences Capabilities for Healthcare Technologies	Engineering & Physical Sciences Research Council	£1,811,025.95









NEW MEMBERS

- Dr Ariel Blocker, Reader in Microbiology, Schools of Cellular and Molecular Medicine & Biochemistry, University of Bristol
- Dr Marie Chattaway, Clinical Scientific Lead/Projects Manager, Gastrointestinal Bacteria Reference Unit (GBRU), Public Health England
- Dr Ali Cody, Post-doctoral Researcher, Department of Zoology, University of Oxford
- Dr Janine Coombes, Tenure-Track Fellow in Infection Biology, University of Liverpool
- Dr Alex Elliot, National Scientist Lead (Syndromic Surveillance), Real-time Syndromic Surveillance Team, National Infection Service, Public Health England
- Dr Ian Hall, Scientific Programme Leader: Bioterrorism and Emerging Disease Analysis, Public Health England
- Mr Daniel Hungerford, Epidemiology Research Fellow, Institute of Infection and Global Health, University of Liverpool
- Mr Daniel Kelly, PhD Student, University of Liverpool
- Miss Lisa Luu, PhD Student, University of Liverpool
- Dr K. Marie McIntyre, Post-doctoral Epidemiologist, Department of Epidemiology and Population Health, Institute of Infection and Global Health, University of Liverpool
- Miss Kate McPhedran, Health Protection Practitioner, Public Health England South East (Thames Valley)
- Professor Mark Pritchard, Professor of Gastroenterology, University of Liverpool
- Mr Barry Rowlingson, Research Fellow, Faculty of Health and Medicine, Lancaster University

External Advisory Panel

A new Lay Member has joined our External Advisory Panel. Geoff Driver joins Roger Gibb, Charles Henderson and Vivianne Buller as a panel Lay Member and has been invited to attend quarterly HPRU GI Steering Committee meetings and the Annual Scientific Meeting. Geoff has a background in Health and Safety and is a past director and trustee of the RSPH. He worked for a number of years with the RSPH examinations committees and also NEBOSH.

SUBMIT YOUR NEWS

If you have any items for inclusion in the next newsletter please send them to hprugi@liverpool.ac.uk

NIHR Health Protection Research Unit in Gastrointestinal Infections

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