

Newsletter

Winter 2017 Issue 05

NEWS



HPRU PhD students

HPRU PHD ACADEMY INAUGURAL EVENT

On 30 and 31 January 2017 58 PhD students from across 11 Health Protection Research Units met at The University of Liverpool in London for the first HPRU PhD Academy, jointly hosted by the HPRU in Gastrointestinal Infections and HPRU in Emerging and Zoonotic Infections.



Professor Bernie Hannigan, PHE

The purpose of the event was to share knowledge across the HPRUs and to give the PhD students a platform to present their research. Each unit gave an overview of their research, as well as two focused oral presentations led by the PhD students on their HPRU work.



Outbreak exercise with Dr Ruth Ruggles, PHE

During the event there were training opportunities from Professor Bernie Hannigan, Deputy Director at Public Health England (PHE) on the importance of NIHR HPRU PhDs' contribution to public health, and Dr Satnam Sagoo, Head of Education and Training Unit at PHE on developing a career in public health.



Poster viewing over lunch

Further to this, there was a talk on 'Getting patients and the public involved in research' by Professor Jackie Cassell, Brighton and Sussex Medical School and an Outbreak Response exercise run by Dr Ruth Ruggles, Head of Public Health Training at PHE.

Discussions and photographs from the event can be viewed at

[#hpruacademy2017](https://twitter.com/hpruacademy2017)



From left to right: Professor Arjan Narbad, Dr Ngozi Elumogo and Dr Lee Kellingray.
Copyright: Institute of Food Research

UNUSUAL PROCEDURE TO TREAT LIFE-THREATENING GUT INFECTION

During International Infection Prevention Awareness Week (17-21 October) HPRU GI researchers Professor Arjan Narbad and Dr Lee Kellingray launched a new treatment programme for *Clostridium difficile* (*C.diff*), a bacterium that infects the gut. The Faecal Microbiota Transplant team is establishing the use of faecal microbiota transplants at the Norfolk and Norwich University hospital to combat *C.diff* infections. The treatment process involves faecal material, which is screened and confirmed to be infection-free. It is then mixed with saline and administered, filtered and infused via a fine tube into the stomach or small bowel.

In the last year, the lives of 20 patients diagnosed with *C.diff* have been transformed by the Norfolk and Norwich University Hospital by the use of Faecal Microbiota Transplant. Overall this treatment has had a 90% success rate. This new service is the result of a successful multi-disciplinary collaboration combining the skills of hospital consultants, lab staff and HPRU GI scientists at the Institute of Food Research.



HPRU GI Annual Scientific Meeting 2017

1-2 March 2017, Liverpool Medical Institute, Liverpool, L3 5SR

Places now limited.

The Annual Conference for the HPRU GI offers the opportunity to hear from key investigators about the exciting research being undertaken on Gastrointestinal infections, with keynote talks from Professor Anne Murcott, Professorial Research Associate, SOAS Food Studies Centre, University of London on 'Good sociological reasons for bad behaviour when it comes to kitchen hygiene' and Professor Simon Capewell, Vice-President for Policy, UK Faculty of Public Health on 'Public Health at the Science/Policy Interface: lessons from Slavery, Rum and Tobacco'.

Registration costs:

HPRU GI Member fee: £100

Non-Member fee: £125

Fee includes conference dinner on 1 March at Victoria Gallery and Museum.

Book your place via the University of Liverpool's [online store](#).

Registration closes 14 February 2017.



SUCCESSSES FOR HPRU GI MEMBER DAVID TAYLOR-ROBINSON

Congratulations to David Taylor-Robinson who has been awarded an MRC Clinician Scientist Fellowship, for his project entitled 'Tackling inequalities in child health: Elucidating pathways, interventions and policies'. David will start his fellowship in 2017, for 4 years, involving a placement in Copenhagen working on the Danish National Birth Cohort Study. Further congratulations go to David on his success in the University of Liverpool's Annual Review Process and being awarded a Personal Chair.



HPRU GI WEBSITE & TWITTER

Our website address is www.hprugi.nihr.ac.uk and Twitter name is [@HPRUgi](https://twitter.com/HPRUgi). 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

Designing and Conducting Research with Human Participants

22 February 2017, 9am-5pm, Wellington House, London, SE1 8UG

This course aims to help PhD students or those with little or no background in social science to understand the good practice of basic methodological and scientific research with human participants. The Emergency Response Department of Public Health England will be conducting this course.

Course fees: £299

To book your place contact APS@phe.gov.uk

NIHR Funding Opportunities for Public Health Research

16 March 2017, 9.30am-2.30pm, Foresight Centre, Liverpool, L69 3GL

Free event.

This Research Design Service North West seminar is for health and social care professionals and researchers in the North West of England who want to develop and submit a Public Health Research application for funding. Those thinking of other NIHR research funding streams will also benefit from attending.

To book your place click on the Eventbrite link: <https://www.eventbrite.co.uk/e/nihr-funding-opportunities-for-public-health-research-tickets-31827433711>

Public Health England Applied Epidemiology Scientific Conference 2017

21-22 March 2017, Ramphal Building, University of Warwick

The focus of this conference is on the application of epidemiological and other scientific methods to protect and improve health, including the work of the NIHR Health Protection Research Units. The aims are to support high quality and innovative science through the sharing of good practice and help to strengthen epidemiology.

A session has been added to the programme for PhD students to give a 3 minute presentation on their PhDs, on 21 March 4.45-6.00pm. If you wish to take part in this session then email your talk title to [Chloe Hardridge](#).

Registration fees:

Tuesday 21 and Wednesday 22 March (without conference dinner on 21 March): £100

Tuesday 21 and Wednesday 22 March (with conference dinner on 21 March at Warwick University): £120

One day only: £60

To book your place, visit the [PHE Conference website](#).

PHE Training

Public Health England are offering a range of different training courses which are open to both PHE staff and external delegates:

- 22 February – STATA Training (this will also run in October)
- 22-24 February – Legionnaires' disease: risk assessment, investigation and control
- 14 March – Advanced outbreak management course
- 28 March – Hitchhikers Guide to Microbiology, microbiology for non-microbiologists (this will also run June and November)
- 25-26 April – Outbreak investigation a practical course (this will also run in November)
- 9 May – Hitchhikers Guide to Epidemiology

If you would like to attend any of these courses then please contact Gloria Wilson, PHE Education and Training Coordinator at gloria.wilson@phe.gov.uk

STAFF UPDATES

We sadly say goodbye to **Adele Maggs**, Project Manager for the HPRU GI, as she moves to be Centre Manager at the Leverhulme Research Centre for Functional Materials Design, a new role within the University of Liverpool.

We would like to welcome **Stevo Williams** who has taken over the coordination of the HPRU GI as Project Manager, based at the Farr Institute@HeRC at the University of Liverpool.

In October **Adedoyin Awofisayo-Okuyelu** spoke on 'Estimating parameter distributions and developing epidemiological methods and tools to support GI outbreak investigation' to Zoology postgraduate students at The University of Oxford's graduate induction.

On 14 October at the Campden BRI's Hot Topics in Microbiology conference **Natalie Adams** gave an oral presentation on the 'Shiga Toxin–Producing *Escherichia coli* O157, England and Wales, 1983–2012' paper which was published earlier in the year.

Natalie Adams, Thomas Inns and **Suzanne Rotheram** presented at the University of Liverpool's Institute of Psychology, Health and Life Sciences Postgraduate Annual Conference on 28 October 2016. Tom gave a talk on the 'Burden and transmission of acute gastroenteritis on Merseyside', Natalie discussed 'Are there Socioeconomic Inequalities in the risk of and exposure to Gastrointestinal Infections?' and Suzanne presented on 'How are the management and consequences of Gastrointestinal Infections shaped in the context of households with young children in differing socio-economic and geographical places?' **Congratulations to Suzanne** who won the prize for the best morning presentation at the conference.

Natalie Adams and **Tanith Rose** both attended the European Public Health Conference in Vienna from 10-11 November 2016. Tanith gave an oral presentation on the 'Relationship between socioeconomic status and measures of infectious intestinal disease severity' as part of the Social inequalities and their influence on health session. Natalie presented a poster on 'Does socioeconomic status influence risk of gastrointestinal infections in the community in the UK?' as part of the Austerity and outcomes poster walk.



The HPRU in Gastrointestinal Infections PhD students met together on the 23 November 2016 at PHE Colindale. This was the first time that all the PhD students have gathered together since the annual conference in March 2016.

It was an opportunity for the students to hear about each other's research and to meet students new to the HPRU for the first time. Charles Henderson (lay member on the HPRU GI External Advisory Panel) gave a life skills session in the afternoon and new students were given a tour of the food and water laboratories. It is hoped that future meetings will provide a useful space for students at different stages of their PhDs to support and encourage each other.

At the International Society for Disease Surveillance (ISDS) 2016 conference hosted in Atlanta, **Helen Hughes** on 7 December 2016 conducted a lightning talk on 'Syndromic surveillance of air pollution incidents across international borders'. Helen had to give a quick-fire talk for 5 minutes about her research.

During the week of Christmas **Adedoyin Awofisayo-Okuyelu** spoke to Maiden Lab members in Oxford on 'Can it be what I ate last night?'

Seun Esan has recently had a blog post published on the Nuffield Department of Primary Care Health Sciences website about '[Unpleasant complications of gastroenteritis – unravelling the link](#)'. This post links to a journal article published in EBioMedicine, see the Publications section below for more details.



Suzanne Rotheram attended the HPRU PhD Academy 30-31 January 2017. Her poster on 'How are the management and consequences of gastrointestinal infections shaped in the context of households with young people in differing socio-economic and geographic places?' won best poster presentation as voted by her peer HPRU PhD students.



Madison Pearce and **Adedoyin Aawofisayo-Okuyelu** both presented their research at the HPRU PhD Academy as representatives of the HPRU GI PhD students. Adedoyin gave an oral presentation on 'Estimating parameter distributions and developing epidemiological methods and tools to support GI outbreak'. Madison gave a talk on 'What Salmonella is it? Are you sure?'

PhD STUDENT PROFILES



Richard Elson

Richard began his Pathways theme PhD studentship 'A spatio-temporal analysis of STEC O157 in England' in January 2016, with HPRU supervisors Iain Lake, Sarah O'Brien and Roberto Vivancos, Bob Adak and Claire Jenkins from Public Health England. Richard is a graduate in Environmental Health from Nottingham Trent University and holds a masters degree in the Control of Infectious Diseases from the London School of Hygiene and Tropical Medicine. Richard works for Public Health England on the surveillance of gastrointestinal pathogens with a particular interest in STEC and is also responsible for outbreak investigation and management. Outside of work he likes to play music, cook and read about marine mammals although these all play second fiddle to spending time entertaining his five year old daughter.



Jennifer Mattock

Jennifer started in the Pathways Theme PhD Studentship 'Reducing the impact of infectious intestinal disease' in October 2016, with supervisors Paul Hunter, Arjan Narbad and Erica Kintz of the University of East Anglia. Jennifer is a Biological Sciences graduate from the University of Birmingham with experience in food microbiology and reproductive biology. Outside of work she enjoys reading, walking and baking.

NEW HPRU GI PhD STUDENTS

Welcome to **Caoimhe McKerr**, who joined us in January 2017 on a joint HPRU EZI & GI PhD studentships, and **Obaghe Edeghere**, who joined us on a HPRU GI PhD studentship in February 2017. Their profiles will be featured in a future HPRU GI newsletter.

PUBLIC INVOLVEMENT AND ENGAGEMENT, IMPACT AND KNOWLEDGE EXCHANGE

PUBLIC INVOLVEMENT AND ENGAGEMENT ACTIVITIES

Involving and engaging the public in our research is a key focus for the unit. Here are some activities that took place over the autumn term:

Public Engagement Case Studies

The University of Liverpool's Faculty of Health and Life Sciences website has recently been updated and now has a dedicated Public Engagement area to showcase the inspiring public engagement work carried out by staff and students. One such example is by Dr Sarah McGarrol, post-doctoral research associate within the HPRU GI, her case study describes the work with Suzanne Rotheram (aided by Dr Sophie Wickham) and the fun, interactive activities they ran for primary aged school children called 'Let's talk about poo and puke!'. Visit the website to [download the case study](#).

Article on Norwich Evening News

The work of the Faecal Microbiota Transplant team involving Professor Arjan Narbad and Dr Lee Kellingray from the Institute of Food Research made news on the regional newspaper, Norwich Evening News: <http://bit.ly/2kQXLID>

Involving the Public in Research

Evidence of the relationship between deprivation and GI infection is limited and the mechanisms underlying this relationship are not well understood. Some existing studies suggest that the trends in risk differ between adults and children, with children living in more deprived areas having higher risk of infection and hospitalisation. Qualitative research led by, Dr Rachael Eastham and Dr Alex Kaley, from the Division of Health Research at Lancaster University, aimed to deliver an in-depth understanding of GI infection within the wider social context and within households; and to characterise how these interplay to influence consequences of GI infection for families living in the North West of England. Using semi-structured interviews and participatory mapping techniques, this study

recruited 21 people with children aged 0-11 who have had a recent experience of GI infection, in order to explore ways in which individual behaviours and experiences interact with the material, social and cultural environment (place) to influence the consequences of GI infection for families. Analysis of the material obtained from fieldwork undertaken between September and December 2016, is currently underway.

Also, Dr Erica Kintz at the University of East Anglia has contacted local patient and public involvement representatives to ensure the information for their case control study uses plain English for a non-science audience.

Commissioned Commentary

The publication "*Exploiting bacterial whole-genome sequencing data for the evaluation of 1 diagnostic assays: Campylobacter speciation as a case study*" by Van Rensburg MJJ, Swift C, Cody AJ, Jenkins C and Maiden MCJ in Journal of Clinical Microbiology (for full details see Publications section below), is being published with an [Associated Commentary](#). This article will be a free-access article, accessible to all.

UPCOMING EVENTS

There are numerous ways in which researchers can get involved, including the following events - please contact hprugi@liverpool.ac.uk for further information.



Museum University Partnership Initiative (MUPI) events

17 February 2017, North West Region at Manchester Museum, Oxford Road, Manchester

21 February 2017, East of England Region at Fitzwilliam Museum, Cambridge

28 March 2017, South East Region (venue tbc), Central London

The [Museum University Partnership Initiative \(MUPI\)](#) is funded by Arts Council England's Museum Resilience Fund. In partnership with Share Academy and Paddy McNulty Associates, the National Coordinating Centre for Public Engagement (NCCPE) is hosting a series of regional networking events called 'MUPI Matches'. These are free one-day events that bring together museum staff and academics, using a tried and tested methodology to stimulate new connections and new projects. Participants can then bid for 'thinking funding' – to enable them to do desk research; have conversations; test ideas; and work together to plan their potential project. This thinking funding provides a critical part of the process, helping people to work out if and how to work together and refine their ideas. Teams will be supported to develop their partnership, and find effective ways to fund their project in the future.

To register for the North West regional event [click here](#).

To register for the East of England regional event [click here](#).

To register for the South East regional event [click here](#).



Podcast your Research

21 February 2017, 10am-4pm

University of Oxford, IT Services, Banbury Road

For members of the University of Oxford only

From inception to publication; this practical session will take you on a tour through the basics of how to share your research in an engaging manner through podcasting. Through practical exercises the session will introduce approaches to podcasting and some of the basic technical skills of recording, editing and publishing audio files. By the end of the session you will have had the opportunity to create a draft pilot episode, so come prepared with ideas.

To book a place, see The University of Oxford's [WebLearn](#) pages.



Infectious Science

The third in the series of HPRU 'Infectious Science' events will be held on **6 March 2017** at the Everyman Theatre Bistro in Liverpool. This free-of-charge evening event, aims 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. Please contact **Raquel Medialdea Carrera** at raquelmc@liverpool.ac.uk if you would like to present your research in Gastrointestinal Infections at this or a future event.



'Meet the Scientists' World Museum Liverpool Programme, World Museum, Liverpool

Weekend family-friendly events focused on key topics researched within the University of Liverpool's Faculty of Health and Life Sciences, including the HPRU GI. Providing an opportunity for visitors to meet real scientists and to find out about the latest research happening at the HPRU, in an informal, interactive and enjoyable way. The next event is on **18 March, 10am-4pm** on 'Experimental'. For more details on this and future events, visit:

<https://www.liverpool.ac.uk/health-and-life-sciences/meet-the-scientists/>



Presenting Science

26 April 2017, 10am-4.30pm

Kinesis Centre, Norwich City Football Club, Norwich, NR1 1 JE



Learn presentation skills from an expert, with tips on how to direct attention, controlling voice and body language and understanding audiences, James Piercy will show you how to stand out from the crowd and ensure your presentation makes an impact. James holds the LAMDA gold medal in public speaking is a trainer for FameLab International and recently

won the Royal Society Radio prize.

Research shows that the public want to hear scientists talk about their work and think they should be rewarded for doing it. How can you get your message across and engage effectively with different audiences?

The course costs £210 for the day.

If you're interested, then order tickets via the [Eventbrite website](#).

Pint of Science



Do you like science, like pints and think you can give an interesting talk about your research to the public, in a pub then we want to hear from you!

The Pint of Science festival runs from 15-17 May 2017 across 3 different pubs in Liverpool. This will be the first time that the event will run in Liverpool, with the University of Liverpool taking the lead. The themes for the festival are 'Beautiful Mind', 'Our Body' and 'Atoms to Galaxies'. Your talk should last no longer than 25 minutes.

There is also an opportunity for PhD students and Early Career Researchers to take part in Shots of Science, whereby you give a 2-3 minute talk about your research. At each event there will be a competition to see who will be crowned Top of the Shots. Everyone that is invited to be part of Shots of Science will also be invited to a science communication masterclass before the event, led by [Dr Steve Cross](#).

If you would like to discuss your latest research and findings in a pub setting then complete the online application form by **12pm on Friday 17 February**:
<https://www.liverpool.ac.uk/health-and-life-sciences/public-engagement/events/pint-of-science/>



Introduction to Engagement and Evaluation

13 June 2017, 12-2pm

Enterprise Centre, iLab 1.11, Norwich

A workshop offered to Norwich Research Park Staff introducing public and community engagement plus methods for evaluating success. All workshops led by former CUE East director Dr Julie Bounford (HSC/EDU).

To book your place contact: rsconnect@uea.ac.uk

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

PUBLIC ENGAGEMENT GRANT SCHEME

Have you got a great idea for a new Public Engagement activity, and would like some support to get it started? Are you already involved in an excellent Public Engagement project, and want to develop it further? The University of Liverpool have grants available to support staff and students engagement with individuals or groups outside of the University. If you want to apply for a grant of between £200 to £2,000 to support your project then complete the [online application form](#). All applications need to be completed by **10 March 2017** and projects must be completed by December 2017.

NIHR COMMUNICATIONS

PUBLICATION APPROVAL AND ACKNOWLEDGMENTS

Acknowledging HPRU in Publications

Acknowledging the NIHR HPRU is vital as we need to capture all your relevant work. If a publication is acknowledged as an HPRU one it can be counted as an output for the Unit.

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

- NIHR Health Protection Research Unit in Gastrointestinal Infections, UK.

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

Acknowledgment and 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 University of Liverpool in partnership with Public Health England (PHE), in collaboration with University of East Anglia, University of Oxford and the Institute of Food Research. [name of researcher] is based at [name of institution]. 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

[name of researcher] is affiliated to the National Institute for Health Research Health Protection Research Unit (NIHR HPRU) in Gastrointestinal Infections at University of Liverpool in partnership with Public Health England (PHE), in collaboration with University of East Anglia, University of Oxford and the Institute of Food Research. [name of researcher] is based at [name of institution]. 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.

Please submit your paper directly to joanna.topping@nihr.ac.uk and mike.rogers@nihr.ac.uk copying in hprugi@liverpool.ac.uk 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.

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 joanna.topping@nihr.ac.uk and mike.rogers@nihr.ac.uk copying in hprugi@liverpool.ac.uk to the email.**

PUBLICATIONS

Congratulations to the following who have published in recent months.

Chalmers RM, McCarthy N, Barlow KL, Stiff R. **An evaluation of health protection practices for the investigation and management of *Cryptosporidium* in England and Wales.** Journal of Public Health. 2016 1-7
Available from: <https://doi.org/10.1093/pubmed/fdw143>

Elliot AJ, Hughes HE, Astbury J, Nixon G, Brierley K, Vivancos R, Inns T, Decraene V, Platt K, Lake I, O'Brien SJ, Smith GE. **The potential impact of media reporting in syndromic surveillance: an example using a possible *Cryptosporidium* exposure in North West England, August to September 2015.** Eurosurveillance. 2016; 21(41): 1-10
Available from: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=22610>

Esan OB, Pearce M, van Hecke O, Roberts N, Collins DR, Violato M, McCarthy N, Perera R, Fanshawe TR. **Factors Associated with Sequelae of *Campylobacter* and Non-typhoidal *Salmonella* Infections: A Systematic Review.** EBioMedicine. 2017; 15: 100-111
Available from: <http://www.sciencedirect.com/science/article/pii/S2352396416305850>

Harris JP, Iturriza-Gomara M, O'Brien SJ. **Re-assessing the total burden of norovirus circulating in the United Kingdom population.** Vaccine. 2017; 35(6): 853-855
Available from: <http://www.sciencedirect.com/science/article/pii/S0264410X17300142>

Inns T, Ashton PM, Herrera-Leon S, Lighthill J, Foulkes S, Jombart T, Rehman Y, Fox A, Dallman T, de Pinna E, Browning L, Coia JE, Edeghere O, Vivancos R. **Prospective use of Whole Genome Sequencing (WGS) detected**

a multi-country outbreak of *Salmonella* Enteritidis. Epidemiology & Infection. 2017; 145(2):289-298.

Available from: <https://doi.org/10.1017/S0950268816001941>

Kintz E, Brainard J, Hooper L, Hunter P. **Transmission pathways for sporadic Shiga-toxin producing *E. coli* infections: A systematic review and meta-analysis.** International Journal of Hygiene and Environmental Health. 2017; 220(1):57-67.

Available from: <http://www.sciencedirect.com/science/article/pii/S143846391630205X>

O'Brien, S. **The consequences of *Campylobacter* infection.** Current Opinion in Gastroenterology. 2016; 33(1): 14-20.

Available from: <http://bit.ly/2k2GINy>

Sinclair C, Jenkins C, Warburton F, Adak, GK, Harris JP. **Investigation of a national outbreak of STEC *Escherichia coli* O157 using online consumer panel control methods: Great Britain, October 2014.** Epidemiology & Infection, Cambridge University Press 2016 1-8 (Published online)

Available from: <https://doi.org/10.1017/S0950268816003009>

Smith KC, Inns T, Decraene V, Fox A, Allen DJ, Shah A. **An outbreak of norovirus GI-6 following a wedding in North West England.** Epidemiology & Infection, Cambridge University Press 2017 1-7 (Published online)

Available from: <https://doi.org/10.1017/S0950268816003368>

Van Rensburg MJJ, Swift C, Cody AJ, Jenkins C, Maiden MCJ. **Exploiting bacterial whole-genome sequencing data for the evaluation of diagnostic assays: *Campylobacter* speciation as a case study.** Journal of Clinical Microbiology. 2016; 54(12): 2882-2890.

Available from: <http://jcm.asm.org/content/early/2016/10/06/JCM.01522-16.full.pdf+html>

Vegge CS, Van Rensburg MJJ, Rasmussen JJ, Maiden MCJ, Lohnsen LG, Danielsen M, MacIntyre S, Ingmer H, Kelly DJ. **Glucose Metabolism via the Entner-Doudoroff Pathway in *Campylobacter*: A Rare Trait that Enhances Survival and Promotes Biofilm Formation in Some Isolates.** Frontiers in Microbiology. 2016; 7: 1877

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
Professor Miren Iturriza-Gómara	EuroRotaNet: Rotavirus Strain Surveillance in Europe	GLAXOSMITHKLINE BIOLOGICALS S.A. (BELGIUM)	£26,837

NEW MEMBERS

Dr Frances Colles, Post-doctoral Researcher, Department of Zoology, University of Oxford

Dr Gauri Godbole, Consultant Medical Microbiologist and Parasitologist, Public Health England and University College London Hospitals NHS Foundation Trust

Dr Rohini Manuel, Consultant Medical Microbiologist, National Infection Service, Public Health England

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

Website | <http://www.hprugi.nihr.ac.uk/>

Twitter | [@HPRUGi](https://twitter.com/HPRUGi)