

Newsletter

Winter 2016

Issue 06

NEWS



STRONG COLLABORATION IN BRAZIL

Over the last six months, members of the Liverpool HPRU team have set up camp in Rio de Janeiro, Brazil, in order to investigate the impact of Zika virus in the local population. We are collaborating with the Fiocruz Flavivirus Reference Laboratory (headed by Dr Ana Bispo), which has been a key local institution for Zika virus diagnostics since the beginning of the outbreak in 2015.



We firstly conducted a retrospective study, looking at patients admitted with neurological syndromes with a preceding illness consistent with a Zika virus infection. Through this, we were able to form a friendly network of clinicians from ten different hospitals within the city. This has helped prepare for the focus of our clinical research in Brazil – a prospective case-control study aiming to investigate the association between Zika/other arboviruses and a range of neurological conditions. We aim to commence recruitment in November-December 2016, in time for the Brazilian summer and higher arboviral infection rates. We hope to shed light on questions of global importance, including the range of neurological disease associated with Zika virus, the relative risk attributable to Zika virus in Guillain-Barre Syndrome and the role of other arboviruses in such disease.





ZikaPLAN LAUNCHED

Members of the HPRU EZI team gathered in Recife, Brazil with 25 research organisations to launch ZikaPLAN (Zika Preparedness Latin American Network). This global initiative, created in response to a Horizon 2020 funding call by the European Commission's Directorate-General Research and Innovation, has been formed to address the Zika virus outbreak and the many research and public health challenges it poses.

The HPRU EZI unit, as part of the ZikaPLAN consortium, will work on improving the diagnosis of Zika, better understanding the neurological complications, and working towards vaccines and treatments. Visit the University of Liverpool website for full details: <https://news.liverpool.ac.uk/2016/10/25/liverpool-unites-with-25-research-organisations-to-fight-zika-virus/>



TICK AWARENESS LEAFLET

HPRU members **Maaïke Pietzch** and **Jolyon Medlock** from PHE have recently produced a factsheet on How to Protect Yourself from Ticks which is very user friendly for children and parents. The full leaflet is available to download from the [EZI website](#).



INFECTION AND GLOBAL HEALTH DAY 2016

HPRU EZI research was well-represented at the University of Liverpool's sixth annual Infection and Global Health (IGH) Day held at the Victoria Gallery and Museum in Liverpool on 17 November 2016.



PhD student Natasha Rickett opened the day with her talk on 'Differential gene expression analysis of acute Ebola virus patients with fatal or non-fatal infections'. Later on Margaux Mesle spoke about 'Country-specific risk of infection with chikungunya and dengue among travellers returning to the UK'. Furthermore, Sarah Bar-Yaacov, Liz McGinley, Soeren Metelmann, Charlotte Robin, and John Tulloch presented posters on topics ranging from 'Hantavirus in pregnant women' to 'Pets, purity and pollution'.



ZIKA MOOC NOW AVAILABLE

'In the footsteps of Zika... approaching the unknown' MOOC is available online, for free (for a year) and has been translated into four languages (English, French, Portuguese and Spanish). **Tom Solomon** has been involved in the module which addresses what is known and unknown about the neurological adverse effects of the Zika virus in French Polynesia and in Brazil. Tom's lecture on Neurological Complications of Flaviviruses focusing on the effects of Zika in adults closes the module. The MOOC can be accessed [here](#).



HPRU VECTOR BIOLOGY AND CLIMATE MODELLING THEME MEETING

On 10 November 2016, Dr Cyril Caminade and Prof. Matthew Baylis held a Vector group meeting at The University of Liverpool in London. The aim of this meeting was to provide an overview of the research activities carried out within the vector theme of the HPRU in Emerging and Zoonotic Infections. Exciting scientific presentations were given by PDRAs and PhD students working across the University of Liverpool, Public Health England and the Liverpool School of Tropical medicine. Topics such as feeding behavior of UK mosquitoes, their competence to transmit critical arboviruses, the development of risk models for *Ae. albopictus* and Zika virus, the surveillance of Ticks activity and their potential to transmit key pathogens in the UK were discussed. The interaction between field work, laboratory work and the modelling activities across the different groups and disciplines is already leading to ground breaking science. Some of the excellent results presented during the meeting are already accepted in high impact factor journals and there are more to come. The meeting was particularly useful for PhD students to assess their current progress and get advice and directions for future work.



HPRU EZI WORKSHOP ON MOLECULAR AND IMMUNOLOGICAL APPROACHES TO HIGH CONSEQUENCE INFECTIONS

On 17 and 18 November Professors Miles Carroll and Julian Hiscox organized a workshop for the Pathogen Discovery and Characterisation Theme at the Radisson in Heathrow Airport. Dr Gustavo Palacios from the U.S Army Medical Research Institute of Infectious Diseases (USAMRIID) spoke about 'Immunomics: Dissection of the immune response after Ebola virus vaccination using NGS methods'.





HPRU EZI WEBSITE & TWITTER

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

HPRU EZI Annual Conference 2016

Tuesday 13 December 2016, Liverpool Medical Institute, 114 Mount Pleasant, Liverpool, L3 5SR

Zika and other Emerging Infections

This Annual Conference for the HPRU EZI will give the opportunity to hear from key investigators about the exciting research being undertaken on Zika and other emerging infections, with keynote talks from Dr Alain Kohl, MRC Programme Leader, MRC-University of Glasgow Centre for Virus Research on 'Zika virus interactions with host cells' and Dr Patricia Sequeira, Laboratorio de Flavivirus, Instituto Oswaldo Cruz, Brazil on 'The Fiocruz response to the Zika outbreak'.

PHE Training

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

- 25-27 January – HIS Foundation course (run by the HIS foundation)
- 6-10 February – Introductory course on the epidemiology and surveillance of infectious diseases (this course is also run June and October)
- 22 February – STATA Training (this is also run in October)
- 22-24 February – Legionnaires' disease: risk assessment, investigation and control
- 7 March – Advanced outbreak management course
- 28 March – Hitchhikers Guide to Microbiology, microbiology for non-microbiologists (this is also run June and 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

Public Health England Research and Applied Epidemiology Scientific Conference 2017

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

The purpose of this conference is to support high quality and innovative science through the sharing of good practice including the work of the NIHR Health Protection Research Units. The focus of the conference will be on the application of epidemiological and other scientific methods to protect and improve health. The meeting will be a mix of plenary sessions, posters and parallel sessions. The call for abstracts is now open and the deadline for all abstracts is by **midnight Friday 9 December 2016**.

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

Visit the conference website for full details of how to register: www.phe-events.org.uk/raesc17

8th International Conference on Emerging Zoonoses

7-10 May 2017, Manhattan, Kansas, USA

This conference will focus on Emerging and Transboundary Infectious Diseases. In order to properly address these issues in the conference, special workshops will be organized by experts in their fields. Potential topics include: the ecology of emerging zoonotic and transboundary diseases; the role of wildlife in emerging zoonoses and transboundary diseases; cross-species transmission of zoonotic and transboundary pathogens; emerging and neglected influenza viruses; hemorrhagic fever viruses; emerging and transboundary bacterial diseases; outbreak responses to zoonotic and transboundary diseases; food-borne zoonotic diseases; prion diseases; and modelling and prediction of emergence of zoonoses and transboundary diseases.

Deadline for abstracts is **1 February 2017**.

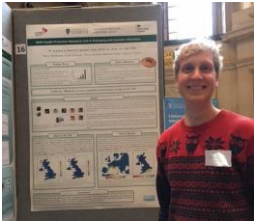
If you wish to register, there is an early bird rate of \$400 and \$300 for students until 28 February 2017. Visit the website for more details: <http://www.zoonoses-conferences.com/>

STAFF UPDATES

We would like to welcome **Vikki Grimbly** who started with us in August 2016 as Project Officer, based at the Farr Institute@HeRC at the University of Liverpool.

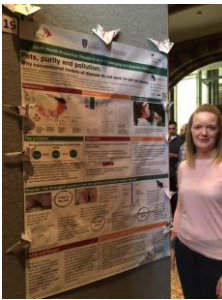
STUDENT NEWS

On 17 May 2016 **Soeren Metelmann** presented at the University of Liverpool's School of Environmental Sciences PGR conference on the 'Development of climate-driven models for mosquito-borne disease risk in the UK'.



Congratulations to **Soeren Metelmann** who won the IGH Poster Prize at the University of Liverpool's 2016 Infection and Global Health Day on 17 November 2016.

Congratulations to **Stephanie Begemann** who has successfully secured a place at this year's BBSRC business and knowledge transfer competition 'Biotechnology YES final' to be held in December in London. Good luck!



Charlotte Robin will be presenting her poster on 'Pets, Purity and Pollution' at the 'One Health EcoHealth 2016' event in Melbourne, Australia on 4 December 2016. This event is the 4th International One Health Congress and 6th Biennial Congress of the International Association for Ecology and Health.

PhD STUDENT PROFILES



Maya Holding

Maya started a PhD studentship in the HPRU EZI Vector Biology and Climate Modelling Theme with the title 'Assessment of the risk to the UK human population from tick-borne viruses'. Her supervisors are Roger Hewson, Jolyon Medlock, and Stuart Dowall from Public Health England and Matthew Baylis from the University of Liverpool. Maya has a BSc in Bioveterinary Science from the University of Lincoln which started her interest in vector borne disease. Maya has rock climbed for the last 17 years and spends most of her holidays and time outside of work climbing, but also enjoys surfing, swimming, horse riding and going out for walks with her dog.



Liana Kaftzopoulou

Liana is a PhD student within the NIHR HPRU in Emerging and Zoonotic Infections with a research focus on pathogen discovery and characterization. She started her PhD 'Viral Identification and Discovery: Application of Next Generation Sequencing for Clinical Diagnostics and Epidemiology' in January and is an offsite student based in Public Health England. Her supervisors are Julian Hiscox from University of Liverpool and Miles Carroll, Roger Hewson, Richard Vipond and Steven Pullan from Public Health England. When not reading about viruses, Liana enjoys cooking, watching TV series and spending time with her friends.



George Lock

George is a BSc graduate in Applied Biomedical Science from the University of Hertfordshire. He started his PhD studentship in the Clinical Surveillance theme researching how genome variability of Enterovirus 71 affects the biological and clinical response to infection in January 2016. His interest in molecular virology started during his undergraduate placement year in the Enteric Virus Unit at Public Health England in 2014. In his spare time he enjoys swimming and has recently begun taking French lessons.



John Tulloch

John joined the HPRU EZI in January and started his PhD; 'The development and evaluation of a surveillance system to determine incidence of Lyme disease and tick bites in England and Wales.' In particular he will be collating and evaluating the various electronic health records that are available within the NHS. He is a vet by trade and has worked in the UK and abroad, in private practice and in industry. His completion of an MSc in Epidemiology and Public Health, lead him to want to study infectious diseases via a 'One Health' approach. He loves going to gigs and festivals. John is a lifelong fan of Bath Rugby and enjoys nothing more than spending an afternoon at The Rec.

NEW HPRU EZI PhD STUDENTS

Welcome to **Ravi Mehta** who has recently taken up a HPRU EZI PhD studentship, and **Caoimhe McKerr**, who will join us in January 2017 on a HPRU EZI PhD studentship. Their studies will be featured in a future newsletter.

PUBLIC INVOLVEMENT AND ENGAGEMENT

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 summer:

Big Bang North West

Liz McGinley helped supply information on ticks, tick borne disease and tick awareness to be displayed at the Big Bang North West event on 5 July 2016 held at the Exhibition Centre Liverpool.

LSTM Mosquito Diaries Exhibition

Aislinn Currie-Jordan presented work on Vector Biology as part of LSTM Mosquito Diaries Exhibition at the Royal Society Summer Science Festival held at the World Museum in Liverpool, 4-7 July 2016.

Introduction to field work

On 14 September, Liz McGinley introduced visiting work experience students to the work of the Emergency Response

department at PHE Porton.

Public Involvement Day

On 27 September, a training day for researchers and members of the Institute of Infection and Global Health/HPRU EZI Public Involvement Panel (PIP) took place at the Ronald Ross Building. For the [full review](#) see the EZI website.

Workshop on Zika Virus at The Wellcome Trust

Also on 27 September, Dr Cyril Caminade spoke about 'Did El Nino 2015-16 fuel the South-American Zika outbreak?' at The Wellcome Trust headquarters in London.

UPCOMING EVENTS

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

Public Engagement Workshop



LSTM will be hosting a Public Engagement Workshop on 8 December 2016, 10am to 4pm, lunch and refreshments are included. The event will be delivered by the National Coordinating Centre for Public Engagement (NCCPE). The workshop is for PhD students, post-doctoral researchers, principal investigators or anyone interested in getting involved in PE. Places are limited to 30 due to the interactive nature of the day.

For more information & registration contact LSTM's Public Engagement Manager [Dr Elli Wright](#)



HPRU 'Infectious Science' Event

The next in the series of HPRU 'Infectious Science' events will be held on 12 December 2016, 6.30pm, at The Vines in Liverpool. This free-of-charge evening event, aims to encourage people from all ages and backgrounds to take an interest in infections, learn about fascinating research undertaken in Liverpool University and abroad and inspiring other's to know more about infections and global health. This 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 at a future event.



Engaging with the Next Generation of Researchers – a cross-faculty workshop exploring effective public engagement and outreach

The workshop is on 14 December 2016, 1.30pm to 4.45pm in G-Flex, Ground Floor



INSTITUTE OF INFECTION
AND GLOBAL HEALTH



Central Teaching Laboratory, at the University of Liverpool. This workshop is open to all staff and PGR students. It aims to showcase great practice in schools outreach and encourage exchange of best practice and collaboration across the University; as well as explore how outreach and public engagement can have a greater impact.

To attend please reserve your place by emailing: eddev@liverpool.ac.uk and copy in Paul Sapple at pjs1@liverpool.ac.uk



'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 EZI. 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 21 January 2017, 10am-4pm on **'Brainiacs'**. Activities can cover a broad range of topics including brain development; diseases that affect the brain; the ageing brain; psychology; how we learn; how we process information etc.

For more details on this and future events, visit: <http://www.liv.ac.uk/health-and-life-sciences/meet-the-scientists/>



I'm a Scientist, Get me out of Here!

An online public engagement event that gets scientists talking to school students all over the UK. Scientists put up a profile on this site, answer students' questions about science, their research, the universe and beyond. They engage directly with students in live text-based chats. Students vote for their favourite scientist to win £500 to spend on further public engagement. Scientists develop their communication skills, gain a fresh perspective on their work, and find out what young people think about science and the role of scientists. Events are in March, June and November, see the website for more details: <http://imascientist.org.uk/scientists>



FameLab 2017

Calling all scientists and engineers with a passion for public engagement to participate in FameLab 2017!

FameLab is inviting scientists, mathematicians and engineers across the globe to take part in its flagship science communications competition. Contestants have just 3 minutes to convey a scientific concept of their choice. They will be judged by leading researchers, media personalities and science policy makers on the content, clarity and charisma of their presentation. Each national winner goes on to compete against over 25 other contestants from around the world at [The Times Cheltenham Science Festival](#) in June

2017. Applications for FameLab UK are now open.

The Centrifuge

IGH Blog

Anyone is free to contribute to the Institute of Infection and Global Health's blog The Centrifuge: www.thecentrifugeblog.com. Blogs should be around 800 words, be written for a lay reader, include some good quality photographs, and can be on any topic as long as it's relevant to your work or IGH in general.

If you are involved in any relevant activities, please inform the HPRU EZI Administration Team at hpruezi@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 FUNDING CALL

Exciting opportunity! We have number of awards of up to £500 available to researchers working in the NIHR HPRU in Emerging and Zoonotic Infections to carry out public engagement activities. The money will need to be spent by **March 2017**; however, the activity can take place up to end of July 2017.

If you are interested, please contact Vikki Grimby at hpruezi@liv.ac.uk for an application form. All applications must be submitted by **9th December 2016** with a short summary outlining what you plan to do, your audience, rough costings and your expected outcomes.

PREVIOUS WINNERS - PUBLIC ENGAGEMENT FUNDING AWARD

Last year we put out a call for members to apply for public engagement funding and here are just some of the success stories:



HPRU EZI member **Dr Janet Scott** was awarded funding of £400 to engage primary school children in science via social media ([BlueEllie and Dr Scott](#)) and role play.



HPRU EZI member **Dr Eric Fevre** received funding of £400 to educate food vendor in low-income settings in Nairobi, Africa. A training session was given to improve food safety practices in the area.



HPRU EZI members **Maaïke Pietzsch** and **Dr Jolyon Medlock** were awarded funding of £400 and produced new tick awareness material aimed at key stage 1 and 2 aged children.

IMPACT AND KNOWLEDGE EXCHANGE

Dr Cyril Caminade was invited to a press conference organised by AJEC21 held in Paris on 29 June 2016. This event led to various articles in the French press on: "Maladies Tropicales: le moustique ne fait pas tout" in [Ouest France](#); "Le rechauffement climatique et son impact sur notre sante: un risque croissant" online at [esante.fr](#), [rewmi.com](#) and [seneweb.com](#); finally, "Changement climatique et maladies infectieuses, une relation compliquee" online at [tahiti-info.com](#)

Professor Matthew Baylis and **Dr Joylon Medlock** had an article on 'Britain's saltmarsh mosquito a potential vector for West Nile virus, study shows' published online at [horsetalk.co.nz](#).

Professor Tom Solomon, Director of HPRU EZI, contributed to the harmonisation of the ZIKV protocols to address key public health concerns. This is now online at Lancet Global Health: [http://dx.doi.org/10.1016/S2214-109X\(16\)30255-8](http://dx.doi.org/10.1016/S2214-109X(16)30255-8). The commentary includes the link to the standardized protocols on the WHO website.

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 Emerging and Zoonotic 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 Emerging and Zoonotic Infections at University of Liverpool in partnership with Public Health England (PHE), in collaboration with Liverpool School of Tropical Medicine. [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 Emerging and Zoonotic Infections at University of Liverpool in partnership with Public Health England (PHE), in collaboration with Liverpool School of Tropical Medicine. [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.

UPDATED 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 hpruezi@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.

UPDATED 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 hpruezi@liverpool.ac.uk to the email.**

CROSS NIHR INFRASTRUCTURE PUMP PRIMING RESEARCH FUNDING CALL

In order to create a strategic collaboration between HPRU EZI and one or more NIHR Infrastructure facility (HPRUs, BRCs or CLAHRCs) or other similar research organisation, a match funded pump priming funding call to support research into any emerging and zoonotic infection was launched. Applications were invited on condition that the applicants identified equal amounts of matched funding.

The following projects were selected and began on 1 October 2016.

Investigators	Research Project Title	Cross NIHR infrastructure partner	Award
Maya Holding, Roger Hewson, Joylon Medlock, Matthew Baylis, Stuart Dowell, Sari Kovats	Investigating the risk of importation of Crimean Congo haemorrhagic fever virus and tick borne encephalitis virus to the United Kingdom from ticks on migratory birds	Director of the HPRU in Environment and Health at the London School of Hygiene and Tropical Medicine. Professor Robert Cheke, Professor of Tropical Zoology (Dept. Agriculture, Health & Environment, University of Greenwich) will contribute his vital knowledge of both ornithology and zoonotic disease.	£5,000

Janet Scott, Richard Tedder, Callum Semple	Serological characterisation of cases and controls for clinical studies in post Ebola Syndrome.		£5,000
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PUBLICATIONS

Congratulations to the following who have published in recent months.

Aljabr W, Touzelet O, Pollakis G, Wu W, Munday DC, Hughes M, Hertz-Fowler C, Kenny J, Fearn R, Barr JN, Matthews DA, Hiscox JA. **Investigating the influence of ribavirin on human respiratory syncytial virus RNA synthesis by using a high-resolution transcriptome sequencing approach.** Journal of Virology. 2016; 90(10): 4876-4888.

Available from: <http://jvi.asm.org/content/90/10/4876.long>

Benjamin LA, Bryer A, Lucas S, Stanley A, Allain TJ, Joekes E, Emsley H, Turnbull I, Downey C, Toh CH, Brown K, Brown D, Ison C, Smith C, Corbett EL, Nath A, Heyderman RS, Connor MD, Solomon T. **Arterial ischemic stroke in HIV: Defining and classifying etiology for research studies.** Neurology, Neuroimmunology & Neuroinflammation. 2016 Aug; 3(4):e254. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4929887/>

Benjamin LA, Corbett EL, Connor MD, Mzingangira H, Kampondeni S, Choko A, Hopkins M, Emsley HC, Bryer A, Faragher B, Heyderman RS, Allain TJ, Solomon T. **HIV, antiretroviral treatment, hypertension, and stroke in Malawian adults: A case control study.** Neurology. 2016 Jan 26; 86(4):324-33

Available from: <http://www.neurology.org/content/86/4/324.long>

Blagrove MSC, Sherlock K, Chapman GE, Impoinvil DE, McCall PJ, Medlock JM, Lycett G, Solomon T, Baylis M. **Evaluation of the vector competence of a native UK mosquito Ochlerotatus detritus (Aedes detritus) for dengue, chikungunya and West Nile viruses.** Parasites and Vectors. 2016; 9(1); 452

Available from: <http://parasitesandvectors.biomedcentral.com/articles/10.1186/s13071-016-1739-3>

Bozkurt I, Sunbul M, Yilmaz H, Esen S, Leblebicioglu H, Beeching NJ. **Direct healthcare costs for patients hospitalized with Crimean-Congo haemorrhagic fever can be predicted by a clinical illness severity scoring system.** Pathogens and Global Health. 2016; 110(1): 9:13.

Available from: <http://www.tandfonline.com/doi/full/10.1080/20477724.2015.1136130#.V6M2LE0UWpo>

Caminade C, Jones AE. **Malaria in a warmer West Africa.** Nature Climate Change. 2016; 6: 984-985

Available from: http://www.nature.com/articles/nclimate3095.epdf?author_access_token=zqnF-dkYe72biXy2putoNtRgN0jAjWeI9jnR3ZoTv0N8kkTsksfuXNv5J5FdMHwX7U9Bq_FpBJUU_zW8ziulnf4mpSHZHW0ZhE68T9lqRS7axaVfviJ0I7U24xJ4iK36

Caminade C, McIntyre KM, Jones AE. **Climate change and vector-borne diseases: where are we next heading?**

Journal of Infectious Diseases, Editor's choice. 2016; 214(11)

Available from: <http://jid.oxfordjournals.org/content/early/2016/08/16/infdis.jiw368.full.pdf+html>

Collins S, Amirthalingam G, Beeching NJ, Chand MA, Godbole G, Ramsay ME, Fry N, White J. **Current epidemiology of tetanus in England, 2001-2014.** Epidemiology and Infection. 2016; 144(16): 3343-3353.

Available from: <https://www.cambridge.org/core/journals/epidemiology-and-infection/article/current-epidemiology-of-tetanus-in-england-20012014/5F1F4B170CBE0C8BD8FEDCD99DC87659>

Cooper J, Kierans C, Defres S, Easton A, Kneen R, Solomon T. **Diagnostic Pathways as Social and Participatory Practices: The Case of Herpes Simplex Encephalitis.** PLoS One. 2016 Mar 9;11(3):e0151145

Available from: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0151145>

Dowall SD, Bewley K, Watson RJ, Vasan SS, Ghosh C, Konai MM, Gausdal G, Lorens JB, Long J, Barclay W, Garcia-Dorival I, Hiscox J, Bosworth A, Taylor I, Easterbrook L, Pitman J, Summers S, Chan-Pesley J, Funnell S, Vipond J, Charlton S, Haldar J, Hewson R, Carroll MW. **Antiviral screening of multiple compounds against Ebola Virus.** Viruses. 2016; 8(11): 277

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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)

Available from: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=22610>

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Available from: <http://dx.doi.org/10.2807/1560-7917.es.2016.21.2.30106>

Kluiters, G, Pagès, N, Carpenter, S, Gardès, L, Guis, H, Baylis, M, & Garros, C. **Morphometric discrimination of two sympatric sibling species in the Palaearctic region, Culicoides obsoletus Meigen and C. scoticus Downes & Kettle (Diptera: Ceratopogonidae), vectors of bluetongue and Schmallenberg viruses.** Parasites Vectors. 2016; 9(1).

Available from: <http://parasitesandvectors.biomedcentral.com/articles/10.1186/s13071-016-1520-7>

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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
Tom Solomon	RCF Funding for Dr Gosnia Wnek	Department of Health (UK)	£18,893

NEW MEMBERS

- **Dr Emma Aarons**, Consultant Virologist and Infectious Diseases Physician, Rare and Imported Pathogens Laboratory, Public Health England
- **Professor Michael John Begon**, Professor of Ecology, Institute of Integrative Biology, University of Liverpool
- **Professor Jonathan Ball**, Professor of Molecular Virology, School of Life Sciences, University of Nottingham
- **Dr Neil Blake**, Senior Lecturer, Institute of Infection and Global Health, University of Liverpool
- **Dr Juliana Coelho**, Senior Healthcare Scientist, Respiratory and Vaccine Preventable Reference Unit, National Infection Service, Public Health England

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

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