Infectious Diseases in Brazil – Raising the profile $18^{th} - 22^{nd}$ November

Day 1 – 18th November

Trip to Ouro Preto

Day 2-3 - 19th-20th November

Workshop

Day 4-5 - 21st-22nd November

UFMG Medicine Seminar

Workshop 19th - November

*** Each session will have 3 professors (head/leader), from the following areas: epidemiology, clinical medicine, and basic science.

| Time | Session | | | |
|-------------|--|---------------------|---------------------|---------------------|
| 08:30-09:00 | Registration | | | |
| 09:00-09:40 | Welcome, aims and short presentation of the Post-Graduate Program (Tom and James) | | | |
| 09:40-10:20 | Brazil in context Brazilian Health System (15') + 5'discussion (Prof. Deborah Malta) Infectious disease burden (15') + 5'discussion (Prof. David Soreira) | | | |
| 10:20-10:40 | Morning coffee break | | | |
| 10:40-11:20 | Research potential for current and emerging threats (15') + 5'discussion (Prof. Mauro Martins) Funding for infectious disease research: Resln (15') + 5'discussion (James / Becs) | | | |
| 11:20-12:50 | Breakout session 1 (20` to talk and 10' discussion) | | | |
| | Group 1 Room 614 | Group 2 Room 616 | Group 3 Room 526 | Group 4 Room 507 |
| 11:20-11:50 | David Cleary | Valéria Augusto | Josafá Barreto | Lourena Costa |

| 11:50–12:20 | Tatiani Maioli | Fernanda Ludolf | Karen Osman | Eliana Barrenho |
|-------------|------------------------|---------------------------|---------------------|---------------------|
| 12:20-12:50 | Ludmila Labanca | Shengjie Lai | Victor Santos | Aline Castro |
| 13:00-14:30 | Networking lunch | | | |
| 14:30-16:30 | Breakout session 2 | | | |
| | Group 1 Room 614 | Group 2 Room 616 | Group 3 Room 526 | Group 4 Room 507 |
| 14:30-15:00 | Adriana Luchs | Maria Victoria Humbert | Natalia Garavito | Merlin Willcox |
| 15:00-15:30 | Desirée Haikal | Elita Jauneikaite | Pablo Valente | William James |
| 15:30-16:00 | Kenny Brackstone | Daniel Silva | Miguel Fumagalli | Thallyta Vieira |
| 16:00-16:30 | Afternoon coffee break | | | |
| 16:30-17:00 | Closing remar | ks and breakout ses | sion summaries | |

Workshop Day 3 – 20th November

*** Each session will have 3 professors (head/leader), from the following areas: epidemiology, clinical medicine, and basic science.

| Time | Workshop | |
|-------------|--|--|
| 09:00-09:10 | Welcome and structure of the day (James) | |
| 09:10-10:30 | Workshop 1: Developing a hypothesis/research question | |
| 09:10-09:30 | Introduction to developing a hypothesis/research question (Tom) | |
| 09:30-10:30 | Meeting of subgroups. Goal: § Define the hypothesis/research question of the project | |
| 10:30-10:50 | Morning coffee break | |
| 10:50-12:20 | Workshop 2: How to formulate aims & objectives and an overview of methodology | |
| 10:50-11:10 | Introduction to formulating Aims & Objectives (Becky) Overview of Methodology (Myron) | |
| 11:20-12:20 | Meeting of subgroups. Goal: § Each group should propose its Aims & Objectives § Define the best methods to use | |
| 12:20-13:50 | Networking lunch | |
| 13:50-16:30 | Workshop 3: Impact and Engagement of Research | |
| 13:50-14:20 | Introduction to impact and engagement of research and writing a lay summary and impact statement (Becky & James) | |
| 14:20-15:15 | Meeting of subgroups. Goal: § Write a lay summary of your research question, aims and objectives. | |
| 15:15-15:35 | Afternoon coffee break | |
| 15:35-16:30 | Meeting of subgroups. Goal: § Write an impact statement (no more than two sentences) | |
| 16:30-17:00 | Workshop closing remarks (Tom & James) | |
| 18:00 | Networking dinner | |

| Attendees | Biography |
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| Dr David Clearly (Group 1) | Dr David Cleary is a Senior Research Fellow in Microbial Sciences at the University of Southampton and the NIHR Biomedical Research Centre. His research involves the application of genomics to investigate bacterial pathogen epidemiology and microbiome associations in human health and respiratory disease. His research focuses on the application of computational biology approaches to understand the epidemiology and pathogenicity of infectious disease, primarily of those pathogens that can be carried in the human respiratory tract such as Streptococcus pneumoniae and Non-typeable Haemophilus influenzae. In addition, his research involves characterising respiratory tract microbiomes to elucidate the community-host interactions that underpin colonisation and progression to disease. He graduated in Medical Microbiology from the University of Surrey in 2002 and went on to complete his PhD with the University of Warwick in 2013 whilst employed as a microbiologist at the Defence Science and Technology Laboratories (DSTL), Porton Down. |
| Dr Eliana Barrenho (Group 4) | Dr Eliana Barrenho is a Research Fellow in Health Economics at Imperial College. Her research involves the adoption and diffusion of technology in health systems, studying the relationship between innovation productivity and health needs. Specifically she focuses on the role of competition and alliances between firms in the drug innovation process, the health inequities on drug innovation and disease investment, and the policy landscape on research and development and innovation adoption in the health systems. Her recent work examines the effect of social networks and national guidelines on the diffusion of new technologies in the English NHS. Eliana holds a Masters degree in Health Economics from the University of York in 2009 and went on to complete her PhD with Imperial College in 2015. |
| Dr Natalia Tejedor Garavito (Group 3) | Dr Natalia Tejedor Garavito is a WoldPop Research Fellow in the GeoData Institute of the University of Southampton. Natalia's research focuses on providing GIS support on maternal and newborn health mapping and migration mapping projects. She |

works on processing of age-structured sensus/survey data, births data, household survey fertility rate data and pregnancy data for the production of high resolution maps of births and pregnancy maps for low income contries across America, Africa and Asia, to assist the estimation of the burden of Zika. Natalia completed her PhD in 2014 at Bournemouth University on the impact of climate change on montane forests. For 10 years, Natalia has been collecting, collating and analysing large datasets to build models that predict and evaluate changes in the distribution of species and forests in different parts of the world.

Dr Thallyta Vieira (Group 1)

Dr Thallyta Vieira is a Professor of Higher Education and the Graduate Programme in Health Sciences at the State University of Montes Claros. She has experience in the area of parasitology, with emphasis on protozoology, working mainly on the following topics: single health, epidemiology of leishmaniasis and Chagas detection of Leishmania disease. and Trypanosoma synanthropic and wild reservoirs, and health education. Thallyta has a Bachelor's degree in Biological Sciences from the State University of Montes Claros, following which she specialised in Fauna and Flora Assessment on Environmental Impacts at the Federal University of Lavras Novas. She completed a Master's degree in Agrarian Sciences, with emphasis in Parasitology, from Federal University of Minas Gerais and where she also completed her Doctorate in Parasitology.

Dr Kenny Brackstone (Group 1)

Dr Kenny Brackstone was awarded his Ph.D. in social psychology from the University of Southampton in 2015. He currently works as a postdoctoral research fellow and enterprise insight analyst at the Clinical Informatics Research Unit, of Southampton. His research interests predominantly in the psychosocial factors that influence disease transmission, such as personality differences and people's attitudes toward health and disease. His work attempts to understand in more depth why certain diseases are transmitted, and why some people are unwilling to protect themselves and others. Kenny aims to develop new approaches toward understanding how social environments sustain transmission of infectious diseases bv focusina on psvchosocial sociocultural factors; how can we support people around the world in taking more care of themselves and others?

| Dr Ludimila Labanca (Group 1) | Dr Ludmilla Labanca is a Postdoctoral Researcher at the Federal University of Minas Gerais. Her research focuses on the evaluation of tools for the early diagnosis of HLTV-1-associated myelopathy. She has research experience in the areas of electrophysiology, hearing, balance, infectology, language and collective health. In addition she has teaching experience as a substitute professor of Speech Therapy at the Federal University of Minas Gerais (2014). Ludmilla has a Bachelor's degree in Speech Therapy from Federal University of Minas Gerais following which she specialised in Audiology at Pontifical Catholic University of Minas Gerais (PUC - 2014). In 2012 she obtained a Master's degree and in 2016 a Doctorate in Health Sciences. |
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| Desirée Haikal (Group 4) | Dr Desirée Haikal is a Professor of Higher Education from State University of Montes Claros (UNIMONTES). Bachelor in Dentistry from the Dentistry Faculty of the Federal University of Minas Gerais (UFMG, 1998). Master and PhD in Dentistry in Collective Health, Faculty of Dentistry, UFMG (2004/2013). Has worked in the areas of Collective Health, with emphasis in General and Molecular Epidemiology, Biostatistics, Scientific Methodology, Oral Health, Health Education, Elderly, Adult and Worker Health HealthShe is a researcher member of the Health Surveillance Research group. |
| Dr Merlin Willcox (Group 4) | Dr Merlin Willcox is an Academic Clinical Lecturer in General Practice at the University of Southampton. His research focuses on primary health care, child health and infectious diseases both in low-income countries and in the UK. Currently he is exploring the use of herbal medicines as alternatives to antibiotics, in order to reduce the overuse of antibiotics for conditions in which antibiotics are not required, but are still commonly used. Merlin qualified in medicine from the University of Oxford in 1998 and completed his GP training in 2004. Since then he has combined clinical work as a GP with research. |
| Dr Karen Osman (Group 3) | Dr Karen Osman is a Research Fellow at Southampton University. Her research focuses on respiratory pathogens collected from indigenous populations in Malasia. |

Dr Valéria Augusto (Group 2)

Dr Valéria Augusto is an Adjunct Professor in Internal Medicine and the Respiratory Diseases Service at the Federal University of Minas Gerais. In addition she coordinates the Advanced Lung Disease Outpatient Clinic at the Federal University of Minas Gerais. Valéria has particular interests in advanced lung disease. tuberculosis and the epidemiology of respiratory diseases. She was awarded a Bachelor's degree in Physiotherapy from the Federal University of São Carlos (1998) followed by a Master's degree in Anatomy – Cellular and Structural Biology from the State University of Campinas (2002) and a Doctorate in Clinical Medicine from State University of Campinas (2013). She also has experience in Physiotherapy and Occupational Therapy, acting on the following subjects: equoterapia, horseback riding, fisioterapia, alongamento and fibromyalgia.

Dr Adriana Luchs (Group 1)

Dr Adriana Luchs is a Postdoctoral Researcher at the Adolfo Lutz Institute, São Paulo, Brazil. Her research interests revolve around the monitoring and molecular characterisation of viral gastroenteritis (Rotavirus, Norovirus, Adenovirus and Astrovirus), the genetic diversity and interspecies transmission. Specifically her main focus is investigating the dynamics between human and animal Group A Rotavirus strains using complete genome sequencing. Adriana was awarded a PhD in Public Health from the Disease Control Centre, São Paulo Ministry of Health in 2014 having completed a Master's degree in Human Physiology at the University of São Paulo and an Bachelor's degree in Biological Sciences.

Dr Elita Jauneikaite (Group 2)

Dr Elita Jauneikaite is a Research Fellow in Bacterial Genomics and Epidemiology at the Department of Infectious Disease Epidemiology, Imperial College. Elita's research focuses on evolution, transmission and antimicrobial resistance of vaccine preventable and healthcare associated bacterial infections. Prior to her fellowship, Elita was a postdoctoral research associate at NIHR Health Protection Research Unit (HPRU) in HCAI and AMR, leading analysis of whole genome sequences of susceptible Staphylococcus aureus, Escherichia coli, C. difficile, Streptococcus and other strains collected from specified populations. Additionally, Elita was studying the phenotypes of these bacteria in relation to the WGS data to determine virulence traits and that may be linked to successful colonization, transmission or invasiveness in the case of skin and soft tissue infections or bacteraemia. Elita completed her PhD in 2014 investigating the prevalence of serotypes and genotypes of disease-causing Streptococcus pneumoniae isolates in Singapore over the last 15 years. This was achieved with a collaboration between four major hospitals in Singapore, Genome Institute of Singapore and University of Southampton.

Dr Daniel Silva (Group 2)

Dr Daniel Silva is a Postdoctoral Fellow in the Graduate Programme in Health Sciences, Infection and Tropical medicine at the Federal University of Minas Gerais. His research interests are in the areas of parasitology, biochemistry and molecular biology with an emphasis on molecular genetics of microorganisms in order to induce heterologous expression in bacteria for the production of recombinant protein commonly used in diagnostic and vaccine tests for Leishmaniasis. Daniel was awarded a Bachelor's degree in Biomedicine (2011), with emphasis in Clinical Pathology, Imaging and Aesthetic Biomedicin, a Master's degree in Biotechnology Applied to Health from the Federal University of São João Del-Rei (2015) and a Doctorate in Health Sciences: Infectious diseases and Tropical Medicine from the Federal University of Minas Gerais(2018).

Dr Pablo Valente (Group 2)

Dr Pablo Valente is a graduate Fellow at Brown University. His research interest is in studying how empirical research and theory can be used together to provide a thorough understanding of health inequities. Specifically, the study of social disparities

related to infectious diseases, especially HIV. Pablo qualified as a Doctor of Medicine in 2011 at the University of Brasilia before completing a medical residency in Infectious Diseases. He has a Master's degree in Public Health from the Columbia University, USA.

Dr Lourena Costa (Group 4)

Dr Lourena Costa is a Postdoctoral Fellow at the Federal University of Minas Gerais. Her research focuses in the prevention, in the form of vaccines, laboratory diagnosis and new forms of treatment, for tegumentary and visceral human and canine Leishmaniasis. She has experience in biotechnology using Phage display for the selection of candidate antigens for the improvement of serodiagnosis and the development of vaccines against human and canine visceral Leishmaniasis. Lourena graduated in Nursing at the Federal University of Minas Gerais in 2011 and is currently studying Medicine. She was awarded a Master's degree in 2013 and a PhD in 2016 from the Graduate Program in Health Sciences: Infectology and Tropical Medicine, Federal University of Minas Gerais. She has been awarded several fellowships including: a full postdoctoral fellowship by CNPq (2016), institutional postdoctoral fellowship of UFMG, Capes / PNPD (current) and University of Southampton - UK (2017-2018).

Dr Shengjie Lai (Group 2)

Dr Shengjie Lai is a WoldPop Research Fellow in the GeoData Institute of the University of Southampton. His research interest is to investigate the spatial epidemiology of vector-borne and zoonotic diseases to understand their spatiotemporal patterns and disease burden, and the correlations between population mobility, environmental change and infectious disease dynamics. Shengjie was awarded a Bachelor's degree in Medicine by the Huazhong University of Science and Technology, China in 2006 followed by a Master's degree in Epidemiology and Health Statistics at the Chinese Centre for Disease Control and Prevention in 2009. In 2013, he completed the International Field Epidemiology Training Programme sponsored by the Thailand Ministry of Public Health, WHO and the USA CDC. He completed his PhD at the University of Southampton in 2018.

Dr Josafá Barreto (Group 3)

Dr Josafá Barreto is an Adjunct Professor at the Federal University of Pará, Amazon Region, Brazil. There he has taught Public Health since 2005 and his main research topic is leprosy. His research interest is in detecting specific areas with higher risk of leprosy, and consequently, indicating priority areas to target governmental interventions for leprosy control. Josafá was awarded a Bachelor's degree in Physical Therapy in 1998 from Pará State University followed by a Master's degree (2008) and Doctorate (2013) in Tropical Medicine at the Federal University of Pará. During his PhD, Josafá spent six months at Emory University to gain knowledge in spatial epidemiology of infectious diseases.

Dr Tatiani Maioli (Group 1)

Dr Tatiani Maioli is an Adjunct Professor at the Federal University of Minas Gerais. Her main research interest is investigating how nutritional statue can interfere with the generation of the immune response during infectious processes, particularly in response to Leishmaniasis. Tatiani was awarded a Bachelor's degree in Nutrition from the Federal University of Ouro Preto in 2001 followed by a Master's degree in General Biology in 2004 and PhD in Biochemistry from the Federal University of Minas Gerais in 2008.

Dr Fernanda Ludolf (Group 2)

Dr Fernanda Ludolf is a Postdoctoral Researcher at the Federal University of Minas Gerais. Her current research focuses on the development of liposome-based formulations to improve the immunogenicity and protective efficacy of recombinant Leishmania proteins. She has experience in molecular biology and parasitology particularly focusing on *Schistosoma mansoni*, *Trypanosoma cruzi*, Leishmaniasis and Dengue. Fernanda was awarded a Bachelor's degree in Biological Sciences from Pontifícia Universidade Católica de Minas Gerais in 2002, followed by a Master's degree in Health Sciences (2005) and a Doctorate in Health Sciences from René Rachou Research Center (2012).

| Dr Miguel Fumagalli (Group 3) |
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Dr Miguel Fumagalli is a Postdoctoral Research Associate at the Federal University of Minas Gerais. His research interests relate to the in silico development of new therapeutics for Leishmaniasis. Has experience in biotechnology, specifically in: phage display, amazonensis. serologic diagnosis. Leishmania leishmaniasis and synthetic peptide. Miguel graduated with a degree in Veterinary Medicine from Federal University of Pernambuco in 2006. He then completed a Master's degree in Pharmacology and Molecular Biochemistry at Federal University of Minas Gerais (2008) and a Doctorate in the same subject area from in 2012. Has experience in Biotechnology, acting on the following subjects: phage display, Leishmania amazonensis, serologic diagnosis, visceral leishmaniasis and synthetic peptide.

Dr Aline Castro (Group 4)

Dr Aline Castro is a PhD student at the Federal University of Minas Gerais. Her research focuses on the evaluation and rehabilitation of central auditory function and cognition in HTLV-1 infections. Aline was awarded a MD in Speech, Language and Hearing Sciences in 2016 from the Federal University of Minas Gerais.

Dr Victor Santos (Group 3)

Dr Victor Santos is an Adjunct professor at the Federal University of Alagoas. His research involves studies on health problems causing high burdens of infectious disease in Northeast Brazil and aims to identify social determinants and risk factors related to infectious diseases. In addition, his work focuses on improving access to diagnosis and treatment for disadvantaged populations. Victor received a Master's degree in PArasitic Biology (2012) and a PhD in Science Health (2017) from the federal University of Sergipe. He was a visiting scholar at the Liverpool School of Tropical Medicine, UK, in 2016.

Dr William James (Group 4)

Dr William James is a Research Fellow in spatial analytics for environmental, healthcare and consumer data research at the University of Leeds. He specialises in GIS and spatial analysis for healthcare and environmental applications. William currently works on a number of projects including that of Zika burden and looking at the sustainability and resilience of agricultural systems and public health implications for changes in diet. William completed his PhD in GIS for climatic and glacial reconstruction at the University of Leeds in 2016.

Dr Maria Victoria Humbert (Group 2)

Dr Maria Victoria Humbert is a Research Fellow at the Faculty of Medicine, University of Southampton, since April 2014. She currently works on a cross-discipline project on the development of a rapid point-of-care serodiagnostic assay for visceral leishmaniasis based on laser-patterned microfluidic devices on a low-cost paper platform, which was the Winning Research Project of the 8th NAMRIP (Network for Anti-Microbial Resistance and Infection Prevention) Pump Priming Competition. She is also working on the development of a novel microfluidic impedance cytometry system for real-time microbial pathogen identification in microbial keratitis, in collaboration with experts in Clinical Ophthalmology and Electronic Engineering, which was a Winning Research Project of the Medical Research Council (MRC) Confidence in Concept (CiC) Awards. Victoria is highly engaged in research data publication in international peer-reviewed journals and entirely committed to actively participating in several national and international scientific meetings, publicly announcing research results in oral communications and poster presentations. She has a PhD in Biological Sciences and a B.Sc. Biotechnology degree from National University of Rosario (UNR-Argentina), Molecular and Cellular Biology Institute of Rosario (IBR-CONICET). She has an interest in infectious diseases and on research aimed at improving public health and animal welfare.