

Lecturers Biographies



Annapurna Vyakarnam - Reader in Microbial Immunology, King's College London; Visiting Scientist at the Centre for Infectious Disease Research at the Indian Institute of Science, Bangalore, India

Annapurna Vyakarnam is also the International Lead for the School of Immunology & Microbial Sciences. She completed her doctoral training in tumour immunology at Darwin College Cambridge, UK and then did a postdoctoral fellowship on understanding immunity to human immunodeficiency virus (HIV) infection at University College London before joining King's College London as a staff member.

Since joining King's, my research interests have focussed on deconvoluting the CD4 T cell immune response to HIV and tuberculosis (TB) infections and in elucidating immune responses induced by Bacillus Calmette–Guérin (BCG), the only licenced TB vaccine. In order to study HIV-TB coinfection, I have set up a fully functional wet lab facility at the premier Indian research institute, the Indian Institute of Science (IISc), in Bangalore (www.iisc.ernet.in), with excellent clinical links to St John's Research Institute, affiliated to St John's Medical College, one of the top ten medical colleges in India (www.sjri.res.in).

Major observations from my group include: (i) highlighting retention of antigen specific CD4 T cells that express multiple effector cytokines to be important in anti-HIV immunity; a phenomenon subsequently shown to be widely applicable in immunity to other pathogens and recently led to identifying novel Th17 subsets in TB immunity. (ii) Definition of a novel soluble factor secreted by CD4 T cells, namely WFDC1/ps20, a whey acidic protein (WAP) family member, that influenced HIV infection by modulating cellular adhesion; this work has subsequently led to wider interest in understanding WAPs, and (iii) the potential to use BCG to boost both anti-mycobacterial specific as well as innate immunity.

A significant focus of my current work is to better understand the mechanisms by which BCG vaccine regulates innate, trained immunity and its potential to boost heterologous immune responses to SARS-COV-2.



Stuart Neil - Professor of Virology:

Stuart Neil is a Professor of Virology. His research interests include HIV cell biology and immunology, antiviral restriction, and Ebola.

He is a Wellcome Senior Research Fellow and was appointed Professor of Virology in 2015.

Mammals have evolved a variety of innate cellular defences that block the replication of retroviruses. Primate lentiviruses in turn have developed mechanisms to evade these host restrictions, helping them to establish chronic infections that, in the case of Human Immunodeficiency Viruses (HIV), eventually lead to AIDS. My interest is in how the small

accessory protein Vpu, encoded by HIV-1, overcomes such a cellular defence. We identified a human IFN-induced plasma membrane protein, Tetherin/CD317 that restricts retroviral particle release but can be overcome by Vpu expression. Tetherin/CD317 has an unusual topology and traffics between multiple cellular compartments. Understanding the cellular and molecular basis for Vpu antagonism of Tetherin-mediated restriction of HIV-1 release should indicate novel targets for antiretroviral drug development.



Adrian Hayday - Professor of Immunobiology:

Professor Hayday trained in biochemistry and tumour virology and pursued post-doctoral training at MIT where he contributed to the discovery of hitherto unanticipated gamma delta T cells. He joined the Yale University Faculty, where he was the first biologist to receive the deVane medal, Yale's highest honour for teaching and scholarship. At a time when tumour immune surveillance was not widely accepted, he showed that mice lacking gamma delta T

cells are more susceptible to carcinogens.

Professor Hayday now works at the Francis Crick Institute and King's College London, seeking to identify molecular mechanisms regulating tissue immune surveillance. He is first or corresponding author on over 130 publications. He was elected to lead the British Society of Immunology and has chaired numerous funding committees. He is an elected fellow of the Academy of Medical Sciences and of the Royal Society. He recently co-founded Gamma Delta Therapeutics, and Adaptate Biotherapeutics.



Rocio Martinez-Nunez - Lecturer in Infectious Diseases:

Dr Rocio Teresa Martinez-Nunez is a lecturer in the School of Immunology & Microbial Sciences, King's College London.

My lab focuses on understanding post-transcriptional gene regulatory mechanisms underpinning inflammation and antiviral responses, with a particular interest in asthma pathophysiology.

We combine molecular biology with bioinformatics approaches, and we specialise in using Frac-seq as a method to reveal new biological pathways regulated during inflammation and infection.

Mauro Giacca - Professor in Cardiovascular Sciences:

Mauro Giacca is a Professor of Cardiovascular Sciences in the School of Cardiovascular Medicine & Sciences.

Mauro Giacca, MD PhD, is Professor of Cardiovascular Sciences at the School of Cardiovascular Medicine & Sciences, King's College London, UK. Until 2018, he has served as the Director-General of the International Centre for Genetic Engineering and Biotechnology, a United Nations organization in Trieste, Italy. He is the President Elect of the International

Society for Heart Research (ISHR)-European Section, a member of the Nucleus of the Working Group on Myocardial Function of the ESC and has served in the scientific councils of several biotechnology centres internationally. His research interests focus on the development of novel biotherapeutics for cardiovascular disorders, on the identification of growth factors and microRNAs stimulating cardiac protection and regeneration after myocardial infarction. He is considered an expert in the generation of AAV vectors for cardiovascular applications. He has published over 340 papers in peer-reviewed, international journals.



Sasi Conte: Professor in Structural Biology

Professor Sasi (Maria R) Conte is a Professor of Structural Biology in the Randall Centre for Cell & Molecular Biophysics.

She is Director of the Centre for Biomolecular Spectroscopy, a biophysical hub of instrumentation and expertise to promote the study of biological molecules, from proteins to metabolites, both in basic and medical science and for projects that translate these advances into clinical understanding and benefit.

Professor Conte is Academic Lead (International) for the School of Basic & Medical Biosciences



Francesco Dazzi: Professor of Regenerative Medicine:

Professor Francesco Dazzi has been working on the biology and clinical applications of cellular therapies in haemopoietic stem cell transplantation for the last 20 years. He obtained an MD and a PhD at Padua University Medical School (Italy) and subsequently trained as a Haematologist at Verona University and at the Royal Postgraduate Medical School (London, UK). He was appointed Senior Lecturer and then Professor in Stem Cell Biology at Imperial College in 2005. In 2014 he moved to King's College

London where he is Professor of Regenerative & Haematological Medicine and leads Cellular Therapies for Kings' Health Partners.

Francesco pioneered a large and highly successful cellular immunotherapy programme for leukaemia and characterised the immunosuppressive effects of mesenchymal stromal cells (MSC). His team successfully tested MSC in pre-clinical models and the work has formed the basis of UK wide clinical studies.

Professor Dazzi was appointed to the role of Vice-Dean (International) for the Faculty of Life Sciences & Medicine in 2019.

Rui Pedra Galao: Lecturer in Infectious Diseases

Dr Rui Pedro Galão is a Lecturer in Infectious Diseases in the School of Immunology & Microbial Sciences at King's College London.

Since joining KCL, initially as postdoc in the lab of Prof Stuart Neil, Rui has primarily worked on the antiviral activity of tetherin/BST2, in particular the coupling of its antiretroviral function to innate pattern recognition. This was followed by a new research program into the biology of Ebola virus, where by establishing a reverse genetics system to study the molecular bases of this virus life cycle and immunity, it was possible to identify and characterise interferon-stimulated genes antiviral against Ebola virus replication.

As an independent researcher, Rui is now focused on driving forward our understanding of host-virus interactions and the molecular pathogenesis of Flaviviruses and Coronaviruses, with a particular interest on uncovering mechanisms by which these viruses are sensitive to, and evade from, interferon-mediated responses to infection.



Katie Doores: Senior Lecturer in Infectious Diseases:

Katie Doores is a Senior Lecturer in the Department of Infectious Diseases at KCL. Her lab studies the neutralising antibody response to viruses including HIV-1, hantaviruses, phleboviruses and new world arenaviruses to inform vaccine development. Most recently her lab has been studying the development and longevity of the neutralising antibody response following SARS-CoV-2 infection.



Manu Shankar-Hari: NIHR Clinician Scientist, Reader and Consultant in Intensive Care

Manu Shankar-Hari undertook a period of clinical training in Guy's and St Thomas' Hospital NHS Trust, University College London Hospital NHS Trust, The Royal Free Hospital, St Mary's Hospital and at a number of regional district general hospitals around London. He completed MSc in Epidemiology at the London School of Hygiene and Tropical Medicine. Manu was awarded PhD in Immunology, for his research into B-lymphocyte and immunoglobulins biology in sepsis, at King's College London.

Manu was appointed as a tenured consultant physician in Intensive Care Medicine at Guy's and St Thomas' Hospital NHS Foundation Trust in 2009.

Manu was awarded the prestigious NIHR Clinician Scientist Award in 2016.

Manu was recognised for his contributions to sepsis research with the ANZICS Intensive Care Global rising star award in 2017 and International Sepsis Forum Lowry Fink Fellowship in 2019.

Currently, Manu leads a translational research group, located within the School of Immunology and Microbial Sciences.

Manu's group is funded primarily by grants from the NIHR and the MRC-EME programme.



Linda Klavinskis: Professor of Viral Immunology

Professor Linda Klavinskis is a Professor of Viral Immunology in the School of Immunology & Microbial Sciences.

She received her doctorate from the University of London studying the pathogenic mechanisms underlying the autoimmune disease Myasthenia gravis. As a Fulbright Fellow, her postdoctoral training in viral pathogenesis focused on CD8 T-cell immunity and virus control in Professor Michael Oldstone's laboratory at The Scripps Research Institute, La Jolla, USA. Following a brief period at Roche, she joined the faculty at King's College London, UK, where her research has focused on how the innate immune system regulates adaptive immune responses to pathogens, and uses this knowledge in the design of vaccines and adjuvants. This has included enhancing mucosal immunity against HIV/SIV, methods to deliver DNA vaccines, deciphering an alternative mode of antigen presentation termed 'cross-dressing', and unravelling mechanisms that contribute to epitope selection and CD8 T-cell immunodominance. She has also engaged in translational research that has pursued the development of effective adjuvants for human vaccines and developing vaccines that provide protection against viruses that infect mucosal surfaces. More recently, her work has been influential in the development of microneedle delivery systems for skin immunization. Dr. Klavinskis has co-authored over 100 peer-reviewed publications and holds several patents. She is a Fellow of the Royal College of Pathologists, a 2017 International Society for Vaccines Fellow and is a past President of the London based Medical Research Club, a distinguished scientific society, established in 1891.



Claire Steves: Senior Clinical Lecturer

Claire is a Clinical Senior Lecturer at King's College London. She is also a Consultant Geriatrician at Guys and St Thomas's NHS Foundation Trust as well as the Deputy Director (Clinical) for TwinsUK. Claire is interested in the interactions between physical and mental health in ageing. Her current research focuses on the relationship between the gut, urinary and salivary microbiome and conditions of ageing, including cognitive ageing, frailty and multi-morbidity. Claire also leads on our new Wellcome Longitudinal Population Study grant which aims to expand our ability to contribute to health sciences, by linking with health records, social and environmental scientists. Claire graduated first class from Cambridge University in 1997. She joined the department in 2009 with a Wellcome Clinical Research Fellowship and gained a PhD by 2014.

Suzanne Pickering: Research Associate in Infectious Diseases: I am a senior post-doctoral scientist working in Professor Stuart Neil's lab in the Department of Infectious Diseases, KCL. My previous research has focused on the evasion of humoral and innate immune responses by HIV-1, with a particular focus on the HIV-1 accessory protein Vpu. During the COVID-19 "lockdown" in the UK, I volunteered to assist clinical colleagues at St Thomas' Hospital in the evaluation and optimisation of SARS-CoV-2 diagnostics. I am currently investigating the relationship between detection of SARS-CoV-2 by PCR, rapid antigen detection, infectivity and the emergence of a neutralising antibody response in infected individuals.

Dr Malur Sudhanva: Consultant Medical Virologist



Dr Malur Sudhanva has been a Consultant Medical Virologist since April 2004, at South London Specialist Virology Centre, Viapath, Infection Sciences Department, Kings College Hospital NHS Foundation Trust, London.

He is also the Lead Clinical Advisor for UK COVID-19 mass testing Lighthouse Laboratories and local advisor for UK Biocentre Milton Keynes as DHSC secondment for Test and Trace from King's since April 2020. In addition, he is the Clinical Director of Viapath Pathology Laboratories at King's College Hospital since Dec 2017

and Chair of Panel of Examiners for Virology at Royal College of Pathologists since May 2018. Within KCL he is the Clinical Advisor for June Almeida SARS-CoV-2 testing laboratory.

On the SARS-CoV-2 testing front, he has a UK-wide leadership role to help DHSC/NHSE&I implement the DHSC, Secretary of State and PMO strategies on mass SARS-CoV-2 RNA testing within the newly created Lighthouse Laboratory network. This involves strategic, operational and troubleshooting roles in the analytical side primarily including validation of assays and its more efficient variations, setting up guidance on test specifications, interpreting lab-generate test results, selection of qualified staff, provide guidance on machine learning, quality assurance approaches leading to UKAS accreditation, help investigate clinical issues and clinical incidences and provide feedback to NHSEI. Role also includes trouble shooting along the Deloitte-NHS work streams of pre-analytical and NHS Digital work stream of post-analytical phases of testing.

In July 2020, his role was expanded to be on the project board to design, evaluate and implement SARS-CoV-2 RNA End-Point PCR, to setup three megalabs in UK with a combined capacity of 825,000 samples per day.