

Infectious Diseases- Old Challenges- New Solutions

Hosted by
London School of Hygiene and Tropical Medicine
5 - 7 December 2005

A workshop on Infectious Diseases will be held at the London School of Hygiene and Tropical Medicine in December 2005

The workshop will focus on the current challenges to global health of both current and emerging infectious diseases.

The aims of the workshop are:

- To enable researchers from participating institutions in the UK and their colleagues from Texas to showcase relevant research activities.
- To allow researchers to network with colleagues and explore collaborative opportunities.

The overall outcomes should be:

- The development of collaborative relationships between researchers in the UK and Texas.
- The exploration of novel opportunities for collaboration across disciplines.
- The sharing of emerging results.
- Accessing unique facilities

The workshop will focus on basic and applied sciences and the sessions will deal with proteomics/genomics, diagnostics and pathogenesis of the diseases.

For additional information on both the Programme and this event please visit www.uspartneruk.com or contact Margaret Parton, Programme Manager on 07748 115404.

Outline Programme

Sunday 4 December

- AM Texas Delegates arrive at Gatwick and make their way to the **Russell Hotel**, Russell Square London
- 7.00 pm Informal Buffet Supper for Texas and UK Delegates at the Russell Hotel

Monday 5 December

- 8.30 am Coffee and Registration at London School of Hygiene and Tropical Medicine

- 9.15 am Opening and Welcome by Professor Sir Andy Haines

- 9.30 am **New Developments in Vaccines and Immunotherapeutics**

Chair: Alan Barrett, University of Texas Medical Branch, Galveston

Polly Roy, London School of Hygiene and Tropical Medicine
"Novel Virus Like-Particle Vaccines for Human and Animal Viral Diseases"

Joseph F. Petrosino, Baylor College of Medicine
"*Francisella tularensis*: Comparative Genomics, Antigen Discovery, and Live Vaccine Strain (LVS) Attenuation"

John Rhodes, GlaxoSmithKline
"Therapeutic DNA Vaccines: Current and Future Strategies in the Management of Chronic Infectious Disease"

Johnny Peterson, University of Texas Medical Branch, Galveston
"Evaluation of New Therapeutics Against Inhalation Anthrax Using Small Animal Models"

- 11.00 am COFFEE

- 11.30 am **Aine McKnight, University College, London**
"Complement Mediated Inhibition of HIV Replication"

Alan Barrett, University of Texas Medical Branch, Galveston
"Envelope Protein Domain III: A Critical Component in Immunogenicity of Flaviviruses"

Slobodan Paessler, University of Texas Medical Branch, Galveston
"Replication and Clearance of Venezuelan Equine Encephalitis Virus from the Brains of Animals Vaccinated with Chimeric SIN/VEE Viruses"

Richard Titball, DSTL Porton Down

"A *Francisella* Proteome Microarray"

1.00 pm Lunch

2.00 pm **Tuberculosis**

Hazel Dockrell, London School of Hygiene and Tropical Medicine

"Towards Correlates of Protection for Tuberculosis"

Doug Young, Imperial College

"Targeting Latent TB: A Grand Challenge in Global Health"

Glyn Hewinson, VLA/DEFRA

"Improved Vaccines and Diagnostics for Bovine Tuberculosis: Two Sides of the Same Coin"

Garry Adams, Texas A&M University

"*Mycobacterium bovis* leuD Auxotroph-Induced Protective Immunity of Cattle Against Intranasal *M. bovis* Ravenal Challenge"

Helen Fletcher, University of Oxford

"Boosting BCG with MVA85A: Update on Clinical Trials"

3.45 pm COFFEE

4.15 pm **Emerging Infectious Diseases: Strategies for Exploiting the Innate and Adaptive Immune Responses**

Michael Holbrook, University of Texas Medical Branch, Galveston

"The Tick-Borne Flaviviruses: A Potential Role for Innate Immunity in Defining Disease"

Mike Malim, King's College, London

"APOBEC Proteins, Cytidine Deamination and Innate Resistance to HIV Infection"

Susan Payne, Texas A&M University

"Equine Infectious Anaemia Virus as a Model for Probing Lentivirus/Macrophage Interactions"

5.30 pm End of session

7.00 pm Reception and Dinner for UK and Texas Delegates at the Worshipful Butchers Hall. Coach Departs Russell Hotel at 6.30pm

Tuesday 6 December

8.30 am Coffee

9.00 am **Emerging Infectious Diseases: Strategies for Exploiting the Innate and Adaptive Immune Responses Cont.**

Pablo C. Okhuysen, University of Texas Health Science Center-Houston

"Genetic Susceptibility to Bacterial Diarrhea"

Richard Elliott, St Andrews University

"Bunyavirus Host Cell Interactions"

Jane Welsh, Texas A&M University

"Neuroendocrine Influences on the Host's Ability to Respond to Infectious Agents: Implications for Bioterrorism and Emerging Infectious Diseases"

Jonathan Stoye, NIMR

"Trim5alpha and resistance to HIV"

10.30 am COFFEE

11.00 am **Rick Randall, St Andrews University**

"The V Proteins of Paramyxoviruses as Multifunctional Interferon Antagonists"

Mark Estes, University of Texas Medical Branch, Galveston

"Characterization of T cell and Humoral Responses to Vaccination against Venezuelan Equine Encephalitis Virus"

Roman Lukaszewski, DSTL, Porton Down

"Diagnosing Disease? Listen to the Immune Response"

Ursula Gompels, London School of Hygiene and Tropical Medicine

"Innate and Novel: Interactions Between Human and New Herpesvirus Chemokine and Chemokine Receptors; Immunotherapeutics Applications"

12.30 pm LUNCH

1.30 pm **Influenza**

Alan Hay, National Institute for Medical Research

"Neuraminidase Structure and the Molecular Bases of Drug Resistance"

Michael Deem, Rice University

"Quantifying Influenza Vaccine Efficacy and Antigenic Distance"

Wendy Barclay, University of Reading

"The Interferon Response to Influenza Virus: Possible Role in Host Range"

Yizhi Jane Tao, Rice University

"Structural Studies of Influenza Virus Polymerase, the Central Machinery for Genome Replication and Transcription"

3.00 pm **COFFEE**

3.30 pm **Robert Krug, University of Texas at Austin**

"The Multiple Novel Functions of the NS1 Protein of Influenza A Viruses"

Paul Digard, University of Cambridge

"Systematic Identification of Conserved Sequences in the Influenza Virus Genome Likely to Act as RNA Packaging Signals"

Blanca Lupiani, Texas A&M University

"Avian Influenza, Research Towards Prevention and Control"

John McCauley, Institute for Animal Health

"Avian Influenza Flu Virus Host Range: Replication Determinants in Hamster/Chicken Hybrid Cells"

Amar Safdar, UT MD Anderson Cancer Center

"Dose-escalation of Recombinant Influenza Vaccine in Patients with B-cell Lymphoma in Collaboration with Dr. Couch at Baylor College of Medicine"

5.30 pm **Session ends**

5.30 – 7.00pm **Drinks Reception and Poster Session in Refectory of LSHTM**

Evening free in London

Wednesday 7 December

8.30 am Coffee

9.00 am **New Technologies in Infectious Diseases Research**

Chair: Michael Ward, Texas A&M University

Roy Anderson, Imperial College

"The Scientific Issues that Underpin Planning for Pandemic Influenza A"

Michael Ward, Texas A&M University

"Identifying Districts At-Risk of Foot-and-Mouth Disease Incursions Using Geographic Automata and Neural Networks"

Bill Keevil, University of Southampton

"Emerging Campylobacters using Culture and Molecular Techniques"

Russell Lewis, University of Houston

"Drosophila as a High-throughput Model Host for Studying Fungal Pathogenesis and Drug Activity in Invasive Mycoses"

Steve Lever, DSTL, Porton Down

"Experimental Inhalational Anthrax Infection"

10.45 am COFFEE

11.15 am **J. Victor Garcia-Martinez, UT Southwestern Medical Center at Dallas**

"Human/Mouse Xenograft Models for Infectious Diseases Research"

Brendan Wren, LSHTM

"Development of an Active Surveillance Pathogen Microarray as an Early Warning System for Highly Transmissible Pathogens"

Ray Hachem, UT MD Anderson Cancer Center

"Novel Strategies for the Prevention of Blood Stream Infections"

Kar-Wai Ng, UT Southwestern Medical Center at Dallas

"Advancing Pathogen and Host Experimental Research Via In Silico Methods"

1.00 pm Lunch and Close of Workshop