



FOREDRAGSEFTERMIDDAG ONSDAG DEN 12. MARTS 2014, kl 14.30-16.00

Foredragseftermiddag om diagnostik af latent tuberkulose og TB vaccineudvikling

Graham Bothamley og Christoph Lange

Program:

- Kl. 14.30 Welcome and introduction
- Kl. 14.35-15.15 Graham Bothamley, TBnet & Homerton University Hospital
“Some surprising facts from clinical tuberculosis which affect TB vaccine design”
- Kl. 15.15-16.00 Christoph Lange, Prof. Dr. med. Dr. h.c., Head of Clinical Infectious Diseases, Research Center Borstel, Leibniz Center for Biomedical Research
“Unpredictable gold standards for tuberculosis prevention - Dreams and reality about IGRAs”

Hvor:

Foredragssalen, bygning 43, lokale 219

Statens Serum Institut

Artillerivej 5

2300 København S.

Henvendelse i receptionen ved ankomst

Hvornår:

Onsdag den 12. marts 2014, kl. 14.30-16.00

Tilmelding:

Ikke nødvendig.

Hvis du mener at andre i dit netværk kan være interesseret i at høre dette foredrag, er du meget velkommen til at sende denne invitation videre (sæt venligst chgp@ssi.dk som cc)



Some “surprising facts” from clinical tuberculosis which affect TB vaccine design



Prof. Graham Bothamley, FRCP, PhD, MA, BM, BCh
Consultant physician, honorary senior lecturer and clinical
director for the NE London TB network
Homerton University Hospital
London, UK

Abstract

Virchow advocated clinical observation, combined with animal experiments, anatomy and histopathology to understand disease processes, ushering in the scientific approach to medical practice.

This talk will begin with the distinction between primary and post-primary tuberculosis and how it informs our understanding of BCG vaccination. Therapeutic vaccines will be discussed in the context of the Koch reaction and how the nature of cell death (apoptosis, necrosis, pyroptosis, NETosis etc.) might be important in considering markers of an effective vaccine.

The natural experiment of CD4 immunodeficiency induced by HIV will demonstrate the role of these cells in the pathogenesis of infectious tuberculosis and pass comment on the immune reconstitution inflammatory syndrome. In order not to diminish the talk of my esteemed colleague, Professor Christoph Lange, only a passing mention will be made on the interferon-gamma release assays.

Latent tuberculosis infection after occupational exposure and anti-TNF inhibitors will be used to provide an insight on this important process. Lastly, we will reflect on the new vaccines for TB and decide whether they have taken account of these clinical facts (all in just 30 minutes!).

Biography

Professor Graham Bothamley is a clinician experienced in the management of tuberculosis with a keen interest in translational research. He is Chair of the Tuberculosis Network European Trialsgroup (TBNET, <http://www.tb-net.org/>) and Chair-elect of the European Respiratory Society Tuberculosis Group.

He has published >100 papers in tuberculosis, which range from the clinical management of TB services, through randomized controlled trials of interventions and evaluation of recent and novel diagnostic tests to basic science topics related to the immune response to and microbiology of *Mycobacterium tuberculosis*.

He graduated from Pembroke College, University of Oxford in 1980 and gained a PhD in the immunology of TB from work undertaken at the MRC Tuberculosis and Related Infections Unit from 1985-88.



Unpredictable gold standards for tuberculosis prevention - Dreams and reality about IGRAs



Prof. Dr. med. Dr. h.c. Christoph Lange
Head of Clinical Infectious Diseases
Research Center Borstel
Leibniz Center for Biomedical Research
Germany

Abstract

In the absence of immune based interventions that will prevent tuberculosis in children and adults better than vaccination with *M. bovis* Bacille Calmette Guérin, prevention of tuberculosis relies on the identification and prophylactic antibiotic treatment of individuals with a (substantially) increased risk for the development of tuberculosis.

For more than 100 years, identification of individuals at risk for the future development of tuberculosis is performed by the tuberculin skin test. More recently, *ex vivo* immunodiagnostic interferon-gamma release assays (IGRAs) with antigens that are more specific for *M. tuberculosis* than those used in the tuberculin skin test, are performed to predict the risk for the development of tuberculosis in the future.

Depending on the geographic region and available resources, the tuberculin skin test or IGRAs are today the gold standard to identify candidates for preventive chemotherapy.

The TBNET has evaluate the role of the TST and IGRAs for the prevention of tuberculosis in putative risk groups in Europe. Results from two large cohort studies enrolling more than 6500 individuals from tuberculosis risk groups shed a new light on currently available biomarkers for tuberculosis risk assessment with implications for the clinical management.

Biography

The Division of Clinical Infectious Diseases at the Research Center Borstel is primarily devoted to patient care and clinically oriented research in pulmonary infectious diseases, especially tuberculosis, and HIV-infection. Christoph Lange is a physician-scientists with specializations in Internal Medicine and Pulmonary Medicine and board-certifications in Intensive Care Medicine, Infectious Diseases, Allergy and Sleep Medicine. He has a Masters Diploma in Biology and has received the *venia legendi* (Habilitation) from the University of Luebeck, Germany, in 2004.

Following clinical training in the Republic of South Africa and Germany, he trained from 1999-2001 at Case Western Reserve University in Cleveland, Ohio (USA) for a clinical fellowship in Infectious Diseases and HIV-related clinical research with Prof. Michael Lederman. In the year 2003 Christoph Lange received the Hector-Award for HIV-Research. Since 2001 he works as at the Medical Clinic of the Research Center Borstel, where he heads the Division of Clinical Infectious Diseases. His principal research interests are the development, improvement and evaluation of novel methods for the diagnosis of tuberculosis and the epidemiology and clinical management of M/XDR-tuberculosis.