NSI Meeting Announcement

Date: Monday, October 30, 12:30 – 13:30
Venue: Rikshospitalet, Auditorium 3 (Blue)

Guest lecture

by

Professor Erik Thorsby

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"*MHC/HLA: Past, present and future*"

Abstract

An antigen encoded by the The Major Histocompatibility Complex (MHC) was first discovered in mice by Peter Gorer in 1936. In man the MHC is called the Human Leucocyte Antigen (HLA) complex. A leucocyte antigen later found to be encoded by the HLA complex was first detected by Jean Dausset in 1958. The immunobiological function of the "classical" MHC molecules was first revealed through the seminal work of Peter Doherty and Rolf Zinkernagel in 1974, and then beatifully visualized by Pam Bjørkman and her associates in 1987. In 1984 Klas Kärre and associates first showed that self MHC class I molecules may provide inhibitory signals for NK cells.

To day we know that the HLA complex encompasses more than 250 genes, of which approx. 30% may have immune functions. From an immunological point of view, the most important products are the extremely polymorphic peptide-presenting HLA class I and II molecules, which to a large extent determine the T cell immune response repertoire of an individual. As a consequence of this, given class I or II molecules strongly predispose to autoimmune diseases. However, other HLA complex genes also contribute to disease predisposition. It is because of their polymorphism and peptide-presentation to T cells that the class I and II molecules are strong histocompatibility antigens, which should merely be considered a clinical side effect. Thus the name MHC may be said to be a misnomer.

The future of HLA is bright. HLA matching will continue to be important in clinical organ and stem cell transplantation. HLA typing may also become increasingly important in designing the most immunogenic peptides for vaccination. Further, HLA typing will become an important tool to identify individuals at high risk to develop given autoimmune diseases, to prevent disease development by intervention at an early stage. Thus, HLA typing will be an important tool in *personalised medicine.*

Refreshments will be served

Welcome all!

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