



NSI Meeting Announcement

Date: Friday, March 3, 14:00 – 14:45

Venue: Lunch room IMMI, A2.2068A, RH

Guest Lecture by Professor Søren Buus

**“Pathogen-, genome- and HLA-wide epitope identification;
a novel immunobioinformatics tool.”**

Abstract

Reverse immunogenetic approaches attempt to optimize the selection of candidate epitopes, and thus minimize the experimental effort needed to identify new epitopes. When predicting cytotoxic T cell epitopes, the main focus has been on the highly specific MHC class I binding event. Methods have also been developed for predicting the antigen-processing steps preceding MHC class I binding, including proteasomal cleavage and transporter associated with antigen processing (TAP) transport efficiency. We have integrated predictions of MHC class I binding affinity, TAP transport efficiency, and C-terminal proteasomal cleavage and demonstrated that it outperforms any of the individual methods. The method is available at <http://www.cbs.dtu.dk/services/NetCTL>.

We have previously applied this kind of global epitope identification approach to suggest SARS epitopes, however, at that time it was not possible to validate these in patients. We have recently repeated a global CTL search in influenza and succeeded in validating the approach. Novel conserved epitopes representing all of the major human HLA supertypes were identified, and several epitopes might even be of relevance for a potential bird flu vaccine

About the speaker

Søren Buus, MD, PhD is a professor at the Institute for Medical Microbiology and Immunology University of Copenhagen. Professor Buus is an international capacity in the field of vaccine design. He has made important contributions to the understanding of the nature of HLA restricted T cell responses and to generation of recombinant HLA molecules. He is in the process of developing a comprehensive database of peptide-HLA interactions, and has generated tools for high-throughput predictions of peptide-HLA interactions and other events relevant to antigen processing and presentation.

Welcome!

Norwegian Society for Immunology (NSI)

