

NSI Meeting Announcement

Date: Friday, June 2, 10:00 – 11:00

Venue: Auditorium 1(Green), Rikshospitalet



Guest lecture by Dr Per thor Straten

“Characterization and monitoring of anti-tumor T cell responses in cancer patients”

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Abstract

Immunotherapy represents an attractive fourth-modality therapeutic approach, especially in light of the shortcomings of conventional surgery, radiation, and chemotherapies in the management of metastatic cancer. To this end, a large number of peptide antigens derived from TAA has been applied in immunotherapeutic trials for the treatment of various malignancies, e.g., cancers of the breast, prostate, and kidney, in addition to hematological cancers. A major strategic difficulty associated with these trials relates to the choice of best-suited peptide antigens. Ideally, target antigens should be derived from proteins required for survival and growth of tumor cells, as antigens with these characteristics would not be inflicted by the development of loss-variant tumor cells. In this respect, escape from apoptosis represents an important step in tumor progression and proteins playing a role in inhibiting apoptosis are universally expressed among tumors. We have characterized spontaneous T-cell reactivity against inhibitor of apoptosis proteins and Bcl-2 family proteins in cancer patients. Thus, peptides binding to the class I molecules HLA-A1, A2, A3, A11, B7, and B35, have been characterized and clinical trials are ongoing to investigate the potential efficacy of these peptides in therapeutic vaccinations against cancer. Obviously, therapeutic vaccinations against cancer have not yet met its promise, and data from comprehensive studies of anti-tumor immune reactivity, may pave the way to improve current strategies. During the past few years, several methods have become available for monitoring of cellular immunotherapy. Thus, tumor specific T cells can now be studied functionally, phenotypically as well as molecularly. We recently developed the T-cell receptor clonotype mapping methodology in which the clonal distribution of the TCR is exploited for detection and tracking of specific clonally expanded T cells based upon detection of the unique TCR. In particular when used in combination with techniques that provide data with regard to phenotype and functional capacity of clonally expanded T cells, clonotype mapping is a powerful technique that may help provide new insight as to the molecular and cellular events that governs the success or failure of current anti-cancer vaccination strategies.

About the speaker

Dr Per thor Straten is heading the Tumor Immunology Group at the Institute of Cancer Biology, Danish Cancer Society, Copenhagen. thor Straten received his PhD in 1998 from the The Open University, Milton Keynes, United Kingdom. His thesis was on T-cell response against melanoma. Dr thor Straten has authored/co-authored more than 80 articles/manuscripts on tumor immunology and immunotherapy.

Welcome!



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