# PD-1/PD-L1 Blockade Widens the Range of Tumor Targets Adequately Recognized by MHC Class I-restricted T Cells: A Tale of Survival or Death

Speaker: Professor **Mansour Haeryfar**, Department of Microbiology & Immunology, The University of Western Ontario, Canada

Time: **Tuesday September 17th, 2019, 13:30-15:30**

Place: **Mærsk Tårnet, Faculty Lounge, 15th floor, University of Copenhagen**

**Abstract:**
MHC Class I-restricted $CD8^+$ killer T cells ($T_{CD8}$) play a pivotal role in anticancer immune surveillance. However, sustained but unproductive encounter with tumor cells can impair $T_{CD8}$ functions. This phenomenon is mediated by programmed cell death-1 (PD-1), a cell surface protein of exhausted $T_{CD8}$. 'Checkpoint inhibitors' that block PD-1 engagement to reenergize tumor-specific $T_{CD8}$ have shown considerable promise in the clinic. However, many studies on PD-1 have focused on immunodominant $T_{CD8}$ clones. This approach is convenient but ignores the fact that subdominant $T_{CD8}$ clones are more likely to escape tolerance mechanisms and may contribute to protective anticancer immunity. Using a clinically relevant mouse model, we have recently demonstrated that interfering with PD-1 signaling prolongs the survival of subdominant $T_{CD8}$ and selectively boosts their responses. This should in turn diversify host responses of sufficient magnitude against cancer. Our ongoing studies address the breadth of $T_{CD8}$ responses in patients with metastatic renal cell carcinoma following checkpoint blockade immunotherapy.

Hosted by Søren Buus, sbuus@sund.ku.dk, +45 28 75 78 85

*Supported by the Danish Immunology Society*