CTLA-4-induced signal transduction pathways in T cells as targets for tumor therapy

Prof. Dr. Monika Brunner-Weinzierl

University Hospital
Otto-von-Guericke University Magdeburg - Germany

CTLA-4 acts as a negative regulator of T cell responses including proliferation and cytokine production. As a major brake of T cell responses, CTLA-4 has become a target of intense investigation in cancer immunotherapy. Anti-CTLA-4 antibodies (e.g. Ipilimumab) were developed, which inhibit CTLA-4 in order to increase T cell activity. This approach proved successful in melanoma and lung cancer. Moreover, recently, checkpoint inhibitors showed clinical efficacy in a variety of malignancies. To enhance the efficacy of this approach and to limit side effects, understanding of CTLA-4 signaling in more detail is critical to pinpoint the correct manipulation of this inhibitory co-receptor and its downstream signaling. We had previously shown that CD8+ T-cell differentiation is regulated by CTLA-4. In order to specify proximal signal transduction pathways, which are under the control of CTLA-4 such as IFN-γ production, a phosphoproteome analysis using iTRAQ mass spectrometry and PepChip was performed. These approaches revealed distinct changes in post-translational modifications, pointing out novel regulatory mechanisms.

Conférence ouverte à tous !

Invitée par Dr Christopher Rudd

Vendredi 13 juillet 2018, 12 h

Salle 080, sous-sol, pavillon Marcel-Lamoureux

Hôpital Maisonneuve-Rosemont
5415 boulevard de l'Assomption
Montréal (Québec) H1T 2M4

Centre intégré universitaire de santé et de services sociaux de l'Est-de-l'Île-de-Montréal
Québec