Medizinische Universität Graz

VFR

Immunology Guest Lecture:

Hypoxia-inducible Factors Augment CD8+ T cell Responses to Cancer and Persistent Viral Infection.

By Dr. Andrew Doedens,
University of California, San Diego

Cytolytic activity by $CD8^+$ cytotoxic T lymphocytes (CTLs) is a powerful strategy for the elimination of intracellular pathogens and tumor cells. We found that CTL immunity was regulated by the central transcriptional response to hypoxia, which is controlled in part by hypoxia-inducible factors (HIFs) and the von Hippel–Lindau tumor suppressor VHL. Loss of VHL, the main negative regulator of HIFs, led to lethal CTL-mediated immunopathology during chronic infection, and VHL-deficient CTLs displayed enhanced control of persistent viral infection and neoplastic growth. We found that HIFs and oxygen influenced the expression of pivotal transcription, effector and costimulatory-inhibitory molecules of CTLs, which was relevant to strategies that promote the clearance of viruses and tumors.

Friday, June 26 2015 at 11:00am

at Hörsaal E1,
Hörsaalzentrum Auenbruggerplatz 15,
Medical University of Graz
(https://www.medunigraz.at/de/die-med-uni-graz/die-universitaet/orientierung/wegbeschreibung-hoersaalzentrum/)