



The Doctoral Program

ION CHANNELS AND TRANSPORTERS AS MOLECULAR DRUG TARGETS („MolTag“)

is pleased to invite you to the following lecture

Voltage-gated proton channels:

"when too much of a good thing is a disease"

by Prof. Francesco TOMBOLA, PhD

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http://www.faculty.uci.edu/profile.cfm?faculty_id=5609,

on: Thursday, September 21st 2017, 05:00 pm (17:00 Uhr)

at: IST-AUSTRIA, Seminar Room Ground Floor in Lab Building East

Abstract:

Voltage-gated proton channels (Hv) are expressed in tissues throughout the body and play important roles in pH homeostasis and in the regulation of NOX enzymes. They consist of two proton-permeable voltage-sensing domains linked together by a cytoplasmic coiled-coil domain. Their voltage-dependent activation is affected by a variety of stimuli, including transmembrane pH gradients, mechanical force, and temperature. Excessive proton channel activity has pathological consequences, such as increased invasiveness in cancer, and enhanced brain damage in ischemic stroke.

In this presentation, I will discuss the physiological and pathological functions of Hv channels, as well as our efforts to elucidate their mechanism of activation and to develop small-molecule inhibitors that could find applications as anticancer drugs and neuroprotective agents.

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