SYMPOSIUM

ION CHANNELS IN BRAIN DISEASES: CAUSES, MEDIATORS, AND DRUG TARGETS
Symposium

Ion Channels in Brain Diseases: Causes, Mediators, and Drug Targets

SUMMARY

Fluxes of sodium, potassium, chloride, and calcium ions through channels in cellular membranes cause electrical signals, which regulate brain functions such as learning and memory as well as our interaction with the environment.

Hence, ion channels are critical regulators of important body functions and channel defects can cause many diseases including migraine, cardiac dysfunctions, autism, and hearing deficits. This symposium, which is organized by the PhD program CavX - Calcium channels in excitable cells of the Universities of Innsbruck and supported by the Karl Landsteiner University, combines international experts of the field to provide an overview of the roles of ion channels in health and disease.

The presentations will particularly focus on calcium and potassium channels and present most recent advances in understanding and treating related diseases.

Univ.-Prof. Gerald Obermair
Division Physiology at the
Karl Landsteiner University,
Speaker of the CavX PhD program in Innsbruck

PART 1:
ION CHANNELS AND BRAIN DISEASES – CURRENT STATE OF KNOWLEDGE

15:30-15:35: Welcome
Gerald Obermair, Karl Landsteiner University
15:35-15:40: Welcome address by the host
Rektor Rudolf Mallinger
15:40-16:00: Ion channels of the brain – a brief introduction
Jörg Striessnig, University of Innsbruck
16:00-16:20: Targeting calcium channels in brain diseases
Gary Stephens, University of Reading, UK
16:20-16:40: The role of calcium channels in adrenal chromaffin cells
Emilio Carbone, University of Torino, Italy
16:40-17:00: Structure-function relationship in calcium channels
Bernhard Flucher, Medical University of Innsbruck

Session chairs: Stefanie Geisler, Nadine Ortner
17:00-17:30: Coffee break sponsored by Ecoplus

PART 2:
ION CHANNELS AND BRAIN DISEASES – NOVEL PERSPECTIVES

17:30-17:50: Calcium channels and migraine
Daniela Pietrobon, University of Padova, Italy
17:50-18:10: Scorpion toxins targeting Kv1.3 potassium channels with therapeutic implications
Gyorgy Panyi, University of Debrecen, Hungary
18:10-18:30: The precise interplay of voltage-gated K+ channels as a prerequisite for sensitive hearing
Michael Leitner, Medical University of Innsbruck

Session chair: Hartwig Seitter

Date:
Thursday, February 27, 2020

Location:
Karl Landsteiner University of Health Sciences, Auditorium

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