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Naturwissenschaftlich-Medizinischer Verein in Innsbruck

Einladung zum zweiten Vortrag des Vereinsjahres 2004/2005

**Zyklonukleotid-gesteuerte Kationenkanäle:
Vom Gen zur Krankheit**

Prof. Dr. Martin Biel

Zentrum für Pharmaforschung, Universität München

Wann: 09.11.2004, 18:15

Wo: Hörsaal A im 1. Untergeschoß der Medizinisch-Theoretischen
Institute, Fritz-Pregl-Strasse 3

Kurzfassung:

Ion channels whose activation is regulated by the binding of cyclic nucleotides can be classified into two subfamilies, the cyclic nucleotide-gated (CNG) channels and the hyperpolarization-activated cyclic nucleotide-gated (HCN) channels. CNG channels are mainly expressed in sensory neurons and are essential for visual and olfactory transduction. HCN channels play a key role in the control of cardiac and neuronal rhythmicity ("pacemaker channels"). In addition, HCN channels are supposed to be involved in the determination of the resting potential, the dendritic signal integration and the control of synaptic plasticity. In my talk, I will summarize recent data of our laboratory on the molecular structure, function and regulation of CNG and HCN channels. In particular, knockout mouse models for CNGA3, CNGB1 and HCN2 channels will be discussed. These mouse models provide deep insight into the physiological role and relevance of distinct members of the CNG/HCN channel families. Moreover, the mouse lines represent valuable model systems for human diseases ranging from retinitis pigmentosa to absence epilepsy.

Gäste sind herzlich willkommen!

Thomas Haller, Schriftführer

Nächster Vortrag: 07.12.04: Prof. H. O. Handwerker, Erlangen: Wie wird der Schmerz zur Krankheit? - Pathophysiologie der Nociception