

## ***Colloquia in Cellular Signaling***

Venue: Medical University Vienna, Center for Physiology and Pharmacology,  
Institute of Pharmacology, Waehringerstrasse 13a, 1090 Vienna, "**Leseraum**".  
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(Walter Sandtner, Tel.: (01) 40160 31260, [walter.sandtner@meduniwien.ac.at](mailto:walter.sandtner@meduniwien.ac.at))

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**Friday 4.11.2016 11:00 s.t. Baron Chanda (host: W. Sandtner)**

Associate Professor  
Departments of Neuroscience and Biomolecular Chemistry  
School of Medicine and Public Health  
1111 Highland Avenue, 9457 WIMR II tower  
University of Wisconsin, Madison-53705

### ***"Molecular Driving Forces underlying Channel Gating"***

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**Baron Chanda (email: [chanda@wisc.edu](mailto:chanda@wisc.edu))**

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**Abstract:**

Members of the voltage-gated ion channel superfamily (VGICs) play a central role in electrical excitability in mammals. Most of them are activated by voltage and, in many instances, they are also regulated by other stimuli namely, temperature, mechanical stretch and small molecule ligands. The molecular mechanisms involved in sensing and transducing stimuli to control conduction through the ion pore remains poorly understood. In the first part of the presentation, I will describe how a newly developed single molecule method sheds light on early gating transitions that underlie activation of human pacemaker ion channels. In the second part, I will discuss our progress in understanding the molecular mechanisms that determine temperature-sensitivity in members of VGIC superfamily.