



# BIOMEDICÍNSKE SEMINÁRE SLOVENSKEJ AKADÉMIE VIED

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Vážené kolegyně a kolegovia,  
dovoľujeme si Vás pozvať na 31. prednášku cyklu  
Biomedicínske semináre SAV

Prednášku prednesie

**Daniela Panáková, PhD.**

Max Delbrück Center for Molecular Medicine, Berlin

na tému

**Development of the functional cardiac syncytium**

dňa

**18. 4. 2016 (pondelok) o 14:00 hod.**

v zasadačke Virologického ústavu Biomedicínskeho centra SAV na Patrónke,  
Dúbravská cesta 9, 845 05 Bratislava



## Daniela Panáková, PhD

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[https://www.mdc-](https://www.mdc-berlin.de/35567762/en/research/research_teams/electrochemical_signaling_in_cell_development_and_disease)

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### Main Field of Research

My long-standing research interest lies in studying the interplay between development and physiology, and in understanding how function and form interact in embryogenesis. Our current research focuses on the fundamental mechanisms that lead to the attenuation of L-type  $\text{Ca}^{2+}$  channel function by non-canonical Wnt signals during the embryonic development of the vertebrate heart. Next, we are addressing how the cardiac chambers acquire their form, and how this process simultaneously affects the patterning of intercellular cardiomyocyte coupling and leads to the formation of the functional cardiac syncytium.

### Current Projects:

1. Molecular interactions between Wnt non-canonical pathway and L-type  $\text{Ca}^{2+}$  channel
2. Crosstalk between PCP-driven cardiac remodeling and mechanosensitive signaling in development and in regeneration
3. Calcium channels in angiogenesis and synchronization of cell behavior

### Keywords:

organ development, lateral mesoderm, epithelia, cardiovascular development, functional cardiac syncytium, intercellular coupling, Wnt/ $\text{Ca}^{2+}$  signaling, zebrafish, cardiac arrhythmias, congenital heart disease

### Major techniques:

confocal microscopy, *in vivo* imaging, high resolution voltage and calcium imaging, zebrafish transgenesis and mutagenesis

### CV:

**Daniela Panáková** was born in 1976 in Martin, Slovakia and graduated in Genetics at Comenius University, Faculty of Natural Sciences, Bratislava, Slovakia in 2001. She finished her PhD at Max Planck Institute of Molecular Cell Biology and Genetics in Dresden in 2005 under the supervision of Prof. Suzanne Eaton, Ph.D. After a short postdoctoral stay in her PhD lab, she moved to Harvard Medical School/Brigham and Women's Hospital in Boston, MA as a Research Fellow in 2007 where she joined the lab of Prof. Calum MacRae, M.D, Ph.D. In 2008, she received a Long-Term Fellowship from Human Frontier Science Program to pursue her postdoctoral research. She received a Helmholtz Young Investigator Grant in 2010, and moved to Max Delbrück Center for Molecular Medicine in Berlin in July 2011 where she is heading her independent research group.