

320064 VO Ion channels and transporters as drug targets (UNI)

1 Hour, 0.5 ECTS credits

Steffen Hering , Gerhard Ecker

861020 VO Journal Club (MedUni)

1 Hour, ? ECTS credits

Hannes Todt, Margot Ernst

Date	Name	Title	Description
25.10.2011	Steffen Hering	General introduction	molecular pharmacology, drug targets (Kv, KATPNav, NMDA, GABA(A) receptors)
08.11.2011	Journal Club	Introduction, presentation+discussion	Katrin Depil, "Sequential formation of ion pairs during activation of a sodium channel voltage sensor."
15.11.2011	Gerhard Ecker	Computational Drug Design	The course deals with the different methods applied for in silico hit identification, the hit to lead process, and lead optimisation. Both ligand- and structure-based approaches will be explained.
22.11.2011	Harald Sitte	Principles of Transporter Biology	
29.11.2011	Eugen Timin	Biophysics of drug-ion channel interaction	Kinetics of „use-dependent“ interaction (HERG and Cav). Binding to open channels. Dissociation from open and closed channels. Drug trapping.
06.12.2011	Margot Ernst	Visualization and analysis of biomolecular structures	
13.12.2011	Journal Club		Song Ke, "Sodium Ion Binding Sites and Hydration in the Lumen of a Bacterial Ion Channel from Molecular Dynamics Simulations" Amir Seddik, "Comparison of current docking tools for the simulation of inhibitor binding by the TM domain of the sarcoplasmic reticulum calcium ATPase (SERCA)"
10.01.2012	Hannes Todt	Molecular Determinants of Modulation of Voltage-Gated Sodium channels by drugs and toxins	Pore blockers – TTX, STX, μ -conotoxins; Gating modifiers – toxins shifting activation and/or slowing inactivation; Local anesthetics , class I antiarrhythmic agents, antiepileptic agents – producing use-dependent block
17.01.2012	Marko Mihovilovic	Special Synthesis Methods in Drug Development	
24.01.2012	Anna Weinzinger	Structure and dynamics of ion channel proteins	including examples of our current research projects (hERG, Cav1.2 and Nav channels)
31.01.2012	Journal Club		Thomas Steinkellner, Lukas Rycek