

Top publications from the last five years

Albus K, Wahab A, Heinemann U., **Standard antiepileptic drugs fail to block epileptiform activity in rat organotypic hippocampal slice cultures.** *Br J Pharmacol.* 2008 154(3):709-24. Apr 14. epub ahead of press

Behrens CJ, van den Boom LP, de Hoz L, Friedman A, Heinemann U. **Induction of sharp wave-ripple complexes in vitro and reorganization of hippocampal networks.** *Nat Neurosci.* 2005 Nov;8(11):1560-7.

Behrens CJ, van den Boom LP, Heinemann U. **Effects of the GABA(A) receptor antagonists bicuculline and gabazine on stimulus-induced sharp wave-ripple complexes in adult rat hippocampus in vitro.** *Eur J Neurosci.* 2007 Apr;25(7):2170-81

Erchova I, Kreck G, Heinemann U, Herz A.; **Dynamics of rat entorhinal cortex layer II/III cells: characteristics of membrane potential resonance at rest predict oscillation properties near threshold.** *J Physiol.* 2004 Oct 1;560(Pt 1):89-110. Epub 2004 Jul 22.

Gabriel S, Njungting M, Pomper JK, Merschhemke M, Sanabria ER, Eilers A, Kivi A, Zeller M, Meencke HJ, Cavalheiro EA, Heinemann U, Lehmann TN. **Stimulus and potassium-induced epileptiform activity in the human dentate gyrus from patients with and without hippocampal sclerosis.** *J Neurosci.* 2004 Nov 17;24(46):10416-30.

Ivens S, Kaufer D, Flores LP, Bechmann I, Zumsteg D, Tomkins O, Seiffert E, Heinemann U, Friedman A. **TGF-beta receptor-mediated albumin uptake into astrocytes is involved in neocortical epileptogenesis.** *Brain.* 2007 Feb;130(Pt 2):535-47.

Jandova K, Päsler D, Antonio LL, Raue C, Ji S, Njungting M, Kann O, Kovacs R, Meencke HJ, Cavalheiro EA, Heinemann U, Gabriel S and Lehmann TN. **Carbamazepine resistance in the epileptic dentate gyrus of human hippocampal slices.** *Brain.* 2006 Dec;129(Pt 12):3290-306

Löscher W, Gernert M, Heinemann U. **Cell and gene therapies in epilepsy - promising avenues or blind alleys?** *Trends Neurosci.* 2008 Jan 15

Meier JC, Henneberger C, Melnick I, Racca C, Harvey RJ, Heinemann U, Schmieden V, Grantyn R.; **RNA editing produces glycine receptor alpha3(P185L), resulting in high agonist potency.** *Nat Neurosci.* 2005 Jun;8(6):736-44.

Remy, S.; Gabriel, S.; Urban, B.W.; Dietrich, D.; Lehmann, T.N.; Elger, C.E.; Heinemann, U.; Beck, H.; **A novel mechanism underlying drug resistance in chronic epilepsy.** *Ann. Neurol.* 2003, 53(4):469-479.

Schreiber S, Erchova I, Heinemann U, Herz AV.; **Subthreshold resonance explains the frequency-dependent integration of periodic as well as random stimuli in the entorhinal cortex.** *J Neurophysiol.* 2004 Jul;92(1):408-15. Epub 2004 Mar 10.

Seiffert E, Dreier JP, Ivens S, Bechmann I, Tomkins O, Heinemann U, Friedman A.; **Lasting blood-brain barrier disruption induces epileptic focus in the rat somatosensory cortex.** *J Neurosci.* 2004 Sep 8;24(36):7829-36.

Tolner EA, Frahm C, Metzger R, Gorter JA, Witte OW, Lopes da Silva FH, Heinemann U. **Synaptic responses in superficial layers of medial entorhinal cortex from rats with kainate-induced epilepsy.** *Neurobiol Dis.* 2007 May;26(2):419-38. Epub 2007 Feb 7.

Wallraff A, Köhling R, Heinemann U, Theis M, Willecke K, Steinhauser C. **The impact of astrocytic gap junctional coupling on potassium buffering in the hippocampus.** *J Neurosci.* 2006 May 17;26(20):5438-47

Weiss T, Veh RW, Heinemann U. **Dopamine depresses cholinergic oscillatory network activity in rat hippocampus.** *Eur J Neurosci.* 2003 Nov;18(9):2573-80

Wohrl R, von Haebler D, Heinemann U. **Low-frequency stimulation of the direct cortical input to area CA1 induces homosynaptic LTD and heterosynaptic LTP in the rat hippocampal-entorhinal cortex slice preparation.** *Eur J Neurosci.* 2007 Jan;25(1):251-8.