

Prof. Dr. THOMAS KUNER

Date of birth: 07 October, 1965
Gender: Male
Address: Institute of Anatomy and Cell Biology
Department of Functional Neuroanatomy
Heidelberg University
Im Neuenheimer Feld 307
69120 Heidelberg
Germany
Phone: +49-(0)6221-548678
Email: thomas.kuner@uni-heidelberg.de
Position: Professor (W3), Director, Department of Functional Neuroanatomy
Children: Two (* 2001, * 2007)



CURRICULUM VITAE

University education

1988 - 1998 Studies of Medicine at Heidelberg University

Scientific degrees

2003 Habilitation and Venia legendi in Physiology, Heidelberg University (Prof. Dr. B. Sakmann)
1998 Doctoral dissertation, M.D., Subject: "Isoform-specific actions of ethanol, argiotoxin636 and Mg²⁺ on NMDA receptors", Heidelberg University (Prof. Dr. P. H. Seeburg)

Professional experience

Since 2012 Director, Department of Functional Neuroanatomy, Medical Faculty Heidelberg, Heidelberg University
2006 - 2012 W3 Professor at the Department of Medical Cell Biology, Medical Faculty Heidelberg, Heidelberg University
2000 - 2006 Group leader, Max Planck Institute for Medical Research, Heidelberg
1998 - 2000 Postdoctoral fellow, Duke University Medical Center, Durham, and Marine Biological Laboratory, Woods Hole, (Prof. George J. Augustine)

Academic functions and awards:

Panels and coordinating functions:

Since 2015 Steering Committee member for the DFG CRC 1158 (Chronic Pain)
2003 - 2006 Speaker of the WIN-Kolleg of the Heidelberg Academy of Sciences

Awards and honours:

2014 Heidelberg University Annual Price for Exceptional Achievements
2012 - 2013 Fellow of the Marsilius Kolleg for Interdisciplinary Studies
2003 - 2006 WIN-Kollegiat of the Heidelberg Academy of Sciences
2000 - 2003 Habilitation Fellowship of the Claussen-Simon Foundation

2000 Grass Fellowship in Neurosciences
1999 - 2000 Human Frontiers in Science Program Long-Term Fellowship
1998 - 1999 Feodor-Lynen Fellow of the Alexander von Humboldt Foundation
1989 - 1994 Fellowship by the German National Fellowship Foundation

A) Publications:

- Nunes, D and Kuner T. Axonal sodium channel NaV1.2 drives granule cell dendritic GABA release and rapid odor discrimination. **PLoS Biology** 16(8):e2003816. doi: 10.1372/journal.pbio.2003816
- Tan LL, Pelzer P, Heintz C, Tang W, Gangadharan V, Flor H, Sprengel R, Kuner T., Kuner R. A pathway from midcingulate cortex to posterior insula gates nociceptive hypersensitivity. **Nature Neuroscience** 2017;20(11):1591-1601.
- Venkataramani V, Herrmannsdorfer F, Heilemann M, Kuner T. SuReSim: simulating localization microscopy experiments from ground truth models. **Nature Methods** 2016;13(4):319-321.
- Nunes D, Kuner T. Disinhibition of olfactory bulb granule cells accelerates odour discrimination in mice. **Nature Communications** 2015;6:8950.
- Korber C, Horstmann H, Venkataramani V, Herrmannsdorfer F, Kremer T, Kaiser M, Schwenger DB, Ahmed S, Dean C, Dresbach T, Kuner T. Modulation of presynaptic release Probability by the vertebrate-specific protein Mover. **Neuron** 2015;87(3):521-533.
- Abraham NM, Egger V, Shimshek DR, Renden R, Fukunaga I, Sprengel R, Seeburg PH, Klugmann M, Margrie TW, Schaefer AT, Kuner T. Synaptic inhibition in the olfactory bulb accelerates odor discrimination in mice. **Neuron** 2010;65(3):399-411.
- Kuner T., Li Y, Gee KR, Bonewald LF, Augustine GJ. Photolysis of a caged peptide reveals rapid action of N-ethylmaleimide sensitive factor before neurotransmitter release. **Proc Natl Acad Sci U S A** 2008;105(1):347-352.
- Duebel J, Haverkamp S, Schleich W, Feng G, Augustine GJ, Kuner T., Euler T. Two-photon imaging reveals somatodendritic chloride gradient in retinal ON-type bipolar cells expressing the biosensor Clomeleon. **Neuron** 2006;49(1):81-94.
- Kuner T., Augustine GJ. A genetically encoded ratiometric indicator for chloride: capturing chloride transients in cultured hippocampal neurons. **Neuron** 2000;27(3):447-459.
- Kuner T., Wollmuth LP, Karlin A, Seeburg PH, Sakmann B. Structure of the NMDA receptor channel M2 segment inferred from the accessibility of substituted cysteines. **Neuron** 1996;17(2):343-352.

B) Patents: -

Scientific collaborations beyond the planned Collaborative Research Centre

Nixon Abraham, ISEER Pune, Pune, India

Frank Biedermann, KIT, Karlsruhe, Germany

Federico Calegari, Technical University Dresden, Dresden, Germany

Johann Engelhardt, University of Mainz, Mainz, Germany

Valery Grinevich, DKFZ, Heidelberg, Germany
Oliver Gruber, Psychiatry, Heidelberg, Germany
Anna Kreshuk, EMBL, Heidelberg, Germany
Gary Lewin, Max-Delbruck Center, Berlin-Buch, Germany
Marcus Mall, Charite, Berlin, Germany
Mike Heilemann, Goethe Universität Frankfurt, Frankfurt, Germany
Wolfgang Sommer, ZI Mannheim, Mannheim, Germany
Frank Winkler, Neurooncology, Heidelberg, Germany
Matthijs Verhage, Vrije Universiteit Amsterdam, Amsterdam, Netherlands