Univ.-Prof. Dr. Jutta Engel

Full Professor (W3) for Biophysics

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University training and degree

1998	Diploma in in Biophysics
1988-1993	Studies of Biology and Biophysics, Humboldt University of Berlin

Advanced academic qualifications

Doctorate:	Ph.D. in Biophysics, Humboldt University of Berlin, 1990, Supervisor: Doz. Dr. Edwin Donath
Habilitation:	Physiology, 2008, Medical Faculty, Tübingen University

Postgraduate professional career

since 2009	Full Professor (W3) for Biophysics, Saarland University.
2001-2008	Group leader, Institute of Physiology II, University of Tübingen and Tübingen Hearing Research Centre (THRC)
1998-2001	Postdoc at the Institute of Physiology II, University of Tübingen (Prof. Dr. Peter Ruppersberg)
1993-1996	Postdoc at the Institute of Physiology, University of Göttingen, Department of Neuro- and Sensory Physiology (Prof. Dr. Dr. Detlev Schild).
1991-1993	Postdoc at the Max Planck Institute for Biophysical Chemistry, Göttingen, Dept. of Biological Spectroscopy (Prof. Dr. Dr. Anton Stier).

Miscellaneous

2017	Offer Full Professorship (W3) for Physiology, Universität Oldenburg, declined.
2012-2020	Co-coordinator (with E. Friauf, Kaiserslautern) of the DFG Priority Program PP1608 “Ultrafast and temporally precise information processing: Normal and dysfunctional hearing”.
2008	Offer Full Professorship (W2) for Interdisciplinary Hearing Research, Universitäts-medizin Charité Berlin, declined.
1999-2001	DFG Postdoctoral Fellowship for Habilitation.
1998-1999	Restart fellowship after maternal leave of the State Baden-Württemberg
1988, 1989	Guest scientist at the Frumkin Institute for Bioelectrochemistry, Academy of Sciences, Moscow, Soviet Union (total three months).

Ten most important publications

1. Eckrich S, Hecker D, Sorg K, Blum K, Fischer K, Münkner S, Wenzel G, Schick B, **Engel J** (2019). Cochlea-specific deletion of $Ca_v1.3$ calcium channels arrests inner hair cell differentiation and unravels pitfalls of conditional mouse models. *Front Cell Neurosci* 13, 225.
2. Stephani F, Scheuer V, Eckrich T, Blum K, Wang W, Obermair GJ, **Engel J** (2019). Deletion of the Ca^{2+} channel subunit $\alpha_2\delta3$ differentially affects $Ca_v2.1$ and $Ca_v2.2$ currents in cultured spiral ganglion neurons before and after the onset of hearing. *Front Cell Neurosci* 13, 298.
3. Ceriani F, Hendry A, Jeng J-Y, Johnson SL, Stephani F, Olt J, Holley MC, Mammano F, **Engel J**, Kros CJ, Simmons DD, Marcotti W (2019). Coordinated calcium signalling in cochlear sensory and non-sensory cells refines afferent innervation of outer hair cells. *EMBO J* 38, e99839.
4. Sonntag M, Blosa M, Schmidt S, Reimann K, Blum K, Eckrich T, Seeger G, Hecker D, Schick B, Arendt T, **Engel J**, Morawski M (2018). Synaptic coupling of inner ear sensory cells is controlled by brevican-based extracellular matrix baskets resembling perineuronal nets. *BMC Biol* 16, 99.
5. Fell B, Eckrich S, Blum K, Eckrich T, Hecker D, Obermair GJ, Münkner S, Flockerzi V, Schick B, **Engel J** (2016). $\alpha_2\delta2$ controls the function and trans-synaptic coupling of $Ca_v1.3$ channels in mouse inner hair cells and is essential for normal hearing. *J Neurosci* 36, 11024–11036
6. Pirone A, Kurt S, Zuccotti A, Ruttiger L, Pilz P, Brown DH, Franz C, Schweizer M, Rust MB, Rübsamen R, Friauf E, Knipper M, **Engel J** (2014). $\alpha_2\delta3$ is essential for normal structure and function of auditory nerve synapses and is a novel candidate for auditory processing disorders. *J Neurosci* 34, 434–445
7. Jaumann M, Dettling J, Gubelt M, Zimmermann U, Gerling A, Paquet-Durand F, Feil S, Wolpert S, Franz C, Varakina K, Xiong H, Brandt N, Kuhn S, Geisler HS, Rohbock K, Ruth P, Schlossmann J, Hütter J, Sandner P, Feil R, **Engel J**, Knipper M, Rüttiger L (2012). cGMP-Prkg1 signaling and Pde5 inhibition shelter cochlear hair cells and hearing function. *Nat Med* 18, 252–259
8. Baig SM, Koschak A, Lieb A, Gebhart M, Dafinger C, Nurnberg G, Ali A, Ahmad I, Sinnegger-Brauns MJ, Brandt N, **Engel J**, Mangoni ME, Farooq M, Khan HU, Nurnberg P, Striessnig J, Bolz HJ (2011). Loss of $Ca_v1.3$ (CACNA1D) function in a human channelopathy with bradycardia and congenital deafness. *Nat Neurosci* 14, 77–84
9. Johnson SL, Franz C, Kuhn S, Furness DN, Ruttiger L, Munkner S, Rivolta MN, Seward EP, Herschman HR, **Engel J**, Knipper M, Marcotti W (2010). Synaptotagmin IV determines the linear Ca^{2+} dependence of vesicle fusion at auditory ribbon synapses. *Nat Neurosci* 13, 45–52
10. Platzer J, **Engel J**, Schrott-Fischer A, Stephan K, Bova S, Chen H, Zheng H, Striessnig J (2000). Congenital deafness and sinoatrial node dysfunction in mice lacking class D L-type Ca^{2+} channels. *Cell* 102, 89-97.