**Thomas Jentsch**
Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP)
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## Curriculum vitae

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|---|---|
| Since 2009 | Deputy director, FMP, Berlin |
| Since 2006 | Head, Department of Physiology and Pathology of Ion Transport, FMP/MDC, Berlin |
| Since 2006 | Full professor (W3), Charité, Berlin |
| 2001 – 2003 | Director, Center for Molecular Neurobiology Hamburg (ZMNH), Hamburg |
| 1995 – 1998 | Director, Center for Molecular Neurobiology Hamburg (ZMNH), Hamburg |
| 1993 – 2006 | Full professor (C4), Center for Molecular Neurobiology Hamburg (ZMNH), Hamburg |
| 1991 | Venia legendi (Habilitation) in Cell Biochemistry, Universität Hamburg |
| 1988 – 1993 | Research group leader, Center for Molecular Neurobiology Hamburg (ZMNH), Hamburg |
| 1986 – 1988 | Postdoctoral fellow, Whitehead Institute for Biomedical Research, Cambridge, US |
| 1984 | MD (Dr. med.), Freie Universität Berlin |
| 1982 | PhD in Physics, Fritz-Haber-Institute, Max Planck Society (MPG), Berlin |
| 1981 – 1985 | Staff scientist, Department for Clinical Physiology, Freie Universität Berlin |
| 1972 – 1980 | Studies in Medicine and studies in Physics, Freie Universität Berlin |

## Research fields

Our group is active in the field of physiology and pathology of ion transport with the major areas:

- Cellular and molecular mechanisms of neurodegeneration, epilepsy, sensory biology
- Cell biology and (patho) physiology of cell volume regulation and related signaling in the CNS
- Mouse models
- Intracellular trafficking, endosomal/lysosomal traffic, and function
- Kidney physiology, transepithelial transport

## Activities in the scientific community, honors, awards

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| present | Member, advisory boards/committees: Université Côte d'Azur; Institut de l'Audition, F; CECS, CL; MPIEM, Göttingen; Fondation Louis-Jeantet, CH |
| 2018 | 'Society Needs Science' Prize (Stifterverband, Leibniz Society) |
| 2017, 2012 | European Research Council (ERC), Advanced Grants |
| 2012 | Hans Ussing Award Lecture, American Physiological Society, US |
| 2006 | Hodgkin-Huxley-Katz Prize Lecture, Physiological Society, UK |
| Since 2005 | Member, Hamburg Academy of Sciences |
| Since 2004 | Member, Leopoldina – German National Academy of Sciences |
| 2004 | Homer W. Smith Award, American Society of Nephrology, US |
| 2004 | Adolf Fick Prize for Physiology/Biophysics |
| Since 2001 | Member, Berlin-Brandenburg Academy of Sciences and Humanities (BBAW), European Molecular Biology Organization (EMBO), and Academia Europaea |
| 2001 | Prix Louis-Jeantet de médecine, Fondation Louis-Jeantet, CH |
| 2000 | Ernst Jung Prize for Medicine, Familie Hansen Prize, and Feldberg Prize |
| 1999 | Zülch Prize for research in neurology, Max Planck Society (MPG) |
| 1998 | Franz Volhard Prize for research in nephrology |
| 1998 | Alfred Hauptmann Award, Swiss Federation of Clinical Neuro-Societies, CH |
| 1995 | Gottfried Wilhelm Leibniz Prize, German Research Foundation (DFG) |
| 1992 | Wilhelm Vaillant Prize for medical research |

## Selected publications


Polovitskaya, M. M., C. Barbini, D. Martinelli, F. L. Harms, F. S. Cole, P. Calligari, G. Bocchinfuso, L. Stella, A. Ciolfi, M. Niceta, T. Rizza, M. Shinawi, K. Sisco, J. Johannsen, J. Denecke, R. Carrozzo, D. J. Wegner, K. Kutsche, M. Tartaglia, and T. J. Jentsch. 2020. 'A Recurrent Gain-of-Function Mutation in CLCN6, Encoding the ClC-6 Cl(-)/H(+)-Exchanger, Causes Early-Onset Neurodegeneration', Am J Hum Genet, 107: 1062-77.

Weinert, S., N. Gimber, D. Deuschel, T. Stuhlmann, D. Puchkov, Z. Farsi, C. F. Ludwig, G. Novarino, K. I. Lopez-Cayuqueo, R. Planells-Cases, and T. J. Jentsch. 2020. 'Uncoupling endosomal CLC chloride/proton exchange causes severe neurodegeneration', The EMBO Journal, 39: e103358.

Ullrich, F., S. Blin, K. Lazarow, T. Daubitz, J. P. von Kries, and T. J. Jentsch. 2019. 'Identification of TMEM206 proteins as pore of PAORAC/ASOR acid-sensitive chloride channels', Elife, 8.

Fernandes-Rosa, F. L., G. Daniil, I. J. Orozco, C. Goppner, R. El Zein, V. Jain, S. Boulkroun, X. Jeunemaitre, L. Amar, H. Lefebvre, T. Schwarzmayr, T. M. Strom, T. J. Jentsch, and M. C. Zennaro. 2018. 'A gain-of-function mutation in the CLCN2 chloride channel gene causes primary aldosteronism', Nat Genet, 50: 355-61.

Stuhlmann, T., R. Planells-Cases, and T. J. Jentsch. 2018. 'LRRC8/VRAC anion channels enhance beta-cell glucose sensing and insulin secretion', Nat Commun, 9: 1974.

Planells-Cases, R., D. Lutter, C. Guyader, N. M. Gerhards, F. Ullrich, D. A. Elger, A. Kucukosmanoglu, G. Xu, F. K. Voss, S. M. Reincke, T. Stauber, V. A. Blomen, D. J. Vis, L. F. Wessels, T. R. Brummelkamp, P. Borst, S. Rottenberg, and T. J. Jentsch. 2015. 'Subunit composition of VRAC channels determines substrate specificity and cellular resistance to Pt-based anti-cancer drugs', The EMBO Journal, 34: 2993-3008.

Voss, F. K., F. Ullrich, J. Munch, K. Lazarow, D. Lutter, N. Mah, M. A. Andrade-Navarro, J. P. von Kries, T. Stauber, and T. J. Jentsch. 2014. 'Identification of LRRC8 heteromers as an essential component of the volume-regulated anion channel VRAC', Science, 344: 634-8.

Billig, G. M., B. Pal, P. Fidzinski, and T. J. Jentsch. 2011. 'Ca2+-activated Cl- currents are dispensable for olfaction', Nat Neurosci, 14: 763-9.

Weinert, S., S. Jabs, C. Supanchart, M. Schweizer, N. Gimber, M. Richter, J. Rademann, T. Stauber, U. Kornak, and T. J. Jentsch. 2010. 'Lysosomal pathology and osteopetrosis upon loss of H+-driven lysosomal Cl- accumulation', Science, 328: 1401-3.

Novarino, G., S. Weinert, G. Rickheit, and T. J. Jentsch. 2010. 'Endosomal chloride-proton exchange rather than chloride conductance is crucial for renal endocytosis', Science, 328: 1398-401.