Thomas Jentsch

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Curriculum vitae

since 2009	Deputy Director of Leibniz-Institut für Molekulare Pharmakologie (FMP)
since 2006	Head, Department of Physiology and Pathology of Ion Transport, Leibniz-Institut für Molekulare Pharmakologie and Max Delbrück Center for Molecular Medicine
since 2006	Full Professor (W3), Charité - Universitätsmedizin Berlin
1995 - 2006	Director, Center for Molecular Neurobiology Hamburg (ZMNH), Hamburg University
1993	Full Professor (C4), Molecular Neuropathology, ZMNH
1991	Habilitation in Cell Biochemistry, University Medical Center Hamburg 1988 - 1993 Research group leader, ZMNH
1986 - 1988	Postdoctoral fellow, (with Harvey F. Lodish) at the Whitehead Institute (Massachusetts Institute of Technology), Cambridge, Massachusetts
1984	M.D. (thesis on pHi-regulating processes; thesis adviser: Prof. Wiederholt), Institute for Clinical Physiology, Freie Universität Berlin (FU)
1982	PhD in Physics (thesis on field ionization (surface physics), thesis adviser: Prof. Block); Fritz-Haber-Institute (Max-Planck-Society), Berlin
1981 - 1985	Staff scientist (Prof. Wiederholt), Institut für Klinische Physiologie, FU Berlin 1974 -
1980	Studies in Physics, FU Berlin
1972 - 1978	Studies in Medicine, FU 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, sensorial biology
- Mouse models
- Intracellular trafficking, endosomal/lysosomal traffic and function, cell volume regulation
- Kidney and bone physiology, transepithelial transport

Activities in the scientific community, honors, awards

2013	Cátedra de Investigación Dr. García-Sainz, Univ. Autón. San Luís Potosí
2012	Hans Ussing Award Lecture (American Physiological Society)
2011	European Research Council (ERC) Advanced Investigator
2006	Hodgkin-Huxley-Katz Prize Lecture (Physiological Society London)
since 2005	Member, Hamburg Academy of Sciences
2004	Homer W. Smith Award (American Society of Nephrology)
since 2004	Member, Deutsche Akademie Naturforscher Leopoldina (Natl. Acad. Science)
2004	Adolf Fick Prize for Physiology/Biophysics
2001	Prix Louis-Jeantet de médecine
since 2001	Member, Berlin-Brandenburg Akad. Wissenschaften, EMBO, and Academia Europaea

2000 Ernst Jung Prize for Medicine, Hansen Family Award, Feldberg Prize
1999 Zülch Prize for research in neurology (Max Planck Society)
1998 Franz Volhard Prize for research in nephrology
1998 Alfred Hauptmann Prize for research on epilepsy
1995 Leibniz Prize, German Research Foundation (DFG) 1992 Wilhelm Vaillant Prize for medical research

Selected publications

Planells-Cases R, Lutter D, Guyader C, Gerhards NM, Ullrich F, Elger DA, Kucukosmanoglu A, Xu G, Voss FK, Reincke SM, Stauber T, Blomen VA, Vis DJ, Wessels LF, Brummelkamp TR, Borst P, Rottenberg S, Jentsch TJ. Subunit composition of VRAC channels determines substrate specificity and cellular resistance to Pt-based anti-cancer drugs. Embo J. 2015;34(24):2993-3008.

Voss FK, Ullrich F, Munch J, Lazarow K, Lutter D, Mah N, Andrade-Navarro MA, von Kries JP, Stauber T, Jentsch TJ. Identification of LRRC8 heteromers as an essential component of the volume-regulated anion channel VRAC. Science (New York, NY. 2014;344(6184):634-8.

Hoegg-Beiler MB, Sirisi S, Orozco IJ, Ferrer I, Hohensee S, Auberson M, Godde K, Vilches C, de Heredia ML, Nunes V, Estevez R, Jentsch TJ. Disrupting MLC1 and GlialCAM and ClC-2 interactions in leukodystrophy entails glial chloride channel dysfunction. Nat Commun. 2014;5:3475.

Heidenreich M, Lechner SG, Vardanyan V, Wetzel C, Cremers CW, De Leenheer EM, Aranguez G, Moreno-Pelayo MA, Jentsch TJ, Lewin GR. KCNQ4 K(+) channels tune mechanoreceptors for normal touch sensation in mouse and man. Nat Neurosci. 2012;15(1):138-45.

Billig GM, Pal B, Fidzinski P, Jentsch TJ. Ca2+-activated Cl- currents are dispensable for olfaction. Nat Neurosci. 2011;14(6):763-9.

Weinert S, Jabs S, Supanchart C, Schweizer M, Gimber N, Richter M, Rademann J, Stauber T, Kornak U, Jentsch TJ. Lysosomal pathology and osteopetrosis upon loss of H+-driven lysosomal Cl- accumulation. Science (New York, NY. 2010;328(5984):1401-3.

Novarino G, Weinert S, Rickheit G, Jentsch TJ. Endosomal chloride-proton exchange rather than chloride conductance is crucial for renal endocytosis. Science (New York, NY. 2010;328(5984):1398-401.

Rickheit G, Maier H, Strenzke N, Andreescu CE, De Zeeuw CI, Muenscher A, Zdebik AA, Jentsch TJ. Endocochlear potential depends on Cl- channels: mechanism underlying deafness in Bartter syndrome IV. Embo J. 2008;27(21):2907-17.

Lange PF, Wartosch L, Jentsch TJ, Fuhrmann JC. ClC-7 requires Ostm1 as a beta-subunit to support bone resorption and lysosomal function. Nature. 2006;440(7081):220-3.

Scheel O, Zdebik AA, Lourdel S, Jentsch TJ. Voltage-dependent electrogenic chloride/proton exchange by endosomal CLC proteins. Nature. 2005;436(7049):424-7.