THOMAS J. JENTSCH, M.D., PH.D.

Address: Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP)/ Max Delbrück Centrum für Molekulare Medizin (MDC), Robert-Rössle-Str. 10, 13125 Berlin, Germany
Phone: +49 30 9406 2961
Email: jentsch@fmp-berlin.de
Homepage: http://www.fmp-berlin.de/jentsch.html
Position: Deputy Director of Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP); Head, Department of Physiology and Pathology of Ion Transport, Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP) and Max Delbrück Centrum für Molekulare Medizin (MDC)
Full Professor (W3), Charité - Universitätsmedizin Berlin

EDUCATION

1991	Habilitation in Cell Biochemistry, University Medical Center Hamburg
1984	M.D. (thesis on pH_i-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
1974 – 1980	Studies in Physics, FU Berlin
1972 – 1978	Studies in Medicine, FU Berlin

PROFESSIONAL BACKGROUND

since 2009	Deputy director of Leibniz-Forschungsinstitut 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
2001 - 2003 &	
1995 – 1998	Director, Center for Molecular Neurobiology Hamburg (ZMNH), Hamburg University
1993 – 2006	Full Professor (C4), Director Dept. Molecular Neuropathology, ZMNH
1988 – 1993	Research group leader, ZMNH
1986 – 1988	Postdoctoral fellow with Harvey F. Lodish at the Whitehead Institute (MIT), Cambridge, Massachusetts
1981 – 1985	Staff scientist (Prof. Wiederholt), Institut für Klinische Physiologie, FU Berlin

AWARDS/ HONORS

2018	'Society needs Science' Prize (by Stifterverband / Leibniz Gemeinschaft)
2017	Honorary Degree (Dr. h.c.) by Medical Faculty of Hamburg University
2017	Awarded second European Research Council (ERC) Advanced Grant
2013	Cátedra de Investigación Dr. García-Sainz, Univ. Autón. San Luís Potosí, MX
2012	Hans Ussing Award Lecture (American Physiological Society)
2012	Awarded European Research Council (ERC) Advanced Grant
2006	Hodgkin-Huxley-Katz Prize (Physiological Society, London)
2004	Adolf-Fick-Prize for Physiology/Biophysics
2004	Homer W. Smith Award (highest nephrology prize, American Society of Nephrology)
2004	Carl W. Gottschalk Distinguished Lectureship (American Physiological Society)
2003	'Berliner Professorship' at Yale University
2001	Ernst Jung-Preis für Medizin
2000	Elected Member of EMBO (European Molecular Biology Organization)
2000	Feldberg Prize (Foundation for Anglo-German Science)

2000 Familie Hansen Preis (Bayer Foundation)
2000 Prix Louis-Jeantet de médecine
1999 International Prize for Translational Neuroscience of the Gertrud Reemtsma Foundation
1998 Alfred Hauptmann Preis (for research on epilepsy)
1998 Franz Volhard Preis (for research in nephrology)
1995 Gottfried-Wilhelm-Leibniz-Preis of the DFG
1992 Wilhelm-Vaillant-Preis (for medical research)

ACADEMY MEMBERSHIPS

2006 Elected member of the Hamburg Academy of Science
2004 Elected member of Leopoldina (German National Academy of Science)
2001 Member of the Joachim Jungius Society, Hamburg
2001 Elected Member of the Berlin-Brandenburg Academy of Sciences and Humanities
2000 Elected Member of the Academia Europaea (European Academy of Sciences)

MEMBERSHIPS IN ADVISORY BOARDS

2017 - Advisory Board Institut de l'Audition (Paris)
2016 - Strategic Committee Université Côte d'Azur (Nice)
2013 - Scientific Committee of the Louis-Jeantet-Foundation, Genève, Switzerland
2010 - Int. Advisory Board of CECS (Centro de Investigaciones Científicas), Valdivia, Chile
2009 - International Advisory Board of Max-Planck-Institut für Experimentelle Medizin, Gö
2003 - 2011 Advisory Board of Ernst-Jung Stiftung für Wissenschaft und Forschung
2002 - 2010 Advisory Board Reemtsma Foundation within the Max Planck Society
2002 - 2006 Advisory Board of Hermann and Lilly Schilling Foundation
1998 - 2000 International Scientific Advisory Board, Instituto de Ciencias Biomédicas, Universidad de Chile, Santiago de Chile

SCIENTIFIC COOPERATIONS

Formalized collaborations in research networks: *Current*: Member of SFB 1365; FOR 2625. *Previously*: Member SFB 740; Speaker of SFB 444, member of 2 'Forschergruppen' and of 3 EU networks. Numerous national and international cooperations on case-by-case basis.

ORGANIZATION OF INTERNATIONAL SCIENTIFIC CONFERENCES

2019 Co-Organizer 39th Blankenese Conference 'Signaling in Health and Disease', Hamburg, Germany
2010 International Titisee Conference 'Sensory Transduction: the Gateway to Perception' (Co-chair Petit and Lewin) Titisee, Germany, Oct 13-17
2009 Symposium 'CLC Cl channels and transporters' at Physiology of Anion Transport and Cell Volume Regulation meeting (Co-chair: Uchida) Okazaki, Japan, Aug 4
2008 ESF Research Conference on Rare Diseases: Transporters and Channels (Co-chair: Palacín) Sant Feliu de Guixols, Spain, March 8-12
2002 Workshop 'Channelopathies', Instituto Juan March de Estudios e Investigaciones (Co-chairs: Ferrer-Montiel, Lerma) Madrid, Spain, March 11-13

PATENTS

1999 Potassium channels and genes encoding these potassium channels
2014 LRRC8-comprising protein complexes and methods for identification of VRAC modulators

SELECTED LECTURES OF LAST 10 YEARS

2019, Oct 1 '*Volume-regulated VRAC and acid-activated ASOR: widely expressed anion channels with* multiple functions', Keynote Lecture, Meeting of the German Physiological Society, Ulm, Germany

2019, Aug 5 'Physiological *Roles of Endo-Lysosomal Cl^-/H^+-exchange'*, Gordon Research Conference on Organellar Channels & Transporters, Mount Snow, VT, USA

2019, June 19 '*The ClC-2 chloride channel and its role in aldosterone secretion'*, Ion Channel Modulation Symposium, Clare College, Cambridge, UK

2018, Sept 21 '*Properties and Functions of VRAC/LRRC8 Volume-Regulated Anion Channels*' Keynote Lecture, Conference of International Transmembrane Transporter Society (ITTS), Vienna, Austria

2017, May 16 '*VRACs: volume-regulated anion channels with role beyond cell volume regulation*', EMBO Lecture, EMBO/FEBS course on ion channels, Erice, Italy

2017, Mar 6 '*Role of CLC anion/proton exchangers in lysosomal ion homeostasis and function'*, Gordon Research Conference on Lysosomal Diseases, Il Ciocco, Italy

2015, Nov 25 '*Molecular identification and role in physiology of the volume-regulated anion cannel VRAC*', John A. Young Plenary Lecture, FAOPS (Federation of Asian and Oceanic Physiological Societies) meeting, Bangkok, Thailand

2015, Nov 4 '*Molecular identification and role in physiology of the volume-regulated anion channel VRAC*', Plenary Lecture, 51st meeting of the Argentinian Society for Investigations in Biochemistry and Molecular Biology, Mar del Plata, Argentina

2015, June 17 '*Physiological Roles of Vesicular Cl^-/H^+ Exchange*', Gordon Research Conference on Organellar Channels & Transporters, Waltham, MA, USA

2014, Jul 15 ‚*Molecular composition of volume-stimulated organic osmolyte / anion channel VSOAC*', Gordon Research Conference on Membrane Transport Proteins, Mount Snow, VT, USA

2013, Sep 6 '*Enigmatic and less enigmatic roles of Cl^-/H^+-exchange in endosomes and lysosomes*', Society of General Physiologists 67th Annual Meeting 'The enigmatic role of chloride ion', Woods Hole, MA

2013, Mar 22 '*Biología sensorial: el papel de canales de K^+ y Cl^- en el oído, el tacto, y la olfacción'*, Cátedra de investigación 'Dr. Jesús Adolfo García Sainz', Universidad Autónoma de San Luís Potosí, México

2012, July 5 '*Endosomal / lysosomal Cl^-/H^+ exchangers: Focus on ClC-7*', Gordon Research Conference 'Membrane Transport', Les Diablerets, CH

2012, Apr 24 '*Ion homeostasis in endosomes and lysosomes: role in kidney, bone, and brain disease'* Hans Ussing Award Lecture, Experimental Biology, San Diego, CA, USA

2012, Jan 23 '*The need for H^+-driven vesicular Cl^- accumulation: Insights from human disease, mice and biophysics'*, Keystone Symposium 'Membranes in Motion', Tahoe, CA, USA

2010, Aug 18 *Coupling H^+ to Cl^- in endosomes and lysosomes*, Gordon Research Conference on Membrane Transport Proteins, University of New England, ME, USA

FORMER COWORKERS IN LEADING ACADEMIC POSITIONS

T. Böttger (Group Leader, MPI HLR, Bad Nauheim, DE)
K. Dedek (Ass. Prof. U. Oldenburg, DE)
R. Estévez (Prof. U. Barcelona, ES)
P. Fong (Prof. U. Manhattan, US)
T. Friedrich (Prof. T.U. Berlin, DE)
S. Gründer (Prof. U. Aachen, DE)
C.A. Hübner (Prof. U. Jena, DE)
S.-E. Jordt (Prof. Duke U., US)
D. Keating (Prof. Flinders U., AU)
U. Kornak (Prof. U. Göttingen, DE)
C. Kubisch (Prof. U. Hamburg, DE)
P. Lange (Ass. Prof. U. Brit. Columbia, CAN)
U. Ludewig (Prof. U. Hohenheim, DE)
G. Novarino (Prof., IST, AT)
B. Pál (Ass. Prof. U. Debrecen, HU)
M. Poët (Group Leader, U. Nice, FR)
M. Pusch (Director Istituto Biofisica, CNR, IT)
M. Rust (Prof. U. Marburg, DE)
B. Schwappach (Prof. U. Hamburg DE, Dean Med. Fac.)
G. Spitzmaul (Ass. Prof., U. Nac. del Sur, AR)
T. Stauber (Prof. Medical School Hamburg, DE)
V. Stein (Prof. U. Bonn, DE)
R. Vicente García (Ass. Prof. U. Pompeu Fabra, ES)
S. Waldegger (Prof. U. Innsbruck, AT)
B. Wollnik (Prof. U. Göttingen, DE)
A.A. Zdebik (Senior Lecturer, UCL, UK)
P. Zhou (Ass. Prof. South. Med. U. Guangzhou, China)

Selected 50 publications (out of >170 original publications)

(* corresponding author; not indicated if last author; h-index = 85, > 21,000 cited (Web of Science, excl. Reviews); corresponding author on 30 out of 31 original papers cited >200 times, >120 citations per item)

1990 - 2009

Jentsch T.J.*, Steinmeyer K., Schwarz, G. (1990). Primary structure of *Torpedo marmorata* chloride channel isolated by expression cloning in *Xenopus* oocytes. ***Nature*** 348: 510-514. (with *News &Views*)

Steinmeyer K., Ortland C., Jentsch T.J. (1991). Primary structure and functional expression of a developmentally regulated skeletal muscle chloride channel. ***Nature*** 354: 301-304.

Steinmeyer K., Klocke R., Ortland C., Gronemeier M., Jockusch H., Gründer S., Jentsch T.J. (1991). Inactivation of muscle chloride channel by transposon insertion in myotonic mice. ***Nature*** 354: 304-308.

Thiemann A., Gründer S., Pusch M., Jentsch T.J. (1992). A chloride channel widely expressed in epithelial and non-epithelial cells. ***Nature*** 356: 57-60.

Koch M.C., Steinmeyer K., Lorenz C., Ricker K., Wolf F., Otto M., Zoll B., Lehmann-Horn F., Grzeschik K.H., Jentsch T.J. (1992). The skeletal muscle chloride channel in dominant and recessive human myotonia. ***Science*** 257: 797-800.

Gründer S., Thiemann A., Pusch M., Jentsch T.J. (1992). Regions involved in the opening of ClC-2 chloride channel by voltage and cell volume. ***Nature*** 360: 759-762.

Steinmeyer K., Lorenz C., Pusch M., Koch M.C., Jentsch T.J. (1994). Multimeric structure of ClC-1 chloride channel revealed by mutations in dominant myotonia congenita (Thomsen). ***EMBO J.*** 13: 737-743.

Pusch M., Ludewig U., Rehfeldt A., Jentsch T.J. (1995). Gating of the voltage-dependent chloride channel ClC-0 by the permeant anion. ***Nature*** 373: 527-531.

Ludewig U., Pusch M., Jentsch T.J. (1996). Two physically distinct pores in the dimeric ClC-0 chloride channel. ***Nature*** 383: 340-343. (with *News &Views*)

Biervert C., Schroeder B.C., Kubisch C., Berkovic S.F., Propping P., Jentsch T.J.*, Steinlein O.K.* (1998). A potassium channel mutation in neonatal human epilepsy. ***Science*** 279: 403-406.

Schroeder B.C., Kubisch C., Stein V., Jentsch T.J. (1998). Moderate loss of function of cyclic-AMP-modulated KCNQ2/KCNQ3 potassium channel causes epilepsy. ***Nature*** 396: 687-690.

Kubisch C., Schroeder B.C., Friedrich T., Lütjohann B., El-Amraoui A., Marlin S., Petit C., Jentsch T.J. (1999). KCNQ4, a potassium channel expressed in sensory outer hair cells, is mutated in dominant deafness. ***Cell*** 96: 437-446.

Schroeder B.C., Waldegger S., Fehr S., Bleich M., Warth R., Greger R., Jentsch T.J. (2000). A constitutively open potassium channel formed by KCNQ1 and KCNE3. ***Nature*** 403: 196-199. (with *Comment* in TIPS)

Piwon N., Günther W., Schwake M., Bösl M.R., Jentsch T.J. (2000). ClC-5 Cl^--channel disruption impairs endocytosis in a mouse model for Dent's disease. ***Nature*** 408: 369-373.

Kharkovets T., Hardelin J.P., Safieddine S., Schweizer M., El-Amraoui A., Petit C., Jentsch T.J. (2000). KCNQ4, a K^+-channel mutated in a form of dominant deafness, is expressed in the inner ear and in the central auditory pathway. ***Proc. Natl. Acad. Sci. U.S.A.*** 97: 4333-4338. (with *Perspective*)

Stobrawa S.M., Breiderhoff T., Takamori, S., Engel D., Schweizer M., Zdebik A.A., Bösl M.R., Ruether K., Jahn H., Draguhn A., Jahn R., Jentsch T.J. (2001). Disruption of ClC-3, a chloride channel expressed on synaptic vesicles, leads to a loss of the hippocampus. ***Neuron*** 29: 185-196. (with *Preview*)

Kornak U., Kasper D., Bösl M.R., Kaiser E., Schweizer M., Schulz A., Friedrich W., Delling G., Jentsch T.J. (2001). Loss of the ClC-7 chloride channel leads to osteopetrosis in mice and man. ***Cell*** 104: 205-215. (with *News & Views* in *Nature*)

Hübner C.A., Stein V., Hermanns-Borgmeyer I., Meyer T., Ballanyi K., Jentsch T.J. (2001). Disruption of KCC2 reveals an essential role of K-Cl-cotransport already in early synaptic inhibition. ***Neuron*** 30: 515-524.

Estévez R., Boettger T., Stein V., Birkenhäger R., Otto E., Hildebrandt F., Jentsch T.J. (2001). Barttin is a Cl^- channel β-subunit crucial for renal Cl^- reabsorption and inner ear K^+ secretion. ***Nature*** 414: 558-561. (with *News &Views*)

Bösl M.R., Stein V, Hübner C., Zdebik A.A., Jordt S.E., Mukhophadhay A.K., Davidoff M.S., Holstein A.F., Jentsch T.J. (2001). Male germ cells and photoreceptors, both depending on close cell-cell interactions, degenerate upon ClC-2 Cl^--channel disruption. ***EMBO J.*** 20: 1289-1299.

Boettger T., Hübner C.A., Maier H., Rust M., Beck F.X., Jentsch T.J. (2002). Deafness and renal tubular acidosis in mice lacking the K-Cl co-transporter KCC4. ***Nature*** 416: 874-878.

Estévez R., Schroeder B.C., Accardi A., Jentsch T.J.$^+$, Pusch M.$^+$ (2003). Conservation of chloride channel structure revealed by an inhibitor binding site in ClC-1. ***Neuron*** 38: 47-59.

Boettger T., Rust M.B., Maier H., Seidenbecher T., Schweizer M., Keating D., Faulhaber J., Ehmke H., Pfeffer C., Scheel O., Lemcke B., Host J., Leuwer R., Pape H.C., Völkl H., Hübner C.A., Jentsch T.J. (2003). Loss of K-Cl cotransporter KCC3 causes deafness, neurodegeneration and reduced seizure threshold. ***EMBO J.*** 22: 5422-5434.

Kasper D., Planells-Cases R., Fuhrmann J.C., Scheel O., Zeitz O., Ruether K., Schmitt A., Poët M., Steinfeld R., Schweizer M., Kornak U., Jentsch T.J. (2005). Loss of the chloride channel ClC-7 leads to lysosomal storage disease and neurodegeneration. ***EMBO J.*** 24: 1079-1091.

Scheel O., Zdebik A.A., Lourdel S., Jentsch T.J. (2005). Voltage-dependent electrogenic chloride proton exchange by endosomal CLC proteins. ***Nature*** 436: 424-427.

Kharkovets T., Dedek K., Maier H., Schweizer M., Khimich D., Nouvian R., Vardanyan V., Leuwer R., Moser T., Jentsch T.J. (2006). Mice with altered KCNQ4 K^+ channels implicate sensory outer hair cells in human progressive deafness. ***EMBO J.*** 25: 642-652.

Poët M., Kornak U., Schweizer M., Zdebik A.A., Scheel O., Hoelter S., Wurst W., Schmitt A., Fuhrmann J.C., Planells-Cases R., Mole S.E., Hübner C.A., Jentsch T.J. (2006). Lysosomal storage disease upon disruption of the neuronal chloride transport protein ClC-6. ***Proc. Natl. Acad. Sci. USA*** 103: 13854-13859.

Lange P.F., Wartosch L., Jentsch T.J.*, Fuhrmann J.C. (2006). ClC-7 requires Ostm1 as a β-subunit to support bone resorption and lysosomal function. ***Nature*** 440: 220-223.

Blanz J., Schweizer M., Auberson M., Maier H., Muenscher A., Hübner C.A., Jentsch T.J. (2007). Leukoencephalopathy upon disruption of the chloride channel ClC-2. ***J. Neurosci.*** 27: 6581-6589.

Rickheit G., Maier H., Strenzke N., Andreescu C.E., De Zeeuw C.I., Zdebik A.A., Jentsch T.J. (2008). Endocochlear potential depends on chloride channels: mechanism underlying deafness in Bartter syndrome IV. ***EMBO J.*** 27: 2907-2917.

Maritzen T., Keating D.J., Neagoe I., Zdebik A.A., Jentsch T.J. (2008). Role of the vesicular chloride transporter ClC-3 in neuroendocrine tissue. ***J. Neurosci.*** 28: 10587-10598.

2010 - present

Tzingounis A.V., Heidenreich M., Kharkovets T., Spitzmaul G., Jensen H.S., Nicoll R.A., Jentsch T.J. (2010). The KCNQ5 potassium channel mediates a component of the afterhyperpolarization current in mouse hippocampus. ***Proc. Natl. Acad. Sci. USA*** 107: 10232-10237.

Novarino G., Weinert S., Rickheit G., Jentsch T.J. (2010). Endosomal chloride-proton exchange rather than chloride conductance is crucial for renal endocytosis. ***Science*** 328: 1398-1401. (with *Perspective*)

Weinert S., Jabs S., Supanchart C., Schweizer M., Gimber N., Richter M., Rademann J., Stauber T., Kornak U., Jentsch T.J. (2010). Lysosomal pathology and osteopetrosis upon loss of H^+-driven lysosomal Cl^- accumulation. ***Science*** 328:1401-1403. (with *Perspective*)

Leisle L., Ludwig C.F., Wagner F.A., Jentsch T.J.*, Stauber T. (2011). ClC-7 is a slowly voltage-gated $2Cl^-/H^+$-exchanger and requires Ostm1 for transport activity. ***EMBO J.*** 30: 2140-2152.

Billig G.M., Pál B., Fidzinski P., Jentsch T.J. (2011). Ca^{2+}-activated Cl^--currents are dispensable for olfaction. ***Nature Neurosci.*** 14: 763-769.

Heidenreich, M., Lechner S.G., Vardanyan V., Wetzel C., Cremers C.W., De Leenheer E.M., Aránguez G., Moreno-Pelayo M.A., Jentsch T.J.*, Lewin G.R.* (2012). KCNQ4 K^+ channels tune mechanoreceptors for normal touch sensation in mouse and man. ***Nature Neurosci.*** 15: 138-145. (with *News &Views*)

Seja P., Schonewille M., Spitzmaul G., Badura A., Klein I., Rudhard Y., Wisden W., Hübner C.A., De Zeeuw C.I., Jentsch T.J. (2012). Raising cytosolic Cl^- in cerebellar granule cells affects their excitability and vestibulo-ocular learning. ***EMBO J.*** 31: 1217-1230.

Weinert S., Jabs S., Hohensee S., Chan W.L, Kornak U., Jentsch T.J. (2014). Transport activity and presence of ClC-7/Ostm1 complex account for different cellular functions. ***EMBO Reports*** 15: 784-791.

Hoegg-Beiler M.B., Sirisi S., Orozco I.J., Ferrer I., Hohensee S., Auberson M., Gödde K., Vilches C., López de Heredia M., Nunes V., Estévez R., Jentsch T.J. (2014). Disrupting MLC1 and GlialCAM and ClC-2 interactions in leukodystrophy entails glial Cl^- channel dysfunction. ***Nature Communications*** 5: 3475.

Voss F.K., Ullrich F., Münch J., Lazarow K., Lutter D., Mah N., Andrade-Navarro M.A., von Kries J.P., Stauber T., Jentsch T.J. (2014). Identification of LRRC8 heteromers as an essential component of the volume-regulated anion channel VRAC. ***Science*** 344: 634-638. (with *Perspective* in *Science* and *Highlight* in *Nature Rev. MCB*)

Fidzinski P., Korotkova T., Heidenreich M., Maier N., Schuetze S., Kobler O., Zuschratter W., Schmitz D., Ponomarenko A., Jentsch T.J. (2015). KCNQ5 K^+ channels control hippocampal synaptic inhibition and fast network oscillations. ***Nature Communications*** 6: 6254.

Planells-Cases R., Lutter D., Guyader C., Gerhards N.M., Ullrich F., Elger D.A., Kucukosmanoglu A., Xu G., Voss F.K., Reincke S.M., Stauber T., Blomen V.A., Vis D.J., Wessels L.F., Brummelkamp T.R., Borst P., Rottenberg S., Jentsch T.J. (2015). Subunit composition of VRAC channels determines substrate specificity and cellular resistance to Pt-based anti-cancer drugs. ***EMBO J.*** 34, 2993-3008. (with *News & Views*)

Gödde K., Gschwend O., Puchkov D., Pfeffer C.K., Carleton A., Jentsch T.J. (2016) Disruption of Kcc2-dependent inhibition of olfactory bulb output neurons suggests its importance in odor discrimination. ***Nature Communications*** 7, 12043.

Fernandes-Rosa F.L., Daniil G., Orozco I.J., Göppner C., El Zein R., Jain V., Boulkroun S., Jeunemaitre X., Amar L., Lefebvre H., Schwarzmayr T., Strom T.M., Jentsch T.J.*, Zennaro M.C.* (2018). A gain-of-function mutation in the *CLCN2* chloride channel gene causes primary aldosteronism. ***Nature Genetics*** 350, 355-361. (with Research Highlight in *Nature Rev Nephrol*)

Stuhlmann T., Planells-Cases R, Jentsch T.J. (2018). LRRC8/VRAC anion channels enhance β-cell glucose sensing and insulin secretion. ***Nature Communications*** 9,1974.

Ullrich F., Blin S., Lazarow K., Daubitz T., von Kries J.P., Jentsch T.J. (2019). Identification of TMEM206 proteins as pore of PAORAC/ASOR acid-sensitive chloride channels. ***eLife*** e49187.

Göppner C., Orozco I.J., Hoegg-Beiler M.B., Soria A.H., Hübner C.A., Fernandes-Rosa F.L., Boulkroun S., Zennaro M.C., Jentsch T.J. (2019). Pathogenesis of hypertension in a mouse model for *CLCN2*-related hyperaldosteronism. ***Nature Communications*** 10, 4678.

Zhou C., Chen X., Planells-Cases R., Chu J., Wang L., Cao L., Li Z., López-Cayuqueo K.I., Xie Y., Ye S., Wang X., Ullrich F., Ma S., Fang Y., Zhang X., Qian Z., Liang X., Cai S., Jiang Z., Zhou D., Leng Q., Xiao T.S., Lan K., Yang J., Li H., Peng C., Qiu Z.*, Jentsch T.J.*, Xiao H.* (2020).Transfer of cGAMP into bystander cells by LRRC8 volume-regulated anion channels augments STING-mediated interferon responses and anti-viral immunity. ***Immunity*** 52, 767-781 (with *Preview*)

Weinert S., Gimber N., Deuschel D., Stuhlmann T., Puchkov D., Farsi Z., Ludwig C.F., Novarino G., López-Cayuqueo K.I., Planells-Cases R., Jentsch T.J. (2020). Uncoupling endosomal proton from chloride transport causes severe neurodegeneration. ***EMBO J.*** 39, e103358 (with *News &Views*)