

Michael Brecht

Humboldt-Universität zu Berlin
Bernstein Center for Computational Neuroscience Berlin (BCCN)
Philippstr. 13 | D-10115 Berlin
Phone: +49 (0)30 2093-6772
E-mail: michael.brecht@bccn-berlin.de



Curriculum vitae

- since 2007 Member, Board of Directors, NeuroCure Cluster of Excellence
- since 2007 Coordinator, Bernstein Center for Computational Neuroscience Berlin
- since 2006 Professor (W3), Animal Physiology/Systems Neuroscience and Computational Neuroscience
- 2004 – 2005 Assistant Professor, Department of Neuroscience, Erasmus Medical College, Rotterdam, The Netherlands
- 2004 Habilitation, University of Tübingen
- 1999 – 2004 Head, research group (department of Prof. Dr. Sakmann), Max Planck Institute for Medical Research, Heidelberg
- 1998 – 1999 Postdoc (laboratory of Prof. Dr. Singer), Max Planck Institute for Brain Research, Frankfurt
- 1995 – 1998 PhD thesis (Prof. Dr. Singer), “Temporal coding in the cat superior colliculus”, Max Planck Institute for Brain Research, Frankfurt
- 1994 Diploma thesis (Prof. Dr. Merzenich) “The vibrissal system of the rat”, Keck Center for Integrative Neuroscience, University of California, San Francisco, and Prof. Dr. Preilowski at University of Tübingen
- 1990 – 1994 Studies in Biology, University of Tübingen
- 1988 – 1990 Studies in Biochemistry, University of Tübingen

Research fields

Our group is active in the field of cellular and systems neuroscience with the following major areas:

- Active touch and object recognition
- Cortical organization
- Cellular basis of sensations
- Cellular basis of movement generation
- Hippocampal activity and navigation

Activities in the scientific community, honors, awards

- 2009 Advanced Investigator Grant, European Research Council (ERC)
- since 2008 Member of the review board, Human Frontier Science Program
- 2005 – 2010 Lecturer/Instructor, “Neural Systems and Behavior” MBL/Woods Hole
- 2003 – 2005 Lecturer/Instructor, “In-vivo intracellular recordings” Otto-Loewi course
- 1998 PhD (Dr. rer. nat.), with honors, summa cum laude, University of Tübingen

Selected publications

Epsztein, J, Brecht, M and Lee, AK. Intracellular Determinants of Hippocampal CA1 Place and Silent Cell Activity in a Novel Environment. *Neuron*. 2011; 70, 109-20.

Burgalossi, A, Herfst, L, von Heimendahl, M, Forste, H, Haskic, K, Schmidt, M and Brecht, M. Microcircuits of functionally identified neurons in the rat medial entorhinal cortex. *Neuron*. 2011; 70, 773-86.

Epsztein, J, Lee, AK, Chorev, E and Brecht, M. Impact of spikelets on hippocampal CA1 pyramidal cell activity during spatial exploration. *Science*. 2010; 327, 474-7.

Chorev, E, Epsztein, J, Houweling, AR, Lee, AK and Brecht, M. Electrophysiological recordings from behaving animals--going beyond spikes. *Curr Opin Neurobiol*. 2009; 19, 513-9.

Houweling, AR and Brecht, M. Behavioural report of single neuron stimulation in somatosensory cortex. *Nature*. 2008; 451, 65-8.

Lee, AK, Manns, ID, Sakmann, B and Brecht, M. Whole-cell recordings in freely moving rats. *Neuron*. 2006; 51, 399-407.

Anjum, F, Turni, H, Mulder, PG, van der Burg, J and Brecht, M, Tactile guidance of prey capture in Etruscan shrews. *Proc Natl Acad Sci U S A*. 2006; 103, 16544-9.

Feldman, DE and Brecht, M. Map plasticity in somatosensory cortex. *Science*. 2005; 310, 810-5.

Brecht, M, Schneider, M, Sakmann, B and Margrie, TW. Whisker movements evoked by stimulation of single pyramidal cells in rat motor cortex. *Nature*. 2004; 427, 704-10.

Margrie, TW, Meyer, AH, Caputi, A, Monyer, H, Hasan, MT, Schaefer, AT, Denk, W and Brecht, M. Targeted whole-cell recordings in the mammalian brain in vivo. *Neuron*. 2003; 39, 911-8.