

Daniela Vallentin

Freie Universität Berlin
Institute of Biology
Takustr. 6
D-14195 Berlin

Phone: +49 (0)30 83861358
Email: daniela.vallentin@fu-berlin.de



Curriculum vitae

Since 2016	Emmy Noether Independent Junior Research Group Leader, Neurobiology and Behavior, German Research Foundation (DFG), Freie Universität Berlin
2010 – 2016	Postdoctoral fellow, Neuroscience Institute, New York University, US
2005 – 2010	PhD thesis, Animal Physiology, Universität Tübingen
2001 – 2005	Studies in Mathematics, Technische Universität Berlin
2000 – 2001	Studies in Mathematics, Marie et Pierre Curie University, Paris, FR
1998 – 2000	Studies in Mathematics, Humboldt-Universität zu Berlin

Research fields

The focus of our research is to examine the changes in the songbird brain that occur throughout development and vocal interactions. We aim to discover synaptic mechanisms that are critical for shaping song learning and reveal neural patterns that govern vocal communications. In our group we use the following methods:

- Computer monitored behavioral observations of songbirds
- Targeted song training of juvenile songbirds
- Electrophysiological recordings of single neurons in awake behaving songbirds

Activities in the scientific community, honors, awards

2017	European Research Council (ERC), Starting Grant
2016	Peter and Patricia Gruber International Research Award, Society for Neuroscience
2016	FENS Travel Award, Society for Neuroscience
2011 – 2013	Research Fellowship, German Research Foundation (DFG)
2000 – 2001	Erasmus Scholarships, Erasmus Programme

Selected publications

- Vallentin D*, Kosche G*, Lipkind D, Long MA. Neural circuits. Inhibition protects acquired song segments during vocal learning in zebra finches. *Science* 2016; 351:267-271 | *equal contribution
- Picardo MA, Merel J*, Katlowitz KA*, Vallentin D*, Okobi DE, Benezra SE, Clary RC, Pnevmatikakis EA, Paninski L, Long MA. Population-Level Representation of a Temporal Sequence Underlying Song Production in the Zebra Finch. *Neuron* 2016; 90:866-876 | *equal contribution
- Benichov JI, Benezra SE, Vallentin D, Globerson E, Long MA, Tchernichovski O. The Forebrain Song System Mediates Predictive Call Timing in Female and Male Zebra Finches. *Curr Biol* 2016; 26:309-318
- Vallentin D, Long MA. Motor origin of precise synaptic inputs onto forebrain neurons driving a skilled behavior. *J Neurosci* 2015; 35:299-307
- Kosche G*, Vallentin D*, Long MA. Interplay of inhibition and excitation shapes a premotor neural sequence. *J Neurosci* 2015; 35:1217-1227 | *equal contribution
- English DF, Peyrache A, Stark E, Roux L, Vallentin D, Long MA, Buzsaki G. Excitation and inhibition compete to control spiking during hippocampal ripples: intracellular study in behaving mice. *J Neurosci* 2014; 34:16509-16517
- Vallentin D, Bongard S, Nieder A. Numerical rule coding in the prefrontal, premotor, and posterior parietal cortices of macaques. *J Neurosci* 2012; 32:6621-6630
- Jacob SN, Vallentin D, Nieder A. Relating magnitudes: the brain's code for proportions. *Trends Cogn Sci* 2012; 16:157-166
- Vallentin D, Nieder A. Representations of visual proportions in the primate posterior parietal and prefrontal cortices. *Eur J Neurosci* 2010; 32:1380-1387
- Vallentin D, Nieder A. Behavioral and prefrontal representation of spatial proportions in the monkey. *Curr Biol* 2008; 18:1420-1425