

James Poulet

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Neural Circuits and Behavior
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Curriculum vitae

since 2009 Group leader, Max Delbrück Center for Molecular Medicine (MDC), Berlin-Buch
2005 – 2009 Postdoctoral scientist (lab of Prof. Carl Petersen), Brain Mind Institute, École Polytechnique Fédérale de Lausanne, Switzerland
2003 – 2005 Postdoctoral scientist (lab of Dr. Berthold Hedwig), Cambridge University
2002 PhD (Dr. Berthold Hedwig), Cambridge University
1998 1st Class honors degree in Biology, University of Bristol

Research fields

Our lab is active in the field of *in vivo* systems neuroscience. We are interested in:

- Neocortical circuit and synaptic mechanisms underlying somatosensory perception and motor control
- Network mechanisms and functions of brain states
- *in vivo* cellular and synaptic mechanisms of neuronal synchrony
- Conditioned mouse forepaw behaviour

Activities in the scientific community, honors, awards

2010 European Research Council starting grant
2009 Postdoctoral funding, part of a Swiss/German research unit “Barrel Cortex Function”, German Research Foundation (DFG)
2005 Long Term Fellowship, Human Frontier Science Program (HFSP)
2004 Young Investigator Award: International Society for Neuroethology
2003 The Thomas Henry Huxley Award: Letter of Commendation, The Zoological Society of London
2002 Rolleston Memorial Prize, Biannual Oxford University Biology Prize
2002 Gedge Prize, Biannual Cambridge University Physiology Prize

Selected publications

Crochet, S, Poulet, JF, Kremer, Y and Petersen, CC, Synaptic mechanisms underlying sparse coding of active touch. *Neuron*. 2011; 69, 1160-75.

Yassin, L, Benedetti, BL, Jouhanneau, JS, Wen, JA, Poulet, JF and Barth, AL, An embedded subnetwork of highly active neurons in the neocortex. *Neuron*. 2010; 68, 1043-50.

Poulet, JF and Petersen, CC, Internal brain state regulates membrane potential synchrony in barrel cortex of behaving mice. *Nature*. 2008; 454, 881-5.

Poulet, JF and Hedwig, B, New insights into corollary discharges mediated by identified neural pathways. *Trends Neurosci*. 2007; 30, 14-21.

Borgdorff, AJ, Poulet, JF and Petersen, CC, Facilitating sensory responses in developing mouse somatosensory barrel cortex. *J Neurophysiol*. 2007; 97, 2992-3003.

Poulet, JF and Hedwig, B, The cellular basis of a corollary discharge. *Science*. 2006; 311, 518-22.

Poulet, JF and Hedwig, B, Auditory orientation in crickets: pattern recognition controls reactive steering. *Proc Natl Acad Sci U S A*. 2005; 102, 15665-9.

Poulet, JF, Corollary discharge inhibition and audition in the stridulating cricket. *J Comp Physiol A Neuroethol Sens Neural Behav Physiol*. 2005; 191, 979-86.

Hedwig, B and Poulet, JF, Complex auditory behaviour emerges from simple reactive steering. *Nature*. 2004; 430, 781-5.

Poulet, JF and Hedwig, B, A corollary discharge maintains auditory sensitivity during sound production. *Nature*. 2002; 418, 872-6.