

Dr. Guy Doron

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Charité Universitätsmedizin Berlin
Charité Cross Over – Campus Mitte
Charitéplatz 1 (Internal: Virchowweg 6)
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Education

PhD (Dr. rer. nat.) in Neurobiology, (summa cum laude), Humboldt University Berlin

Department of Biology, 2013

M.A. University of Haifa, Israel

Department of Psychology, 2007

B.Sc. University of Haifa, Israel

Department of Computer Sciences, 2003

B.A. University of Haifa, Israel

Department of Psychology, 2003

Research and Training

Post doctoral research fellow (Advisor: Prof. Matthew Larkum), Charité Universitätsmedizin Berlin

Research topic: “Neural circuits of learning and memory consolidation”

Doctoral degree, Humboldt University Berlin

Department for Biology, with Prof. Michael Brecht, 2008 - 2013

Dissertation: “Psychophysical characterization of single neuron stimulation in rat barrel cortex”

Department for Biology, with Prof. Michael Brecht, 2012 - 2013

Research project: “Membrane potential dynamics of vibrissal motor cortex neurons during staged episodes of active social touch”

Department for Biology, with Prof. Michael Brecht and Prof. Benjamin Lindner, 2012 – 2013

Research project: “Fitting an exponential Integrate and fire neuron to spike trains evoked by juxtacellular stimulation”

M.A degree, University of Haifa

Department of Psychology, with Prof. Kobi Rosenblum, 2002 – 2008

Dissertation: “Functional Description of the Gustatory Cortex of the Rat Following Taste Memory Formation”

Department of Neurobiology and Ethology, with Dr. Hanoch Kaphzan, 2004 – 2007

Research project: “Signal transduction and translation initiation convergence due to NMDA and dopaminergic neurotransmission”

Department of Neurobiology and Ethology, with Dr. Alina Elkobi, 2005 – 2008

Research project: “Proteomics approach to study the role of ERK1/2 in learning and plasticity”

Laboratory Skills

Methods:

Behavioral Experiments, Immunohistochemistry (IHC), Confocal and fluorescence Microscopy, Western Blotting (WB), in-vivo viral transfections, ex-vivo slice preparations, Electrophysiology techniques: *in-vivo* extracellular and juxtacellular stimulation and recording, whole cell recording, microstimulation, low speed and high speed videography.

Tools:

Biorad Radiance 2000 confocal unit Nikon Microscope, Olympus IX-81 Epifluorescence Microscope, LaserSharp 2000, Image-Pro Plus 4.5-6.0, AnalySIS[^]D, LaserPix V4.0, Adobe Illustrator, Adobe Photoshop, Spike2 and CED Power 1401, Cornerstone, Dagan Bridge & Voltage clamp amplifier, npi EXT 10-2F extracellular amplifier.

Teaching Experience

Lab Teaching Assistant, University of Haifa, 2005 - 2008

Lead graduate students in advanced fluorescence microscopy principles and techniques

Leadership Experience

Apple Picking Group Leader, Kibbutz Bar'am Plantations, 2000 - 2002

Apple picking guidance of Israeli students and foreign volunteers groups in Hebrew, English and Spanish.

Non-Commissioned Officer (N.C.O), Israel Defense Force (IDF), 1995-1998

Commander of recruits, service as an Explosive Detection Dog Trainer, Combat Engineering corps.

Computer Sciences and IT Experience

System Administrator, Help Desk Team, Elbit Systems Corporation, 2002 - 2008

Installing, supporting, and maintaining servers and other computer systems, and planning for and responding to service outages and other problems.

Programming Languages: C, C++, VB, VB.NET, Assembly, MATLAB, SQL.

Honors and Scholarships

PhD (Dr. rer. nat.) in Neurobiology, with honors, summa cum laude, Humboldt University Berlin, 2013

DAAD Research Grant for Doctoral Candidates and young academics and scientists, 2008 - 2011

Minvera Fellowship Program, 2008

Distinguished Award for Excellence in Research for Psychology Graduate Students, 2006

Languages

Fluent in Hebrew, English and German. Knowledge of Russian.

Publications

Research Papers

Kaphzan H., **Doron G.** and Rosenblum K. (2007) "Co-application of NMDA and Dopamine Induce Rapid Translation of RSK2 in the Mature Hippocampus", *J Neurochem.* ; 103(1):388-99

Houweling AR*, **Doron G***, Voigt BC, Herfst LJ, Brecht M (2010) "Nanostimulation: manipulation of single neuron activity by juxtacellular current injection", *J Neurophysiol* 103: 1696–1704.

*equal contribution

Doron G. and Rosenblum K. (2010) "c-Fos expression is elevated in GABAergic interneurons of the gustatory cortex following novel taste learning", *Neurobiol Learn Mem.* 2010 Jul; 94(1):21-9. Epub 2010 Mar 20.

Doron G., von Heimendahl M., Schlattmann P., Houweling AR., Brecht M. (2014) "Spiking irregularity and frequency modulate the behavioral report of single-neuron stimulation", *Neuron* ;81(3):653-63;

Book Chapters:

Barki-Harrington L., Belevovsky K., **Doron G.** and Rosenblum K. (2008) "Molecular Mechanisms of Taste Learning in the Insular Cortex and Amygdala", In: "Conditioned Taste Aversion: Behavioral and Neural Processes", edited by: Reilly S. and Schachtman T., Oxford University press, Oxford.

Posters and Invited Talks:

Doron G., Rosenblum K. (2007) "Novel taste elevates c-fos expression in GABAergic neurons in the Insular Cortex following Taste Aversion Learning", Poster presented in 2nd. Haifa Neurobiology of Learning and Memory Conference, April 2007

Doron G., Rosenblum K. (2007) "Novel taste elevates c-fos expression in GABAergic neurons in the Insular Cortex following Taste Aversion Learning", Poster presented in CSHL and Wellcome Trust Center meeting on Integrative Approaches to Brain Complexity, Cambridge, UK, September 2007.

Doron G., Rosenblum K. (2007) "Novel taste elevates c-fos expression in GABAergic neurons in the Insular Cortex following Taste Aversion Learning", Invited talk in Bernstein Center for Computational Neuroscience, Humboldt University, Berlin, October 2007.

Doron G., Rosenblum K. (2007) "Novel taste elevates c-fos expression in GABAergic neurons in the Insular Cortex following Taste Aversion Learning", Invited talk in Israeli Society for Neuroscience (ISFN) Annual Conference, Eilat, Israel, November 2007.

Kaphzan H., **Doron G.** and Rosenblum K. (2007) "Co-application of NMDA and Dopamine Induce Rapid Translation of RSK2 in the Mature Hippocampus", Poster presented in Israeli Society for Neuroscience (ISFN) Annual Conference, Eilat, Israel, November 2007.

Doron G., Houweling AR., Brecht M. (2009) "Single-neuron stimulation in barrel somatosensory cortex: assessing the sensory effects of action potential number and frequency", Poster presented in Barrels XXII Conference, Evanston, IL, USA, November 2009.

Houweling AR., **Doron G.**, Brecht M. (2009) "Nanostimulation: Manipulation of single neuron activity by juxtacellular current injection", Poster presented in Barrels XXII Conference, Evanston, IL, USA, November 2009.

Doron G., Houweling AR., Brecht M. (2009) "Single-neuron stimulation in barrel somatosensory cortex: assessing the sensory effects of action potential number and frequency", Poster presented in SFN Annual Conference, Chicago, IL, USA, November 2009.

Houweling AR., **Doron G.**, Brecht M. (2009) "Nanostimulation: Manipulation of single neuron activity by juxtacellular current injection", Poster presented in SFN Annual Conference, Chicago, IL, USA, November 2009.

Doron G., Houweling AR., Brecht M. (2011) "Single-neuron stimulation in barrel somatosensory cortex: assessing the sensory effects of action potential number and frequency", Poster presented in German Society of Neuroscience conference, Göttingen, Germany, March 2010.

Doron G., Houweling AR., Brecht M. (2011) "Single-neuron stimulation in barrel somatosensory cortex: assessing the sensory effects of action potential number and frequency", Poster presented in Barrels IX Conference, Baltimore, MA, USA, November 2011.

Doron G., Houweling AR., Brecht M. (2011) "Single-neuron stimulation in barrel somatosensory cortex: assessing the sensory effects of action potential number and frequency", Poster presented in SFN Annual Conference, Washington DC, USA, November 2011.

Doron G., Brecht M. (2012) "Spiking patterns & cortical neuron detectability", Invited talk in Neurobiology Seminar of the Hertie Institute for Clinical Brain Research, Tübingen, Germany, July 2012.

Doron G., Houweling AR., Brecht M. (2012) "Single-neuron stimulation in barrel somatosensory cortex: assessing the sensory effects of action potential number and frequency", Poster presented in FENS Conference, Barcelona, Spain, August 2012.

Doron G., Lindner B., Brecht M. (2013) "Enhancement of spike timing reliability in-vivo using noise", Invited talk in Bernstein Conference 2013 workshop, Tübingen, Germany, September 2013.

References

Prof. Michael Brecht, Department of Biology, Humboldt University Berlin, Berlin, Germany.

Prof. Benjamin Lindner, Department of Physics, Humboldt University Berlin, Berlin, Germany.

Prof.. Kobi Rosenblum, Department of Neurobiology and Ethology, University of Haifa, Haifa. Israel

Dr. Hanoch Kaphzan (MD/PhD), Department of Neurobiology and Ethology, University of Haifa, Haifa. Israel