

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Jochen Roeper

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Professor of Neurophysiology & Director, Centre of Physiology, Goethe University Frankfurt

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Kreisgymnasium Bargtheide	BAC	06/1983	Biology, History, Math
Hamburg University, Germany	MD	11/1991	Medicine
Hamburg University, Germany	PhD	03/1992	Physiology
Oxford University, UK	Post-Doc	03/1994	Neuroscience
Hamburg University, Germany	Post-Doc	03/1999	Neuroscience
Hamburg University, Germany	Habilitation	01/1999	Physiology
Oxford University, UK	M.A.	04/1999	Neuroscience

A. Personal Statement

My research focusses on the role of ion channels for in vitro and in vivo activity and behavioral functions of defined subpopulation of dopamine midbrain neurons. I also study how ion channels contribute to the pathophysiology of Parkinson disease and Schizophrenia.

B. Positions and Honors

11/1986 – 03/1992	Graduate Student, Institute of Physiology, University of Hamburg (Supervisor Prof. J.R. Schwarz).
04/1992 - 04/1994	Postdoctoral Fellow, Dept. of Physiology, University of Oxford, UK (Supervisor Prof. FM. Ashcroft).
04/1994 - 04/1999	Research Scientist, Center for Molecular Neurobiology (ZMNH), University of Hamburg (Director Prof. O. Pongs).
04/1999 – 04/2002	Assistant Professor (tenure-track), MRC Anatomical Neuropharmacology Unit, University of Oxford, UK (Director Prof. P. Somogyi).
04/2002 - 04/2007	Associate Professor (C3, tenure), Department of Physiology, University of Marburg.
04/2007 - present	Director (W3), Full Professor (tenure), Institute of Neurophysiology, Goethe University Frankfurt
01/2008 - present	Director, Center of Physiology, Goethe University Frankfurt
1985	Scholarship, National Scholarship Foundation Germany
1991	Fellowship, Parkinson Disease Society
1991	Prize Fellowship, Magdalen College Oxford
1992	Postdoctoral Fellowship, DFG
1999	Senior Fellowship, Exeter College Oxford
2001	Exhibitor, Royal Society UK

2004	Prize for excellent teaching, Marburg University
2013	Prize for excellent teaching, Goethe University
2015	Gutenberg Research Fellowship, Mainz University
2020	Visiting Miller Professorship, Berkeley

C. Contributions to Science

2004-2010	Council Member of International Basal Ganglia Society
2013-2017	Reviewing Editor "The Journal of Physiology"
2015-present	Section Editor "European Journal of Neuroscience"
2016-present	Neuroscience Panel for Danish Council for Independent Research (DFF)
2020-2022	Board Member, German Physiological Society, Frankfurt
2020	Panelist, NeuroNex, National Science Foundation, USA
2021	President, 100th Meeting of German Physiological Society, Frankfurt

D. Additional Information: Research Support and/or Scholastic Performance

Research is support by grants from DFG, NIH and GIF.

Selected Publications:

(for full Bibliography see <https://www.ncbi.nlm.nih.gov/myncbi/18iKzxx2vmGQQ/bibliography/public/>)

Chiu WH, Kovacheva L, Musgrove RE, Arien-Zakay H, Koprach JB, Brotchie JM, Yaka R, Ben-Zvi D, Hanani M, Roeper J, Goldberg JA. (2021) α -Synuclein-induced Kv4 channelopathy in mouse vagal motoneurons drives nonmotor parkinsonian symptoms. *Science Advances* 7(11):eabd3994

Otomo K, Perkins J, Kulkarni A, Stojanovic S, Roeper J*, Paladini CA* (2020) In vivo patch-clamp recordings reveal distinct subthreshold signatures and threshold dynamics of midbrain dopamine neurons. *Nat Commun.* 11:6286 *shared senior authors

Cooper A, Butto T, Hammer N, Jagannath S, Fend-Guella D L, Akhtar J, Radyushkin K, Lesage F, Winter J, Strand S, Roeper J*, Zechner U*, Schweiger S* (2020). Inhibition of histone deacetylation rescues phenotype in a mouse model of Birk-Barel intellectual disability syndrome. *Nature Communications*, 11: 480 *shared senior authors

Farassat N, Costa K M, Stojanovic S, Albert S, Kovacheva L, Shin J, Egger R, Somayaji M, Duvarci S, Schneider G, Roeper J. (2019) In vivo functional diversity of midbrain dopamine neurons within identified axonal projections. *Elife* 2019, 8

Duvarci S, Simpson E, Schneider G, Kandel ER, Roeper J*, Sigurdsson T* (2018) Impaired recruitment of dopamine neurons during working memory in mice with striatal D2 receptor overexpression. *Nature Communications* 9:2822. *shared senior authors

Krabbe S, Duda J, Schiemann J, Poetschke C, Schneider G, Kandel ER, Liss B, Roeper J*, Simpson EH* (2015) Increased dopamine D2 receptor activity in the striatum alters the firing pattern of dopamine neurons in the ventral tegmental area. *Proc Natl Acad Sci USA* 112: E1498-506. * shared senior authors

Subramaniam M, Althof D, Gispert S, Schwenk J, Auburger G, Kulik A, Fakler B, Roeper J (2014) Mutant α -synuclein enhances firing frequencies in dopamine substantia nigra neurons by oxidative impairment of A-type potassium channels. *J Neuroscience* 34:13586-99.

Schiemann J, Schlaudraff F, Klose V, Bingmer M, Seino S, Magill PJ, Zaghloul KA, Schneider G, Liss B, Roeper J. (2012) K-ATP channels in dopamine substantia nigra neurons control bursting and novelty-induced exploration. *Nature Neuroscience* 15:1272-80

Lammel S, Ion DI, Roeper J, Malenka RC. (2011) Projection-specific modulation of dopamine neuron synapses by aversive and rewarding stimuli. *Neuron* 70:855-62.

Lammel S, Hetzel A, Häckel O, Jones I, Liss B, Roeper J. (2008) Unique properties of mesoprefrontal neurons within a dual mesocorticolimbic dopamine system. *Neuron* 57:760-73.

Liss B, Haeckel O, Wildmann J, Miki T, Seino S and Roeper J (2005) KATP channels promote differential degeneration of dopaminergic midbrain neurons. *Nature Neuroscience* 8:1742-51.

Miki T, Liss B, Minami K, Shiuchi T, Saraya A, Kashima Y, Horiuchi M, Ashcroft F, Minokoshi Y, Roeper J, Seino S. (2001) ATP-sensitive K⁺ channels in the hypothalamus are essential for the maintenance of glucose homeostasis. *Nature Neuroscience* 4:507-12.

Roeper J, Sewing S, Zhang Y, Sommer T, Wanner SG, Pongs O (1998) NIP domain prevents N-type inactivation in voltage-gated potassium channels. *Nature* 391:390-3