

Dr. Sanja Bauer Mikulovic

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Personal

- Born on 29.05.1986
- Married, 2 children: (born 2014 and 2016)
- Citizenship: Swedish and Serbian

Work Experience

- **Leibniz Institute for Neurobiology** Magdeburg, Germany
Junior group leader *Jan 2021-present*
 - Investigating hippocampal and septal circuits linked to locomotion, cognitive and emotional learning and memory
 - Memory-related input-output clusters of subcortical and hippocampal neurons
 - Mechanisms of social learning and memory
- **German Centre for Neurodegenerative Diseases** Bonn, Germany
Post-doctoral researcher *Jan 2018 - Dec 2020*
 - International post-doc between the Karolinska Institutue, Stockholm, Sweden and DZNE Bonn, Germany. Laboratories of Gilad Silberberg and Stefan Remy.
 - Investigating neuronal circuits underlying motion- and emotion-related behavior using 2-photon imaging and electrophysiology in vivo.
 - Additional research interest in computational methods for automated behavioral analysis.
- **Uppsala University, Department of Neuroscience** Uppsala, Sweden
Post-doctoral researcher *Jan 2017 - Jan 2018*
 - Research on the role of specific hippocampal interneuron types in hippocampal oscillations underlying innate anxiety behavior.
- **Siemens Life Science Systems** Vienna, Austria
Data Scientist (50% part-time) *May 2008 - Oct 2010*
 - Data analysis and statistical modeling of pharmaceutical production.

Education

- **Uppsala University, Department of Neuroscience** Uppsala, Sweden
PhD in Medicine *May. 2011 - May. 2016*
 - Thesis title: *On the mechanisms behind hippocampal theta oscillations.*
 - Research on the role of specific interneuron types in hippocampal oscillations and behavior.

- Implementation of electrophysiology, optogenetics, and imaging techniques.
- Computational analysis of electrophysiological recordings in correlation with behavior.

- **Vienna University of Technology**

Vienna, Austria

- *MSc in Biomedical Engineering*

Oct. 2008 - Oct. 2010

- Specialization on Computational and Mathematical Biology.
- MSc thesis title: *Statistical Modeling of Pharmaceutical Production*.
- Relevant courses: mathematical modeling in biology, computational neuroscience, genetics.

Teaching and Supervision

- Teaching

- Integrative Neuroscience for MSc, WS 2020, 2021 *Neuroscience of social interaction*, OVGU Magdeburg, Germany.
- Integrative Neuroscience for MSc, WS 2020, 2021 *Writing course on neural signalling*, OVGU Magdeburg, Germany.
- Neuroscience for MSc, WS 2019 *Practical demonstrations of craniotomy surgeries and 2 Photon Imaging*, DZNE Bonn, Germany.
- Neurobiology for MSc, WS 2016, WS 2017 *Introduction to Electrophysiology*, Uppsala University, Sweden.
- Neurobiology for MSc, WS 2014, WS 2015, WS 2016 *Learning and Memory*, Uppsala University, Sweden.
- PhD Course, SS 2013, SS 2014 *Statistics for Neuroscientists*, Uppsala University, Sweden.
- PhD Course, SS 2017 *Advanced techniques to study animal behaviour*, Uppsala University, Sweden.
- Introduction to Computational Neuroscience for MSc, WS 2012, UT Vienna, Austria.

- Supervision

- Ph.D. advisor: *The role of medial septum inputs to the ventral hippocampus and ventral tegmental area in locomotion, appetitive and aversive learning*, by Endre Marosi, LIN Magdeburg.
- Ph.D. advisor: *Neural mechanisms and environmental modifiers of empathy and prosocial behaviour*, by Charitha Omprakash, LIN Magdeburg.
- Ph.D. co-advisor: *Basal forebrain interaction with locomotor circuits*, by Petra Mocellin, DZNE Bonn.
- Ph.D. co-advisor: *The role of OLM interneurons in memory and learning*, by Samer Siwani, Uppsala University.
- Ph.D. co-advisor: *Understanding the role of hippocampal interneurons in microcircuits involved in learning, memory and anxiety related behaviour*, by Angelica Thulin, Uppsala University.
- MSc advisor: *Molecular characterization of interneurons in aging animals*, by Robin Visvanathar, Uppsala University.
- MSc advisor: *Molecular characterization of Chrna2 positive cells in medial septum, amygdala and supramammillary nucleus*, by Johanna Hindman, Uppsala University.

Presentations (Selection)

- International Neurophotonics Workshop, *Shining light on the neural networks underlying motivation to move*, Brno, Czech Republic, 2022, invited symposium speaker.
- Neuroscience Graduate Programme Symposium, Regensburg, 2022, key note speaker.
- Young German Neuroscience Society Meeting, Ulm, 2021, key note speaker.
- German Neuroscience Meeting, *On motion and emotion-neuronal circuits underlying locomotion and aversive behavior in the hippocampus/medial septum system*, 2020, invited symposium speaker.
- Oxford University, 2020, Online invited talk by the groups of Peter Somogyi and David Dupret.
- ABINEP PhD symposium, *Hippocampal neuronal networks underlying cognitive, emotional and motor learning*, Merseburg, Germany, 2019, key note speaker.
- FENS Regional Meeting, *Neuronal basis of learned and innate behavior*, Belgrade, Serbia, 2019, symposium chair and presenter.
- Leibniz Institute for Neurobiology, *Hippocampal neuronal networks underlying cognitive and emotional memory formation*, Magdeburg, Germany, 2019, Invited talk.
- Department of Neurochemistry, Stockholm University, *The role of hippocampal interneurons in cognitive and emotional behavior*, Stockholm, Sweden, 2017, Invited talk.
- Brain Institute Natal Conference “From molecules to circuits”, *Chrna2 positive OLM interneurons differentially modulate CA3 and entorhinal cortex inputs to CA1 pyramidal cells*, Natal, Brazil, 2015, Invited talk.

Public Outreach

- Long Night of Science, *In the mice city*, 2022, Magdeburg, midnight lecture.
- Long Night of Science, *Can mice be empathetic?*, 2021, Magdeburg, invited interview.
- FEM Cafe, *Combining science, family and life in different countries*, 2021, invited talk.
- Network Motherhood and Science, 2021, invited podium discussion.

Awards

- Leibniz Best Minds - junior group award, 2023, 1.000.000 Euro.
- EMBO - advanced optical imaging and data analysis course, 2023, main organizer, 40.000 Euro.
- Volkswagen Stiftung - advanced optical imaging and data analysis course, 2021, organizer, 25.000 Euro.
- Leibniz Mentoring Programme - career coaching for excellent female scientists.
- International Post-Doc grant awarded by the Swedish Research Council (acceptance rate 10 - 15 %, 350.000 Euro), Jan 2018 – Dec 2020.
- Olle Enqvist post-doctoral fellowship, Uppsala University, Sweden, 60.000 Euro, May 2016 - Jan 2018.
- Marietta Blau Stipend, Austrian government fellowship for excellent students' study abroad, 30.000 Euro, Uppsala University, Sweden, Oct 2010-April 2011.
- The first graduate of the Biomedical Engineering master program, Oct 2010, UT Vienna. Press Release.

Management Experience

- LINdoscope, 2021, advanced optical imaging and data analysis course, organizer.
- onLINE seminar series, 2020-current, organizer.
- Symposium organizer: FENS regional meeting. Organizer/Speaker/Chair, 2019, Belgrade, Serbia.
- PhD Course organizer, Advanced techniques to study animal behavior, 2017, Uppsala, Sweden.

Reviewing activities

-Guest Editor in Cells, Frontiers in Cellular Neruoscience, Ad hoc Reviewer in PLOS Computational Biology, Nature Communications, Nature Scientific Reports, Nature Translational Psychiatry, Nature Communications Biology, Frontiers in Cellular Neuroscience, Frontiers in Psychiatry. Co-Reviewer in Neuron, Nature Neuroscience, Cell Reports, eLife

Languages

- Serbian (Mother tongue), English (Professional), German (Professional), Swedish (Intermediate), Spanish (Intermediate)