



Corinne Benakis, PhD

Institute for Stroke and Dementia Research, Munich, Germany

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Citizenship: Swiss, French mother tongue
Date of Birth: April 6 1980

Enthusiastic, pro-active and creative, I am an expert in the crossroad of neurobiology and immunology, investigating the critical role of the gut microbiota in brain disease.

Current position

Postdoctoral Research Associate

Since 06.2016

Marie Sklodowska-Curie Individual Fellowship
Laboratory of Dr. Arthur Liesz, Institute for Stroke and Dementia Research
Ludwig-Maximilians University, Munich, Germany

Education and Academic positions

Postdoctoral Researcher

01.2012-06.2016

Swiss National Science Foundation Fellowship
Laboratory of Prof. Costantino Iadecola, Brain and Mind Research Institute
Weill Cornell Medicine, New York, USA

Postdoctoral Researcher

05.2011-01.2012

Laboratories of Prof. Lorenz Hirt and Prof. Rolf Gruetter
University Hospital of Lausanne and Ecole Polytechnique Fédérale de Lausanne, Switzerland

PhD in Neuroscience

09.2007-05.2011

Laboratory of Prof. Lorenz Hirt, Department of Fundamental Neurosciences
Faculty of Biology and Medicine, Lausanne, Switzerland
Thesis: Neuroprotection in cerebral ischemia: an effect of c-Jun N-terminal kinase inhibition on the inflammatory response.

Master internship in Molecular Biology

01.2006-12.2006

Laboratory of Dr. Fred Meunier, Queensland Brain Institute
University of Queensland, Brisbane, Australia
Thesis: Dynamics of molecular interactions in neuronal communication and synaptic repair.

Master in Biochemistry

10.2004-12.2005

Faculty of Science, University of Geneva, Switzerland

Bachelor in Biochemistry

10.1999-10.2004

Faculty of Science, University of Geneva, Switzerland

Grants/Fellowships

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| • Deutsche Forschungsgemeinschaft grant (DFG) | EUR 280 000 | 2019-2021 |
| • Marie Sklodowska-Curie European Individual Fellowships | EUR 160 000 | 2017-2019 |
| • Swiss National Science Foundation | USD 142 500 | 2012-2015 |
| • Academic Society of Vaud, Post-doctoral research grant | CHF 10 000 | 2011 |
| • Academic Society of Vaud, Doctoral research grant | CHF 8 000 | 2010 |
| • Mobility Master scholarship, Ernest Boninchi Foundation
University of Geneva, Switzerland | CHF 7 000 | 2006 |
| • Mobility Master scholarship, Maria Stepanoff-Ogankoff,
University of Geneva, Switzerland | CHF 10 000 | 2006 |



Awards

• SyNergy travel grant 2019 International Stroke Conference 2019 Feb 6-8, Honolulu, USA	EUR 1 000	02.2019
• SyNergy travel grant 2018 Neuroprotection and Neurorepair Conference 2018 Oct 9-11, Dresden	EUR 500	10.2018
• SyNergy travel grant 2017 Brain Conference 2017 Apr 1-4, Berlin	EUR 500	04.2017
• SfN Trainee Professional Development Award SfN Conference 2016 Nov 12-16, San Diego, USA	USD 1 000	11.2016
• PhD Excellence Prize, Amicitia foundation University of Lausanne, Switzerland	CHF 7 500	09.2011
• Best Didactic Poster Award 2011 Faculty of Biology and Medicine, Lausanne, Switzerland	CHF 500	01.2011
• Best Didactic Poster Award 2010 Faculty of Biology and Medicine, Lausanne, Switzerland	CHF 500	01.2010
• Swiss Society for Neuroscience travel fellowship FENS Conference 2010 July 3-7, Amsterdam	CHF 1 500	07.2010
• Swiss Neuroscience Doctoral School travel grant SfN Conference 2009 October 17-21, Chicago	CHF 2 000	10.2009

Teaching / Supervision

Master course - Neuroimmunological methods in experimental stroke research May 2019
Graduate School of Systemic Neurosciences (GSN-LMU), Munich, Germany

Supervision of Master/Medical thesis

• Philip Melton, Medical student, Liesz Lab, ISD, Munich, Germany	Since 10.2018
• Diana Fink, Master student, Liesz Lab, ISD, Munich, Germany	Since 09. 2017
• Steffanie Heindl, Master student, Liesz Lab, ISD, Munich, Germany	09.2016-07.2017

Supervision of PhD students

• Rebecca Sadler, Liesz Lab, ISD, Munich, Germany	Since 09.2016
• Giulia Sita, Iadecola Lab, Weill Cornell Medicine, New York, USA	2013
• Ximena Castillo, Hirt Lab, Department of Fundamental Neurosciences Faculty of Biology and Medicine, Lausanne, Switzerland	2011

Teaching assistant in chemistry at high school

2008-2010
Collège de Candolle, Department of Public Education, Geneva, Switzerland
Task: Evaluate and coach students in chemistry, organic and analytical chemistry

Invited talks

• Society for Neuroscience (SfN) 2019, Chicago "The gut-brain axis in health and brain disease"	Oct 19-23 2019
• Brain & Brain PET Conference 2019, Yokohama "The role of the microbiome in acute and chronic brain disease"	July 4-7 2019
• Center for Advanced Studies (CAS), LMU, Munich "Microbial Endocrinology: Microbial-Gut-Brain Axis"	June 6-7 2019
• International Stroke Conference 2019, American Stroke Association, Hawaii "Microbiome in stroke and heart diseases"	Feb 6-8 2019
• Mind, Mood & Microbes 2nd International Conference, Amsterdam "The bi-directional communication between gut and brain after stroke"	Jan 17-18 2019
• Metabolomics Symposium, Munich "Disease Modulation by Microbiota, Lifestyle and Pharmacological Interventions"	Nov 12-13, 2018
• 10th Symposium International on Neuroprotection and Neurorepair, Dresden "The gut-brain axis in neurological disorders and repair"	Oct 9-11 2018



Publications

1. Cai R, Pan C, Ghasemigharagoz A, Todorov MI, Förstera B, Zhao S, Bhatia HS, Parra-Damas A, Mrowka L, Theodorou D, Rempfler M, Xavier ALR, Kress BT, **Benakis C**, Steinke H, Liebscher S, Bechmann I, Liesz A, Menze B, Kerschensteiner M, Nedergaard M, Ertürk A. Panoptic imaging of transparent mice reveals whole-body neuronal projections and skull-meninges connections. *Nature Neuroscience* 2019, 22:317-327 (IF:19.9)
2. Kobayashi M, Benakis C, Anderson C, Moore MJ, Poon C, Uekawa K, Dyke JP, Fak JJ, Mele A, Park CY, Zhou P, Anrather J, Iadecola C, Darnell RB. AGO CLIP Reveals an Activated Network for Acute Regulation of Brain Glutamate Homeostasis in Ischemic Stroke *Cell Reports* 2019, 28:979-991. e6 (IF:8.0)
3. Cramer JV, **Benakis C**, Liesz A. T cells in the post-ischemic brain: Troopers or paramedics? *Journal of Neuroimmunology* 2019, 326:33-37 (IF:3.0)
4. Singh V, Sadler R, Heindl S, Llovera G, Roth S, **Benakis C**, Liesz A. The gut microbiome primes a cerebroprotective immune response after stroke. *Journal of Cerebral Blood Flow & Metabolism* 2018, 38:1293-1298 (IF:4.9)
5. García-Bonilla L, Brea D, **Benakis C**, Lane D, Murphy M, Moore J, Racchumi G, Jiang X, Iadecola C and Anrather J. Endogenous protection from ischemic brain injury by preconditioned monocytes. *Journal of Neuroscience* 2018, 38: 6722–6736 (IF:5.9)
6. **Benakis C**, Llovera G and Liesz A. The meningeal and choroidal infiltration routes for leukocytes in stroke. *Therapeutics Advances in Neurological Disorders* 2018, 11: 1–13 (IF:4.8)
7. Heindl, S., Gesierich B, **Benakis C**, Llovera G, Duering M and Liesz A. Automated morphological analysis of microglia after stroke. *Frontiers Cellular Neuroscience* 2018; 12: 106 (IF:4.5)
8. Llovera G, **Benakis C**, Enzmann G, Cai R, Arzberger T, Ghasemigharagoz A, Mao X, Malik R, Lazarevic I, Liebscher S, Ertürk A, Meissner L, Vivien D, Haffner C, Plesnila N, Montaner J, Engelhardt B and Liesz A. The choroid plexus is a key cerebral invasion route for T cells after stroke. *Acta Neuropathologica* 2017, 134: 1-18 (IF:12.2)
9. Sadler R, Singh V, **Benakis C**, Garzetti D, Brea D, Stecher B, Anrather J and Liesz A. Microbiota differences between commercial breeders impacts the post-stroke immune response. *Brain Behavior and Immunity* Epub 2017 Mar 24 (IF:5.9)
10. **Benakis C**, Brea D, Caballero S, Faraco G, Moore J, Murphy M, Sita G, Racchumi G, Ling L, Pamer EG, Iadecola C, Anrather J. Commensal microbiota affects ischemic stroke outcome by regulating intestinal T cells. *Nature Medicine* 2016, 22: 516-523, (IF:30.4)
11. **Benakis C**, Garcia-Bonilla L, Iadecola C, Anrather J. The role of microglia and myeloid immune cells in acute cerebral ischemia. *Frontiers in Cellular Neuroscience* 2015, 8: 1-16 (IF: 4.6)
12. Hochrainer K, Jackman K, **Benakis C**, Anrather J, Iadecola C. SUMO2/3 is associated with ubiquitinated protein aggregates in the mouse neocortex after middle cerebral artery occlusion. *Journal of Cerebral Blood Flow & Metabolism* 2015, 35: 1-5 (IF: 5.4)
13. Garcia-Bonilla L, **Benakis C**, Iadecola C, Anrather J. Immune mechanisms in cerebral ischemic tolerance. *Frontiers in Neuroscience* 2014, 8: 44 (IF: 3.4)
14. Berthet C, Xin L, Buscemi L, **Benakis C**, Gruetter R, Hirt L, Lei H. Non-invasive diagnostic biomarkers for estimating the onset time of permanent cerebral ischemia. *Journal of Cerebral Blood Flow & Metabolism* 2014, 34: 1848-55 (IF: 5.4)
15. **Benakis C**, Vaslin A, Pasquali C, Hirt L. Neuroprotection by inhibiting the c-Jun N-terminal kinase pathway after cerebral ischemia occurs independently of Interleukin-6 and Keratinocyte-derived Chemokine (KC/CXCL1) secretion. *Journal of Neuroinflammation* 2012, 25: 76 (IF: 4.7)
16. **Benakis C**, Bonny C, Hirt L. JNK inhibition and inflammation after cerebral ischemia. *Brain Behavior and Immunity* 2010, 24: 800-811 (IF: 5.9)
17. **Benakis C**, Hirt L, Du Pasquier RA. Inflammation and Stroke. *Cardiovascular Medicine* 2009, 12: 143-150.