

Giovanna Diletta Ielacqua, DVM

Research and Work Experience

- August 2018 - present* **Postdoctoral Research Fellow** - Neurology and Neurological Sciences
Stanford University, California, US
- Sept 2017 – May 2018* **Head of animal facility**
ETH Zurich, Institute for Biomedical Engineering. Zurich, Switzerland
Management of the animal facility, animal import/export, animal health report
- Jan 2014 – June 2018* **PhD candidate**
ETH Zurich, Institute for Biomedical Engineering. Zurich, Switzerland
fMRI characterization of pain models in rodents. Se-fMRI, rs-fMRI from acquisition to data analysis
- Jan 2014 – Sept 2017* **Vice Head of animal facility**
ETH Zurich, Institute for Biomedical Engineering. Zurich, Switzerland
Management of the animal facility, animal import/export, animal health report
- Aug 2012 – Dec 2013* **DVM**
ETH Zurich, Institute for Biomedical Engineering. Zurich, Switzerland
Vascular Pathology in Alzheimer's Disease. Magnetic resonance angiography (MRA) and perfusion MRI in a mouse model of Alzheimer's Disease, acquisition and data analysis
- Jan 2012 – Aug 2012* **Veterinarian** - Clinic and surgery of small animals
Ambulatorio Veterinario Centro. Turin, Italy
- Oct 2010 – Oct 2011* **Vet. Med. Thesis**
Department of Veterinary Sciences, University of Turin. Turin, Italy
Microencapsulated organic acids therapy in Salmonella typhimurium swine infection. Autopsy, Histopathology, data analysis

Education

- June 2018* **Ph.D in Biomedical Engineering**
ETH Zurich, Institute for Biomedical Engineering. Zurich, Switzerland
- June 2012* **State Exam DVM**
- Sep 2006 – Oct 2011* **Veterinary Medicine Degree**
Department of Veterinary Science, University of Turin. Turin, Italy
- Sep 2001- Jul 2006* **High School** "G. Keplero" Scientific High school, Rome, Italy
- Jun-Jul 2005* **Exchange Student** "Egbert- Gymnasium" Humanistisches-neusprachliches Gymnasium. Muensterschwarzach, Germany

Awards

- Oct 2015* **Best Paper Award - Medical Image Analysis - MICCAI 2015**
Reconstructing Cerebrovascular Networks under Local Physiological Constraints by Integer Programming. Medical Image Analysis

Skills & Activities

<i>Skills</i>	<p>MRI data acquisition, rodents anesthesia, intubation, MR angiography, se-fMRI/rs-fMRI in mice and rats, FSL, AFNI, ITKsnap, neurosurgery (SNI mice), Immunofluorescence, Immunohistochemistry, Neuropathology, Histopathology, Neurobiology and Brain Physiology, Confocal Microscopy, Necropsy, Microsoft Office, Prism, Sigma Plot.</p> <p>FELASA B certificate - Education and training of persons carrying out animal experiments</p> <p>FELASA C certificate - Education for persons responsible for directing animal experiments/Ausbildung zum Leiter von Tierversuchen.</p>
<i>Teaching duties</i>	<ul style="list-style-type: none">- EXCITE Summer School on Biomedical Engineering (2013 - present)- Workshop: Functional MRI in mice: setup, animal preparation and monitoring (November 2016/May 2017)
<i>Languages</i>	Italian (native), English (Professional working proficiency), German (Professional working proficiency), French (basic knowledge)
<i>Scientific Memberships</i>	ESMRMB ESMI ISMRM
<i>Other Interests</i>	I love to travel and to take pictures (macro are definitely my favorites!), I have a passion for long distance swimming and I truly adore cooking, I like to organize stress-free cooking workshops with colleagues and friends!

Publications

- David Buehlmann, **Giovanna D. Ielacqua**, Jael Xandry, Markus Rudin. *Preventive administration of anti-NGF treatment effectively suppresses functional connectivity alterations following cancer-induced bone pain in mice* (accepted). PAIN
- Valerio Zerbi, **Giovanna D. Ielacqua**, Marija Markicevic, Matthias Haberl, Mark H Ellisman, Arjun A. Bhaskaran, Andreas Frick, Markus Rudin, Nicole Wenderoth. *Dysfunctional Autism risk genes cause circuit-specific connectivity deficits with distinct developmental trajectories*. *Cereb Cortex*. 2018 Jul 1;28(7):2495-2506. doi: 10.1093/cercor/bhy046.
- Kristoffer Sahlholm, **Giovanna D. Ielacqua**, Jinbin Xu, Lynne A Jones, Felix Schlegel, Robert H Mach, Markus Rudin, Aileen Schroeter: *The role of beta-arrestin2 in shaping fMRI BOLD responses to dopaminergic stimulation*. *Psychopharmacology* 04/2017;, DOI:10.1007/s00213-017-4609-6
- Giovanna D. Ielacqua**, Felix Schlegel, Martina Füchtenteimer, Jael Xandry, Markus Rudin, Jan Klohs: *Magnetic Resonance Q Mapping Reveals a Decrease in Microvessel Density in the arcA β Mouse Model of Cerebral Amyloidosis*. *Frontiers in Aging Neuroscience* 01/2016; 7(32)., DOI:10.3389/fnagi.2015.00241
- Jan Klohs, Andreas Deistung, **Giovanna D. Ielacqua**, Aline Seuwen, Diana Kindler, Ferdinand Schweser, Markus Vaas, Anja Kipar, Jü Rgen, R Reichenbach, Markus Rudin: *Quantitative assessment of microvasculopathy in arcAb mice with USPIO-enhanced gradient echo MRI*. *Journal of cerebral blood flow and metabolism: official journal of the International Society of Cerebral Blood Flow and Metabolism* 12/2015; 36(9)., DOI:10.1177/0271678X15621500
- Markus Rempfler, Matthias Schneider, **Giovanna D. Ielacqua**, Xianghui Xiao, Stuart R. Stock, Jan Klohs, Gábor Székely, Bjoern Andres, Bjoern H. Menze: *Reconstructing Cerebrovascular Networks under Local Physiological Constraints by Integer Programming*. *Medical Image Analysis* 04/2015; 25(1)., DOI:10.1016/j.media.2015.03.008
- Markus Rempfler, Matthias Schneider, **Giovanna D. Ielacqua**, Tim Sprenger, Xianghui Xiao, Stuart R. Stock, Jan Klohs, Gábor Székely, Bjoern Andres, Bjoern H. Menze: *Rekonstruktion zerebraler Gefässnetzwerke aus in-vivo μ MRA mittels physiologischem Vorwissen zur lokalen Gefäßgeometrie*. *Bildverarbeitung für die Medizin 2015*, Edited by Handels, Heinz and Deserno, Thomas Martin and Meinzer, Hans-Peter and Tolxdorff, Thomas, 01/2015: pages 161-166; Springer Berlin/Heidelberg., DOI:10.1007/978-3-662-46224-9_29

Conference Proceedings

- Giovanna D. Ielacqua**, Aileen Schroeter, Aline Seuwen, David Buehlmann, John N. Wood, and Markus Rudin. *fMRI and spectroscopic characterization of sensory and pain processing in "pain-free" mice*. *Proc. Intl. Soc. Mag. Reson. Med.* 25 (2017) #1715
- Georges Hankov, **Giovanna D. Ielacqua**, Basil Künnecke, Thomas Mueggler, Markus von Kienlin, and Markus Rudin. *Poloxamer: a new means to recover functional network information in the rodent's deep brain structures*. *Proc. Intl. Soc. Mag. Reson. Med.* 25 (2017) #5248
- David Buehlmann, **Giovanna D. Ielacqua**, Joanes Grandjean, Jael Xandry, and Markus Rudin. *Towards specific biomarkers of chronic pain: Modelling behavior readouts of developing pain to resting-state functional connectivity using a developmental trajectory in a mouse model of chronic pain from bone cancer*. *Proc. Intl. Soc. Mag. Reson. Med.* 25 (2017) #1710
- Giovanna D. Ielacqua**, Aileen Schroeter, David Buehlmann, John N. Wood, Markus Rudin. *fMRI characterization of sensory and pain processing in "pain-free" mice*. *The Challenge of Chronic Pain* (2017)
- Giovanna D. Ielacqua**, Aileen Schroeter, David Bühlmann, Felix Schlegel, John N Wood, and Markus Rudin. *fMRI characterization of pain processing in Nav1.7 Wnt1 KO mice*. *Proc. Intl. Soc. Mag. Reson. Med.* 24 (2016) #1740
- David Bühlmann, Joanes Grandjean, **Giovanna D. Ielacqua**, Jael Xandry, and Markus Rudin. *Longitudinal resting-state fMRI and 1H-MRS characterization in the mouse brain during development of a chronic pain state*. *Proc. Intl. Soc. Mag. Reson. Med.* 24 (2016) #3751
- Giovanna D. Ielacqua**, Aileen Schroeter, Mark Augath, Felix Schlegel and Markus Rudin. *how specific is specific? stimulus-evoked fMRI in rats and mice*. *Proc. Intl. Soc. Mag. Reson. Med.* 23 (2015) #2037
- Giovanna D. Ielacqua**, Felix Schlegel, Markus Rudin, Jan Klohs. *Age-dependent decrease of capillary density in arcA β mouse model of cerebral amyloidosis detected with Relaxation Rate Shift Index Q mapping at 9.4T using a Cryoprobe*. *Proc. Intl. Soc. Mag. Reson. Med.* 22 (2014)