

Dr. AMIT AGARWAL

Date of birth: 13 September, 1980
 Gender: Male
 Address: Heidelberg University
 Institute of Anatomy and Cell Biology
 Im Neuenheimer Feld 307
 69120 Heidelberg, Germany
 Phone: +49-(0)6221-546115
 Email: agarwal@ana.uni-heidelberg.de
 Position: Chica and Heinz Schaller Research Group
 Children: Two (* 2012, * 2015)



Leader

CURRICULUM VITAE**University education**

2003 - 2005 Master of Science (M.Sc.) in Neuroscience, International Max-Planck Research School for Neurosciences and Georg-August University, Göttingen, Germany
 1999 - 2003 Bachelor of Technology (B.Tech.), Biotechnological Engineering G.G.S. Indraprastha University, New Delhi, India

Scientific degrees

2008 Doctoral dissertation in Neuroscience, Mentor: Prof. Klaus-Armin Nave, Department of Neurogenetics, Max-Planck Institute of Experimental Medicine and Georg-August University, Göttingen, Germany

Professional experience

Since 2017 The Chica and Heinz Schaller Research Group Leader
 Institute of Anatomy and Cell Biology, Heidelberg University, Germany
 2016 - 2017 Research Associate (Junior Faculty), Department of Neuroscience, Johns Hopkins University, Baltimore, USA
 2010 - 2016 Post-doctoral fellow with Prof. Dwight Bergles, Department of Neuroscience, Johns Hopkins University, Baltimore, USA
 2008 - 2010 Post-doctoral fellow with Prof. Klaus-Armin Nave, Department of Neurogenetics, Max-Planck Institute of Experimental Medicine, Göttingen, Germany

Academic functions and awardsAwards and honours:

2017 Chica and Heinz Schaller Research Group Leader, Heidelberg, Germany
 2016 - 2018 NARSAD Young Investigator Award, Brain & Behavior Research Foundation, USA
 2016 Anuradha Rao Memorial Award, Cell Press/Society for Neuroscience, USA

2016	W. Barry Wood Jr. Young Investigator Award, Johns Hopkins University, USA
2016	FENS-IBRO/PERC Travel Award, FENS Forum 2016, Copenhagen, Denmark
2011 - 2014	National Multiple Sclerosis Society Postdoctoral Fellowship, New York, USA
2004 - 2008	Max-Planck Society Stipend for Graduate Students
2003 - 2004	International Max-Planck Research School Stipend, Göttingen, Germany
1999 - 2003	University Scholarship, G. G. S. Indraprastha University, Delhi, India

Editorial boards:

Since 2015 Editorial Board member, *Frontiers in Cellular Neuroscience and Matters*

A) Publications:

Larson VA, Mironova Y, Vanderpool KG, Waisman A, Rash JE, Agarwal A^{**}, Bergles DE^{**}. Oligodendrocytes control potassium accumulation in white matter and seizure susceptibility. **eLife** 2018;7.

Agarwal A, Wu PH, Hughes EG, Fukaya M, Tischfield MA, Langseth AJ, Wirtz D, Bergles DE. Transient opening of the mitochondrial permeability transition pore induces microdomain calcium transients in astrocyte processes. **Neuron** 2017;93(3):587-605.e587.

Kim YS, Anderson M, Park K, Zheng Q, Agarwal A, Gong C, Saijilafu, Young L, He S, LaVinka PC, Zhou F, Bergles D, Hanani M, Guan Y, Spray DC, Dong X. Coupled activation of primary sensory neurons contributes to chronic pain. **Neuron** 2016;91(5):1085-1096.

Goebbels S, Wieser GL, Pieper A, Spitzer S, Weege B, Yan K, Edgar JM, Yagensky O, Wichert SP, Agarwal A, Karram K, Renier N, Tessier-Lavigne M, Rossner MJ, Káradóttir RT, Nave K-A. A neuronal PI(3,4,5)P3-dependent program of oligodendrocyte precursor recruitment and myelination. **Nature Neuroscience** 2016;20:10.

Wang HC, Lin CC, Cheung R, Zhang-Hooks Y, Agarwal A, Ellis-Davies G, Rock J, Bergles DE. Spontaneous activity of cochlear hair cells triggered by fluid secretion mechanism in adjacent support cells. **Cell** 2015;163(6):1348-1359.

Otsu Y, Couchman K, Lyons DG, Collot M, Agarwal A, Mallet JM, Pfrieger FW, Bergles DE, Charpak S. Calcium dynamics in astrocyte processes during neurovascular coupling. **Nature Neuroscience** 2015;18(2):210-218.

Paukert M^{*}, Agarwal A^{*}, Cha J, Doze VA, Kang JU, Bergles DE. Norepinephrine controls astroglial responsiveness to local circuit activity. **Neuron** 2014;82(6):1263-1270.

Agarwal A, Zhang M, Trembak-Duff I, Unterbarnscheidt T, Radyushkin K, Dibaj P, Martins de Souza D, Boretius S, Brzozka MM, Steffens H, Berning S, Teng Z, Gummert MN, Tantra M, Guest PC, Willig KI, Frahm J, Hell SW, Bahn S, Rossner MJ, Nave KA, Ehrenreich H, Zhang W, Schwab MH. Dysregulated expression of neuregulin-1 by cortical pyramidal neurons disrupts synaptic plasticity. **Cell reports** 2014;8(4):1130-1145.

Agarwal A, Dibaj P, Kassmann CM, Goebbels S, Nave KA, Schwab MH. In vivo imaging and noninvasive ablation of pyramidal neurons in adult NEX-CreERT2 mice. **Cerebral**

Cortex 2012;22(7):1473-1486.

Brinkmann BG*, Agarwal A*, Sereda MW, Garratt AN, Muller T, Wende H, Stassart RM, Nawaz S, Humml C, Velanac V, Radyushkin K, Goebbels S, Fischer TM, Franklin RJ, Lai C, Ehrenreich H, Birchmeier C, Schwab MH, Nave KA. Neuregulin-1/ErbB signaling serves distinct functions in myelination of the peripheral and central nervous system. **Neuron** 2008;59(4):581-595.

* Equally contributing authors

** Corresponding authors

B) Patents: -

Scientific collaborations beyond the planned Collaborative Research Centre

Serge Charpak, École des Neurosciences Paris Île de France, France

Klaus-Armin Nave, Max-Planck Institute for Experimental Medicine, Germany

Weiqi Zhang, Universität Münster, Germany

Markus Schwab, Medizinische Hochschule Hannover, Germany

Martin Kerschensteiner, Universität München, Germany

Dwight Bergles, Johns Hopkins University, USA

Jeremy Nathans, Johns Hopkins University, USA

Alfonso Araque, University of Minnesota, USA

Eric Newman, University of Minnesota, USA