

JULIANNE McCALL

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EDUCATION

PhD Candidate in Cellular & Molecular Biology (Exp. graduation June 2015)
Heidelberg University, Spinal Cord Injury Center, Advisor: Dr. Armin Blesch
Dissertation title: "Transcriptional regulators of adult axonal regeneration"

Master of Science in Biomedical Sciences (2010)
University of California, San Diego, Advisor: Dr. Armin Blesch, GPA 3.88/4.0
Thesis title: "Roles of NO/cGMP in regenerative axonal growth programs"

Bachelor of Science in Neuroscience (2006)
Denison University, Granville, Ohio, Magna Cum Laude, GPA 3.7/4.0

PUBLICATIONS

McCall J, Kienle E, Uhrig S, Grimm D, Blesch A. Improved AAV gene transfer to dorsal root ganglion neurons by targeted peptide display, *in preparation*.

Dean K*, Fields A*, Geer M*, King E*, Lynch B*, Manohar R*, McCall J*, Palozola K*, Zhang Y*, Liebl E. An allele of *sequoia* dominantly enhances a *trio* mutant phenotype to influence *Drosophila* larval behavior, (* signifies equal contribution). PLoS One (2013) 8(12): e84149.

McCall J, Weidner N, Blesch A. Neurotrophic factors in combinatorial approaches for spinal cord regeneration. Cell and Tissue Research (2012) 349(1):27-37.

McCall J, Nicholson L, Weidner N, Blesch A. Optimization of adult sensory neuron electroporation to study mechanisms neurite growth. Frontiers in Molecular Neuroscience (2012) 5(11).

Paquet-Durand, F, Sanges, D, McCall J, Silva J, van Veen T, Ekström P. Photoreceptor rescue and toxicity induced by different calpain inhibitors. Journal of Neurochemistry (2010) 115(4):930-40.

McCall JR, Mead KS. Structural and functional changes in regenerating antennules in the crayfish *Orconectes sanborni*. Biological Bulletin (2008) 214(2):99-110.

Sachs BD, Baillie GS, McCall JR, Passino MA, Schachtrup C, Wallace DA, Dunlop AJ, MacKenzie KF, Klussmann E, Lynch MJ, Sikorski SL, Nuriel T, Tsigelny I, Zhang J, Houslay MD, Chao MV, Akassoglou K. p75 neurotrophin receptor regulates tissue fibrosis through inhibition of plasminogen activation via a PDE4/cAMP/PKA pathway. Journal of Cell Biology (2007) 177(6):1119-32.

EXPERIENCE

Heidelberg University Spinal Cord Injury Center, Laboratory for Neuroregeneration, PhD Candidate, 2010- Present, Heidelberg, Germany.
Dr. Armin Blesch - "Transcriptional regulators of adult axonal regeneration"
Identifying and testing DNA-binding factors for growth-promoting effects following CNS injury, utilizing rAAV vectors, in vitro neuronal growth assays, surgical procedures, immunocytochemistry, and fluorescence microscopy.

EXPERIENCE

American Journal Experts

Junior Editor, 2010-2014 (intermittently), certified English-language editor of academic research for the industry standard in academic journal review.

University of California, San Diego Center for Neural Repair,

Master's Student, Biomedical Sciences Graduate Program, 2008-2010, USA.
Dr. Armin Blesch- "Roles of NO/cGMP in regenerative axonal growth programs"
Genetic dynamics and intrinsic signaling mechanisms in CNS regeneration.

Salk Institute - UCSD - Burnham Institute Research Rotations

Graduate Research Assistant, 2007-2008, La Jolla, CA, USA
Advisors: Dr. Fred Gage, Salk Institute; Dr. Mark Ellisman, National Center for Microscopy Imaging Research, UCSD; and Dr. Alexey Terskikh, Burnham Inst.
Collaborations were established between three laboratories to pursue a project identifying components of the neurogenesis niche in the adult mouse hippocampus. Image published in Cell 132, Feb 2008.

Lund University Department of Ophthalmology

Fulbright Research Fellow, 2006-2007, Lund, Sweden
Advisor: Dr. Per Ekström. Signaling mechanisms in retinitis pigmentosa blindness disorders and pharmacological therapies using calpain inhibitors.

Denison University Department of Biology

Bachelor Honors Thesis Student Researcher, 2004-2006, Granville, Ohio, USA
Advisor: Dr. Kristina Mead - "A Novel Method to Study Nerve Regeneration in Crayfish Olfactory System" Highest score received for Bachelor Honors Thesis.

University of California, San Diego Department of Pharmacology

Research Assistant, Summer Undergraduate Research Fellowship, 2005, USA
Advisor: Dr. Katerina Akassoglou. Characterized the signaling mechanisms of p75 neurotrophin receptor in regenerative programs after CNS injury.

Denison University Department of Biology

Student Researcher, 2004-2005, Granville, Ohio, USA
Advisor: Dr. Eric Liebl. Phenotypic analysis of dominant enhancers of the *trio* mutant phenotype in *Drosophila* CNS development.

Stanford University Ophthalmic Tissue Engineering Laboratory

Student Research Assistant, Summer Internship, 2004, Palo Alto, CA, USA
Advisor: Dr. Harvey Fishman. Assisted with a case study of the etiology of an intraocular pseudotumor and development of implantable retinal chips.

UCSD Laboratory for Research on the Neuroscience of Autism

Student Research Assistant, Summer Internship, 2003, La Jolla, CA, USA
Advisor: Dr. Eric Courchesne. Assisted with digital comparative analyses of cortical brain structures indicating neurodevelopmental differences in autism.

Baldwin Wallace Department of Neuroscience

Student Research Assistant, Summer Internship, 2002, Berea, Ohio, USA
Advisor: Dr. Andrew Mickley. Behavioral and sensory characterization in prenatal rats using conditioned taste aversion.

Cleveland Clinic Lerner Research Institute Neuroscience Laboratories

Student Research Assistant, Summer Internships, 2001, 2002, Cleveland, USA.
Advisors: Dr. Marc Mayberg and Dr. Benedict Albeni. Electrophysiological analysis of pharmacological therapies for epilepsy.

SELECT
PRESENTATIONS

- McCall J, Kienle E, Grimm D, Blesch A. Development of chimeric AAV vectors for retrograde transport and sensory neuron transduction. Society for Neuroscience Annual Meeting, San Diego, USA, 2013
- J. McCall, Graduate school community outreach programs in neuroscience: Classroom workshops and an annual national science competition. Society for Neuroscience Annual Meeting, San Diego, USA, 2013
- McCall J, Public Scientific Literacy Programs. Comm4Biotech Conference on Science Communication by the German Biotechnology Student Initiative and French New Generation of Biotechnologists, Heidelberg, Germany, Nov. 2013
- McCall J and R van der Torren, Fostering Public Scientific Literacy. Fulbright Association Annual Meeting, Washington, DC, USA, 2013
- McCall J, Transcriptional Mechanisms of Axonal Regeneration. Invited Speaker, Annual Fall Meeting of the International Graduate School in Molecular Medicine Ulm, Ulm, Germany, 2012
- McCall J. Programs to Improve Public Science Literacy. Falling Walls Lab Fellow, Annual Falling Walls Conference on Breakthroughs, A.T. Kearney Scholarship, 2012
- McCall J, Kienle E, Grimm D, Blesch A. Development of chimeric AAV vectors for retrograde axonal transport and sensory neuron transduction . Meeting of the Heidelberg Interdisciplinary C. for Neurosciences, Schöntal, Germany, 2012
- McCall J, Transcriptional mechanisms regulating axonal regeneration after spinal cord injury. Guest talk for the Heidelberg University Centre for Organismal Studies, Heidelberg, Germany, 2012
- McCall J, Nicholson LK, Blesch A. An optimized neuronal electroporation transfection protocol to study intrinsic mechanisms of axonal regeneration *in vitro*. Annual Meeting of the Heidelberg University Interdisciplinary Center for Neurosciences, Schöntal, Germany, 2011.
- McCall J, Spinal Cord Injury Fundamentals. The San Diego Brain Injury Foundation, Encinitas, California, May, 2010.
- McCall J, Adolescent Brain Development and the Placebo Effect. Pacific Ridge High School Assemblies, Feb., 2010.
- McCall J, Paquet-Durand F, Ekström P. The differential effects of calpain inhibition on the retina as a whole. RetNet Annual Mtg, Budapest Hungary 2007
- McCall J, Paquet-Durand F, van Veen T, Ekström P. Rd1 photoreceptor cell survival depends on the *in vitro* calpain inhibition paradigm employed. RetNet Research Workshop, Potsdam, Germany, 2007.
- McCall J, Murch C, Mead K. Structural dynamics of the regenerating peripheral olfactory system in the crayfish *Orconectes sanbornii*. Ohio Academy of Science Annual Meeting, Columbus, Ohio, 2006.
- McCall J, Liebl E. Phenotypic analysis of dominant enhancers of the *trio* mutant phenotype in *Drosophila*. Ohio Academy of Science Annual Meeting, Columbus, Ohio, 2005.
- Commencement Student Addresses, Denison University and Chagrin Falls High School Graduation Ceremonies, 2006 and 2002, respectively.

AWARDS

Landesgraduiertenförderungsgesetz Graduate Fellowship, 3-year funding support of graduate research by the state of Baden-Württemberg. 2012-2014.

Federation of European Neuroscience Societies Neuroscience Outreach Grant, organized educational programs for public audiences, 2014.

Heidelberg University Biosciences Student Representative, Academic Advisory Board, CellNetworks Research Cluster, 2013.

Falling Walls Lab Fellow, A.T. Kearney Scholarship for 100 young international professionals, Berlin, Germany, 2012.

Global Exchange of International Leadership Initiatives Fellow, Social change think-tank network of young leaders, Hong Kong, China, 2012.

DAAD International Student of the Year, scholarship recipient of Heidelberg University, awarded for academic achievements and social engagement, 2011.

International Brain Bee Leadership Award, granted for coordinating the international neuroscience contest and establishing an alumni community for student participants. Florence, Italy, 2011.

Fulbright Academy of Science and Technology Delegate to the 5th World Science Forum, Budapest, 2011.

Howard Hughes Medical Institute Med-Into-Grad Fellowship, clinical training in Neurosurgery, Neurology & Neurorehabilitation, VA & UCSD Hospitals, 2009-2010.

National Institutes of Health UCSD Predoctoral Genetics Training Grant, 3-year program included courses, seminars & annual meeting, 2008-2010.

Association for Women in Science, San Diego Chapter Scholarship, for science outreach and academic contribution to neuroscience research, 2008.

U.S. Fulbright Research Grant, Sweden, 1-year fellowship to conduct neuroscience research and engage with US foreign policy, 2006-2007.

Two-time U.S. President's Gold Medal Award for Service, national award granted for efforts in improving communities through volunteer service, 2004-06

Who's Who Among Students in American Universities & Colleges, 2005-06

Denison Alumnae Endowed Scholarship, awarded for academic record and contributions to the campus, 2005-06.

Sigma Xi Award, Denison University Chapter, for science outreach, 2006.

Denison University Distinguished Leadership Award, 2006.

Denison University Biology Department Senior Fellow, 2005-2006.

Two-time Denison Community Association Giving Tree Award, recognition award for most volunteer hours, 2005, 2006.

International "Brain Bee" Neuroscience Competition, 3rd Place, 2002.

Tylenol National Scholarship, granted to 10 high school seniors, 2002.

COMMUNITY
ENGAGEMENT

International Brain Bee Neuroscience Education Outreach, Director of the 2013 and 2016 International Brain Bee Neuroscience Competitions for High School Students, Assistant Director of International Competitions 2010- 2012, 2014), Founder and Director of the German National (2011-Present) and San Diego (2008-20010) and Central Ohio (2006) regional competitions.

TEDx Conference Organizer, Licensee and Lead Curator of TEDxFulbright 2012-2015; events in Los Angeles, Washington DC, Dublin, Frankfurt, Boston.

HBIGS International Graduate School Student Speaker, member of the Board, founder of the Student Leadership Council, 2011-2013.

Heidelberg Neuro Outreach, Founder and Chair, organize and conduct neuroscience and science literacy workshops for schools, 2010-Present.

European Unitarian Universalists Association, Director of Youth Ethics Education, develop curricula and coordinate youth programs, 2011-2014.

German Fulbright Alumni Association, member of the Extended Board as the Editor of the annual publication. 2011-2013.

Autism Speaks, San Diego Chapter Science Ambassador, bridging research and community. Initiated the "Research Tent" at the annual Autism Walk, which has been implemented in other Walks across the USA. 2007-10.

UCSD Neuro Outreach, conducted neuroscience educational workshops in low-income area high schools and public events, 2008-10.

San Diego Science Olympiad, Assistant Event Captain, regional science competition for students , 2007-10.

Unitarian Universalist Fellowship of San Dieguito, Facilitator of the Coming of Age Program, a 1-year social justice, ethics course for teenagers, 2007-10.

Teaching Assistantships, Denison University Biology Department courses: Genetics, Molecular Biology, and Zoology, 2003-06.

HOPE for Autism, Chair, coordinated free behavioral therapy for 22 children with autism in low-income areas. Orchestrated parents, consultants, teachers, and volunteers to implement daily therapy programs. I personally trained over 100 volunteers in ABA therapy and coordinated the 1st Cleveland Clinic Center for Autism conference at Denison University. 2002-06.

Sustained Dialogue Diversity Program, Co-Founder of Sustained Dialogue at Denison University, based on the International Institute for Sustained Dialogue to promote understanding and respect between different communities. 2005-06.

Omicron Delta Kappa, President. National Leadership Honorary, Denison University Chapter. 2005-06.