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Positions

- 05/2016 – Assistant Professor of Pathology and Laboratory Medicine
 Center for Cellular and Molecular Therapeutics (CCMT) at the Children's
 Hospital of Philadelphia (CHOP), University of Pennsylvania
- 09/2009 – 04/2016 Postdoctoral Fellow
 Dept. of Physiology, Univ. of California San Francisco and HHMI
 Mentor: Dr. Yuh Nung Jan, Ph.D.

Education

- 05/2015 Spinal Cord Injury Training Program (SCITP)
 Dept. of Neuroscience, Ohio State University, Columbus, OH
- 2003 – 2009 Ph.D. in Neuroscience
 Univ. of Pennsylvania School of Medicine, Philadelphia, PA
- 1998 – 2002 B.S. in Biotechnology
 Shanghai Jiao Tong University, Shanghai, China

Research Experience

- 09/2009 – present UCSF Yuh Nung Jan Lab Postdoctoral Fellow
Research Projects: Cellular and molecular mechanisms underlying axon
 and dendrite degeneration and regeneration
 Neural and molecular substrates for the plasticity of aggression
- 02/2004 – 08/2009 UPenn Rita Balice-Gordon Lab Graduate Student
Research Projects: Cellular and molecular mechanisms underlying
 neural circuitry formation and function
 Zebrafish model of MLL leukemogenesis
 Zebrafish model of neurodegenerative diseases
- 09/2003 – 12/2003 UPenn Irwin Levitan Lab Pre-dissertation Laboratory Rotation
 Research Project: Regulation of sodium-potassium ATPase by its
 binding protein mSlob
- 06/2003 – 08/2003 UPenn Nancy Bonini Lab Pre-dissertation Laboratory Rotation
Research Project: Molecular mechanisms of polyglutamine diseases
- 07/2002 – 05/2003 Institute of Neuroscience, Academy of Sciences, Shanghai, China
Research Assistant in the Lab of Shu-Min Duan, Xiao-Bing Yuan, and
Mu-Ming Poo
Research Project: Axon guidance and Rho GTPase signaling

Awards and Fellowships

07/2014 – 2019	NIH/NINDS PA-11-197 NIH Pathway to Independence award (K99-R00): Mechanistic studies of novel factors regulating axon regeneration in the PNS/CNS
2012	My work on axon regeneration is supported by funding from the Roman Reed Spinal Cord Injury Research Fund of California.
2008	Neuroscience Imaging Competition winner at the Mahoney Institute of Neurological Sciences Retreat
2008	My work on “MLL dependent leukemogenesis in zebrafish” was supported by a research funding from Eagles for Leukemia.
2005	Fine Science Tools Travel Award at University of Pennsylvania
2001	University’s Second Class Scholarship, Shanghai Jiao Tong University
2000	University’s Third Class Scholarship, Shanghai Jiao Tong University

Professional Services

2009 – present	Review editor for <i>PLoS One</i> , <i>Journal of Molecular Neuroscience</i> , <i>Neuroscience</i> , <i>Brain Research</i> , <i>Frontiers in Neural Circuits</i>
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Teaching and Mentoring Experience

09/2005 – 12/2005	Teaching assistant for the BBB109 course “Introduction to Brain and Behavior”, University of Pennsylvania School of Medicine
07/2005 – 08/2005	Teaching assistant for the Neurobiology summer course on molecular neurobiology, Marine Biological Laboratory, Woods Hole, MA

Mentoring one graduate student, one undergraduate and one postdoc in using the zebrafish model during my graduate work; mentoring two graduate students and two postdocs in the *Drosophila* injury model, and performing training for lab members in using the two-photon imaging system, during my postdoctoral work.

Patents

U.S. Provisional patent application filed on 02/26/2007 for zebrafish MLL gene, with co-inventors Dr. C. Felix, Dr. R. Balice-Gordon, Dr. G. Germano, Dr. Blaine Robinson, Mr. Yuanquan Song. (US 2009/0055940 A1; CHOP Technology No. 0312P2).

Publications

1. **Song Y**, Sretavan D, Salegio EA, Berg J, Huang X, Cheng T, Meltzer S, Han C, Nguyen T, Bresnahan JC, Beattie MS, Jan LY, and Jan YN (2015) Regulation of axon regeneration by the RNA repair/splicing pathway. ***Nature Neuroscience*** 18(6): 817-25. (Highlighted in ***Nature*** (2015) A way to regrow nerve fibres; ***Nature Reviews Neuroscience*** (2015) Splicing up repair mechanisms).
2. Yu D, Baird MA, Allen JR, Howe ES, Klassen MP, Reade A, Makhijani K, **Song Y**, Lin S, Murthy Z, Zhang S, Weiner OD, Kornberg TB, Jan YN, Davidson MW, Shu X (2015) A naturally-monomeric infrared fluorescent protein for protein labeling *in vivo*. ***Nature Methods*** (Epub ahead of print).
3. Han C*, **Song Y***, Xiao H, Wang D, Franc N, Jan LY, Jan YN (2014) Dendritic fragmentation and clearance by phagocytic epidermal cells in *Drosophila* dendrite pruning and dendrite injury. ***Neuron*** 5;81(3): 544-60 (***Co-first author**). (Highlighted in ***Nature Reviews Neuroscience*** (2014) Epidermal cells eat up dendrites).
4. Yuan Q*, **Song Y***, Yang C, Jan LY, Jan YN (2014) Female exposure modulates male aggression via a sexually dimorphic GABAergic circuit in *Drosophila*. ***Nature Neuroscience*** 17(1): 81-8 (***Co-first author**). (Highlighted in ***Nature Reviews Neuroscience*** (2014) The

- feminine touch dampens aggression; Highlighted in **Nature Neuroscience** (2014) How sex prevents violence: the magic of caress (and GABA)).
5. **Song Y**, Ori-McKenney KM, Zheng Y, Han C, Jan LY, Jan YN (2012) Regeneration of *Drosophila* sensory neuron axons and dendrites is regulated by the Akt pathway involving *Pten* and microRNA *bantam*. **Genes Dev** 26: 1612-1625. (Highlighted in **Genes Dev** (2012) No simpler than mammals: axon and dendrite regeneration in *Drosophila*; Highlighted in **F1000** (2012)).
 6. Robinson BW*, Germano G*, **Song Y***, Abrams J, Scott M, Guariento I, Tiso N, Argenton F, Basso G, Rhodes J, Kanki JP, Look AT, Balice-Gordon RJ, Felix CA (2011) mll ortholog containing functional domains of human MLL is expressed throughout the zebrafish lifespan and in haematopoietic tissues. **Br J Haematol** 152(3): 307-21 (***Co-first author**).
 7. **Song Y**, Willer JR, Scherer PC, Panzer JA, Kugath A, Skordalakes E, Gregg RG, Willer GB, Balice-Gordon RJ (2010) Neural and synaptic defects in *slytherin*, a zebrafish model for human congenital disorders of glycosylation. **PLoS One** 5(10):e13743. (Highlighted in **F1000** (2011)).
 8. **Song Y**, Selak MA, Watson CT, Coutts C, Scherer PC, Panzer JA, Gibbs S, Scott M, Willer G, Gregg RG, Ali DW, Bennett MJ and Balice-Gordon RJ (2009) Mechanisms underlying metabolic and neural defects in zebrafish and human multiple acyl-CoA dehydrogenase deficiency (MADD). **PLoS One** 4(12): e8329.
 9. **Song Y**, Balice-Gordon RJ (2008) New dogs in the dogma: Lrp4 and Tid1 in neuromuscular synapse formation. **Neuron** 60: 526-8.
 10. Kim M, Liu I, **Song Y**, Halfter W, Balice-Gordon RJ, Linney E and Cole GJ (2007) Agrin is required for posterior development and axon pathway formation in embryonic zebrafish. **Glycobiology** 17: 231-47.
 11. **Song Y**, Panzer JA, Wyatt RM, Balice-Gordon RJ (2006) Formation and plasticity of neuromuscular synaptic connections. **International Anesthesiology Clinics** 44: 145-78.
 12. Panzer JA*, **Song Y***, Balice-Gordon RJ (2006) *In vivo* imaging of preferential motor axon outgrowth to and synaptogenesis at prepatterned acetylcholine receptor clusters in embryonic zebrafish skeletal muscle. **Journal of Neuroscience** 18: 934-47 (***Co-first author**). (Highlighted in **F1000** (2006)).
 13. Jin M, Guan CB, Jiang YA, Chen G, Zhao CT, Cui K, **Song YQ**, Wu CP, Poo MM, Yuan XB (2005) Ca²⁺-dependent regulation of rho GTPases triggers turning of nerve growth cones. **Journal of Neuroscience** 25: 2338-2347.
 14. Yuan XB, Jin M, Xu X, **Song YQ**, Wu CP, Poo MM, Duan S (2003) Signaling and crosstalk of Rho GTPases in mediating axon guidance. **Nature Cell Biology** 5: 38-45.

Presentations

1. **Song Y**, Sretavan D, Jan LY, and Jan YN (2015) Evolutionarily conserved regulation of axon regeneration by the RNA repair/splicing pathway. 2015 Abstract Viewer/Itinerary Planner. Chicago, IL: Society for Neuroscience. Nanosymposium #368.01. **Oral presentation**.
2. **Song Y** (2015) What can flies tell us about degeneration and regeneration? UCSF Postdoc Neuroscience Seminar Series ("BrainTalks") 2015. **Oral presentation**.

3. **Song Y**, Sretavan D, Jan LY, and Jan YN (2015) Evolutionarily conserved regulation of axon regeneration by the RNA repair/splicing pathway. Cold Spring Harbor Laboratory Neurobiology of *Drosophila* meeting 2015.
4. **Song Y**, Sretavan D, Berg J, Huang X, Cheng T, Meltzer S, Han C, Nguyen T, Jan LY, and Jan YN (2014) The RtcA-Archease dependent RNA repair/splicing pathway regulates axon regeneration. Cell Biology of the Neuron Gordon Research Conference 2014.
5. **Song Y**, Salegio EA, Berg J, Huang X, Han C, Beattie MS, Bresnahan JC, Jan LY, and Jan YN (2013) A novel inhibitory factor regulating axon regeneration in *Drosophila* and mice. HHMI Science Meeting.
6. **Song Y** (2012) Regeneration of *Drosophila* sensory neuron axons and dendrites in the PNS and CNS. [2012 Abstract Viewer/Itinerary Planner](#). New Orleans, LA: Society for Neuroscience. Nanosymposium #312. **Oral presentation**.
7. Kanther M, Porazzi PA, Germano G, **Song Y**, Robinson BW, Abrams J, Kugath A, Scott M, Rhodes J, Balice-Gordon RJ, and Felix CA (2012) Modeling MLL leukemia haploinsufficiency in the zebrafish embryo. [2012 Abstract Viewer](#). Madison, WI: 10th International Conference on Zebrafish Development and Genetics.
8. Robinson BW, **Song Y**, Germano G, Ernst P, Abrams J, Scott M, Kugath A, Helfrich M, Sunyer JO, Rhodes J, Balice-Gordon RJ, and Felix CA (2009) Zebrafish *mll* depletion model phenocopies mammalian *mll* depletion and implicates MLL as master regulator of novel developmental hematopoietic targets. [2009 Online Program and Abstracts](#). New Orleans, LA: 51st ASH Annual Meeting and Exposition. Abstract #3655.
9. **Song Y**, Coutts C, Scherer PC, Watson CT, Selak MA, Panzer JA, Gibbs S, Willer G, Gregg RG, Ali D, Bennett MJ and Balice-Gordon RJ (2009) Mitochondrial dysfunction caused by *etfdh* mutation leads to severe neural defects in a zebrafish mutant, *xavier*. [2009 Abstract Viewer](#). Cold Spring Harbor, NY: Synapses: From Molecules to Circuits & Behavior.
10. **Song Y**, Scherer PC, Watson CT, Selak MA, Panzer JA, Gibbs S, Willer G, Gregg RG, Bennett MJ and Balice-Gordon RJ (2008) Mitochondrial dysfunction caused by *etfdh* mutation leads to severe neural defects in a zebrafish mutant, *xavier*. [2008 Abstract Viewer/Itinerary Planner](#). Washington, DC: Society for Neuroscience. Online.
11. **Song Y**, Panzer JA, Willer JR, Gregg RG, Willer G and Balice-Gordon RJ (2007) Neural and synaptic phenotypes in a zebrafish mutant, *slytherin*, as a putative disease model for human congenital disorders of glycosylation. [2007 Abstract Viewer/Itinerary Planner](#). San Diego, CA: Society for Neuroscience. Online.
12. Robinson BW, Germano G, **Song Y**, Balice-Gordon RJ and Felix C (2007) Cloning and characterization of the zebrafish *mll* ortholog. [Blood](#) 110 (11): Abstract #1249.
13. **Song Y**, Panzer JA and Balice-Gordon RJ (2006) *Bossu* is critical for the co-localization of pre- and postsynaptic specializations and the function of neuromuscular junctions in zebrafish. [2006 Abstract Viewer/Itinerary Planner](#). Washington, DC: Society for Neuroscience. Online.
14. **Song Y**, Panzer JA, Balice-Gordon RJ (2005) Spatial and temporal dynamics of neuromuscular synaptogenesis in zebrafish. [2005 Abstract Viewer/Itinerary Planner](#). Washington, DC: Society for Neuroscience. Online.
15. **Song Y** (2005) Early events during synaptogenesis. 2005 seminar, Mid-Atlantic Regional

Zebrafish (MARZ) meeting, Philadelphia, PA. **Oral presentation.**

16. Panzer JA, Gibbs SM, **Song Y**, Balice-Gordon RJ (2004) Temporal dynamics and role of activity in neuromuscular synaptogenesis in wild type and mutant zebrafish. [2004 Abstract Viewer/Itinerary Planner](#). San Diego, CA: Society for Neuroscience. Online.

Extracurricular Activities

02/2008-05/2008

Consulting experience

Worked on a consulting project at Penn Biotech Group (PBG), to perform a market analysis on a new product line for BD (Becton, Dickinson and Co.), and provide product positioning and marketing strategy. Our project won the second place in the PBG consulting competition in 2008.

References

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