

WHITNEY E. HEAVNER

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Education

Ph.D., Genetics and Molecular Biology, 2013

University of North Carolina at Chapel Hill, Chapel Hill, NC

Thesis: "Using the mouse retina to model the role of SOX2 in neural induction"

B.S., Biology, B.A., English, 2006

Lenoir-Rhyne College, Hickory, NC

GPA: 4.00 (*summa cum laude*)

Honors Thesis: "Bone mineral densities related to anti-epileptic drug use and ambulatory status of people with developmental disabilities"

Research & Professional Experience

Postdoctoral Research, Stanford University, Stanford, CA (Current)

- Computational Genomics and Neuroscience
- Advisors: Dr. Susan McConnell and Dr. Gill Bejerano

Graduate Research, University of North Carolina at Chapel Hill, Chapel Hill, NC (2007-2013)

- Genetics and Molecular Biology, Certificate in Developmental Biology
- Advisor: Dr. Larysa Pevny

Undergraduate Research, Lenoir-Rhyne College, Hickory, NC (2002-2006)

- Department of Biology
- Advisor: Dr. Stephen Scott

Summer Internship, J. Iverson Riddle Center for the Developmentally Disabled, Morganton, NC (2005)

- Department of Psychology (Applied Behavior Analysis)
- Advisor: Dr. Martin Ivancic

Fellowships, Grants & Awards

Stanford School of Medicine Teaching and Mentoring Innovation Grant, Evidence-Based Postdoc Pedagogy Workshop, *Summer 2017*

Henzl-Gabor Travel Grant, Cortical Development Conference, Chania, Greece, *May 2017*

Stanford Neurosciences Institute Interdisciplinary Scholar Award, *Jan 2015-Jan 2017*

Tuition scholarship, Gene Regulatory Networks for Development course, Woods Hole, MA, *2015*

NIH Kirschstein NRSA F32 13th percentile/impact score 22 (accepted a different fellowship), *2014*

NIH-funded Epilepsy Training Fellowship, *2013-2104*

Fully funded tuition to Fundamental Issues in Vision Research course, Woods Hole Marine Biological Laboratory, *2010*

NIH-funded Developmental Biology Training Fellowship, *2009-2010*

Lenoir-Rhyne College First Honor Graduate, *2006*

NCAA Academic All-American, Women's Cross Country/Track & Field, Division II, *2006*

Cecilia Willard Natural Science Medal, Lenoir-Rhyne College, *2006*

Albert R. Keiser, Sr. English Literature Award, Lenoir-Rhyne College *2006*

Cromer Full Tuition Academic Scholarship, Lenoir-Rhyne College, *2002-2006*

Publications

1. Matsushima, D.*, **Heavner, W***. and Pevny, L. H. (2011). Combinatorial regulation of optic cup progenitor cell fate by SOX2 and PAX6. *Development* 138, 443-54. *Equal Contributions
2. **Heavner, W.** and Pevny, L.H. (2012). Eye Development and Retinogenesis. *Cold Spring Harbor Perspect Biol* doi: 10/1101 / cshperspect.a008391
3. Leone, D.P., **Heavner, W.**, Ferenczi, E.A., Dobreva, G., Huguenard, J., Grosschedl, R., and McConnell, S.K. (2014). The chromatin remodeling protein Satb2 regulates the differentiation of subcerebral projection neurons in the developing cerebral cortex. *Cerebral Cortex* doi: 10.1093/cercor/bhu156
4. **Heavner, W.**, Andoniadou, C. and Pevny, L.H. (2014). SOX2 regulates the neurogenic boundary of the retina via mediation of WNT signaling. *Neural Development* 9:27
5. Notwell, J.H., Chung, T., **Heavner, W.**, and Bejerano, G (2015). Transposable elements and the enhancer landscape of the developing neocortex. *Nature Communications* 6:6644
6. Leone, D.P., Panagiotakos, G., **Heavner, W.**, Joshi, P., Zhao, Y., Westphal, H., and McConnell, S.K. (2016) Compensatory actions of Ldb Adaptor Proteins During Corticospinal Motor Neuron Differentiation. *Cerebral Cortex* doi: 10.1093/cercor/bhw003
7. Notwell, J.H., **Heavner, W.**, Darbandi, S.F., Katzman, S., McKenna, W.L., Ortiz-Londono, C.F., Tastad, D., Eckler, M.J., Rubenstein, J.L.R., McConnell, S.K., Chen, B., Bejerano, G. (2016) Tbr1 regulates autism risk genes in the developing neocortex. *Genome Research* 26:1013-1022.

Selected Extramural Research Talks

1. **Heavner, W.**, Notwell, J.H., Bejerano, G., and McConnell, S.K. Gene Regulatory Networks for Building a Neocortex. (Nov 2016) University of California, Santa Cruz NeuroClub
2. **Heavner, W.** and Pevny, L.H. (May 2012) Genetic Analysis of SOX2 and WNT signaling in regulating optic cup progenitor cell fate. The Association for Research in Vision and Ophthalmology. Fort Lauderdale, Florida.
3. **Heavner, W.** and Pevny, L.H. (2012) Keeping an eye on SOX2: How genetic interactions of transcription factors shape retinal development. UNC Genetics Department Seminar Series, Chapel Hill, NC.
4. **Heavner, W.**, Matsushima, D. and Pevny, L.H. (2011). The role of SOX2 in optic cup patterning. Ulm University annual scientific retreat, Ulm, Germany.
5. **Heavner W.**, Matsushima D, Pevny L (2010) SOX2 and PAX6 Dosages Control Retinal Progenitor Cell Fate. Vertebrate Organogenesis. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.
6. **Heavner W.**, Ivancic M (2006) Bone mineral densities related to anti-epileptic drug (AED) use and ambulatory status of people with developmental disabilities, North Carolina Academy of Sciences.

Selected Poster Presentations

1. **Heavner, W.**, Notwell, J.H., Ji, S., Bejerano G., and McConnell, S.K. (May 2017) Dynamics of Chromatin Accessibility During Neocortex Development Reveals Roles for Cis Regulation in Projection Neuron Fate and Human Disease. Cortical Development Conference, Chania, Crete, Greece.
1. **Heavner, W.**, Notwell, J.H., Bejerano G. and McConnell, S.K. (Aug 2014) Genomic Analysis of the transcriptional network controlling neocortical projection neuron fate. Gordon Research Conference on Neural Development, Newport, RI.
2. **Heavner, W.** and Pevny, L.H. (Aug 2012) In the absence of SOX2, β -Catenin is dispensable for *Ccnd1* expression and ciliary epithelial fate. Poster Presentation. Gordon Research Conference on Neural Development. Newport, RI.
3. **Heavner, W.**, Matsushima, D. and Pevny, L.H. (2011). Envisioning a mechanism of cell fate conversion in the retina. The Association for Research in Vision and Ophthalmology. Fort Lauderdale, Florida

Pedagogy

Stanford University, Stanford, CA

Certificate, Postdoctoral Short Course on College Science Teaching

- **Co-organizer, Evidence-Based Teaching Practices**, a mini-series for postdocs funded by the Teaching and Mentoring Academy (Summer 2017)
- **Co-instructor, A Critical Evaluation of Neuroscience Techniques**, 12 students (Winter 2017 mini-course)
- **Teaching Assistant, Developmental Neurobiology (BIO158)**, 70 students (Fall 2016)
- **Stanford Summer Research Program (SSRP) mentor**, Melissa Lucero (Amgen scholar), UMBC class of 2017 (2016)
- **Science classroom volunteer**, Ravenswood Middle Schools Science Initiative, East Palo Alto, CA (2014-2016)
- **Summer undergraduate research mentor**, Curtis Wu, Harvard class of 2018 (2015)
- **Student mentor, Biology of Design** course, California College of the Arts (2015)

University of North Carolina at Chapel Hill, Chapel Hill, NC

- **Teaching Assistant, Genetics and Molecular Biology (BIO 202)**, 200 students (2008)

Appalachian State University, Boone, NC

- **Supplemental Instructor and Teaching Assistant**, Biology Department (2006-2007)

Science Communication, Outreach, Membership & Service

Stanford University, Stanford, CA

- **Workshop Coordinator**, NeuWrite West science writing group (Current)
- **Workshop Coordinator for Writing the Lay Abstract**, NeuWrite West and the Biosciences Grant Writing Academy (Summer 2017)
- **Contributor, Stanford Gender in Science** web resource (2014)
- **Member**, Women in Science and Engineering (Current)
- **Member**, Association for Women in Science, Palo Alto chapter (Current)

University of North Carolina at Chapel Hill, Chapel Hill, NC

- **Girls on the Run Volunteer Coach**, character development and training coach for girls (2010-2012)

Programming Languages and Other Hobbies

Bash, R, Python, HTML

Running, Cycling, Swimming, Climbing, Gardening, Clawhammer banjo