

# JASON M. NEWBERN, Ph.D.

## Associate Professor

Co-Director ASU/BNI Interdisciplinary Graduate Program in Neuroscience  
Barrett Honors Faculty  
Faculty of Genomics, Evolution, and Bioinformatics  
School of Life Sciences  
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Primary Research Focus: Developmental Neurobiology

Keywords: nervous system, embryology, signal transduction, apoptosis, kinase, confocal microscopy, MAPK, transgenic mouse, RASopathy, neuromuscular, glia, cortex, axon outgrowth, conditional knockouts, programmed cell death, phosphorylation, myelination, trophic factors, neural circuit

## EDUCATION

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- Postdoctoral Fellow** 2006 – 2011  
Neuroscience Center - University of North Carolina, Chapel Hill, NC  
*Mentor:* William Snider, MD
- Ph.D.** - Neurobiology and Anatomy June 2006  
Dept. of Neurobiology and Anatomy - Wake Forest University School of Medicine, Winston-Salem, NC  
*Mentor:* Carol Milligan, PhD  
*Thesis:* The Role of Signal Transduction Pathways in Motoneuron Programmed Cell Death
- B.S.** - Cellular & Molecular Biology and Biological Psychology June 2000  
College of Literature, Science, and the Arts - University of Michigan - Ann Arbor, MI

## ACADEMIC APPOINTMENTS

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- Associate Professor** 2019 - present  
**Assistant Professor** 2013 - 2019  
School of Life Sciences - Arizona State University, Tempe, AZ
- Research Scientist** *Mentor:* William Snider, MD 2011 - 2013  
Neuroscience Center - University of North Carolina, Chapel Hill, NC

## PROFESSIONAL AWARDS & HONORS

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- ASU Leadership Academy 2018 - 2019  
Nominee: ASU CLAS: Zebulon Pearce Distinguished Teaching Award 2017 - 2020  
Nominee: NIH PECASE Award 2016  
NIH Pathway to Independence Award 2011  
NIH Postdoctoral National Research Service Award 2009  
UNC Developmental Biology Training Program Postdoctoral Fellowship 2007  
Western North Carolina Society for Neuroscience – Poster Winner 2003

## PROFESSIONAL MEMBERSHIPS

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- American Society for Neurochemistry 2015-present  
Arizona Imaging and Microanalysis Society 2014-present  
Society for Neuroscience (USA) 2002-present  
Western North Carolina Society for Neuroscience 2001 – 2006

**GRANTS**

- FUNDING TOTAL = DIRECT + INDIRECT COSTS (ASU % RECOGNITION TO J. NEWBERN, DEFINED [HERE](#))

**CURRENT**

**R01 NS097537** (PI: Newbern, ASU-SoLS) **7.1.2016 – 5.31.2022**  
HHS-NIH-NINDS Total: \$1,912,747 (70%)

**Functions of ERK/MAPK Signaling in GABAergic Circuit Development**

*The major goals of this grant are to characterize the cellular and genetic mechanisms of neocortical circuit defects resulting from aberrant ERK/MAPK activity in GABAergic neurons and to utilize chemogenetic tools to rescue GABAergic neuron loss.*

Role: **Principal Investigator**

**R01 MH110433** (PI: Olive, ASU-Psychology) **9.30.2016 - 9.29.2022**  
HHS-NIH-NIAAA Total: \$1,823,623 (5%)

**Brain endorphin targets of low dose alcohol**

*The goal of this proposal is to explore the molecular targets and neural pathways recruited by low dose alcohol action in endorphinergic circuits. These studies will increase our understanding of the mechanisms by which ethanol produces its reward, reinforcing, and potentially cognition impairing effects.*

Role: **Co-Investigator**

**R01 AG028084** (PI: Bimonte-Nelson, ASU-Psychology) **7.1.2018 – 6.30.2023**  
HHS-NIH-NIA Total: \$1,828,473 (22%)

**Variations in Hormones During Menopause: Effects on Cognitive and Brain Aging**

*This grant assesses the trajectory of transitional and surgical variants of menopause, evaluates the impact of hormone therapies, and examines candidate neural circuits important for cognitive alterations.*

Role: **Co-Investigator**

**R01 NS116657** (PI: Stabenfeldt, ASU-SBHSE) **9.1.2020 – 8.31.2025**  
HHS-NIH-NINDS Total: \$3,193,033 (5%)

**Exploiting sex-dependent brain injury response for nanoparticle therapeutics**

*The major goal is to develop nanoparticle-based therapeutics that impact recovery in male and female rodents that have experienced traumatic brain injury.*

Role: **Co-Investigator**

**COMPLETED**

**R21 DA044479** (PI: Gipson-Reichardt, ASU-Psychology) **7.15.2018 – 6.30.2020**  
HHS-NIH-NIDA Total: \$443,267 (10%)

**Cholinergic control of glutamatergic signaling in nicotine addiction and relapse**

Role: **Co-Investigator**

**F31 AG056110** (PI: Bimonte-Nelson/Koebele, ASU-Psychology) **8.1.2017 - 7.31.2019**  
HHS-NIH-NIA Total: \$104,186 (15%)

**S. Koebele Fellowship-Hysterectomy and Cognition: A Preclinical Evaluation**

Role: **Co-Investigator**

**Subcontract ADHS#3606** (PI: Baumbach-Reardon, UA-Phoenix) **12.1.2015 – 10.31.2018**  
Arizona Biomedical Research Commission Total Subcontract: \$19,244 (100%)

**Identification and functional characterization of novel neuromuscular disease-causing variants in Arizona infants and children**

Role: **Subcontract PI**

**SIG S10 OD023691** (PI: Chandler/Baluch, ASU-SoLS) **2.1.2017 - 1.31.2018**  
HHS-NIH-OD Total: \$600,000 (5%)

**Leica TCS SP8 Laser Scanning Confocal Microscope**

Role: **Co-Investigator/Major User**

**K99/R00 NS076661** (PI: Newbern, UNC/ASU-SoLS)  
 HHS-NIH-NINDS Pathway to Independence Award  
**ERK/MAPK Regulation of Cortical Inhibitory Interneurons**  
 Role: **Principal Investigator**

**9.30.2011 – 7.31.2017**  
 Total: \$900,432 (100%)

**F32 NS061591**  
 HHS-NIH-NINDS Individual NRSA Postdoctoral Fellowship  
**The In Vivo Role of ERK1/2 Signaling in PNS Development**

**4.1.2009 – 3.31.2011**  
 Total: \$102,308

**T32 HD046369**  
 HHS-NIH-NICHD Institutional NRSA Postdoctoral Fellowship  
**UNC Developmental Biology Training Program**

**2007 - 2008**

## COURSE TEACHING EXPERIENCE

- FACULTY TEACHING SCORE = Instructor rating on a 5-point scale (1=**excellent** and 5=**poor**) from anonymous, university-managed course evaluations (link [here](#)).

### UNDERGRADUATE PROGRAMS

#### IN-PERSON

**Neurobiology (BIO467, 3 credit hours)**  
 Instructor of Record (36 contact hours)  
 Faculty teaching score = **1.4-1.7**

Semesters: **SP'14, '15, '16, '17, '19, '20**  
 Highest Enrollment: **150**

- *Active-learning course surveying the biological basis of brain function and fundamental principles.*

**Developmental Biology (BIO351, 3 credit hours)**  
 Co-Instructor of Record (20 contact hours)  
 Faculty teaching score = **1.5-1.7**

Semesters: **FA'16, '17, '18, '19, '20**  
 Highest Enrollment: **299**

- *Lecture-based course surveying basic principles of vertebrate development.*

**Neurodevelopment (BIO494/598, 3 credit hours)**  
 Instructor of Record (36 contact hours)  
 Faculty teaching score = **1.0**

Semesters: **FA'15, SP'18**  
 Highest Enrollment: **25**

- *Upper-level course on advanced concepts of nervous system formation and early neural circuit modifications.*

#### ONLINE

**Neurobiology Online Course Development (BIO467online, 3 credit hours)**

- *Designed and built this online course focused on the biological basis of brain function and fundamental neuroscientific principles, offered for the first time in the Spring 2021.*

**Cellular and Molecular Neuroscience Online Course Development (BIO476online, 3 credit hours)**

- *Co-Designing and building this online course surveying core cellular and molecular principles of brain function with plans to offer for the first time in the Fall 2021.*

### GRADUATE PROGRAMS

**Advanced Molec. & Cell Science (MCB/NEU555-ASU, 6 credit hours)**  
 Co-Instructor of Record (7 contact hours)

Semesters: **FA'19, '20**  
 Highest Enrollment: **18**

- *Block director of this core course for Neuroscience and MCB graduate students, provide 4-5 lectures.*

**Neuroscience Research Seminar (NEU591-ASU, 1 credit hour)**  
 Instructor or Co-Instructor of Record

Semesters: **2017-2021**  
 Highest Enrollment: **16**

- *Seminar series for Neuroscience graduate students to develop core presentation skills and observe seminars by noted researchers offered every Fall and Spring semester.*

**Molecular & Cell Biology Seminar (MCB501/701-ASU, 1 credit hour)**Semesters: **2015-2018**

Instructor or Co-Instructor of Record

Highest Enrollment: **46**

- *Seminar series for MCB graduate students to develop core presentation skills and observe presentations by noted researchers offered every Fall and Spring semester.*

**Dev. & Regen, 'Journal Club' (MCB/NEU591, 1 credit hour)**Semester: **FA'15, '16, '17, SP'19**

Co-Instructor of Record

Enrollment: **17**

- *Journal club focusing on recent manuscripts examining development and regeneration of various systems.*

**M.D. PROGRAMS**Nerve Tissue – Mayo Clinic School of Medicine, Arizona Campus Fall 2018*Guest instructor for nerve tissue histology course for medical students.*Clinical Anatomy – University of Arizona Phoenix College of Medicine Spring 2015*Guest instructor for Neuroanatomy block in Gross Anatomy for first year medical students.*Clinical Anatomy – University of Arizona Phoenix College of Medicine Fall 2013 & 2014*Guest instructor for Head & Neck block in Gross Anatomy for first year medical students.*Medical Neuroanatomy – UNC-Chapel Hill School of Medicine 2011 & 2013*Guest facilitator for neuroanatomy dissections and case-based learning sessions for medical students.***GUEST LECTURER/INSTRUCTOR**Neurobiology (BIO467) -ASU Spring 2021*Lecture on neurodevelopment to undergraduates.*Cellular and Molecular Neuroscience (BIO476) - ASU Fall 2020*Lecture on neurodevelopment to senior undergraduates.*Neuroscience Journal Club (NEU558) – ASU Fall 2020*Lecture on neural circuit formation.*Cellular and Molecular Neuroscience (BIO476) - ASU Spring 2020*Lecture on visual circuits to senior undergraduates.*Animal Physiology (BIO360) – ASU Spring 2019*Lecture on nervous system formation and structure.*Advanced Molecular & Cellular Science (MCB/NEU555) – ASU Fall 2018*Two lectures on vertebrate development and signaling mechanisms*Art and Science (ART/BIO 494/598) – ASU Spring 2018 & 2019*Provided a short lecture and hands-on tour of my laboratory with a focus on microscopy and biological imaging*Cellular and Molecular Neuroscience (BIO476) - ASU Fall 2017*Lecture on neurodevelopmental disorders to senior undergraduates.*Neurobiology (BIO467) -ASU Fall 2017*Lecture on neurodevelopment to undergraduates.*Advanced Molecular & Cellular Science (MCB/NEU555) – ASU Fall 2017*Two lectures, one on axonal polarity and one on developmental signaling mechanisms*Stress and the Brain (BIO494/598/PSY568) - ASU Spring 2017*Lecture on opto/chemogenetics to undergraduates/graduate students.*Neurobiology (BIO467) – ASU Fall 2016*Lecture on neurodevelopment to undergraduates.*Advanced Molecular & Cellular Science (MCB/NEU555) – ASU Fall 2016*Lecture on axonal polarity and cytoskeletal control.*Animal Physiology (BIO360) – ASU Spring 2016*Lecture on nervous system formation and structure.*Pathologies of the Aging Brain (BIO498) – ASU Spring 2016*Lecture on Autism Spectrum Disorders and associated neuropathology.*Developmental Genetics (BIO494/598) – ASU Spring 2016*Lecture on ERK/MAPK signaling in the developing nervous system.*Freshman Seminar Course (BIO189) - ASU Fall 2015, Fall 2014*Provided four lectures during a mini-series entitled "Building Brains" for first-year undergraduates*

Developmental Biology (BIO351) – ASU <i>Lecture on neurodevelopment to undergraduates.</i>	Fall 2014
Neurobiology (BIO467) – ASU <i>Lecture on neurodevelopment to undergraduates.</i>	Fall 2013
Cell and Molecular Neurobiology - UNC-Chapel Hill Sch. of Medicine <i>Two lectures on neuronal cell biology and neuroanatomy for neuroscience graduate students.</i>	Fall 2010, Fall 2011, Fall 2012
Molecular Neuroscience Techniques - UNC-Chapel Hill School of Medicine <i>Lecture on biological labeling techniques for graduate students.</i>	2012 & 2013
Molecular and Cellular Neuroscience - Wake Forest University School of Medicine <i>Lecture on trophic factors for first year graduate students.</i>	2012 & 2013

## PUBLICATIONS

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### LEGEND

- UNDERLINED NAMES = Mentored or co-mentored undergraduate, post-bac students, or technicians
- DOUBLE UNDERLINED NAMES = Mentored or co-mentored graduate students
- † = CORRESPONDING AUTHOR(S)      \* = JOINT AUTHORSHIP
- Citation numbers are derived from Google Scholar as of JAN 2021. Impact factors are derived from Journal Citation Reports for the year the article was published.

**SUMMARY OF SCIENTIFIC IMPACT** ([GOOGLE SCHOLAR PROFILE](#) – JUNE 2021)      [NIH NCBI BIBLIOGRAPHY LINK](#)  
HIRCH'S H-INDEX = **15**      I-10 INDEX = **23**      TOTAL CITATIONS = **1401**

### SUBMITTED OR PUBLISHED PEER-REVIEWED ARTICLES

33. Holter M, Hewitt LT, Nishimura K, Knowles SJ, Bjorklund GR, Shah S, Fry NR, Rees KP, Gupta TA, Daniels CW, Li G, Marsh S, Treiman DM, Olive FO, Anderson TR, Sanabria F, Snider WD, **Newbern JM**<sup>†</sup>. (2021) Hyperactive MEK1 signaling in cortical GABAergic interneurons causes embryonic parvalbumin-neuron death and deficits in behavioral inhibition. *Cerebral Cortex*. 31(6):3064-3081. PMID: 33570093  
Impact Factor: 6.1
32. Leyrer-Jackson JM, Holter M, Overby PF, **Newbern JM**, Scofield MD, Olive MF, Gipson CD<sup>†</sup>. (2021) Accumbens cholinergic interneurons mediate cue-induced nicotine seeking and associated glutamatergic plasticity. *eNeuro*. 8(1). PMID: PMC7890519  
Impact Factor: 3.5
31. Ortiz JB, **Newbern JM**, Conrad CD<sup>†</sup>. (2021) Chronic stress has different immediate and delayed effects on hippocampal calretinin- and somatostatin- positive cells. *Hippocampus*. 31(2):221-231. PMID: 33241879  
Impact Factor: 3.9
30. Balabiyev A, Podolnikova NP, Mursalimov A, Lowry D, **Newbern JM**, Roberson RW, and Ugarova TP<sup>†</sup> (2020) Transition of podosomes into zipper-like structures in macrophage-derived multinucleated giant cells. *Molecular Biology of the Cell* 31(18):2002-2020. PMID: PMC7543064  
Impact Factor: 3.5
29. Leyrer-Jackson JM, Nagy EK, Hood LE, **Newbern JM**, Gipson CD, and Olive MF<sup>†</sup>. (2020) Ethanol has concentration-dependent effects on hypothalamic POMC neuronal excitability. *Alcohol*. 86:103-112  
PMCID: PMC7292773  
Impact Factor: 2.0
28. Bharadwaj VN, Copeland C, Mathew E, **Newbern JM**, Anderson TR, Lifshitz J, Vikram D Kodibagkar VD, Stabenfeldt SE<sup>†</sup>. (2020) Sex-dependent macromolecule and nanoparticle delivery in experimental brain injury. *Tissue Engineering*. 26(13-14):688-701. PMID: PMC7398445  
Impact Factor: 4.1

27. Hrach HC, Steber HS, **Newbern JM**, Rawls JA, Mangone M<sup>†</sup>. (2020) Consecutive signaling pathways are activated in progression of Duchenne muscular dystrophy in *C. Elegans*. *Human Molecular Genetics* 29(10):1607-1623. PMID: PMC7322572  
Impact Factor: 4.5
26. Der-Ghazarian T, Charmchi D, Noudali S, Scott S, Holter M, **Newbern JM**, Neisewander JL<sup>†</sup>. (2019) Neural circuits associated with 5-HT<sub>1B</sub> receptor agonist inhibition of methamphetamine seeking in the conditioned place preference model. *ACS Chem Neurosci*. 10(7):3271-3283. PMID: 31042352  
Citations: 7 Impact Factor: 4.2
25. Holter M, Hewitt LT, Koebele S, Xing L, Judd J, Bimonte-Nelson H, Conrad C, Araki T, Neel B, Snider WD, **Newbern JM**<sup>†</sup>. (2019) The Noonan Syndrome-linked Raf1<sup>L613V</sup> mutation drives increased glial number and enhanced spatial learning. *PLoS Genet*. 15(4):e1008108. PMID: PMC6502435  
Citations: 15 Impact Factor: 5.5
24. Aoidi R, Houde N, Landry-Truchon K, Holter M, Jacquet K, Charron L, Krishnaswami SR, Yu BD, Rauen KA, Bisson N, **Newbern JM**, and Charron J<sup>†</sup>. (2018) *Mek1<sup>Y130C</sup>* mice recapitulate aspects of the human Cardio-Facio-Cutaneous syndrome. *Disease Models and Mechanisms*. 11(3). PMID: PMC5897723  
Citations: 10 Impact Factor: 4.7  
  - [Cover image generated by Mike Holter.](#)
23. Tokuyama M<sup>\*</sup>, Xu C<sup>\*</sup>, Fisher R, Wilson-Rawls J, Kusumi K, **Newbern JM**<sup>†</sup>. (2018) Developmental and adult-specific processes contribute to de novo neuromuscular regeneration in the lizard tail. *Developmental Biology*. 433(2):287-296. PMID: PMC5764105  
Citations: 8 Impact Factor: 2.9  
  - *Featured on local CBS affiliate nightly news, video link [here](#).*
22. Nichols J, Bjorklund RG, **Newbern JM**, Anderson T<sup>†</sup>. (2018) Parvalbumin fast-spiking interneurons are selectively altered by paediatric traumatic brain injury. *J. Physiology*. 596(7):1277-1293. PMID: PMC5878227  
Citations: 15 Impact Factor: 4.7  
  - [Cover image generated by Joshua Nichols.](#)
21. Sinakevitch IT, Bjorklund GR, **Newbern JM**, Gerkin RC, and Smith BH<sup>†</sup>. (2018) Comparative study of chemical neuroanatomy of the olfactory neuropil in mouse, honey bee and human. *Biological Cybernetics*. Epub ahead of print. PMID: PMC5832527  
Citations: 11 Impact Factor: 1.7
20. Blazie SM, Wilky H, Joshi R, **Newbern JM**, Mangone M<sup>†</sup>. (2017) Alternative polyadenylation coordinates tissue specific miRNA targeting in *Caenorhabditis elegans* somatic tissues. *Genetics* 206(2):757-774. PMID: PMC5499184  
Citations: 46 Impact Factor: 4.6
19. Lewis CR, Manning TB, Himes SM, Bastle R, Fennig P, Conrad PR, Colwell J, Pagni BA, Hess LA, Matekel CG, **Newbern JM**, Olive MF<sup>†</sup>. (2016) Interactions between Early Life Stress, Nucleus Accumbens MeCP2 Expression, and Methamphetamine Self-Administration in Male Rats. *Neuropsychopharmacology* 41(12):2851-2861. PMID: PMC5061895  
Citations: 15 Impact Factor: 6.4
18. Xing L, Larsen R, Bjorklund GR, Li X, Wu Y, Philpot BD, Snider WD, **Newbern JM**<sup>†</sup>. (2016) Layer-specific and general requirements for ERK/MAPK signaling in the developing neocortex. *Elife* Feb 5;5 pii: e11123. PMID: PMC4758957  
Citations: 37 Impact Factor: 7.7



17. Yi J, Berrios J, **Newbern JM**, Snider WD, Philpot BD, Hahn KM, Zylka MJ<sup>†</sup>. (2015) An Autism-Linked Mutation Disables Phosphorylation Control of UBE3A. *Cell* 162(4):795-807 PMID: PMC4537845  
Citations: 118 Impact Factor: 28.7
16. Maynard TM, Gopalakrishna D, Meechan D, Paronett E, **Newbern JM**, LaMantia AS<sup>†</sup>. (2013) 22q11 gene dosage establishes an adaptive range for sonic hedgehog and retinoic acid signaling during early development. *Human Molecular Genetics*. 22(2):300-12. PMID: PMC3526161  
Citations: 36 Impact Factor: 6.7
15. Li X, **Newbern JM**, Wu Y, Morgan-Smith M, Zhong J, Charron J, Snider WD<sup>†</sup>. (2012) MEK is a key regulator of gliogenesis in the developing brain. *Neuron*. 75(6):1035-50. PMID: PMC3483643  
Citations: 132 Impact Factor: 15.8  
• Featured in a [preview](#) by Zhou and Stiles.
14. **Newbern JM**, Li X, Shoemaker S, Zhong J, Zhou J, Wu Y, Bonder D, Hollenback S, Coppola G, Geschwind D, Landreth GE, Snider WD<sup>†</sup>. (2011) Specific functions for ERK/MAPK signaling during PNS development. *Neuron*. 69(1):1-15. PMID: PMC3060558  
Citations: 188 Impact Factor: 14.7  
• Rated ['very good'](#) by Faculty of 1000.
13. **Newbern JM**, Zhong J, Wickramasinghe RS, Li X, Wu Y, Samuels I, Cherosky N, Karlo JC, O'Loughlin B, Wikenheiser J, Gargasha M, Doughman YQ, Charron J, Ginty DD, Watanabe M, Saitta SC, Snider WD, Landreth GE<sup>†</sup>. (2008) Mouse and human phenotypes indicate a critical conserved role for ERK2 signaling in neural crest development. *Proc Natl Acad Sci* 105(44):17115-20. PMID: PMC2579387  
Citations: 155 Impact Factor: 9.4
12. Macosko JC, **Newbern JM**, Rockford J, Chisena E, Brown C, Holzwarth GM, and Milligan CE<sup>†</sup>. (2008) Fewer active motors per vesicle may explain slowed vesicle transport in chick motoneurons after three days in vitro. *Brain Research* 1211:6-12. PMID: PMC2464625  
Citations: 13 Impact Factor: 2.5
11. Taylor AR, Gifondorwa DJ, **Newbern JM**, Robinson MB, Strupe JL, Prevette D, Oppenheim RW, and Milligan CE<sup>†</sup>. (2007) Astrocyte and Muscle-derived Secreted Factors Differentially Regulate Motoneuron Survival. *J. Neuroscience* 27(3):634-644. PMID: 17234595  
Citations: 41 Impact Factor: 7.5
10. **Newbern J**, Taylor AR, Robinson MB, Lively MO, Milligan CE<sup>†</sup>. (2007) JNK signaling regulates events associated with both health and degeneration in motoneurons. *Neuroscience* 47(3):680-692. PMID: 17583433  
Citations: 28 Impact Factor: 3.4
9. Robinson MB, Tidwell JL, Gould T, Taylor AR, **Newbern JM**, Graves J, Tytell M, Milligan CE<sup>†</sup>. (2005) Extracellular Heat Shock Protein 70: A Critical Component for Motoneuron Survival. *J. Neuroscience* 25(42):9735-45. PMID: 16237177  
Citations: 148 Impact Factor: 7.5
8. **Newbern JM**, Taylor AR, Robinson MB, Li L, Milligan CE<sup>†</sup>. (2005) Decreases in PI3K and ERK1/2 signaling activate components of spinal motoneuron death. *J. Neurochemistry* 94:1652-1665. PMID: 16045454  
Citations: 25 Impact Factor: 4.6
7. Sun W, Gould T, **Newbern JM**, Milligan CE, Choi SY, Kim H, Oppenheim RW<sup>†</sup>. (2005) Phosphorylation of c-Jun in Avian and Mammalian Motoneurons *In Vivo* during Programmed Cell Death: An Early Reversible Event in the Apoptotic Cascade. *J. Neuroscience* 25(23):5595-5603. PMID: 15944387  
Citations: 65 Impact Factor: 7.5

**REVIEWS AND OTHER PRODUCTS**

6. **Newbern JM**<sup>†</sup>. (2015) Molecular control of the neural crest and peripheral nervous system development. *Curr Topics in Developmental Biology* 111:201-31 PMID: PMC4517674  
Citations: 30 Impact Factor: 4.7
5. Xing L, **Newbern JM**, Snider WD<sup>†</sup>. (2013) Neuronal Development: SAD Kinases make happy axons. *Curr Biol* “Dispatch” 23(17):R720-3. PMID: PMC3947747  
Impact Factor: 9.9
4. **Newbern JM**, Snider WD<sup>†</sup>. (2012) Bers-ERK Schwann Cells Coordinate Nerve Regeneration. *Neuron*. “Preview” 73(4):623-626. PMID: 22365537  
Impact Factor: 15.8
3. **Newbern JM**, Birchmeier C<sup>†</sup>. (2010) Nrg1/ErbB signaling networks in Schwann cell development and myelination. *Seminars in Cell and Developmental Biology*. 21(9):922-928. PMID: PMC2991617  
Citations: 206 Impact Factor: 5.9
2. **Newbern JM**, Li X, Snider WD<sup>†</sup>. (2010) Signaling endosomes trigger synapse assembly. *Neuron*. “Preview” 67(3):352-4. PMID: 20696371  
Impact Factor: 14.0
1. **Newbern JM**, Shoemaker S, Snider WD<sup>†</sup>. (2009) Taking off the SOCS: cytokine signaling spurs regeneration. *Neuron*. “Preview” 64(5):591-2. PMID: 20005813  
Impact Factor: 13.2

**CONFERENCE ABSTRACTS & POSTERS**

41. Palade J, Boschi A, Eckalbar W, Kusumi K, Rawls A, **Newbern JM**, Wilson-Rawls J (2020) Analysis of vertebrate Delta-like s genes and proteins: Implications for cellular localization and function. Society for Developmental Biology 79<sup>th</sup> Annual Meeting ONLINE. Poster # 515 A1.
40. Der-Ghazarian TS, Charmchi D, Noudali SN, Scott SN, Holter MC, **Newbern JM**, Neisewander JL. (2019) Fos expression associated with 5-HT1B receptor agonist inhibition of methamphetamine seeking in the conditioned place preference model. Annual Society for Neuroscience Meeting. Poster Program No. 156.17.
39. Ortiz JB, **Newbern JM**, Conrad CD. (2019) The effect of chronic stress and a post-stress rest period on the hippocampal GABAergic neurons. Annual Society for Neuroscience Meeting. Poster Program No. 588.17.
38. Leyrer JM, Holter M, Brickner M, **Newbern JM**, Overby PF, Olive MF, Gipson CD. (2019) Chemogenetic inhibition of accumbens cholinergic interneurons inhibits cue-induced nicotine seeking. Annual Society for Neuroscience Meeting. Poster Program No. 080.11.
37. Mousa G, Copeland C, Martinez B, Leka K, Bjorklund G, Householder K, **Newbern J**, Sirianni R, Stabenfeldt S. (2019) HDACi-Loaded Nanoparticles to Treat Traumatic Brain Injury. Annual Society for Neuroscience Meeting. Poster Program No. 570.20
36. Holter MH, Fry NR, Bjorklund GR, Martinez JS, Nishimura K, Nichols J, Anderson TR, **Newbern JM**. (2019) Cortical GABAergic interneurons require ERK/MAPK for postnatal maturation and function. Annual Society for Neuroscience Meeting. Poster Program No. 734.18.
35. Mousa G, Copeland C, Martinez B, Leka K, Bjorklund G, Householder K, **Newbern J**, Sirianni R, Stabenfeldt S. (2019) HDACi-Loaded Nanoparticles to Treat Traumatic Brain Injury. 37th Annual National Neurotrauma Symposium. Session No. A17-01
34. Mousa G, Copeland C, Martinez B, Leka K, Bjorklund G, Householder K, **Newbern J**, Sirianni R, Stabenfeldt S. (2019) Quisinostat-loaded PLA-PEG Nanoparticles to Treat Traumatic Brain Injury. Biomedical Engineering Society Annual Meeting. Poster 1-16. Abstract No. 3038.



33. Nagy EK, **Newbern JM**, Olive MF (2018) POMC Neuron Activation by Alcohol and Possible Interaction with Stress. *41st Annual Scientific Meeting of the Research Society on Alcoholism*. San Diego, CA Symposium #111
32. Gupta TA, Daniels CW, Inguito D, Coury A., Nishimura K, Sanabria F, **Newbern JM** (2018) Acquisition and Maintenance of fixed-minimum interval performance is impaired in cortical GABAergic neuron deficient mice *Annual Society for Neuroscience Meeting*. Poster Program No. 242.11
31. Holter MH, Bjorklund GR, Shah SA, Nishimura K, **Newbern JM** (2018) Constitutively active MEK1 signaling drives selective death of cortical parvalbumin-expressing GABAergic interneurons in mouse embryonic brain development. *Annual Society for Neuroscience Meeting*. Poster Program No. 550.05
30. Holter MH, Bjorklund GR, Shah SA, Nichols JD, Martinez JS, Anderson TR, **Newbern JM** (2017) Functions of ERK/MAPK signaling in GABAergic neuron development and identity. *Annual Society for Neuroscience Meeting*. Poster Program No. 653.20
29. Bjorklund GR, Hewitt LT, Nishimura K, **Newbern JM** (2017) Hyperactivation of ERK/MAPK leads to altered cortical projection neuron outgrowth, reduced activity dependent gene expression, and motor learning deficits. *Annual Society for Neuroscience Meeting*. Poster Program No. 653.14
28. Shah S, Holter M, Marsh S, Treiman DM, **Newbern JM** (2017) Hyperactivation of ERK/MAPK Signaling Regulates Embryonic Cortical GABAergic Neuron Development. *AAAS Annual Meeting*. Boston, MA, Poster# BBS-12
27. Holter MH, Hewitt LT, Koebele SV, Judd J, Wedwick C, Bimonte-Nelson HA, Conrad CD, Neel BG, Araki T, Snider WD, **Newbern JM** (2016) The Noonan Syndrome-linked Raf1L613V mutation drives increased glial number and alterations in learning. *Annual Society for Neuroscience Meeting*. Poster Program No. 32.12/D11
26. Bjorklund GR, Hewitt LT, Xing L, Nikolova V, Moy SS, Snider WD, **Newbern JM** (2016) ERK/MAPK hyperactivation leads to altered corticospinal neuron connectivity and motor learning deficits. *Annual Society for Neuroscience Meeting*. Poster Program No. 118.03/B3
25. Nichols J, **Newbern JM**, Anderson T. (2016) Inhibitory dysfunction in contralateral motor cortex following pediatric traumatic brain injury. *Annual Society for Neuroscience Meeting* Poster Program No. 521.10/KK6
24. Sinakevitch I, Bjorklund G, **Newbern JM**, Smith BH (2016) Comparative study of chemical neuroanatomy of the olfactory neuropil in mouse, honey bee, and human. *12th International Neural Coding Workshop - University of Cologne*. Poster No. 5, Aug 29th
23. Aoidi R, Holter M, **Newbern JM**, Charron J (2016) Mice carrying the Mekk1<sup>Y130C</sup> mutation present cardio-facio-cutaneous phenotype. *Society for Developmental Biology Meeting* Aug 4-8, Boston, MA. Program Abstract #211
22. Shah S, Holter M, **Newbern JM** (2016) Hyperactivation of ERK/MAPK Leads to Altered Cortical GABAergic Neuron Number and Morphology. *23rd Annual ASU Undergraduate Poster Symposium*, Tempe, AZ, April 17th
21. Tokuyama M, Xu C, Fisher R, Wilson-Rawls J, Kusumi K, **Newbern JM** (2016) Formation of Neuromuscular Junctions in the Regenerating Lizard Tail Recapitulates Developmental Processes *Society for Developmental Biology Meeting* Aug 4-8, Boston, MA. Program Abstract #463
20. Shah S, Moreno M, **Newbern JM** (2015) Investigating Neuronal Morphology in Monogenic Neurodevelopmental Syndromes. *Arizona Science & Engineering Fair*, Phoenix, AZ
19. Martinez JS, Nichols J, Anderson T, **Newbern JM** (2015) Region-specific requirement for ERK/MAPK signaling in regulating GABAergic interneuron number and excitatory synaptic drive during development. *Annual Society for Neuroscience Meeting* Poster Program No. 684.16/H24
18. Nichols J, **Newbern JM**, Anderson T (2015) Pediatric traumatic brain injury induces selective loss of cortical inhibitory function. *Annual Society for Neuroscience Meeting* Poster Program No. 43.18/C87

17. Moreno M\*, Hewitt LT\*, Bjorklund GR, Daniels CW, Olive MF, Sanabria F, Marsh S, Treiman DM, Snider WD, **Newbern JM**. (2015) Hyperactivation of ERK1/2 signaling in developing GABAergic circuits reduces parvalbumin interneuron number and increases cortical excitability. *Annual Society for Neuroscience Meeting Poster Program* No. 685.01/H34
16. Xing L, Bjorklund GR, Li X, Wu Y, Snider WD\*, **Newbern JM\*** (2015) A bidirectional threshold of ERK/MAPK signaling regulates axonal outgrowth in developing corticospinal neurons. *Annual Society for Neuroscience Meeting Poster Program* No. 686.05/I11
15. Sinakevitch I, Bjorklund GR, Baluch DP, **Newbern JM**, and Smith BH. (2015) Comparative study of chemical neuroanatomy of the olfactory neuropil in mouse, honey bee and human. *Olfaction Conference Poster*. Santa Barbara, CA
14. Moreno MA, Martinez JS, **Newbern JM** (2014) Investigating the Effects of Aberrant ERK/MAPK Signaling on the Number of GABAergic Inhibitory Interneurons in the Developing Neocortex. *Annual Biomedical Research Conference for Minority Students Poster Session* No. A069
13. Xing L, Larsen RS, Li X, Wu Y, Philpot BD, Snider WD, **Newbern JM** (2014) Layer specific requirements for ERK/MAPK signaling in the developing neocortex. *Annual Society for Neuroscience Meeting Poster Program* No. 121.12
12. **Newbern JM**, Xing L, Larsen RS, Li X, Wu Y, Philpot BD, Snider WD (2013) Neuronal subtype-specific effects of ERK/MAPK signaling in the developing neocortex. *Annual Society for Neuroscience Meeting Poster Program* No. 721.02
11. **Newbern JM**, Li X, Lusk S, Larsen RS, Philpot BD, Snider WD (2012) ERK/MAPK activity levels control cortical gliogenesis and excitatory/inhibitory tone. Poster - *Neural Development - Gordon Research Conference*.
10. **Newbern JM**, Li X, Larsen RS, Philpot BD, Snider WD (2011) ERK/MAPK signaling levels regulate neural cell fate decisions and excitatory/inhibitory tone. Poster - *Cell Symposia: Autism Spectrum Disorders: From Mechanisms to Therapies*
9. Li X, **Newbern JM**, Snider WD. (2011) Disruption of ERK/MAPK signaling in intermediate neural progenitors leads to upper layer expansion in the neocortex. *Annual Society for Neuroscience Meeting Poster Program* No. 649.17
8. **Newbern JM**, Li X, Shoemaker S, Zhong J, Zhou J, Wu Y, Carlo C, Landreth GE, Snider WD. (2009) ERK/MAPK signaling is necessary for Schwann cell colonization of developing peripheral nerves. Poster - *Neurotrophic Factor - Gordon Research Conference*.
7. Watanabe M, Cherosky N, **Newbern JM**, Samuels I, Doughman Y, Wikenheiser J, Gargesha M, Karunamuni G, Carlo K, Saitta S, Snider WD, Landreth GE. (2009) Perturbation in ERK1/2 Signaling Results in Cardiac and Glandular Defects Associated With NCFC Syndromes. *American Journal of Medical Genetics* 152A(1):4-24.
6. Pucilowska J, **Newbern JM**, Samuels I, Carlo K, Saitta S, Snider WD, Landreth GE. (2009) Perturbation in ERK1/2 Signaling Result in Developmental Deficits Associated With NCFC Syndromes. *American Journal of Medical Genetics* 152A(1):4-24.
5. **Newbern JM**, Zhong J, Li X, Goins L, Samuels I, Carlo K, Cherosky N, Watanabe M, Landreth GE, Snider WD. (2007) ERK1/2 signaling is necessary for the development of neural crest derived structures *in vivo*. *Annual Society for Neuroscience Meeting Poster Program* No. 637.21.
4. Li X, Zhong J, **Newbern JM**, Goins L, Charron J, Landreth GE, Snider WD. (2007) Conditional mutagenesis of Raf/Mek/Erk pathway components in parvalbumin expressing neurons reveals a striking requirement for Raf and Mek signaling in Purkinje cell development. *Annual Society for Neuroscience Meeting Poster Program* No. 567.23.

3. Taylor AR, **Newbern JM**, and Milligan CE. (2004) Astrocytic modulation of motoneuron survival by NGF and Hsp70 is altered by cellular stress. *Annual Society for Neuroscience Meeting Poster Program* No. 944.4.
2. **Newbern JM**, Taylor AR, Wood M, Milligan CE. (2004) The JNK/c-Jun Axis Regulates Regenerative and Degenerative Events in Acutely Isolated Spinal Motoneurons *in vitro*. *Annual Society for Neuroscience Meeting Poster Program* No. 837.6.
1. **Newbern JM**, Taylor AR, Li L, Milligan CE. (2002) Survival Signaling Pathways for Embryonic Motoneurons *in vitro*. *Annual Society for Neuroscience Meeting Poster Program* No. 532.12.

## **INVITED SEMINARS**

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<b>Developmental Biology Seminar Series – Children's Hospital of Philadelphia</b>	
“Neural Cell Type Dependent Functions of ERK/MAPK Signaling in Cortical Development”	3.2.2021
<b>23<sup>rd</sup> Annual Korean Society for Brain and Neural Sciences Conference– Seoul, Korea</b>	
“Neural-Cell Type Dependent Functions of ERK/MAPK Signaling in Developing Cortical Circuits”	11.15.2020
<b>9<sup>th</sup> Annual ASU/BNI Neuroscience Research Symposium – Phoenix, AZ</b>	
“Kinase Signaling in Nervous System Development”	3.9.2019
<b>University of Michigan-Ann Arbor – Department of Human Genetics</b>	
“CRAF'ting the Neocortex: Cell-specific responses to pathological kinase activity”	9.7.2018
<b>Arizona State University – Coffee and Cognition Seminar Series – Col. of Health Solutions</b>	
“Kinase Signaling Regulates Developing Cortical Circuits”	4.6.2018
<b>8<sup>th</sup> Annual ASU/BNI Neuroscience Research Symposium – Phoenix, AZ</b>	
“ERK/MAPK Signaling in Cortical Development”	2.17.2018
<b>University of Arizona – Tucson, AZ</b>	
“CRAF'ting the Neocortex: Cell-specific responses to pathological kinase activity”	1.23.2018
<b>Barrow Neurological Institute – Phoenix, AZ</b>	
“CRAF'ting a Cerebral Cortex: Neural cell type-specific responses to pathological kinase activity”	10.17.2017
<b>Society for Neuroscience – San Diego, CA</b>	
“Functions of ERK/MAP Kinase Signaling in Developing Cortical Circuits”	11.13.2016
<b>American Soc. For Neurochemistry – Denver, CO</b>	
“Functions of ERK/MAP Kinase Signaling in Developing Cortical Circuits”	3.22.2016
<b>6<sup>th</sup> Annual ASU/BNI Neuroscience Research Symposium – Phoenix, AZ</b>	
“On Neurodevelopmental Syndromes”	1.7.2016
<b>Barrow Neurological Institute – Phoenix, AZ</b>	
“ERK/MAPK signaling in normal and pathological nervous system development.”	3.24.2015
<b>Arizona State University – School of Biol &amp; Health Systems Engineering Seminar Series</b>	
“Functions of MAP kinase signaling in the developing nervous system.”	10.3.2014
<b>Arizona State University – Dept. of Psychology: Behavioral Neuroscience Seminar</b>	
“Functions of MAP kinase signaling in the developing nervous system.”	4.9.2014
<b>Arizona Imaging and Microanalysis Society – Phoenix, AZ</b>	
“Imaging neural development in transgenic mice”	3.21.2014
<b>Arizona State University – Molecular and Cell Biology Colloquia</b>	
“Functions of MAP kinase signaling in the developing nervous system.”	3.6.2014
<b>Translational Genomics Research Institute – Phoenix, AZ</b>	
“Functions of MAP kinase signaling in the developing nervous system.”	1.16.2014
<b>University of Arizona College of Medicine - Phoenix – Dept. of Biomedical Sciences</b>	
“ERK/MAPK signaling in normal and pathological nervous system development”	10.13.2013
<b>University of Maryland – Dept. of Pharmacology</b>	
“Specific functions of ERK/MAPK signaling in the developing nervous system”	3.8.2013

<b>The Ohio State University</b> – Dept. of Psychology	
“Gliogenesis goes bers'ERK': Functions of MAP kinase signaling in the nervous system”	2.19.2013
<b>Virginia Polytechnic Institute and State University</b> – Dept. of Biology	
“Gliogenesis goes bers'ERK': Functions of MAP kinase signaling in the nervous system”	2.8.2013
<b>Arizona State University</b> – School of Life Sciences	
“Gliogenesis goes bers'ERK': Functions of MAP kinase signaling in the nervous system”	1.30.2013
<b>Indiana Univ./Purdue Univ. Indianapolis</b> – Dept. of Biology	
“Kinase signaling pathways in the developing nervous system”	1.22.2013
<b>Medical College of Wisconsin</b> – Neuroscience Research Center	
“Gliogenesis goes bers'ERK': Functions of MAP kinase signaling in the nervous system”	1.10.2013
<b>University of Kentucky</b> - Dept. of Biochemistry	
“Glia go bers'ERK': MAP kinase signaling in the nervous system”	12.17.2012
<b>Wake Forest University</b> – Dept. of Neurobiology and Anatomy	
“Specific developmental functions of ERK/MAPK signaling in peripheral nervous system”	1.26.2012
<b>University of North Carolina</b> - Dept. of Cell and Molecular Physiology	
“Specific developmental functions of ERK/MAPK signaling in peripheral nervous system”	1.28.2011
<b>North Carolina State University</b> – Dept. of Biomedical Sciences	
“Specific functions of ERK1/2 signaling in peripheral nervous system development”	10.27.2010
<b>University of North Carolina</b> – Neuroscience Center Mini-Series	
“Genetic dissection of ERK1/2 functions in peripheral nervous system development”	2.14.2009
<b>Duke University</b> – Dept. of Neuroscience Postdoctoral Neuroscience Series	
“Neural crest specific loss of MAPK leads to deficits in cardiac and craniofacial development”	4.30.2008
<b>University of North Carolina</b> – 3 <sup>rd</sup> Annual Developmental Biology Symposium	
“Erk2 signaling is required for neural crest and craniofacial development”	3.28.2008

## MENTORSHIP

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### PH.D. STUDENTS

#### Primary Mentor

**Sara Knowles** August 2019-present

ASU Interdisciplinary Graduate Program in Neuroscience

**Katherine Rees** August 2018-present

ASU Interdisciplinary Graduate Program in Molecular and Cellular Biology

**Michael Holter** August 2014-December 2019

ASU Interdisciplinary Graduate Program in Neuroscience

*Current Position: Postdoctoral Fellow, Ivy Brain Tumor Center, Barrow Neurological Inst.*

**George Reed Bjorklund** January 2014-December 2018

ASU Interdisciplinary Graduate Program in Molecular and Cellular Biology

*Current Position: Postdoctoral Fellow – ASU Sch. of Biological and Health Systems Engineering*

#### Co-Mentor

**Cindy Xu** *Primary Mentor: Kenro Kusumi, Ph.D.* 2017-2020

ASU Interdisciplinary Graduate Program in Molecular and Cellular Biology

*Current Position: Postdoctoral Researcher, Center for Regenerative Medicine at Harvard Medical School*

**Joshua Nichols** *Primary Mentor: Trent Anderson, Ph.D.* 2014-2015

ASU Biology Ph.D. Program

*Current Position: Discovery Neuroscientist - Amgen*

#### Chair of Doctoral Student Comprehensive Exam Committee

**Heather Geissel:** ASU-MCB *Primary Mentor: Marco Mangone, Ph.D.* 2018

**Joanna Palade:** ASU-MCB *Primary Mentor: Jeanne Wilson-Rawls, Ph.D.* 2016

**Adrienne Henderson-Smith:** TGen-MCB *Primary Mentor:* Matt Huentelman, Ph.D.

2016

Member of Doctoral Student Committee

Wesley Tierney: ASU-Neuro	<i>Chair:</i> Ian Hogue, Ph.D	2020-present
Joanna Winstone: ASU-Neuro	<i>Chair:</i> Ramon Velezquez, Ph.D	2020-present
Ryan Pevey: ASU-Neuro	<i>Chair:</i> Rita Sattler, Ph.D	2020-present
Gayathri Srinivasan: ASU-SBHSE	<i>Chair:</i> David Brafman, Ph.D.	2020-present
Lynette Bustos: ASU-Neuro	<i>Chair:</i> Rita Sattler, Ph.D	2020-present
Ammar Tanveer: ASU-MCB	<i>Chair:</i> Joseph Blattman, Ph.D.	2020-2021
Mollie Peters: ASU-Neuro	<i>Chair:</i> Melissa Wilson, Ph.D	2020-2021
Broc Pagni: ASU-Neuro	<i>Chair:</i> B. Blair Braden, Ph.D	2018-present
Kassondra Hickey: ASU-SBHSE	<i>Chair:</i> Sarah Stabenfeldt, Ph.D.	2018-present
Tyler Quigley: ASU-Animal Beh	<i>Chair:</i> Gro Amdam, Ph.D.	2018-present
Heather Geissel-Hrach: ASU-MCB	<i>Chair:</i> Marco Mangone, Ph.D.	2017-2020
Joshua Carmen: ASU-Microbio	<i>Chair:</i> Joseph Blattman, Ph.D.	2017-2021
Stephanie Koebele: ASU-Beh Neuro	<i>Chair:</i> Heather Bimonte-Nelson, Ph.D.	2016-2019
Kimberly Meyers: ASU-Neuro	<i>Chair:</i> Amelia Gallitano, Ph.D. (UA-COM)	2016-2020
Joanna Palade: ASU-MCB	<i>Chair:</i> Jeanne Wilson-Rawls, Ph.D.	2016-2020
Adrienne Smith: TGEN-MCB	<i>Chair:</i> Matt Huentelman, Ph.D. (TGEN)	2016-2019
Kasuen Kotagama: ASU-MCB	<i>Chair:</i> Marco Mangone, Ph.D.	2015-2019
Sambhavi Subramanian: ASU- Neuro	<i>Chair:</i> Bertram Jacobs, Ph.D	2015-2020
Raul Garcia: ASU- Neuro	<i>Chair:</i> Janet Neisewander, Ph.D	2015-2020
Cherie Alissa Lynch: ASU-MCB	<i>Chair:</i> Alan Rawls, Ph.D.	2015-2020
Taleen Der-Ghazarian: ASU- Neuro	<i>Chair:</i> Janet Neisewander, Ph.D	2015-2018
Guohui Li: ASU-Neuro	<i>Chair:</i> Shenfeng Qui, Ph.D. (UA-COM)	2015-2017
Christopher Jernigan: ASU-Bio	<i>Chair:</i> Brian Smith, Ph.D.	2014-2018
Bryce Ortiz: ASU- Beh Neuro	<i>Chair:</i> Cheryl Conrad, Ph.D.	2014-2017
Jeremiah Molinaro: ASU- Neuro	<i>Chair:</i> Miles Orchinik, Ph.D.	2014-2015
Jonathan Bobek: ASU-Bio	<i>Chair:</i> Gro Amdam, Ph.D.	2013-2017

**M.S. STUDENTS**

Primary Mentor

<b>Katie Riordan</b>		2018-present
Master's Program in Biology - ASU		
<i>Accepted Position: MD Student – University of Arizona School of Medicine</i>		
<b>Rebecca Sebastian</b>		2016-2019
Master's Program in Biology - ASU		
<i>Current Position: PhD Student – UMASS-Amherst</i>		
<b>Colton Smith</b>		2015-2017
Master's Program in Biology - ASU		
<i>Current Position: PhD Student – Neuroscience PhD Program, Univ. of Southern California</i>		

Member of Master's Student Committee

Umar Aftab	<i>Chair:</i> Rachel Rowe, Ph.D. (UA-COM)	2021-present
Joshua Nichols	<i>Chair:</i> Trent Anderson, Ph.D.	2014
Samantha Ridgway	<i>Chair:</i> Theresa Thomas, Ph.D. (UA-COM)	2018-2019

**RESEARCH TECHNICIANS**

<b>Noah Fry, B.Sc.:</b> Research Technician		2018-2019
<i>Current Position: MD Program – Baylor University</i>		
<b>Kenji Nishimura, B.Sc.:</b> Research Technician		2016-2018
<i>Current Position: PhD Program - Inst. for Neuroscience, Univ. of Texas at Austin</i>		

<b>Lauren Hewitt</b> , B.Sc.: Research Technician	2014-2016
<i>Current Position: PhD Program - Inst. for Neuroscience, Univ. of Texas at Austin</i>	
<b>Johan Martinez</b> , B.Sc.: Research Technician	2013-2014
<i>Current Position: PhD Program, Brown University, Boston MA</i>	

**UNDERGRADUATE & POST-BAC STUDENTS**Chair of Barrett Honors College Student Thesis Committee

<b>Jordan Hill</b>	Spring 2020 – Spring 2021
<b>Shiv Shah</b>	Fall 2015-Spring 2019
<i>Current Position: MD Student – Mayo Scottsdale School of Medicine</i>	
<b>Kevin Treadwell</b>	Fall 2016-Summer 2017
<b>Alex Hilbert</b>	Spring 2016-Spring 2017
<i>Current Position: MS Student - Keck Graduate Inst, Masters in Business &amp; Science Program</i>	
<b>Cassandra Roose</b>	Fall 2015-Spring 2017
<i>Current Position: Fulbright Scholar, English Teaching – Ghent Univ., Belgium</i>	
<b>Javier Gonzalez</b>	2014-2016

Member of ASU Barrett Honors Student Thesis Committee

Alexa Algstam	<i>Chair: Timothy Balmer, Ph.D.</i>	2021-present
Kamawela Leka	<i>Chair: Sampath Rangasamy, Ph.D. (TGen)</i>	2021-present
Umar Aftab	<i>Chair: Rachel Rowe, Ph.D. (UA-COM)</i>	2019-2020
Eden Christie	<i>Chair: Jon Lifshitz, Ph.D. (UA-COM)</i>	2020
Tien Le	<i>Chair: Janet Neisewander, Ph.D.</i>	2018-2020
Gergey Mousa	<i>Chair: Sarah Stabenfeldt, Ph.D.</i>	2018-2019
Shannon Obrien	<i>Chair: Marco Mangone, Ph.D.</i>	2018-2019
Nicholas Jarvis	<i>Chair: Amaal Starling, M.D. (Mayo)</i>	2017-2019
Una Hadziahmetovic	<i>Chair: Michael Krueger, M.D./Ph.D. (PCH)</i>	2017-2018
Vrishti Shah	<i>Chair: Cheryl Conrad, Ph.D.</i>	2018
Kelsey Newbold	<i>Chair: Rachel Rowe, Ph.D. (UA-COM)</i>	2017-2018
Arhem Barkatullah	<i>Chair: Amelia Gallitano, Ph.D. (UA-COM)</i>	2017-2018
Yerina Hur	<i>Chair: Theresa Thomas, Ph.D. (UA-COM)</i>	2017-2018
Mahir Quereshi	<i>Chair: John Lifshitz, Ph.D. (UA-COM)</i>	2016-2017
Madeleine St Peter	<i>Chair: Janet Neisewander, Ph.D.</i>	2016-2017
Emily Hoegh	<i>Chair: Miles Orchinik, Ph.D.</i>	2016-2017
Brittany Gerald	<i>Chair: Vinodh Narayanan, Ph.D. (TGEN)</i>	2016-2017
Gurkaran Singh	<i>Chair: Robert Bowser, Ph.D. (BNI)</i>	2015-2017
Ivan Fernandez	<i>Chair: Amelia Gallitano, Ph.D. (UA-COM)</i>	2015-2017
Trisha Chaudhury	<i>Chair: Janet Neisewander, Ph.D.</i>	2015-2017
Thuy-Duyen Nguyen	<i>Chair: Marco Mangone, Ph.D.</i>	2015-2016
Tushar Menon	<i>Chair: John J. Nigro, M.D. (PCH)</i>	2014-2015
Henry Wilke	<i>Chair: Marco Mangone, Ph.D.</i>	2014-2015

Undergraduate Students - Primary Mentor

Elise Bouchal: University of Arizona	Summer 2021-present
Anna Bayne: Biological Sciences – ASU	Spring 2021-present
Ariana Afshari: WINURE – ASU	Fall 2020-present
Jennifer Smetanick: SHBSE – ASU	Fall 2019-Spring 2020
Nithara Murphy: Biological Sciences – ASU	Fall 2018-Spring 2020
Danielle Gonzalez: Biological Sciences – ASU	Fall 2017-2019
Katie Riordan: Biological Sciences – ASU	Summer 2017-2018
Noah Fry: Boston University	Summer 2017



Gina Williams: Univ of Arizona, Tucson – NDRC Summer Internship Program <i>Current Position: PhD Student– UCSF Neuroscience Graduate Program</i>	Summer 2016
Tina Frechette: Biological Sciences – ASU	Fall 2015-2016
Alexi Choueiri: Barrett Honors College – ASU <i>Current Position: Graduate Fellow– Neuroscience PhD Program, MIT</i>	Fall 2015-Spring 2016
Sarah Bjorklund: Biological Sciences - ASU	Fall 2015
Katelyn Wilensky: Biology – University of Michigan <i>Current Position: Research Technician - Univ. of Michigan-Dept. of Psychiatry</i>	Summer 2015
Christopher Wedwick: Biological Sciences-ASU <i>Current Position: Medical Student – Univ. of Arizona-College of Medicine Phoenix</i>	Spring 2015-2017
Evan Hendrick: Biological Sciences - ASU	Spring 2015
Marissa Kulick: Molecular Biosciences/Biotechnology - ASU	Fall 2014
Colin Parker: Biological Sciences - ASU	Fall 2013-2015
Mario Moreno: Biological Sciences, SOLUR & PREP Program - ASU	Spring 2014-2015
Tekoda Kemper: Molecular Biosciences/Biotechnology - ASU	Fall 2013-2014
Sindell Soto: Biological Sciences – ASU	Fall 2013-2014
Alina Martinez: Biological Sciences – ASU	Fall 2013-2014
Cory Breaux: Dept. of Biology - UNC <i>Current Position: Data Associate – US Census Bureau</i>	2012-2013
Caroline Henderson: Dept. of Biology –UNC	2012
Jordan Messer: Dept. of Chemistry - UNC <i>Current Position: Global Medical Affairs Manager - Biogen</i>	2010-2012
Samuel Lusk: Dept. of Biology - UNC <i>Current Position: Senior Analytics Consultant - Lumeris</i>	2010-2012
Asm Bhuiyan: Biomedical Engineering – UNC	2010-2012

#### HIGH SCHOOL STUDENTS

Elise Bouchal: Basha High School – Chandler, AZ	2017-2020
Maurisa Rapp: Mountain View High School – Tempe, AZ	2016
Shiv Shah: Hamilton High School Honors Science Class – Chandler, AZ	2014-2015
Julia Weiss: The Payne Academy at McClintock High School – Phoenix, AZ	2014

#### UNDERGRADUATE STUDENT MENTORED GRANTS

##### Shiv Shah

The Origins Project at ASU - \$10,000 Undergraduate Fellowship 9.1.2017-8.31.2018

##### Alexi Choueiri

The Origins Project at ASU - \$10,000 Undergraduate Fellowship 9.1.2015-9.1.2016  
NSF Graduate Research Fellowship Program (GRFP) 2016

##### Lauren Hewitt

NSF Graduate Research Fellowship Program (GRFP) 2016

#### SERVICE

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##### NATIONAL/STATE

Co-Director: AZ Wellbeing Commons 2019-present  
Neurobiology, Aging, Dementias and Movement Disorders Cluster

##### Ad hoc manuscript reviewer

Journal of Neuroscience, Developmental Biology, Scientific Reports, Molecular Neurobiology, Cell Reports, PLOS One, Frontiers in Cellular Neuroscience, PLOS Genetics, Frontiers in Cellular Neuroscience, Bioessays, Journal of Neurochemistry, Journal of Medical Genetics

Ad hoc grant reviewer

Arizona Alzheimer's Consortium	2020
American Heart Association - Basic Cell Genetics and Epigenetics-2 Committee	2016-2020
National Science Foundation Grant Reviewer	2008

Conference Organization

Minisymposium Chair: International Society for Neuroscience Conference: "RASopathies: Pathophysiology and Therapeutic Directions"	2021
Co-Organizer: 9 <sup>th</sup> Annual ASU/BNI Neuroscience Symposium	2.1.2020
Neurobiology Cluster Session Director: AZ Wellbeing Commons Conference	9.27.2019, 10.9.2020
Breakout Session Organizer: 6 <sup>th</sup> Annual ASU/BNI Neuroscience Symposium	1.5.2017
Minisymposium Co-Chair: International Society for Neuroscience Conference: Session 191-"Building the Cerebral Cortex"	10.13.2016

**ARIZONA STATE UNIVERSITY**University

Co-Director: ASU/BNI Interdisciplinary Graduate Program in Neuroscience	2021-present
Member: ASU RegenMed Core Advisory Board	2020-2021
Member: ASU Neuroscience B.Sci. Interdepartmental Curriculum Committee	2019-present
Member: ASU/BNI Interdisciplinary Graduate Program in Neuroscience – Exec. Com.	2019-present
Organizer: ZEISS On Your Campus - Microscopy Workshop at <a href="#">ASU</a>	April 2019
Member: ASU Leadership Academy Cohort 4 - Behavioral Genomics Initiative	2018-2019
Flinn Scholar Faculty Host	2.26.2014, 2.27.2019, 2.5.2020
Member: Animal Users Advisory Committee	2015-present
RCR Series: Career Development Seminar	1.25.2018
Member: Clinical Veterinarian Search Committee	2015

School of Life Sciences (SoLS)

Co-chair: Targeted Recruitment Committee - Assistant Professor	June 2021
Co-chair: Targeted Recruitment Committee - Assistant Professor	April 2021
Member: Targeted Recruitment Committee - Professor/Director	Jan 2021
Chair: Open Search Committee – Assistant/Associate Professor in Neurobiology	2019-2020
Member: Open Search Committee – Lecturer, Neuroscience	2019-2020
Director: Neuroscience Research Seminar (NEU591)	2017-present
Co-Director: MCB Colloquium (MCB 501/701)	2015-2019
Member: Undergraduate Programs Committee	2017-2018
Panel Participant: SoLS Graduate Student Retreat	3.26.2017, 3.30.18
Member: Stem Cell Biology Faculty Search Committee	2016-2017
Interim Member: SoLS Director Search Committee	2014-2015
Member: School of Life Sciences/School of Art Collaborative Committee	2014

**UNIVERSITY OF NORTH CAROLINA – CHAPEL HILL**

Coordinator: Neuroscience Seminar Mini-Series	2009 - 2011
Member: Developmental Biology Symposium Event Committee	2008