

## **Brandon Cox, Ph.D.**

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### **Current Position**

Associate Professor with Tenure, Department of Pharmacology  
Cross appointed to the Department of Otolaryngology  
Southern Illinois University School of Medicine  
Springfield, IL

### **Education**

Postdoctoral Research Associate St. Jude Children's Research Hospital, Memphis, TN	2008 – 2013
Ph.D. Pharmacology, Georgetown University, Washington, DC	2008
B.S. Biology, University of Richmond, Richmond, VA	1999

### **Academic Appointments**

Associate Professor with Tenure, Department of Pharmacology Cross appointed to the Department of Otolaryngology Southern Illinois University School of Medicine Springfield, IL	2018 – present
Assistant Professor, Department of Pharmacology Cross appointed to the Department of Otolaryngology Southern Illinois University School of Medicine Springfield, IL	2013 – 2018

### **Professional Positions and Experience**

Director of the Pharmacology and Neuroscience Graduate Program Southern Illinois University School of Medicine, Springfield, IL	2019 – present
Consultant, Turner Scientific, LLC, Jacksonville, IL	2017 – present
Consultant, Otonomy, Inc., San Diego, CA	2018 – 2019
Clinical Research Coordinator Chicago Center for Clinical Research Protocare Trials (currently known as Radiant Research) Chicago, IL	2000 – 2002
Research Assistant Chicago Center for Clinical Research, Protocare Trials (currently known as Radiant Research), Chicago, IL	1999 – 2000

## Professional Memberships and Activities

Association for Research in Otolaryngology, Member	2008 – present
Chair, Program committee	2023 – present
Member, Communications committee	2023 – present
Member, Program committee	2019 – 2022
Member, Nominating committee	2020
Member, Long Range Planning committee	2018 – 2021
Member, Membership committee	2018 – 2019
Moderator, 40 <sup>th</sup> annual midwinter research meeting. Regeneration I session	2017
Moderator, 38 <sup>th</sup> annual midwinter research meeting. Development I session	2015
Moderator, 34 <sup>th</sup> annual midwinter research meeting. Development III session	2011
Member, Pharmaceutical Interventions for Hearing Loss working group Department of Defense	2016 – present
Member, American Association for the Advancement of Science	2009 – present
Member, Society for Neuroscience	2004 – present
Member, American Society for Pharmacology and Experimental Therapeutics	2013 – 2020
Member, National Postdoctoral Association	2008 – 2013

## Editorial Board Appointments

Editorial Board Member, <i>Hearing Research</i>	2018 – present
Guest Editor, <i>Hearing Research</i> Special Issue: <a href="#">Post-transcriptional &amp; post-translational control of gene expression in the inner ear</a>	2020 – 2023

## Committee Assignments and Administrative Services

### Southern Illinois University School of Medicine

Chair, Research Policy Committee	2023 – present
Member, Patent and Copyright Committee	2023 – present
Director, Graduate Program, Department of Pharmacology	2019 – present
Vice Chair, Institutional Animal Care and Use Committee	2019 – present
Member, Promotion and Tenure Committee	2018– present
Member, Department of Pharmacology Assistant Professor Search Committee	2023
Member, Research Policy Committee	2018– 2023
Member, Veterinarian Search Committee	2019
Member, Institutional Animal Care and Use Committee	2013 – 2019
Member, Graduate Program Committee, Department of Pharmacology	2014 – 2019
Member, Population Science and Health Steering Committee	2017 – 2018
Member, Associate Dean for Research Search Committee	2016 – 2018
Co-chair, Research Collaboration Retreat Committee	2016
Member, Information Management Policy Committee	2014 – 2017
Member, Grant Review Committee	2014 – 2017
Member, Somani Award Committee, Department of Pharmacology	2014 – 2016
Interviewer, Medical School Admissions Committee	2013 – 2016
Member, Research Collaboration Retreat Committee	2015

### Grant Review Service

Ad Hoc Reviewer, NIH/NIDCD AUD Study Section	2023
Ad Hoc Reviewer, NIH/NIDCD AUD Study Section	2022
Reviewer, Foundation Pour l'Audition, France	2020
Reviewer, Department of Defense, Army Medical Research Materiel Command	2018
Reviewer, Medical Research Council, UK	2018
Reviewer, NIH/NIDCD Special Emphasis panel	2018
Reviewer, Department of Defense, Congressionally Directed Medical Research Program	2017
Reviewer, Action on Hearing Loss Foundation	2014 & 2016

### Reviewer Service for Peer-Reviewed Journals

<i>Aging Cell</i>	2019
<i>Cell Proliferation</i>	2020
<i>Cell &amp; Tissue Research</i>	2018
<i>Comparative Medicine</i>	2015
<i>Development</i>	2022
<i>Experimental Cell Research</i>	2020
<i>Experimental Gerontology</i>	2013
<i>Frontiers in Cell and Developmental Biology</i>	2021, 2022
<i>Hearing Research</i>	2016, 2017 (2), 2018, 2020 (2), 2022
<i>International Journal of Audiology</i>	2014 (2)
<i>Journal of the Association for Research in Otolaryngology</i>	2016, 2018 (3)
<i>Journal of Cell Science</i>	2020
<i>Journal of Neuroscience</i>	2020
<i>Journal of Visualized Experiments</i>	2017
<i>Molecular Neurobiology</i>	2014
<i>Neuroscience</i>	2014
<i>Neuroscience Letters</i>	2018, 2019
<i>PLOS Biology</i>	2021
<i>PLOS One</i>	2018
<i>Scientific Reports</i>	2017, 2019 (2), 2020

### Conference Organization Service

Co-Chair, Midwest Auditory Research Conference	2019
2.5 day conference with 150 attendees and 8 keynote speakers	
Received NIH R13 support (see grants & contracts below)	

### **Educational Activities**

#### ***Southern Illinois University School of Medicine***

##### Senior Medical Curriculum

Research in sensory pharmacology elective	2015, 2017, 2022
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##### Sophomore Medical Curriculum

###### Intro Week

Lecture given on the following topic (annually): Pharmacogenomics	2022– present
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###### Cardiovascular, Renal, & Respiration Unit

Lecture given on the following topic (annually): Antihistamines, Antitussives, Expectorants, Mucolytics, & Nasal Decongestants	2015 – present
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## Neuromuscular and Behavior Unit

Problem-based learning group facilitator (annually*)	2014 – present
*except for 2021 when on maternity leave	
Lectures given on the following topics (annually):	
NSAIDs, inflammation & gout	2014 – present
Substance abuse (using flipped classroom method)	2014 – present
Neuromuscular blockers & spasmolytics	2015 – 2021
Opioids, pain & migraine (integrated session with a clinician)	2014 – 2021

## Graduate Student Curriculum

PHRM-500 Seminar/Journal Club (Fall & Spring semesters)	
Course director	2019 – present
PHRM-501 Introduction to Seminar/Journal Club (Fall & Spring semesters)	
Course director	2019 – present
PHRM-530: Advanced Pharmacology	
Course director	2019 – present
Series of discussion sessions on Mouse Genetics	2020, 2022
Series of discussion sessions on Developmental Biology	2014, 2016, 2018
PHRM-540: Responsible Conduct of Research	
Course director	2017
Lecture given on the following topic:	
Animal use in research session	2017, 2019
PHRM-550A & B: Principles of Pharmacology	
Course director	2019 – present
Lectures given on the following topics:	
Antihistamines, Antitussives, Expectorants, Mucolytics, & Nasal Decongestants	2016, 2018, 2020, 2022
Substance abuse	2015, 2017, 2019, 2021
NSAIDs, Antipyretics, & Anti-inflammatory	2014, 2016, 2017, 2019, 2021
Migraine	2014, 2016, 2017, 2019, 2021
Neuromuscular blockers & spasmolytics	2015, 2017, 2019
Opioids, NSAIDs, & Pain	2014, 2016, 2017, 2019
Mouse genetics	2013, 2015, 2017
Drug/receptor interactions	2013
PHRM-551: Methods in Pharmacology	
Lecture given on the following topic:	
Mouse Genetics & CRISPR	2023
PHRM-577: Principles of Neuroscience	
Course director	2019 – 2021
Lectures given on the following topics:	
Neurotransmitters	2015, 2017, 2019, 2021
Cellular components of the nervous system	2013, 2015, 2017, 2019, 2021
Neurotransmitter release	2013, 2015, 2017, 2019, 2021
Neurotransmitter receptors	2015, 2017, 2019

MBMB-504: Research Methods  
Lecture given on the following topic:  
Mouse Genetic Models 2022, 2023

Resident Curriculum

Neuroscience course for Neurology & Neurosurgery Residents  
Lecture given on the following topics (annually):  
Cellular & subcellular components of the nervous system 2014 – 2017, 2020 –2022

Graduate student dissertation committees

Rajaram Kshetri, Department of Pharmacology 2021 – present  
Madan Ghimire, Department of Pharmacology 2019 – 2023  
Vikrant Borse, Department of Pharmacology 2014 – 2017  
Aarushi Sharma, Department of Pharmacology 2013 – 2016  
Yuanzhao Lv, Department of Pharmacology 2013 – 2015

Mentoring Experience

*PhD student dissertations*

Sujata Pandey 1/2023 – present  
Dissertation title: The Role of the Aryl Hydrocarbon Receptor in Cochlear  
Development and Hair Cell Regeneration

Melissa McGovern 2014 – 2017  
Dissertation title: The Role of Notch Signaling in the Differential Ability of Supporting Cell  
Subtypes to Spontaneously Regenerate Hair Cells in the Neonatal Mouse Cochlea  
Awards: selected to attend the Biology of the Inner Ear course at Woods Hole, MA  
(competitive application process)  
received travel award from Association for Research in Otolaryngology  
received travel award from Vice Chancellor for Research, SIUSOM  
Current position: Tenure-track Assistant Professor, University of Pittsburgh, PA

*Postdocs*

Jarnail Singh, PhD 2017 – 2020  
Current position: Staff scientist, Cox lab, SIUSOM

Luyi Zhou, PhD 2017 – 2018  
Current position: Senior scientist, Turner Scientific, LLC, IL

Yuanzhao Lv Darcy, PhD 2015 – 2017  
Current position: Principal scientist, Montai Health, MA

Sumedha Karmarkar, PhD, 2013 – 2014  
Current position: unknown

*Otolaryngology Residents*

Mitch Heuermann, MD 2020 – 2023  
Awards: received travel award from Association for Research in Otolaryngology  
Current position: Assistant professor SIUSOM, Department of Otolaryngology

Betty Chen, MD 2018 – 2021  
Current position: American Academy of Facial Plastic & Reconstructive Surgery  
Fellowship, Roseville Facial Plastic Surgery, CA

Nnenna Ezeilo, MD 2015 – 2018  
Awards: received Research Seed Grant for Residents from Dept. of Surgery, SIUSOM  
received travel award from Association for Research in Otolaryngology  
Current position: Otolaryngology private practice, Wellstar ENT, GA

Scott Montgomery, MD 2015 – 2017  
Current position: Otolaryngology private practice, Sutter Health, CA

Stacie Garland Gregory, MD 2014 – 2015  
Current position: Assistant professor SIUSOM, Department of Otolaryngology

*Medical students*

Hannah Johnson, Y2 MPEE 6/2023 – present

Hailey Hollinshead, Y2 4/2023 – present

Victoria Idowu, Y2 8/2022 – present  
Awards: received Alpha Omega Alpha Carolyn L. Kuckein Student Research Fellowship

Sophia Matos, Y4 4/2021 – 5/2022  
Current position: Resident, Otolaryngology, SIUSOM

Luis Rubio, Y2-Y4 10/2020 – 2/2022  
Current position: Resident, Otolaryngology, Loyola University Medical Center, IL

Todd Johnson, Y2-Y3 10/2020 – 10/2021  
Current position: Resident, Family Medicine, Baystate Franklin Medical Center, MA

Candice Cuppini, Y2-Y3 1/2017 – 4/2018  
Current position: Resident, Anesthesiology, University of Chicago Medical Center, IL

Max Crouse, Y3-Y4 10/2016 – 12/2017  
Current position: Family Medicine private practice, Brentwood East Family Medicine, TN

Cindy Gregory Moore, Y2-Y4 12/2014 – 6/2016  
Current position: Instructor, Dept. of Otolaryngology, Vanderbilt University

*Undergraduate students*

McKenna Schmitt, University of Illinois at Springfield 3/2022 – 3/2023

Leeza Zavelsky, Goucher College 6/2022 – 8/2022

Josie Long, University of Mississippi 6/2021 – 8/2021

Ariel Tegler, University of Illinois at Urbana-Champaign 5/2019 – 8/2019

Bridget Brian, University of Illinois at Springfield 1/2018 – 5/2018  
Awards: received Hemal Vakharia Memorial Award from SIUSOM

Ruth Brown, University of Kentucky 6/2017 – 7/2017

Auston “Cody” Grant, University of the Tampa 5/2014 – 8/2014 & 3/2015 – 6/2015  
Awards: received Hemal Vakharia Memorial Award from SIUSOM

Neil Parker, Southern Illinois University, Edwardsville 6/2013 – 8/2013

***St. Jude Children’s Research Hospital***

Mentoring Experience

*Master’s students*

Anne Lenoir, Universite Paris-Diderot, Paris 7 4/2009 – 8/2009

Samantha Papal, Universite Paris-Diderot, Paris 7 4/2008 – 8/2008

*Undergraduate student*

Kristin Ates, Tulane University 5/2012 – 8/2012

***Georgetown University***

Undergraduate Student Curriculum

BIOL-370: Neurobiology

Lecture given on the following topic:

Drugs of abuse 2006, 2007

ICOS-325: Diseases and Disorders of the Brain

Course director 2006

Lectures given on the following topics:

Mood and anxiety disorders 2005, 2006

Alzheimer’s disease 2005

Graduate Student Curriculum

PHAR-511: Fundamentals of Pharmacology

Lecture given on the following topic:

Reproductive pharmacology 2005

PHAR-516: Neuropharmacology

Cannabinoids 2006, 2007

Nursing Student Curriculum

NURS-204: Principles of Pharmacology

Lecture given on the following topic:

Reproductive pharmacology 2007

Mentoring Experience

*Master’s students*

Tara Levin, Oberlin University 5/2007 – 8/2007

Jordan Magarik, Vanderbilt University 5/2006 – 8/2006

## Honors and Awards

Rising Star, Researchers to Know, Illinois Science & Technology Coalition	2018
Forty under 40 in Springfield, <i>Springfield Business Journal</i> , Springfield, IL	2016
Young Medical Innovator Award, Sangamon County Medical Society, IL	2016
Nominated for the Presidential Early Career Award for Scientists & Engineers (PECASE) by the Office of Naval Research	2013
“Spinning the Spider Web” Award, given for service as the Washington DC alumni chapter president from the University of Richmond	2006
Beta Beta Beta Biology Honor Society Induction, University of Richmond, VA	1996

## Grants and Contract Awards

### Current Grant Support (by role)

Title: Consequences of chronic noise exposure in nonhuman primates

Project Number: R01 DC020888

Agency: NIH/National Institute on Deafness and other Communicative Disorders

Role: Co-PI [with Ram Ramachandran (Vanderbilt Univ.) & Collen LePrell (Univ. of Texas Dallas)]

Total Award Amount: \$3,457,661 with subcontract to SIUSOM at \$366,805

Projected Award Dates: 1/2024 – 12/2029

Title: Development of new therapies that stimulate hair cell regeneration

Project Number: W81XWH-22-1-0674

Agency: Department of Defense

Role: PI

Total Award Amount: \$1,475,000

Award dates: 8/2022 – 7/2025

Title: The role of Pou4f3 in age-related vestibular dysfunction

Project Number: R01 AG073151

Agency: NIA/National Institute on Aging

Role: Co-PI [with Dr. Brad Walters (Univ. of Mississippi Medical Center)]

Total Award Amount: \$3,205,474 with subcontract to SIUSOM at \$757,613

Award dates: 8/2021 – 4/2026

Title: Nicotinic Receptor Pathology in Tinnitus: Auditory Cortex and Selective Desensitizing Nicotinic Agents

Project Number: W81XWH-19-1-0017

Agency: Department of Defense

Role: Co-investigator (0.6 calendar month commitment)

PI: Dr. Don Caspary (SIUSOM)

Total direct cost: \$1,712,585

Award dates: 7/2019-12/2023



Title: Fate acquisition and function of type I and II vestibular hair cells in mammals  
Project Number: R01 DC13771  
Agency: NIH/National Institute on Deafness and other Communicative Disorders  
Role: Co-investigator (0.96 calendar month commitment)  
PI: Dr. Jenny Stone (Univ. of Washington)  
Total Award Amount: \$3,246,882 with subcontract to SIUSOM at \$247,407  
Award dates: 4/2019 – 3/2024

Title: Coding in Auditory Neurons: Effects of Amino Acids  
Project Number: R01 DC00151  
Agency: NIH/National Institute on Deafness and other Communicative Disorders  
Role: Co-investigator (1.2 calendar month commitment)  
PI: Dr. Don Caspary(SIUSOM)  
Total Award Amount: \$3,271,643  
Award dates: 1/2023-12/2027

Title: Cerebellar granule cell dysfunction in Shank3 mutant mice  
Project Number: R01 MH129749  
Agency: NIH/National Institute of Mental Health  
Role: Consultant (0.6 calendar month commitment)  
PI: Dr. Ben Richardson (SIUSOM)  
Total Award Amount: \$1,855,624  
Award dates: 7/2022-6/2027

#### Completed Grant Support

Title: Coding in Auditory Neurons: Effects of Amino Acids  
Project Number: R01 DC00151  
Agency: NIH/National Institute on Deafness and other Communicative Disorders  
Role: Co-investigator (1.2 calendar month commitment)  
PI: Dr. Don Caspary (SIUSOM)  
Total Award Amount: \$2,558,285  
Award dates: 12/2015-12/2022

Title: Mechanisms that regulate hair cell survival  
Project Number: R01 DC014441  
Agency: NIH/National Institute on Deafness and other Communicative Disorders  
Role: PI  
Total direct cost: \$1,567,190  
Award dates: 6/2016 – 5/2022

Title: 2019 Midwest Auditory Research Conference  
Project Number: R13 DC018245  
Agency: NIH/National Institute of Deafness and other Communicative Disorders  
Role: Co-PI (with Dr. Don Caspary, SIUSOM)  
Total Award Amount: \$20,350  
Award dates: 7/2019-6/2020

Title: Investigation of Notch signaling in during spontaneous regeneration of cochlear hair cells  
Project Number: W81XWH-15-1-0475  
Agency: Department of Defense

Role: PI  
Total Award Amount: \$1,499,960  
Award dates: 9/2015 – 9/2019

Title: Targeting attentional mechanisms in tinnitus: contributions of the thalamic cholinergic system

Project Number: N00014-16-1-2306  
Agency: Office of Naval Research  
Role: Co-investigator (1.2 calendar month commitment)  
PI: Dr. Don Caspary (SIUSOM)  
Total Award Amount: \$1,498,626  
Award dates: 4/2016 – 8/2019

Title: Vestibular hair cell turnover in normal mammals

Project Number: R01 DC13771  
Agency: NIH/National Institute on Deafness and other Communicative Disorders  
Role: Co-investigator (0.6 calendar month commitment)  
PI: Dr. Jenny Stone (Univ. of Washington)  
Total Award Amount: \$1,645,781 with subcontract to SIUSOM at \$161,898  
Award dates: 4/2014 – 12/2019

Title: The role of Pou4f3 in regulating survival of vestibular hair cells

Research Seed Grant for Residents  
Agency: Department of Surgery, Southern Illinois University School of Medicine  
Role: Mentor  
Resident PI: Nenna Ezeilo  
Total Award Amount: \$2,500  
Award dates: 1/2016 – 12/2016

Title: Confocal microscope for the investigation of hearing loss, otoprotection, and tinnitus

Project Number: N00014-15-1-2866  
Agency: Office of Naval Research, Defense University Research Instrumentation Program  
Role: PI  
Total Award Amount: \$270,389  
Award dates: 8/2015 – 8/2016

Title: Cell source and mechanism of hair cell regeneration in the neonatal mouse cochlea

Project Number: N00014-13-1-0569  
Agency: Office of Naval Research  
Role: PI  
Total Award Amount: \$398,499  
Award dates: 4/2013 – 9/2015

Title: Acoustic nerve synapse loss changes central auditory transmission: new targets for treating age-related hearing loss

Agency: Southern Illinois University School of Medicine  
Role: co-PI (with Dr. Don Caspary, SIUSOM)  
Total Award Amount: \$15,000  
Award dates: 1/2014 – 12/2014

Title: Spontaneous hair cell regeneration in the neonatal mouse cochlea  
Pediatric Research Loan Repayment Grant  
Agency: NIH/National Center for Advancing Translational Sciences  
2<sup>nd</sup> Competitive renewal  
Award dates: 7/2013 – 6/2014

Title: Spontaneous hair cell regeneration in the neonatal mouse cochlea  
Pediatric Research Loan Repayment Grant  
Agency: NIH/National Institute on Deafness and Other Communication Disorders  
Competitive renewal  
Award dates: 7/2012 – 6/2013

Title: Mechanism of hair cell regeneration in the neonatal mouse cochlea  
Pediatric Research Loan Repayment Grant  
Agency: NIH/National Institute on Deafness and Other Communication Disorders  
Award dates: 7/2010 – 6/2012

Title: p16INK4a in mammalian cochlear hair cell regeneration  
Project Number: NRSA F32 DC010310  
Agency: NIH/ National Institute on Deafness and Other Communication Disorders  
Role: PI  
Mentor: Jian Zuo, Ph.D.  
Total Award Amount: \$127,176  
Award dates: 7/2009 – 6/2012

Title: Expression of heat shock proteins in the gorgonian, *Leptogorgia virgulata*  
John Neasmith Dickinson Memorial Research Grant  
Agency: University of Richmond  
Role: PI  
Mentors: Roni Kingsley, Ph.D. and Valerie Kish, Ph.D.  
Total Award Amount: \$1,000  
Award dates: 5/1999 – 8/1999

#### Completed Sponsored Research Contracts

Title: Industry Sponsored Research  
Agency: Decibel Therapeutics, Inc.  
Role: PI  
Total Award Amount: \$61,046  
Award dates: 4/2021 – 4/2023

Title: Industry Sponsored Research  
Agency: Otonomy, Inc.  
Role: PI  
Total Award Amount: \$75,740  
Award dates: 2/2020 – 7/2022

#### Pending Grant Support

None

Grants Applications not funded (since last promotion)

Title: Beyond Cre/loxP: Development of new recombinant enzymes for manipulation of gene expression

Project Number: R21 DC018914

Agency: NIH/National Institute of Deafness and other Communicative Disorders

Role: PI

Total Award Amount: \$338,117

Award dates: 7/2020 – 6/2022

Title: Investigating the role of estrogen in regulating auditory hair cell regeneration

Agency: Southern Illinois University School of Medicine

Role: PI

Total Award Amount: \$15,000

Award dates: 7/2020 – 6/2021

Title: Treating tinnitus by overcoming limitations to auditory hair cell regeneration

Project Number: PR182257

Agency: Department of Defense

Role: PI

Total Award Amount: \$295,000

Award dates: 9/2019 – 2/2021

Title: 2019 Midwest Auditory Research Conference

Agency: Memorial Medical Center Foundation

Role: Co-PI (with Dr. Don Caspary, SIUSOM)

Total Award Amount: \$18,850

Award dates: 7/1/2019-6/30/2020

Title: Investigation of mechanisms that limit auditory hair cell regeneration to neonatal ages

Agency: Office of Naval Research

Role: PI

Total Award Amount: \$537,997

Award dates: 6/1/2018 – 5/31/2021

Title: Overcoming limitations to hair cell regeneration in the auditory system

Agency: Department of Defense

Role: PI

Total Award Amount: \$1,307,050

Award dates: 6/2018 – 5/2021

**Publications**

Peer-Reviewed Publications (since last promotion)

\*\*student, postdoc, and resident authors are underlined\*\*

1. Ghimire M, Cai R, Ling L, Brownell KA, Wisner KW, **Cox BC**, Hackett TA, Brozoski TJ and Caspary DM (2023) Desensitizing nicotinic agents normalize tinnitus-related inhibitory dysfunction in the auditory cortex and ameliorate behavioral evidence of tinnitus. *Front Neurosci* 17:1197909. DOI: [10.3389/fnins.2023.1197909](https://doi.org/10.3389/fnins.2023.1197909)

2. Ciani Berlingeri AN, Pujol R, **Cox BC**, and Stone JS (2022) Sox2 is required in supporting cells for regeneration of vestibular hair cells in adult mice. *Hear Res* 426:108642. DOI: [10.1016/j.heares.2022.108642](https://doi.org/10.1016/j.heares.2022.108642)
3. Heuermann ML, Matos S, Hamilton D, and **Cox BC** (2022) Regenerated hair cells in the neonatal cochlea are innervated and the majority co-express markers of both inner and outer hair cells. *Front Cell Neurosci* 16:841864. DOI: [10.3389/fncel.2022.841864](https://doi.org/10.3389/fncel.2022.841864)
4. Generotti C, **Cox BC**, Singh J, Hamilton D, McKenzie E, O'Malley BW, and Li D (2022) Subclinical diagnosis of cisplatin-induced ototoxicity with biomarkers *Sci Rep* 12(1):18032. DOI: [10.1038/s41598-022-23034-x](https://doi.org/10.1038/s41598-022-23034-x)
5. Stone JS, Pujol R, Nguyen TB, **Cox BC** (2021) The transcription factor Sox2 is required to maintain the cell type-specific properties and innervation of type II vestibular hair cells in adult mice. *J Neurosci* 41(29):6217-6233. DOI: [10.1523/JNEUROSCI.1831-20.2021](https://doi.org/10.1523/JNEUROSCI.1831-20.2021)  
-image chosen for journal cover
6. Chrysostomou E, Zhou L, Darcy YL, Graves KA, Doetzlhofer A, and **Cox BC** (2020) The Notch ligand Jagged1 is required for the formation, maintenance, and survival of Hensen's cells in the mouse cochlea. *J Neurosci* 40(49):9401-9413. DOI: [10.1523/JNEUROSCI.1192-20.2020](https://doi.org/10.1523/JNEUROSCI.1192-20.2020)  
-image chosen for journal cover
7. Beebe NL, Sowick CS, Kristaponyte I, Galazyuk AV, Vetter DE, **Cox BC**, Schofield BR (2020) Generation of a ChAT<sup>Cre</sup> mouse line without the early onset hearing loss typical of the C57BL/6J strain. *Hearing Res* 388:107896. DOI: [10.1016/j.heares.2020.107896](https://doi.org/10.1016/j.heares.2020.107896)
8. Hicks KL, Wisner SR, **Cox BC**, and Stone JS (2020) Atoh1 is required in supporting cells for regeneration of vestibular hair cells in adult mice. *Hearing Res* 385:107838. DOI: [10.1016/j.heares.2019.107838](https://doi.org/10.1016/j.heares.2019.107838)
9. Naples JG, Ruckenstein MJ, Singh J, **Cox BC**, and Li D (2020) Intratympanic Diltiazem-Chitosan Hydrogel as a Novel Otoprotectant against Cisplatin-Induced Ototoxicity in a Mouse Model. *Otol Neurotol* 41(1):115-122. DOI: [10.1097/MAO.0000000000002417](https://doi.org/10.1097/MAO.0000000000002417)
10. Warchol ME, Massoodnia R, Pujol R, **Cox BC**, and Stone JS (2019) Development of hair cell phenotype and calyx nerve terminals in the neonatal mouse utricle. *J Comp Neurol* 527(11): 1913-1928. DOI: [10.1002/cne.24658](https://doi.org/10.1002/cne.24658)
11. McGovern MM, Randle MR, Cuppini CL, Graves KA, and **Cox BC** (2019) Multiple supporting cell subtypes are capable of spontaneous hair cell regeneration in the neonatal mouse cochlea. *Development* 146(4):pii DOI: [10.1242/dev.171009](https://doi.org/10.1242/dev.171009)
12. Stone JS, Wisner SR, Bucks SA, Mellado Lagarde MM, and **Cox BC** (2018) Characterization of adult vestibular organs in 11 CreER mouse lines. *J Assoc Res Otolaryngol* 19(4):381-399. DOI: [10.1007/s10162-018-0676-6](https://doi.org/10.1007/s10162-018-0676-6)
13. McGovern MM, Zhou L, Randle MR, and **Cox BC** (2018) Spontaneous hair cell regeneration is prevented by increased Notch signaling in supporting cells. *Front Cell Neurosci* 12:120. DOI: [10.3389/fncel.2018.00120](https://doi.org/10.3389/fncel.2018.00120)
14. Cai R, Montgomery SC, Graves KA, Caspary DM, and **Cox BC** (2018) The FBN rat model of aging: investigation of ABR waveforms and ribbon synapse changes. *Neurobiol Aging* 62:53-63. DOI: [10.1016/j.neurobiolaging.2017.09.034](https://doi.org/10.1016/j.neurobiolaging.2017.09.034)

Peer-Reviewed Publications (prior to 2018)

1. Sottile SY, Ling L, **Cox BC**, and Caspary DM (2017) Impact of aging on postsynaptic neuronal nicotinic neurotransmission in auditory thalamus. *J Physiol* 595(15):5375-5385. DOI: [10.1113/JP274467](https://doi.org/10.1113/JP274467)
2. Bucks SA, **Cox BC**, Vlosich BA, Manning JP, Nguyen TB and Stone JS (2017) Supporting cells remove and replace sensory receptor hair cells in a balance organ of adult mice. *eLife* 6:e18128 DOI: [10.7554/eLife.18128](https://doi.org/10.7554/eLife.18128)
3. McGovern MM, Brancheck J, Grant AC, Graves KA, and **Cox BC**. (2017) Quantitative analysis of supporting cell subtype labeling among CreER lines in the neonatal mouse cochlea. *J Assoc Res Otolaryngol* 18(2): 227-245. DOI: [10.1007/s10162-016-0598-0](https://doi.org/10.1007/s10162-016-0598-0)  
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4. Montgomery SC and **Cox BC** (2016) Whole mount dissection and immunofluorescence of the adult mouse cochlea. *J Vis Exp* 107:e53561. DOI: [10.3791/53561](https://doi.org/10.3791/53561)
5. Walters BJ\*, Liu Z\*, Crabtree M\*, Coak E, **Cox BC**, and Zuo J. (2014) Auditory hair cell-specific deletion of p27<sup>Kip1</sup> in postnatal mice promotes cell-autonomous generation of new hair cells and normal hearing. *J Neurosci*, 34:15751-15763. DOI: [10.1523/JNEUROSCI.3200-14.2014](https://doi.org/10.1523/JNEUROSCI.3200-14.2014)  
\*authors contributed equally
6. **Cox BC**, Dearman JA, Brancheck J, Zindy F, Roussel MF, and Zuo J. (2014) Generation of Atoh1-rtTA transgenic mice: a tool for inducible gene expression in hair cells of the inner ear. *Sci Rep* 4:6885. DOI: [10.1038/srep06885](https://doi.org/10.1038/srep06885)
7. **Cox BC\***, Chai R\*, Lenoir A, Liu Z, Zhang L, Nguyen D, Chalasani K, Steigelman KA, Fang J, Rubel EW, Cheng AG, and Zuo J. (2014) Spontaneous hair cell regeneration in the neonatal mouse cochlea in vivo. *Development* 141:816-829. DOI: [10.1242/dev.103036](https://doi.org/10.1242/dev.103036)  
\*authors contributed equally
8. Mellado Lagarde, MM, **Cox BC**, Fang J, Taylor R, Forge A, and Zuo J. (2013) Selective ablation of pillar and Deiters' cells severely affects cochlear postnatal development and hearing function in mice. *J Neurosci* 33:1564-1576. DOI: [10.1523/JNEUROSCI.3088-12.2013](https://doi.org/10.1523/JNEUROSCI.3088-12.2013)
9. Liu Z, Walters BJ, Owen T, Brimble MA, Steigelman KA, Zhang L, Mellado Lagarde MM, Valentine MB, Yu Y, **Cox BC**, and Zuo J. (2012) Regulation of p27<sup>Kip1</sup> by Sox2 maintains quiescence of inner pillar cells in the murine auditory sensory epithelium. *J Neurosci* 32:10530-10540. DOI: [10.1523/JNEUROSCI.0686-12.2012](https://doi.org/10.1523/JNEUROSCI.0686-12.2012)
10. Burns J\*, **Cox BC\***, Thiede BR, Zuo J, and Corwin JT. (2012) In vivo proliferative regeneration of balance hair cells in newborn mice. *J Neurosci* 32:6570-6577. DOI: [10.1523/JNEUROSCI.6274-11.2012](https://doi.org/10.1523/JNEUROSCI.6274-11.2012)  
\*authors contributed equally  
-image chosen for journal cover
11. Liu Z, Dearman JA, **Cox BC**, Walters BJ, Zhang L, Ayrault O, Zindy F, Gan L, Roussel M, and Zuo J. (2012) Age-dependent in vivo conversion of mouse cochlear pillar and Deiters' cells to immature hair cells by Atoh1 ectopic expression. *J Neurosci* 32: 6600-6610. DOI: [10.1523/JNEUROSCI.0818-12.2012](https://doi.org/10.1523/JNEUROSCI.0818-12.2012)

12. Yu Y, Weber T, Yamashita Y, Liu Z, Valentine MB, **Cox BC**, and Zuo J. (2010) In vivo proliferation of postmitotic cochlear supporting cells by acute ablation of the retinoblastoma protein in neonatal mice. *J Neurosci* 30: 5927-5936. DOI: [10.1523/JNEUROSCI.5989-09.2010](https://doi.org/10.1523/JNEUROSCI.5989-09.2010)
13. **Cox BC**, Marritt AM, Perry DC, and Kellar KJ. (2008) Transport of multiple nicotinic acetylcholine receptors in the rat optic nerve: High densities of receptors containing  $\alpha 6$  and  $\beta 3$  subunits. *J Neurochem* 105: 1924-1938. DOI: [10.1111/j.1471-4159.2008.05282.x](https://doi.org/10.1111/j.1471-4159.2008.05282.x)
14. Marritt AM, **Cox BC**, Yasuda RP, McIntosh JM, Xiao Y, Wolfe BB, and Kellar KJ. (2005) Nicotinic cholinergic receptors in the rat retina: simple and mixed heteromeric subtypes. *Mol Pharmacol* 68: 1656-1668. DOI: [10.1124/mol.105.012369](https://doi.org/10.1124/mol.105.012369)
15. Kingsley RJ, Affif E, **Cox BC**, Kothari S, Kriechbaum K, Kuchinsky K, Neill AT, Puri AF, and Kish VM. (2003) Expression of heat shock and cold shock proteins in the gorgonian *Leptogorgia virgulata*. *J Exp Zool A Comp Exp Biol* 296: 98-107. DOI: [10.1002/jez.a.10248](https://doi.org/10.1002/jez.a.10248)

Peer-Reviewed Review Articles (since last promotion)

Walters BJ and **Cox BC** (2019) Approaches for the study of epigenetic modifications in the inner ear and related tissues. *Hearing Res* 376:69-85. DOI: [10.1016/j.heares.2019.01.007](https://doi.org/10.1016/j.heares.2019.01.007)

Peer-Reviewed Review Articles (prior to 2018)

**Cox BC**, Liu Z, Mellado Lagarde MM, and Zuo J. (2012) Conditional gene expression in the mouse inner ear using Cre-loxP. *J Assoc Res Otolaryngol* 13:295-322. DOI: [10.1007/s10162-012-0324-5](https://doi.org/10.1007/s10162-012-0324-5)

Book Chapters (invited and peer-reviewed)

1. Duncan JS and **Cox BC** (2020) Anatomy & Development of the Inner Ear. In *The Senses: A Comprehensive Reference, 2<sup>nd</sup> edition*. B. Fritsch, editor, Cambridge, Massachusetts: Elsevier Inc. Chapter 2.16
2. **Cox, BC**, Brigande JV, and Walters BJ (2023) Genetic and epigenetic strategies for promoting hair cell regeneration in the mature mammalian inner ear. In Warchol ME, Stone JS, Coffin AB, Popper AN & Fay RR (Eds.) *Hair Cell Regeneration: Springer Handbook of Auditory Research volume 75*. Springer. DOI: [10.1007/978-3-031-20661-0\\_8](https://doi.org/10.1007/978-3-031-20661-0_8)

Manuscripts under review

\*\*student, postdoc, and resident authors are underlined\*\*

1. Singh J, Randle MR, and **Cox BC** (*under review*). The transcription factor Pou4f3 is essential for the survival of postnatal and adult mouse cochlear hair cells and normal hearing. *Front Cell Neurosci*.
2. Zhou L, Randle MR, Graves KA, Telger AE, Darcy YL, and **Cox BC** (*under review*) Cochlear supporting cells are unable to convert into hair cells after deletion of the hair cell-specific Notch ligands Delta-like 1 and Jagged 2. *Development*

**Published Abstracts and Presentations**

Invited Talks at Conferences (since last promotion)

1. Keynote speaker at the *Celebrating Corti Hearing Conference*, 2023 October 29-31, Wurzburg, Germany
2. *Academic Laboratory Management & Leadership Symposium*. Mentoring session on Sustaining Your Lab. 2023 March 10, Virtual
3. *Association for Research in Otolaryngology: 46<sup>th</sup> annual midwinter meeting*, Mentoring session on Careers in Academia. 2023 February 11-15, Orlando, FL
4. *Auditory System Gordon Research Conference*. Discussion leader for the Diagnoses & Interventions session. 2022 July 10-15, Bryant University, Smithfield, RI
5. *Coffee hour for the Student & Postdoc Committee of the Association for Research in Otolaryngology*. Mentoring session on personal statements. 2022 June 15, Virtual.
6. *Academic Laboratory Management & Leadership Symposium*. Mentoring session on Sustaining Your Lab. 2021 March 4, Virtual
7. *Association for Research in Otolaryngology: 44<sup>th</sup> annual midwinter research meeting*, Mentoring session on Mentor-Mentee Communication. 2021 February 18, Virtual
8. *Association for Research in Otolaryngology: 41<sup>st</sup> annual midwinter meeting*. Mentoring session on the NIH loan repayment program. 2018 February 10, San Diego, CA.

*Invited Talks at Conferences (prior to 2018)*

1. *Society for Neuroscience 47<sup>th</sup> Annual Meeting*. Nanosymposium 548: Hair cells, The Notch ligand Jagged1 is required for the survival of supporting cells in the postnatal mouse cochlea. 2017 November 11-15, Washington, DC.
2. *US Army Medical Research and Materiel Command Clinical and Rehabilitative Medicine Hearing and Balance In-Progress Review Meeting*. Investigation of Notch signaling in during spontaneous regeneration of cochlear hair cells. 2017 August 3, Fort Detrick, MD.
3. *Association for Research in Otolaryngology: 40<sup>th</sup> annual midwinter meeting*. Mentoring session on job search and independence. 2017 February 13, Baltimore, MD
4. *Association for Research in Otolaryngology: 40<sup>th</sup> annual midwinter meeting*. Mentoring session on the NIH loan repayment program. 2017 February 14, Baltimore, MD
5. *Auditory System Gordon Research Conference*. Cellular and molecular mechanisms that regulate spontaneous hair cell regeneration in the neonatal mouse cochlea. July 10-15, 2016, Bates College, Lewiston, ME.
6. *Noise-Induced Hearing Loss Program Review, Office of Naval Research*. Cell source and mechanism of hair cell regeneration in the neonatal mouse cochlea. August 4-7, 2014, Annapolis, MD.
7. Keynote speaker at the *Iowa Center for Molecular Auditory Neuroscience Symposium, University of Iowa*. Spontaneous hair cell regeneration in the neonatal mouse cochlea and utricle in vivo. October 17, 2013, Iowa City, IA.
8. *Noise-Induced Hearing Loss Program Review, Office of Naval Research*. Cell source and mechanism of hair cell regeneration in the neonatal mouse cochlea. August 21-24, 2012, Baltimore, MD.

*Invited Talks at Universities (since last promotion)*

1. *Kresge Hearing Research Institute, University of Michigan*. Molecular control of hair cell survival: effects on hearing and balance. March 31, 2022, Virtual
2. *Department of Pharmacology, Georgetown University*. Molecular control of hair cell survival: effects on hearing and balance. November 18, 2021, Washington, DC
3. *National Institute of Deafness and Communication Disorders*. Molecular control of hair cell survival: effects on hearing and balance. November 16, 2021, Virtual
4. *Molecular Biology, Microbiology, and Biochemistry Seminar series, Southern Illinois University Carbondale*. Molecular control of hair cell survival: effects on hearing and balance. October 8, 2021, Virtual.



5. *Department of Biological Sciences, Western Michigan University.* Notch signaling regulates cell survival in the neonatal cochlea. March 19, 2021, Virtual
6. *Department of Neuroscience, University of Virginia.* Unique role of Notch signaling in the neonatal cochlea. August 28, 2019, Charlottesville, VA
7. *Department of Physiology, Southern Illinois University.* Plasticity in the auditory and vestibular systems. September 14, 2018, Carbondale, IL

*Invited Talks at Universities (prior to 2018)*

1. *Department of Neurobiology and Anatomical Sciences, University of Mississippi Medical Center.* Plasticity in the auditory and vestibular systems. October 10, 2017, Jackson, MS.
2. *Postdoctoral Fellows Professional Development Symposium, St. Jude Children's Research Hospital.* On the Move: 3 part series, Academia versus Industry & Mock interview sessions. May 24-26, 2017, Memphis, TN.
3. *Southern Illinois University, Edwardsville School of Pharmacy.* Plasticity in the auditory and vestibular systems. April 14, 2017, Edwardsville, IL.
4. *Department of Biomedical Sciences, Creighton University.* Cell source and mechanism of spontaneously regenerated hair cells in the neonatal mouse cochlea. October 24-25, 2016, Omaha, NE.
5. *Department of Otolaryngology, University of Washington.* Cell source and mechanism of spontaneously regenerated hair cells in the neonatal mouse cochlea. June 30, 2016, Seattle, WA.
6. *Department of Otolaryngology, Washington University School of Medicine.* Cell source and mechanism of spontaneously regenerated hair cells in the neonatal mouse cochlea. February 10, 2016, St. Louis, MO.
7. *Postdoctoral Fellows Professional Development Symposium, St. Jude Children's Research Hospital.* Career panel discussion & table topics discussion. May 28-29, 2015, Memphis, TN.
8. *Department of Pharmacology & Physiology, Georgetown University.* Using mouse genetic models to investigate the mechanism of spontaneous hair cell regeneration in the neonatal mouse cochlea. November 20, 2014, Washington, DC.
9. *Department of Physiology, Southern Illinois University Carbondale.* Using mouse genetic models to investigate the mechanism of spontaneous hair cell regeneration in the neonatal mouse cochlea. October 3, 2014, Carbondale, IL.
10. *Department of Pharmacology, Howard University, College of Medicine.* In vivo hair cell regeneration in the neonatal mouse cochlea and utricle. December 5, 2012, Washington, DC.
11. *Department of Otolaryngology, Head and Neck Surgery, Case Western Reserve University, School of Medicine.* In vivo hair cell regeneration in the neonatal mouse cochlea and utricle. November 26, 2012, Cleveland, OH.
12. *Department of Anatomy, Physiology, and Genetics, Uniformed Services University of the Health Sciences.* In vivo hair cell regeneration in the neonatal mouse cochlea and utricle. November 19, 2012, Bethesda, MD.
13. *Department of Biomedical Sciences, Marquette University, College of Health Sciences.* In vivo hair cell regeneration in the neonatal mouse cochlea and utricle. November 11, 2012, Milwaukee, WI.
14. *Biomedical Research Symposium, St. Jude Children's Research Hospital.* In vivo hair cell regeneration in the neonatal mouse cochlea. October 29, 2012, Memphis, TN.
15. *Department of Pharmacology, Southern Illinois University School of Medicine.* In vivo hair cell regeneration in the neonatal mouse cochlea. October 24, 2012, Springfield, IL.

16. *Department of Biology, Fall seminar series, Rhodes College.* In vivo hair cell regeneration in the neonatal mouse cochlea, September 22, 2011 Memphis, TN.
17. *School of Audiology and Speech-Language Pathology Communication Sciences and Disorders colloquium, University of Memphis.* In vivo hair cell regeneration in the neonatal mouse cochlea. March 4, 2011, Memphis, TN.
18. *Postdoctoral Annual Retreat (one of eight chosen speakers), St Jude Children's Research Hospital.* In vivo hair cell regeneration in the neonatal mouse cochlea. March 2, 2011, Memphis, TN.

Conference Abstracts presented as Oral Presentations (since last promotion)

\*\*student, postdoc, and resident authors are underlined\*\*

1. González-Garrido A, López-Ramírez O, **Cox BC**, Stone JS, and Eatock RA. Manipulating gene expression in adult vestibular type II hair cells promotes transdifferentiation toward the type I hair cell phenotype. Vestibular-Oriented Research Meeting 2023 June 25-29, Boulder, CO
2. Baertsch H, Dorssers H, Nguyen T, Phillips JO, Eatock RA, **Cox BC**, and Stone JS. Sox2 is required to maintain the morphology and afferent innervation of type II HCs and to regulate motor behaviors of adult mice. Vestibular-Oriented Research Meeting 2023 June 25-29, Boulder, CO
3. Ciani Berlinger A, Pujol R, **Cox BC**, and Stone JS. Sox2 is Required in Supporting Cells for Normal Levels of Vestibular Hair Cell Regeneration in Adult Mice *Association for Research in Otolaryngology:46<sup>th</sup> annual midwinter meeting*, 2023 February 11-15, Orlando, FL
4. Stansak K, Chen B, Chen T, Wang T, Nall C, Ezeilo N, Graves K, Macon T, Zhou W, Zhu H, Cheng A, **Cox BC**, and Walters BJ. Loss of Pou4f3 From Adult Vestibular Hair Cells Leads to Reduced Vestibular Function and Hair Cell Death *Association for Research in Otolaryngology:46<sup>th</sup> annual midwinter meeting*, 2023 February 11-15, Orlando, FL
5. Stansak K, Nall C, Chen T, Zhou W, Zhu H, **Cox BC**, and Walters, BJ. Conditional deletion of Pou4f3 from type II hair cells leads to hair cell loss in murine horizontal cristae. *Association for Research in Otolaryngology:45<sup>th</sup> annual midwinter meeting*, 2022 February 5-9, Virtual
6. **Cox BC**, Pujol R, Nguyen T, and Stone JS. Sox2 Maintains Type II Hair Cell Fate in Adult Mouse Vestibular Organs. *Association for Research in Otolaryngology:43<sup>rd</sup> annual midwinter meeting*, 2020 January 25-29, San Jose, CA
7. Zhou L, Randle MR, Graves KA and **Cox BC**. Deletion of the Notch ligands Jagged 2 and Delta-like 1 results in loss of supporting cells in the neonatal mouse cochlea. *Midwest Auditory Research Conference*, 2019 July 11-13, Springfield, IL
8. Singh J, Randle MR, and **Cox BC**. Targeted deletion of Pou4f3 from postnatal cochlear hair cells: Effects on the cellular architecture of the mouse cochlea. *Midwest Auditory Research Conference*, 2019 July 11-13, Springfield, IL
9. Chen BY, Ezeilo N, Graves KA and **Cox BC**. The role of *Pou4f3* in vestibular hair cell survival. *Midwest Auditory Research Conference*, 2019 July 11-13, Springfield, IL
10. Naples JG, Ruckenstein MJ, Singh J, **Cox BC**, and Li D. Intratympanic Diltiazem-Chitosan Hydrogel as a Novel Otoprotectant against Cisplatin-Induced Ototoxicity in a Mouse Model. *American Neurology Society:54<sup>th</sup> annual midwinter meeting*, 2019 May 3-4, Austin, TX

Conference Abstracts presented as Oral Presentations (prior to 2018)

1. **Cox BC** and Koehler J. Giving Lectures a FACE Lift (Focus, Attention, Concentration, and Engagement). 8<sup>th</sup> Annual Symposium for Teaching and Learning, 2017 April 20, Springfield, IL
2. Furrer Bucks SA, **Cox BC**, Vlosich BA, Nguyen TB, Pujol R, and Stone JS. Supporting cell and hair cell populations are dynamic in adult mouse utricles. *Association for Research in Otolaryngology: 38<sup>th</sup> annual midwinter meeting*, 2015 February 21-25, Baltimore, MD
3. Trone MM, Karmarkar, SW, and **Cox BC**. Dynamic changes in the Notch signaling pathway after hair cell ablation in the neonatal mouse cochlea. *Joint meeting of the Midwest Auditory Research Conference and the Midwest Auditory Neuroscience Symposium*. 2014 July 23-25, Omaha, NE
4. **Cox BC**, Randle MR, and Karmarkar SW. Regenerated hair cells that spontaneously form in the neonatal mouse cochlea do not express the survival factor, Pou4f3. *Joint meeting of the Midwest Auditory Research Conference and the Midwest Auditory Neuroscience Symposium*. 2014 July 23-25, Omaha, NE
5. **Cox BC**, Zuo J, and Randle MR. Dose response of hair cell damage and regeneration in the neonatal mouse cochlea, *Joint meeting of the Midwest Auditory Research Conference and the Midwest Auditory Neuroscience Symposium*. 2014 July 17-19, St. Louis, MO.
6. **Cox BC** and Zuo J. Dose response of hair cell damage and regeneration in the neonatal mouse cochlea. *Association for Research in Otolaryngology: 36<sup>th</sup> annual midwinter research meeting*, 2013 February 16-20, Baltimore, MD.
7. Chai R, Tong L, **Cox BC**, Chalasani K, Wang T, Xue A, Nookala V, Huang G, Pham XP, Zuo J, Rubel EW, and Cheng A. Lineage tracing reveals supporting cells contributing to hair cell regeneration in the neonatal mouse cochlea in vivo. *Association for Research in Otolaryngology: 36<sup>th</sup> annual midwinter research meeting*, 2013 February 16-20, Baltimore, MD
8. Walters BJ, Liu Z, Crabtree M, **Cox BC**, and Zuo J. Ablation of p27Kip1 in mouse auditory hair cells results in cell proliferation and long term survival of postnatally produced hair cells. *Association for Research in Otolaryngology: 36<sup>th</sup> annual midwinter research meeting*, 2013 February 16-20, Baltimore, MD.
9. **Cox BC**, Dearman J, Papal S, Steigelman KA, Valentine MB and Zuo J. The role of p16Ink4a in mammalian hair cell regeneration. *Association for Research in Otolaryngology: 35<sup>th</sup> annual midwinter research meeting*, 2012 February 25-29, San Diego, CA.
10. **Cox BC**, Lenoir A, Zhang L, Steigelman KA, Fang J and Zuo J. In vivo hair cell regeneration in the neonatal mouse cochlea. *Association for Research in Otolaryngology: 35<sup>th</sup> annual midwinter research meeting*, 2012 February 25-29, San Diego, CA.
11. **Cox BC**, Lenoir A, Zhang L, Steigelman KA and Zuo J. Hair cell damage in the neonatal mouse cochlea using forced expression of diphtheria toxin. *Association for Research in Otolaryngology: 33<sup>rd</sup> annual midwinter meeting*, 2010 February 6-10, Anaheim, CA.
12. Mellado Lagarde MM, Lenoir A, **Cox BC**, and Zuo J. Specific ablation of neonatal cochlear supporting cells in vivo by expression of diphtheria toxin. *Association for Research in Otolaryngology: 33<sup>rd</sup> annual midwinter meeting*, 2010 February 6-10, Anaheim, CA.
13. **Cox BC**, Papal S, Steigelman KA, Valentine MB and Zuo J. Effect of p16<sup>Ink4a</sup> deletion on cochlear hair cells. *Association for Research in Otolaryngology: 32<sup>nd</sup> annual midwinter research meeting*, 2009 February 14-19, Baltimore, MD.

Conference Abstracts presented as Poster Presentations (since last promotion)

\*\*student, postdoc, and resident authors are underlined\*\*

1. Ciani Berlinger A, Tao L, **Cox BC**, Segil N, and Stone JS. Molecular characterization of type I and II vestibular hair cells in adult mice using RNAseq. Vestibular-Oriented Research Meeting 2023 June 25-29, Boulder, CO
2. Ling L, Ghimire M, Cai R, Brownell K, Wisner K, Brozoski T, Hubecky E, **Cox BC**, Tucker K, and Caspary DM. Preclinical Studies on Sazetidine-A, a Potent Nicotinic Desensitizing Agent, for Tinnitus Treatment: Behavioral and Pharmacokinetic Studies *Association for Research in Otolaryngology:46<sup>th</sup> annual midwinter meeting*, 2023 February 11-15, Orlando, FL
3. Singh J and **Cox BC**. Characterizing the Surviving Cochlear Hair Cells After Noise-Induced Damage in Mice With Pou4f3 Overexpression. *Association for Research in Otolaryngology:46<sup>th</sup> annual midwinter meeting*, 2023 February 11-15, Orlando, FL
4. Singh J, Stansak K, Chen B, Ezeilo N, Graves K, Walters BJ and **Cox BC**. The transcription factor *Pou4f3* is critical for the postnatal survival of cochlear hair cells, but not necessary for the type II hair cells of the mouse utricle. *Auditory System Gordon Research Conference*, 2022 July 10-15, Bryant University, Smithfield, RI
5. Ciani A, **Cox BC**, and Stone JS. Sox2 is Required for Normal Levels of Vestibular Hair Cell Regeneration in Adult Mice *Auditory System Gordon Research Conference*, 2022 July 10-15, Bryant University, Smithfield, RI
6. Singh J, Randle MR, and **Cox BC**. The transcription factor Pou4f3 is essential for the survival of mouse cochlear hair cells at early postnatal ages through adulthood. *Midwest Auditory Research Conference*, 2022 June 23-25, Ann Arbor, MI
7. Heuermann M and **Cox BC**. Regenerated hair cells in the neonatal cochlea express markers of both inner and outer hair cells. *Association for Research in Otolaryngology:45<sup>th</sup> annual midwinter meeting*, 2022 February 5-9, Virtual
8. Matos S, Graves K, Randle M, and **Cox BC**. Supporting cells express markers of hair cell fate after damage, but cannot progress to Myosin VIIA. *Association for Research in Otolaryngology:45<sup>th</sup> annual midwinter meeting*, 2022 February 5-9, Virtual
9. Singh J, Hamilton D, Walters, BJ, and **Cox BC**. The Role of Pou4f3 overexpression in the protection of adult mouse utricle hair cells from aminoglycosides induced cell death. *Association for Research in Otolaryngology:45<sup>th</sup> annual midwinter meeting*, 2022 February 5-9, Virtual
10. Singh J, Uribe P, Jacques B, and **Cox BC**. Development of an enhanced screening assay to distinguish between hair cell regeneration and protection. *Association for Research in Otolaryngology:45<sup>th</sup> annual midwinter meeting*, 2022 February 5-9, Virtual
11. Borse V, Sviben S, **Cox BC**, and Warchol ME. Pou4f3 is required for the development of type I hair cells in the mouse utricle. *Association for Research in Otolaryngology:45<sup>th</sup> annual midwinter meeting*, 2022 February 5-9, Virtual
12. Gonzalez-Garrido A, Lopez-Ramirez O, **Cox BC**, Stone JS and Eatock RA. Deletion of Sox2 from adult vestibular type II hair cells partly shifts properties of outward currents from type II-like to type I-like. *Association for Research in Otolaryngology:45<sup>th</sup> annual midwinter meeting*, 2022 February 5-9, Virtual
13. Baertsch HC, Dorssers H, Ciani A, Jauregui E, Philips J, Mejia Bibriesca I, Nguyen T, Pujol R, Philips J, **Cox BC**, and Stone JS. Sox2 deletion from naïve or regenerated type II vestibular hair cells causes conversion to type I-like cells and increased motor activity in adult mice. *Association for Research in Otolaryngology:45<sup>th</sup> annual midwinter meeting*, 2022 February 5-9, Virtual
14. Singh J and **Cox BC**. Reduced Pou4f3 overexpression in inner hair cells of the mouse cochlea causes increased vulnerability to noise-induced cell death. *Association for Research in Otolaryngology:44<sup>th</sup> annual midwinter meeting*, 2021 February 20-24, Virtual

15. Heuermann M and **Cox BC**. Regenerated hair cells in the neonatal cochlea express markers of both inner and outer hair cells. *Association for Research in Otolaryngology:44<sup>th</sup> annual midwinter meeting*, 2021 February 20-24, Virtual
16. Ciani A, **Cox BC**, and Stone JS. Sox2 is Required for Regeneration of Vestibular Hair Cells in Adult Mice. *Association for Research in Otolaryngology:43<sup>rd</sup> annual midwinter meeting*, 2020 January 25-29, San Jose, CA
17. Chen BY, Ezeilo N, Graves KA, Chen T, Huang J, Zhu H, Zhou W, Walters BJ and **Cox BC**. The Role of Pou4f3 in Vestibular Hair Cell Survival and Function. *Association for Research in Otolaryngology:43<sup>rd</sup> annual midwinter meeting*, 2020 January 25-29, San Jose, CA
18. Singh J, Randle MR, Pinder CA, Zhou L, and **Cox BC**. Does overexpression of the transcription factor Pou4f3 protect against noise-induced hearing loss? *Association for Research in Otolaryngology:43<sup>rd</sup> annual midwinter meeting*, 2020 January 25-29, San Jose, CA
19. Zhou L, McGovern MM, Randle MR, and **Cox BC**. Increased Notch signaling induces proliferation in the mouse cochlea. *Association for Research in Otolaryngology:42<sup>nd</sup> annual midwinter meeting*, 2019 February 9-13, Baltimore, MD
20. Graves KA, Randle MR, and **Cox BC**. Expression of transcription factors that regulate differentiation and survival in regenerated hair cells of the neonatal mouse cochlea. *Association for Research in Otolaryngology:42<sup>nd</sup> annual midwinter meeting*, 2019 February 9-13, Baltimore, MD
21. Singh J, Randle MR, and **Cox BC**. Targeted deletion of *Pou4f3* from hair cells causes apoptotic hair cell death followed by loss of supporting cells in the mouse cochlea. *Association for Research in Otolaryngology:42<sup>nd</sup> annual midwinter meeting*, 2019 February 9-13, Baltimore, MD
22. Naples JG, Ruckenstein MJ, Singh J, **Cox BC**, and Li D. Intratympanic delivery of a calcium-channel blocker-hydrogel: a novel approach to otoprotection against cisplatin-induced ototoxicity. *Association for Research in Otolaryngology:42<sup>nd</sup> annual midwinter meeting*, 2019 February 9-13, Baltimore, MD
23. Zhou L, McGovern MM, Randle MR, and **Cox BC**. Increased Notch signaling induces proliferation in the mouse cochlea. 1<sup>st</sup> Annual Bellucci Symposium on Hearing Research, 2019 May 10, Omaha, NE
24. McGovern MM, Zhou L, Randle MR, and **Cox BC**. Increased Notch signaling at birth induces widespread proliferation and ectopic hair cells in the non-sensory tissue of the neonatal mouse cochlea. *Gordon Research Conference on the Auditory System*, 2018 July 8-12, Bryant University, Smithfield, RI
25. Zhou L, Darcy YL, Graves KA, Randle MR, and **Cox BC**. The role of the Notch ligand Jagged1 in postnatal development of the mouse cochlea. *Gordon Research Conference on the Auditory System*, 2018 July 8-12, Bryant University, Smithfield, RI
26. Singh J, Randle, MR, Gregory S, Larsen D, Walters BJ, and **Cox BC**. Targeted deletion of *Pou4f3* causes hair cell loss in the early postnatal and adult mouse cochlea. *Gordon Research Conference on the Auditory System*, 2018 July 8-12, Bryant University, Smithfield, RI
27. Cuppini CL, McGovern MM, Randle MR, and **Cox, BC**. Investigating the cellular source of regenerated hair cells in the neonatal mouse cochlea. *American College of Physicians Internal Medicine Meeting*, 2018 April 19-21, New Orleans, LA
28. Ezeilo N and **Cox BC**. The role of *Pou4f3* in regulating survival of vestibular hair cells. *Association for Research in Otolaryngology:41<sup>st</sup> annual midwinter meeting*, 2018 February 10-14, San Diego, CA
29. Randle MR and **Cox BC**. Expression of the survival factor *Pou4f3* in regenerated hair

- cells of the neonatal mouse cochlea. *Association for Research in Otolaryngology:41<sup>st</sup> annual midwinter meeting*, 2018 February 10-14, San Diego, CA
30. McGovern MM, Randle MR, Zhou L, and **Cox BC**. Maintaining active Notch signaling in supporting cells prevents spontaneous hair cell regeneration *in vivo*. *Association for Research in Otolaryngology:41<sup>st</sup> annual midwinter meeting*, 2018 February 10-14, San Diego, CA
  31. Singh J, Gregory S, Walters BJ, and **Cox BC**. Conditional deletion of *Pou4f3* in outer hair cells causes cell death in the postnatal mouse cochlea. *Association for Research in Otolaryngology:41<sup>st</sup> annual midwinter meeting*, 2018 February 10-14, San Diego, CA
  32. Chrysostomou E, Zhou L, Graves KA, Darcy YL, Randle MR, Doetzlhofer A, and **Cox BC**. The Notch ligand Jagged1 is required for the survival of supporting cells in the mouse cochlea. *Association for Research in Otolaryngology:41<sup>st</sup> annual midwinter meeting*, 2018 February 10-14, San Diego, CA
  33. Hicks K, Wisner S, **Cox BC**, and Stone JS. Atoh1 is required in supporting cells for regeneration of type II hair cells in utricles of adult mice. *Association for Research in Otolaryngology:41<sup>st</sup> annual midwinter meeting*, 2018 February 10-14, San Diego, CA
  34. Massoodnia R, **Cox BC**, Pujol R, Warchol ME, and Stone JS. Postnatal development of vestibular nerve afferents and hair cells in mouse utricles. *Association for Research in Otolaryngology:41<sup>st</sup> annual midwinter meeting*, 2018 February 10-14, San Diego, CA

Conference Abstracts presented as Poster Presentations (prior to 2018)

1. McGovern MM, Cuppini CL, Graves KA, Darcy YL, and **Cox, BC**. Fate-mapping identifies supporting cell subtypes capable of spontaneously regenerating cochlear hair cells. *Association for Research in Otolaryngology:40<sup>th</sup> annual midwinter meeting*, 2017 February 11-15, Baltimore, MD
2. Randle MR and **Cox, BC**. Evaluating the mechanism of regeneration in response to different amounts of hair cell damage in the neonatal mouse cochlea. *Association for Research in Otolaryngology:40<sup>th</sup> annual midwinter meeting*, 2017 February 11-15, Baltimore, MD
3. **Cox, BC**, Ling LL, Sottile SY, and Caspary DM. Aging may differentially impact neuronal nicotinic acetylcholine receptors in the inferior colliculus and auditory cortex. *Association for Research in Otolaryngology:40<sup>th</sup> annual midwinter meeting*, 2017 February 11-15, Baltimore, MD
4. McGovern MM, Randle MR, Graves KA, Darcy YL and **Cox, BC**. Differential ability of supporting cell subtypes to regenerate hair cells in the neonatal mouse cochlea. *Noise-Induced Hearing Loss Program Review, Office of Naval Research*, 2016 September 13-15, Memphis, TN
5. Cai R, Montgomery, SC, Caspary DC, and **Cox, BC**. Altered ABR waveforms and ribbon synapse changes in the FBN rat model of aging. *Association for Research in Otolaryngology:39<sup>th</sup> annual midwinter meeting*, 2016 February 20-24, San Diego, CA
6. McGovern MM, Randle MR, Graves-Ramsey KA, Darcy YL and **Cox, BC**. Differential ability of supporting cell subtypes to regenerate hair cells in the neonatal mouse cochlea. *Association for Research in Otolaryngology:39<sup>th</sup> annual midwinter meeting*, 2016 February 20-24, San Diego, CA
7. Bucks SA, **Cox BC**, Vlosich BA, Manning JP, Nguyen TB, and Stone JS. Supporting cells generate type II hair cells in undamaged and damaged adult mouse utricles. *Association for Research in Otolaryngology:39<sup>th</sup> annual midwinter meeting*, 2016 February 20-24, San Diego, CA
8. Furrer Bucks SA, **Cox BC**, Vlosich BA, Nguyen TB, and Stone JS. Supporting cell-to-

hair cell conversion occurs at an increased rate in damaged adult mouse utricles compared to normal hair cell turnover. *Auditory Development: From Cochlea to Cognition*, 2015 August 14-15, Seattle, WA

9. **Cox BC**, Ling LL, Sametsky EA, Sottile SY, and Caspary DM. Subunit composition of neuronal nicotinic receptors in the medial geniculate body: impact of aging. *Association for Research in Otolaryngology: 38<sup>th</sup> annual midwinter meeting*, 2015 February 21-25, Baltimore, MD
10. Randle MR, Karmarkar SW, and **Cox BC**. Expression of the hair cell survival factor, Pou4f3, in regenerated hair cells that spontaneously form in the neonatal mouse cochlea following damage. *Association for Research in Otolaryngology: 38<sup>th</sup> annual midwinter meeting*, 2015 February 21-25, Baltimore, MD
11. Trone MM, Karmarka, SW, **Cox BC**. Changes in the Notch Signaling Pathway during Spontaneous Hair Cell Regeneration in the Neonatal Mouse Cochlea. *Association for Research in Otolaryngology: 38<sup>th</sup> annual midwinter meeting*, 2015 February 21-25, Baltimore, MD
12. **Cox BC**, Randle MRR and Karmarkar SW. Survival of regenerated hair cells in the neonatal mouse cochlea. *Society for Neuroscience 44<sup>th</sup> Annual Meeting*, 2014 November 15-19, Washington, DC.
13. Trone MM, Brancheck J, Grant AC, Graves-Ramsey K, and, **Cox BC**. Using Cre-loxP mouse genetics to target specific cochlear supporting cell subtypes. *Joint meeting of the Midwest Auditory Research Conference and the Midwest Auditory Neuroscience Symposium*. 2014 July 23-25, Omaha, NE
14. Furrer Bucks SA, Vlosich BA, Nguyen TB, **Cox BC**, Pujol R, and Stone JS. Evidence for hair cell turnover in adult mouse utricles. *Auditory System Gordon Research Conference*, 2014 July 13-18, Lewiston, ME
15. **Cox BC** and Faingold C. Flipping the classroom to teach substance abuse to sophomore medical students. *5<sup>th</sup> Annual Symposium for Teaching and Learning*, 2014 April 15, Springfield, IL
16. Brancheck J and **Cox BC**. Using Cre-loxP mouse genetics to target specific cochlear supporting cell subtypes. *Association for Research in Otolaryngology: 37<sup>th</sup> annual midwinter research meeting*, 2014 February 22-26, San Diego, CA
17. Randle MR, Zuo J, and **Cox BC**. Ablation of different quantities of hair cells in the neonatal mouse cochlea to examine mechanisms of regeneration. *Association for Research in Otolaryngology: 37<sup>th</sup> annual midwinter research meeting*, 2014 February 22-26, San Diego, CA
18. Karmarkar S and **Cox BC**. Characterization of hair cell survival genes in regenerated hair cells in the neonatal mouse cochlea. *Association for Research in Otolaryngology: 37<sup>th</sup> annual midwinter research meeting*, 2014 February 22-26, San Diego, CA
19. **Cox BC**, Furrer S, Nguyen TB, Mellado Lagarde MM, and Stone JS. Characterization of CreER activity in the adult vestibular sensory epithelium for eight CreER mouse lines. *Association for Research in Otolaryngology: 37<sup>th</sup> annual midwinter research meeting*, 2014 February 22-26, San Diego, CA
20. Furrer SA, Nguyen TB, **Cox BC**, Pujol R, and Stone JS. Hair cell death and clearance in undamaged adult mouse utricles. *Association for Research in Otolaryngology: 37<sup>th</sup> annual midwinter research meeting*, 2014 February 22-26, San Diego, CA
21. **Cox BC**, Nguyen TB, and Stone JS. Characterization of six CreER mouse lines in the adult utricle. *Molecular Biology of Hearing & Deafness Conference*, 2013 June 22-25, Palo Alto, CA.
22. Dearman, JA, **Cox BC** and Zuo J. Generation of Atoh1-rtTA transgenic mice to transiently alter gene expression in hair cells. *Association for Research in*

*Otolaryngology: 36<sup>th</sup> annual midwinter research meeting*, 2013 February 16-20, Baltimore, MD.

23. Liu Z, Walters B, Owen T, Steigelman KA, Zhang L, Mellado Lagarde MM, Valentine M, Yu Y, **Cox BC**, and Zuo J. Regulation of p27Kip1 by Sox2 is required to maintain quiescence of neonatal and juvenile inner pillar cells in the mouse auditory sensory epithelium. *Association for Research in Otolaryngology: 35<sup>th</sup> annual midwinter research meeting*, 2012 February 25-29, San Diego, CA.
24. Liu Z, Dearman J, **Cox BC**, Walters B, Zhang L, Ayrault O, Zindy F, Gan L, Roussel M, and Zuo J. Age-dependent in vivo conversion of mouse cochlear pillar and Deiters' cells to immature hair cells by Atoh1 ectopic expression. *Association for Research in Otolaryngology: 35<sup>th</sup> annual midwinter research meeting*, 2012 February 25-29, San Diego, CA.
25. **Cox BC**, Lenoir A, Papal S and Zuo J. Damage of neonatal cochlear hair cells in mice using genetic ablation. *Society for Neuroscience 39<sup>th</sup> Annual Meeting*, 2009 October 17-21, Chicago, IL.
26. **Cox BC**, Papal S, Steigelman KA and Zuo J. Effect of p16<sup>Ink4a</sup> deletion on cochlear hair cells after damage with ototoxic drugs. *Society for Neuroscience 38<sup>th</sup> Annual Meeting*, 2008 November 15-19, Washington, DC.
27. **Cox BC**, Marritt AM, Yasuda RM, Xiao Y, Fan H, Wolfe BB and Kellar KJ. Transport of neuronal nicotinic acetylcholine receptors in the rat optic nerve. *Society for Neuroscience 36<sup>th</sup> Annual Meeting*, 2006 October 14-18, Atlanta, GA.
28. **Cox BC**, Xiao Y, and Kellar KJ. WERI-Rb-1, a human retinoblastoma cell line, expresses neuronal nicotinic acetylcholine receptors. *Society for Neuroscience 35<sup>th</sup> Annual Meeting*, 2005 November 12-16, Washington, DC.

Local Symposia Abstracts presented as Oral Presentations (since last promotion)

\*\*student, postdoc, and resident authors are underlined\*\*

1. Heuermann M and **Cox BC**. Regenerated hair cells in the neonatal cochlea form new synaptic connections. *21st Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine*, 2023 June 16, Springfield, IL
2. Heuermann M and **Cox BC**. Regenerated hair cells in the neonatal cochlea co-express Markers of both inner and outer hair cells. *20th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine*, 2022 June 10, Springfield, IL
3. Heuermann M and **Cox BC**. Regenerated hair cells in the neonatal cochlea express markers of both inner and outer hair cells. *19th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine*, 2021 June 11, Springfield, IL
4. Rubio L and **Cox BC**. Interaction of Sox2 and Jag1 in the maintenance of supporting cell fate. *19th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine*, 2021 June 11, Springfield, IL
5. Heuermann M and **Cox BC**. Regenerated hair cells in the neonatal cochlea express markers of both inner and outer hair cells. *30<sup>th</sup> Annual Medical Student and Resident Research Symposium, Southern Illinois University School of Medicine*, 2021 April 20, Springfield, IL
6. Heuermann M and **Cox BC**. Investigating the Terminal Differentiation of Regenerated Hair Cells in the Neonatal Cochlea. *18th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine*, 2020 June 19, Springfield, IL
7. Singh J and **Cox BC**. Overexpression of *Pou4f3* in the Outer Hair Cells: Protection from



Cell Death But Not Against Hearing Loss. *18th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2020 June 19, Springfield, IL*

8. Chen B, Ezeilo N, Graves K, and **Cox BC**. The Role of Pou4f3 in Vestibular Hair Cells. *17th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2019 June 21, Springfield, IL*
9. Singh J, Randle MR, and **Cox BC**. Targeted Deletion of Pou4f3 from Postnatal Mouse Cochlear Hair Cells Causes Hair Cell Loss and Affects the Survival of Supporting Cells and Spiral Ganglion Neurons in Long Term. *17th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2019 June 21, Springfield, IL*
10. Chen B, Ezeilo N, Graves K, and **Cox BC**. The Role of Pou4f3 in Vestibular Hair Cells. *29th Annual Medical Student & Resident Research Symposium, Southern Illinois University School of Medicine, 2019 April 23, Springfield, IL*
11. Ezeilo N and **Cox BC**. The role of Pou4f3 in regulating survival of vestibular hair cells. *16th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2018 June 08, Springfield, IL*
12. Montgomery SC and **Cox BC**. The FBN rat model of aging: Investigation of ABR waveforms and ribbon synapse changes. *16th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2018 June 08, Springfield, IL*
13. Zhou L, Darcy YL, Graves KA, Randle MR, and **Cox, BC**. The Notch ligand Jagged1 is required for the survival of Hensen cells in the mouse cochlea. *16th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2018 June 08, Springfield, IL*
14. Cuppini CL, McGovern MM, Randle MR, and **Cox, BC**. Investigating the cellular source of regenerated hair cells in the neonatal mouse cochlea. *28th Annual Medical Student & Resident Research Symposium, Southern Illinois University School of Medicine, 2018 April 18, Springfield, IL*
15. Ezeilo N and **Cox BC**. The role of Pou4f3 in regulating survival of vestibular hair cells. *17th Annual Surgery Resident Research Day, Southern Illinois University School of Medicine, 2018 April 12, Springfield, IL*

Local Symposia Abstracts presented as Oral Presentations (prior to 2018)

1. Ezeilo N and **Cox BC**. The role of Pou4f3 in regulating survival of vestibular hair cells. *15th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2017 June 09, Springfield, IL*
2. **Cox BC**. Research updates on gene therapy for cochlear hair cell regeneration. *14th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2016 June 03, Springfield, IL*
3. Montgomery SC and **Cox BC**. Ribbon Synapse Changes in the FBN Rat Model of Aging. *14th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2016 June 03, Springfield, IL*
4. McGovern MM, Randle MR, Graves KA, Darcy YL, and **Cox BC**. Differential ability of supporting cell subtypes to regenerate hair cells in the neonatal mouse cochlea. *14th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2016 June 03, Springfield, IL*
5. Ezeilo N and **Cox BC**. The role of Pou4f3 in regulating survival of vestibular hair cells. *14th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2016 June 03, Springfield, IL*
6. Gregory Moore C, Walters BJ, and **Cox BC**. Investigation of Cochlear Hair Cell Survival

- Pathways. *14th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2016 June 03, Springfield, IL*
7. Montgomery SC and **Cox BC**. Ribbon synapse changes in the FBN rat model of aging. *15th Annual Surgery Resident Research Day, Southern Illinois University School of Medicine, 2016 April 29, Springfield, IL*
  8. McGovern MM, Randle MR, Graves KA, Darcy YL, and **Cox BC**. Differential ability of supporting cell subtypes to regenerate hair cells in the neonatal mouse cochlea. *26th Annual Graduate Student Research Symposium, Southern Illinois University School of Medicine, 2016 April 29, Springfield, IL*
  9. Garland SR, Randle MRR, and **Cox BC**. The role of Pou4f3 in the regulation of hair cell survival in the adult cochlea. *13th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2015 June 5, Springfield, IL*
  10. Montgomery SC and **Cox BC**. Age-related Hearing Loss and Changes in Ribbon Synapses. *13th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day, Southern Illinois University School of Medicine, 2015 June 5, Springfield, IL*
  11. **Cox BC**. The role of p16<sup>Ink4a</sup> in mammalian hair cell regeneration. *13th Annual Horst R. Konrad Visiting Professor & ENT Resident Research Day Southern Illinois University, School of Medicine, 2015 June 5, Springfield, IL*
  12. Garland SR, Randle MRR, and **Cox BC**. The role of Pou4f3 in the regulation of hair cell survival in the adult cochlea. *14th Annual Surgery Resident Research Day, Southern Illinois University School of Medicine, 2015 May 8, Springfield, IL*

Local Symposia Abstracts presented as Poster Presentations (since last promotion)

\*\*student, postdoc, and resident authors are underlined\*\*

1. Zhou L, Darcy YL, Graves KA, Randle MR, and **Cox, BC**. The Notch ligand Jagged1 is required for the survival of Hensen cells in the mouse cochlea. *28th Annual Graduate Student Research Symposium, Southern Illinois University School of Medicine, 2018 April 26, Springfield, IL*
2. Singh J, Randle MR, Gregory S, Walters BJ and **Cox, BC**. Pou4f3 is required for survival of hair cells in the early postnatal and adult mouse cochlea. *28th Annual Graduate Student Research Symposium, Southern Illinois University School of Medicine, 2018 April 26, Springfield, IL*

Local Symposia Abstracts presented as Poster Presentations (prior to 2018)

1. McGovern MM, Cuppini CL, Graves KA, Darcy YL, and **Cox BC**. The majority of spontaneously regenerated hair cells come from pillar and Deiters' cells compared to other supporting cell subtypes. *27th Annual Graduate Student Research Symposium, Southern Illinois University School of Medicine, 2017 April 21, Carbondale, IL*
2. Trone MM, Karmarkar SW, and **Cox BC**. Changes in the Notch Signaling Pathway during spontaneous hair cell regeneration in the neonatal mouse cochlea. *25th Annual Graduate Student Research Symposium, Southern Illinois University School of Medicine, 2015 April 25, Carbondale, IL*

## Patents and Technology Transfer

Caspary D, Brozowski T and **Cox BC**, inventors. Neuronal Nicotinic Acetylcholine Receptor Partial Agonists as Therapeutics for Chronic Tinnitus. US patent 17/428,164. 2021 August 3.

## **Professional Community Activities**

### Non-Peer Reviewed Manuscript meant for Scientific Outreach

Cox, BC. (2023) From mice to men: Will we soon be able to restore hearing loss? *Research Outreach*, 136. DOI: [10.32907/RO-136-4666117037](https://doi.org/10.32907/RO-136-4666117037)

### Scientific Outreach Activities

Lab tour for IL IEPA Governor's Environmental Corps Interns (annually)	2013 – present
Lab tour for Univ. of Illinois Springfield clinical lab science students (annually)	2015 – present
Lab tour for Southeast high school students	2023
Lab tour for Lincoln Land Community College Chemistry Club	2023
Presentation on hearing loss & my research to Springfield Sertoma Club	2022
Lab tour for Elk Grove Village high school students	2022
Podcast on my research and career path, Transnetyx Inc.	2019
Podcast on my research, Illinois Science and Technology Coalition	2019
Lab tour for Chinese delegation of the American Council of Young Political Leaders	2018
Lab tour for Franklin high school students	2018
Lab tour for Western Illinois University pre-health club	2016 & 2018
Lab tour for Leadership Springfield	2017
Presentation on hearing loss to employees of Transnetyx, Inc, Cordova, TN	2016
Lab tour for Illinois State Representative, Sara Jimenez	2016
Presentation on hearing & hair cell regeneration to Medical Explorers (high school students), Springfield, IL	2015
Podcast on hearing & hair cell regeneration (middle & high school level), Science Sound Bites, Memphis, TN	2015
Presentation on hearing to 8-13 year olds, SIU Take Your Kids to Work Day, Springfield, IL	2015
Article for Teacher Tools e-magazine, Supporting Success for Children with Hearing Loss Foundation, Tampa, FL	2015
Lab tour for SIU alumnus (Dr. David Riesenberger '79) & his grandson	2015