

# SHELLEY A. TISCHKAU, PhD

Associate Professor (with tenure)

---

## WORK ADDRESS:

Department of Pharmacology  
Southern Illinois University School of Medicine  
801 N. Rutledge, Rm 3333  
P.O. Box 19629  
Springfield, IL 62794-9629  
Phone: (217) 545-6524  
e-mail: stischkau@siumed.edu

## PROFESSIONAL APPOINTMENTS:

### Southern Illinois University School of Medicine

- ▲ Associate Professor (with tenure), Department of Pharmacology, 2012-present. Position is 50% research, 40% teaching, 10% service.
  - × Unit Director, 2<sup>nd</sup> Year Medical Curriculum, 2009-2014. Directed the curriculum for the Endocrine-Reproduction-Gastrointestinal block for the 2<sup>nd</sup> year medical students.
  - × Director, Pharmacology and Neuroscience Graduate Program, 2014-present.
  - × Advisor, Pharmacology and Neuroscience Graduate Program, 2007-present.
  - × Proxy Chair in the absence of Chairman of the Department, Dr. Carl Faingold, 2014-present
- ▲ Associate Professor (Cross Appointment), Department of Medical Education, 2017-present
- ▲ Associate Professor (Cross Appointment), Department of Medical Microbiology, Immunology and Cell Biology, 2012-present
- ▲ Interim Director of Operations, Department of Laboratory Animal Medicine, 2017-present
- ▲ Assistant Professor, Department of Pharmacology, 2007-2012. Position is 50% research, 40% teaching, 10% service.
- ▲ Assistant Professor (Cross Appointment), Department of Medical Microbiology, Immunology and Cell Biology, 2010-2012.
- ▲ Affiliate, Center for Integrated Research in Cognitive and Neural Sciences, 2009-present.
- ▲ Member, SIU Neuroscience Research Center, 2009-present.
- ▲ Member, Academy for Scholarship in Education, 2014-present
- ▲ Member, Faculty Council First-Aid/USMLE-Rx, 2018-present

### University of Illinois at Urbana-Champaign

- ▲ Assistant Professor, Department of Veterinary Biosciences, 2001-2006. Position was 70% research, 30% teaching and service.
- ▲ Director, Translational Biology and Medicine Program, College of Veterinary Medicine, 2005-2006.
- ▲ Faculty Affiliate, Neuroscience Program, 2001-2006.
- ▲ Core Faculty Member, Interdisciplinary Environmental Toxicology Program, 2003-2006.
- ▲ Core Faculty Member, Reproductive Biology Training Program, 2004-2006.
- ▲ Member, College of Veterinary Medicine Teaching Academy, 2003-2006.
- ▲ Visiting Assistant Professor, Department of Animal Sciences, 1999-2001.

- ⤴ Research Assistant Professor, Department of Cell and Structural Biology, 2000-2001.
- ⤴ Postdoctoral Fellow, Department of Cell and Structural Biology, 1995-1999.
- ⤴ Pre-doctoral Fellow, Department of Molecular and Integrative Physiology, 1991-1995.
- ⤴ Graduate Teaching Assistant, School of Life Sciences, 1989-1991

### **Parkland College**

- ⤴ Instructor, Department of Health and Physical Education, 1992-1996.
- ⤴ Assistant Volleyball Coach, 1992-1995.

### **Truman State University**

- ⤴ Graduate Teaching Assistant, Division of Science, 1986-1989.

## **EDUCATION:**

- May 1995 Ph.D. Physiology. University of Illinois at Urbana-Champaign, Urbana, IL  
 Thesis Title: Physiology of the Germinal Disc Region of Preovulatory Follicles in the Chicken Ovary  
 Advisor: Janice M. Bahr, Ph.D.
- May 1991 M.S. Physiology. University of Illinois at Urbana-Champaign, Urbana, IL  
 Project: Mechanisms of Sexual Dimorphism in the Non-genomic Actions of Progesterone in the Rat Brain  
 Advisor: Victor D. Ramirez, M.D.
- May 1989 M.S. Biology. Truman State University, Kirksville, MO  
 Thesis Title: Characterization of Transepithelial Molecular Transport of L-arginine and L-leucine by Gut Segments of the Pacific Hagfish, *Eptatretus stoutii*.  
 Advisor: George J. Schulte, Ph.D.
- May 1986 B.S. Biology. Truman State University, Kirksville, MO  
 Honors: Magna Cum Laude

## **POSTGRADUATE EDUCATION AND TRAINING:**

- Sept. 1995-1999 Postdoctoral Fellow. University of Illinois at Urbana-Champaign, Urbana, IL  
 Advisor: Martha U. Gillette, Ph.D.

## TEACHING EXPERIENCE:

### Southern Illinois University School of Medicine

- ▲ Medical Curriculum Teaching
  - × Toxicology (Lecture), 2007-present
  - × Nutrition and Obesity (Integrated Resource Session), 2008-present
  - × Fertility and Contraception (Lecture), 2008-present
  - × Pregnancy (Integrated Resource Session), 2007-present
  - × Abnormal Uterine Bleeding (Integrated Resource Session), 2007-present
  - × Tutor for ERG Unit, 2008-present
  - × Diseases of the Thyroid, 2012-present
  - × Diseases of Hypothalamus and Pituitary, 2012-present
  - × Male Reproduction, 2012-present
  - × Advanced Reproductive Pharmacology, 4<sup>th</sup> year elective, 2011 to present
  
- ▲ Pharmacology and Neuroscience Graduate Curriculum Teaching:
  - × Pharm 545 Toxicology
    - Course Co-Coordinator, 2008-present
    - Lectures
      - Reproductive Toxicology, 2008-present
  - × Pharm 550A Principles of Pharmacology
    - Lectures
      - Principles of Toxicology, 2007-present
  - × Pharm 550B Principles of Pharmacology
    - Lectures
      - Female Reproductive Pharmacology, 2007-present
      - Contraceptives, 2007-present
      - Pregnancy and Parturition, 2007-present
      - Obesity and Metabolic Syndrome, 2010-present
      - Thyroid Pharmacology, 2011-present
      - Adrenal Pharmacology, 2011-present
      - The Hypothalamus and Pituitary, 2011-present
  - × Pharm 574 Advanced Neuropharmacology
    - Course Co-Coordinator
    - Lectures
      - Descending Neural Pathways, 2007
      - Circadian Rhythms, 2007
      - Cell Biology Principles, 2010-present
  - × Pharm 577 Principles of Neuroscience
    - Lectures/Labs
      - Neuroanatomy, 2011-2015
      - Architecture of the Nervous System, 2013-present
  - × Pharm 540 Responsible Conduct of Research
    - Interactive Session – Animal Care Policies

- × MBMB 530 Advanced Cell Biology
  - Lectures
    - Regulation of Transcription, 2007-present
    - Nerve Cells, 2009-present

▲ Department of Medical Education

- × Annual SIU-SOM Problem Based Learning Workshop, Faculty, 2011-present
- × Principles of Problem Based Learning, A Workshop held at Star Lane Center, Natrona County School District, Casper, WY, 2015
- × Problem Based Learning Workshop, Pathways Innovation Center, Natrona County Schools, Casper, WY
- × Problem Based Learning Refresher, SIU School of Medicine, Carbondale, 2017
- × Problem Based Learning Tips for Tutors, SIU School of Medicine, SUCCEED Faculty Development Series, 2017-present

▲ Other Teaching:

- × Southern Illinois University School of Medicine Grant Writing Course
  - Lecture
    - Funding Opportunities at the National Science Foundation, 2010
- × University of Illinois at Springfield Course
  - Lecture
    - Reproductive Pharmacology, 2007-2010
- × University of Illinois at Urbana-Champaign
  - Guest Lecturer
    - Chronobiology Course, 2010-present
- × Navigating the New LACUC Forms Workshop, 2016

**University of Illinois at Urbana-Champaign**

▲ Veterinary Medical Curriculum Teaching:

- × VB610 Veterinary Neurobiology, 2001-2006
  - Course Coordinator
  - 32 Lectures, Neuroanatomy, Developmental Neurobiology, Neurophysiology, Muscle Physiology
  - Lab Coordinator, Neuroanatomy Lab
- × VB605 Veterinary Histology, 2003-2006
  - 6 Lectures/Labs, Embryology

▲ Graduate and Undergraduate Teaching:

- × PHYSL510 Advanced Topics in Reproductive Biology, 2003
  - Course Coordinator
- × PHYSL455 Advanced Reproductive Endocrinology, 1999-2001
  - Course Coordinator
  - Taught all lectures
- × PHYSL301 Cell and Membrane Physiology, 1999-2000
  - 6 Lectures, Nervous System Physiology
- × PHYSL402 Comparative Animal Physiology, 1998-2001

- 6 Lectures, Comparative Endocrinology
- × PHSYL199 Reproductive Biology Discovery Course, 1999-2007
  - 2 Lectures, Neuroendocrinology
- × BIOL120 The Cell (Honor's Biology), 1989-1990
  - Teaching Assistant – prepped and taught all labs
- × BIOL122 The Organism (Honor's Biology), 1990-1991
  - Teaching Assistant – prepped and taught all labs
- × BIOL110 Principles of Biology II, 1991
  - Teaching Assistant – taught all labs
- × PHYS101 Introduction to Human Physiology, 1992
  - Teaching Assistant – taught all labs, tutor group

### Truman State University

- ▲ Undergraduate and Graduate Teaching:
  - × BIOL101 Introductory Biology, 1987-1988
    - Taught all lectures and labs
  - × CHEM101 Introductory Chemistry, 1989
    - Taught all lectures and labs
  - × BIOL315 Human Physiology, 1985-1988
    - Teaching Assistant – prepped and taught all labs
  - × BIOL330 Embryology and Developmental Biology, 1986-1989
    - Taught 10 lectures, prepped and taught all labs

### Graduate and Undergraduate Research Mentoring

#### Postdoctoral Fellows

- |           |   |
|-----------|---|
| 2010-2014 | Chun Wang, MD/PhD. Department of Pharmacology, SIU-SOM<br>Project: Role of AhR in metabolic syndrome                                    |
| 2012-2013 | Sumedha Karmarkar, PhD. Department of Pharmacology, SIU-SOM<br>Project: Circadian dysregulation in a mouse model of Alzheimer's disease |

#### Medical Residents

- |           |   |
|-----------|---|
| 2014-2017 | Junzhi (Jack) Lin, MD Department of Internal Medicine<br>Project: AhR as a regulator of clock-controlled metabolic function |
|-----------|---|

#### PhD Students

- |           |   |
|-----------|---|
| 2002-2007 | Jason Hickok, Department of Cell & Developmental Biology, UIUC<br>Project: Gene expression profiling in native GnRH neurons   |
| 2003-2006 | Motoko Mukai, Department of Veterinary Biosciences, UIUC<br>Project: Role of aryl hydrocarbon receptor in circadian rhythms   |
| 2007-2012 | Sumedha Karmarkar, Department of Pharmacology, SIU-SOM<br>Project: Role of mitogen activated protein kinases in endogenous neuroprotection of suprachiasmatic nucleus neurons |
| 2011-2012 | Bopanna Kalappa, Department of Pharmacology, SIU-SOM<br>Project: Modulation of $\beta 7$ nicotinic acetylcholine receptors in the hippocampus                                 |

2011-2014	Canxin Xu, Department of Pharmacology, SIU-SOM Project: Regulation of circadian clocks and metabolism by aryl hydrocarbon receptor
2010-2015	Mingwei Sun, Department of Pharmacology, SIU-SOM Project: Rev-erb $\beta$ as a mediator of the circadian regulation of metabolism
2010-2015	Cassie Jaeger, Department of Pharmacology, SIU-SOM Project: Obesity and diabetes in response to circadian clock disruption
2013-2015	Daniel Fox, Pharmacology and Neuroscience, SIU-SOM (Department Advisor) Project: S-methionine in hearing loss
2014-2017	Sarah Sottile, Department of Pharmacology (Co-Advisor) Project: Cholinergic signaling in the central auditory system
2014-present	Ali Khazaal, Molecular Biology, Microbiology & Biochemistry, SIU-SOM Project: Aryl hydrocarbon receptor regulation of adipose tissue function
2015-present	Jesse Britz, Department of Pharmacology Project: Effects of circadian disruption in a mouse model of Alzheimer's disease

### Master's Degree Students

1999-2001	Julie Pendergast, Biology, UIUC (Research Advisor) Project: Protein kinase G II expression in the suprachiasmatic nucleus
2007-2009	Kanchan Paradkar, Pharmacology, SIU-SOM Project: Regulation of EMT-6 cell growth by melatonin and sleep fragmentation
2013	Jeff Hsieh, Pharmacology and Neuroscience, SIU-SOM Project: Role of TRPA1 in regulating insulin secretion in pancreatic beta cells

### Medical Students

2014	Michelle Herberts, MPEE program
2016	Matthew Cleveland, MPEE program (Co-Advisor)
2017	Margaret Armstrong
2017	Artemus Holguin-Mills-Hoffman
2017	Blake Vest, MPEE program

### Undergraduate Students

2001-2002	Kirsten Holthusen (UIUC, Animal Sciences, BS 2002)
2001-2002	Alexander Landers (UIUC, Bioengineering, BS 2002)
2001-2003	Claire Zimmerman (UIUC, Animal Sciences, BS 2003)
2002-2004	Jared Cohen (UIUC, Molecular and Cellular Biology, BS 2004)
2002-2003	Kelly Barry (UIUC, Animal Sciences, BS 2003)
2003-2005	Benjamin Haley (UIUC, Honor's Biology, BS 2005)
2003-2005	Jackie Kanoon (UIUC, Animal Sciences, BS 2005)
2003-2005	Mia Layne (UIUC, Molecular and Cellular Biology, BS 2005)
2004-2005	Jennifer Howell (UIUC, Animal Sciences, BS 2005)
2003-2005	Emily Poon (UIUC, Molecular and Cellular Biology, BS 2005)
2005-2007	Kara Escutia (UIUC, Animal Sciences, BS 2007)
2005-2007	Divya Chandiramani (UIUC, Molecular and Cellular Biology, BS 2008)
2006-2007	Jessica Anderson (UIUC, Molecular and Cellular Biology, BS 2009)
2007	Dana Armour (Illinois Wesleyan University, BS 2007)
2008	Caitlin Allen (Illinois College, BS 2010)

2008-2009 Cassie Jaeger (Millikin University, BS 2010)  
2009 Leigh Groszek (University of Illinois at Springfield, BS 2011)  
2010 Susan Coryell (University of Illinois at Springfield, BS 2011)  
2011 Natalie Allen (Illinois College, BS 2011)  
2011 Prema Babu (University of Illinois at Springfield, BS 2012)  
2012-2014 Ashley Mihalich (UIUC, Integrative Biology, BS 2014)

#### **UIUC Summer Research Opportunities Program (Big 10 Summer Research for Minority Students)**

Jared Cohen (UIUC, 2002)  
Eliza Salvo (Purdue University, 2003)  
Lucius Jerome Hales (Jackson State University, 2004)  
Aurora Cruz-Torres (University of Puerto Rico, 2005)  
Kara Escutia (University of Illinois, 2005)  
Pilar Silva (University of Puerto Rico, 2006)

#### **Thesis Committees, MS and PhD:**

Sabra Abbott (Molecular & Integrative Physiology, UIUC, PhD 2005)  
Project: Cholinergic Regulation of Sleep Centers and the Circadian Clock  
Jamie Stark (Veterinary Biosciences, UIUC, PhD 2006)  
Project: Physiological Implications and Mechanisms of Estrogen Protection Associated with Myocardial Ischemia/Reperfusion Injury  
Archana Koosuru (Veterinary Biosciences, UIUC, MS 2005)  
Project: Effects of Resveratrol on Uterine Growth and Development  
Christopher Zugates (Cell & Structural Biology, UIUC, PhD 2007)  
Project: Studies of Post-Embryonic *Drosophila* Brain Development  
Laura Pace (Neuroscience Program, UIUC, PhD 2007)  
Project: Role of Protein Kinase G Signaling in the Suprachiasmatic Circadian Clock  
Sufang Wang (Cell & Structural Biology, UIUC, PhD 2008)  
Project: Role of Atypical Protein Kinase C in Light Signaling and Cytoskeletal Rearrangement in the Suprachiasmatic Nucleus  
Lilia Zurkovsky (Neuroscience Program, UIUC, PhD 2009)  
Project: Estrogen Modulation of Place Learning through Estrogen Receptors in the Hippocampus  
Molly Kent (Neuroscience Program, UIUC, PhD 2009)  
Project: Estrogenic Effects on Spatial Learning Tasks Involves Multiple Memory Systems  
Patty Kandelapas (Neuroscience Program, UIUC, PhD 2009)  
Project: Molecular Mechanisms of Melatonin Action on the Rat Suprachiasmatic Nucleus: an *In Vitro* Analysis  
Stephen Johnson (Pharmacology, SIU-SOM, PhD 2009)  
Project: A Biochemical and Pharmacological Characterization of a Novel Neuroactive Peptide from the Neotropical Hunting Ant *Dinoponera australis*  
Joe Jeffry (Pharmacology, SIU-SOM, PhD 2009)  
Project: Modulation of Synaptic Transmission at the Trigeminal Nucleus Caudalis by TRPV1  
Jacob Neumann (Pharmacology, SIU-SOM, PhD 2011)  
Project: Modulation of Ryanodine Receptors in Cardiac Muscle  
Xuejing Zhang (Medical Microbiology, Immunology, Cell Biology, PhD 2012)  
Project: Role of Thromboxane A2 Receptor in Breast Cancer

Tejbeer Kaur (Pharmacology, SIU-SOM, PhD 2012)  
Project: Role of STAT1 Signaling in Cisplatin-induced Hearing Loss

Bethany Karman (Comparative Biosciences, UIUC, PhD 2012)  
Project: The Role of the Aryl Hydrocarbon Receptor in Ovarian Follicle Development

Vijaya Samineni (Pharmacology, SIU-SOM, PhD 2012)  
Project: The role of the periaqueductal gray in modulation of acute and chronic pain: Actions of drugs with analgesic properties on periaqueductal gray neuronal network

Sandeep Sheth (Pharmacology, SIU-SOM, PhD 2013)  
Project: Resveratrol inhibits prostate cancer growth and metastasis by targeting AKT/microRNA-21 pathway

Navneet Singh (Med Micro, Immunology, Cell Biology, SIU-SOM, PhD 2013)  
Project: Lack of Calcium Sensing Receptor Expression Augments Malignancy and Bestows Cancer Stem Cell-like Properties to Human Colon Carcinoma Cells

Yiwen Bu (Med Micro, Immunology, Cell Biology, SIU-SOM, PhD 2014)  
Project: Phosphorylation of RelA/p65 on Ser536 signals cancer cells to death and sensitizes cancer cells to chemotherapy

Mruvil Abooj (Pharmacology, SIU-SOM, PhD 2014)  
Project: TRP Channels in Neuropathic Pain

Lin Feng (Pharmacology, SIU-SOM, PhD 2014)  
Project: Cholinergic Neurons in the Brainstem

Yi Shen (Med Micro, Immunology, Cell Biology, SIU-SOM, PhD 2014)  
Project: AKR1B10 in colon cancer

Jamila Adom (Med Micro, Immunology, Cell Biology, SIU-SOM, PhD 2014)  
Project: Role of Pregnane X Receptor in Breast Cancer

Puspanjali Bhatta (Pharmacology, SIU-SOM, MS 2014)  
Project: Protective Effect of Capsaicin against Cisplatin Ototoxicity

Olga Villamizar (Med Micro, Immunology, Cell Biology, SIU-SOM, PhD 2015)  
Project: Expression and Regulation of a Long Non-coding RNA, FAS anti-sense or SAF, during Human Red Blood Cell Development

Grace Ramena (Med Micro, Immunology, Cell Biology, SIU-SOM, PhD 2015)  
Project: CLCA and EVA1 interactions in Breast Cancer

Nisha Risvi (Pharmacology, SIU-SOM, PhD 2015)  
Project: Novel Dopaminergic Signaling Modulating Hippocampal Synaptic Transmission

Yuanzhao Lv (Pharmacology, SIU-SOM, PhD 2015)  
Project: The role of Modulation of Ryanodine Receptors and Sarcoplasmic Reticulum Ca<sup>2+</sup>-ATPase in the Cell Protective Action of Benzothiazepines and Antiepileptic Agents

Ria Goswami (Med Micro, Immunology, Cell Biology, SIU-SOM, PhD 2016)  
Project: Dominant Antigens of EBV Recognized by Human Sera

Aarushi Sharma (Pharmacology, SIU-SOM, PhD 2016)  
Project: Electrophysiological Properties of CLCA2

Vikrant Borse (Pharmacology, SIU-SOM, PhD 2017)  
Project: Epigallocatechin Gallate (EGCG) Protects Against Cisplatin-Induced Hearing Loss by Altering the Balance between STAT1 and STAT3 Proteins

Justin Darcy (Med Micro, Immunology, Cell Biology, SIU-SOM, PhD 2017)  
Project: Growth Hormone in Longevity

Srinivasa Kommajosyula (Pharmacology, SIU-SOM, PhD 2017)



Project: Respiratory Failure as a Mechanism for SUDEP: Role of Neuromodulators  
Sumana Ghosh (Pharmacology, SIU-SOM, PhD 2017)  
Project: Cannabinoid Receptor 2 agonists protect from Cisplatin-induced hearing loss  
Yufang Yin (Pharmacology, SIU-SOM, current PhD student)  
Project: CLCA proteins in Cancer  
Melissa Trone (Pharmacology, SIU-SOM, PhD 2017)  
Project: Hair Cell Development in the Inner Ear  
Haneen Ismaeel (Med Micro, Immunology, Cell Biology, SIU-SOM, current PhD student)  
Project: Regulation of the trophoblast by statins  
Enthkab Alanisi (Med Micro, Immunology, Cell Biology, SIU-SOM, current PhD student)  
Project:  
Yuanquin Zhang (Med Micro, Immunology, Cell Biology, SIU-SOM, current PhD student)  
Project:  
Skyler Johnson (Med Micro, Immunology, Cell Biology, SIU-SOM, MS 2018)  
Project: Role of nRIP1 in skin aging  
Xin Wang (Med Micro, Immunology, Cell Biology, SIU-SOM, current PhD student)  
Project: Microbiome changes in inflammatory bowel disease

## **ADMINISTRATIVE SERVICE**

### **Institutional Service**

#### **Southern Illinois University**

##### School of Medicine

Year 2 Curriculum Committee 2007-present

- USMLE Step 1 Subcommittee, 2010-2011

Laboratory Animal Care and Use Committee, 2007-present; Vice Chair, 2010-2011; Chair, 2011-present

- LACUC Policy Review Subcommittee, 2009 and 2011

Research Strategic Planning Task Force, 2012  
Educational Policy Council, 2012-present; Chair, 2015-present  
Longitudinal Planning Curriculum Committee, 2017-present  
LCME Self-Study, Students Subcommittee, 2013-2015  
Representative to AAMC GREAT Group, 2013-present  
Y3T Program Evaluation Subcommittee Co-Chair, 2014-present  
Y3T Advisory Committee, 2015-present  
Outstanding Educator Selection Committee, 2015-present  
Faculty Wellness Group, 2016-present  
Interim Director of Operations, Department of Laboratory Animal Medicine, 2017-2018  
Attending Veterinarian/DLAM Director – Search Committee, 2018

##### Department of Pharmacology

Director, Pharmacology and Neuroscience Graduate Program, 2014-present  
Graduate Program Committee, 2007-present

Seminar Program Coordinator, 2008-2015  
Annual Pharmacology Awards Selection Committee, 2010-2012; 2014  
LAN Manager Search Committee, 2011, 2012  
Faculty Recruitment Search Committee, 2011-2012  
Advisor, Graduate Student Brain Awareness Week Activities, 2010-present

## **University of Illinois at Urbana-Champaign**

### University

Post-Genomics Initiative Faculty Search Committee, 2002, 2003  
Faculty Senate, 2004-2006  
HHMI Translational Research Initiative Committee, 2005

### College of Veterinary Medicine

Admissions Committee, 2005-2007  
Executive Committee, 2005-2007  
Comparative and Translational Research Program Steering Committee, 2005-2007  
Research Advisory Committee, 2005-2006  
Department of Veterinary Biosciences Head Search Committee, 2005  
Faculty Search Committee, Anesthesiology, Department of Clinical Medicine, 2006  
Blue Coat Ceremony, Department of Veterinary Biosciences Representative, 2004-2006  
White Coat Ceremony, Class of 2007  
Committee on Committees, 2003-2004; Chair, 2004  
College of Veterinary Medicine Teaching Academy, 2004-2007

### Department of Veterinary Biosciences

Courses and Curriculum Committee, 2003-2006; Chair, 2005-2006  
Anatomy Preparatory Search Committee, 2005  
Seminar Committee for Fields Program in Reproductive Biology, 2003-2007  
Faculty Search Committee, 2006

### Neuroscience Program

Executive Committee, 2005-2006  
Graduate Admissions Committee, 2003-2004

### Reproductive Biology Training Program

Discovery Course Committee, 2005-2007  
Graduate Student Association President, 1993-1995

## **Truman State University**

Beta Beta Beta Biological Society, President, 1985-1986  
Cardinal Key National Honor Sorority, Secretary, 1984-1986

## **Local and National Service**

## Grant Review Panels

Reviewer, NIH Review Panel (ZRG F01A, F01B), 2015-present  
Reviewer, NIH Neuroendocrinology, Neuroimmunology, Rhythms and Sleep Study Section, 2011  
Member, NSF Review Panel, Neural Systems Cluster, Apr. 2009; Oct. 2009; Apr. 2010; Oct. 2010  
Reviewer, NIH Challenge Grants, 2009  
Reviewer, *ad hoc*, NIH Review Panel (ZRG F03A), 2005-2006  
AAAS, Reviewer for competitive grants program, 2001-2010  
Lalor Foundation, Reviewer for Postdoctoral Fellowship Program, 2002-2008  
UIUC Research Board, 2001-2006  
UIUC, College of Veterinary Medicine Grant Review Panel, 2001-2006  
UIUC Environmental Toxicology Scholars Review Panel, 2005-2006  
SIU-GRC, *ad-hoc* Reviewer, 2007-present  
UK National review board, *ad hoc* Reviewer, 2014  
Italian Govt., *ad hoc* Review Panel, 2015  
New Zealand Research Foundation *ad hoc* Reviewer, 2016

## Journals and Books

American Journal of Physiology, Reviewer  
Biochemical Pharmacology, Reviewer  
Biology of Reproduction, Reviewer  
Brain, Behavior and Immunity, Reviewer  
Brain Research, Reviewer  
Cancer Letters, Reviewer  
Chronobiology International, Reviewer  
Endocrinology, Reviewer  
Environmental Health Insights, Reviewer  
Environmental Research, Reviewer  
European Journal of Neuroscience, Reviewer  
Experimental Neurology, Reviewer  
Frontiers in Integrative Physiology, Reviewer  
General and Comparative Endocrinology, Reviewer  
Journal of the American Association of Laboratory Animal Science, Reviewer  
Journal of Biological Rhythms, Reviewer  
Journal of Circadian Rhythms, Reviewer  
Journal of Clinical Endocrinology and Metabolism, Reviewer  
Journal of Comparative Endocrinology, Reviewer  
Journal of Neuroscience, Reviewer  
Life Sciences, Reviewer  
Molecular and Cellular Endocrinology, Reviewer  
Neurobiology of Disease, Reviewer  
Neuroscience, Reviewer  
Neuroscience Letters, Reviewer  
Pharmacology, Biochemistry and Behavior, Reviewer  
Physiological Genomics, Reviewer  
Physiology & Behavior, Reviewer  
PLoS One, Reviewer

Reproductive Toxicology, Reviewer  
Sleep Research Online, Reviewer  
Toxicological Sciences, Reviewer  
Toxicology, Reviewer

#### **Other Review Panels**

Society for the Study of Reproduction, Abstract Reviewer, Ovary, 2003  
Northwestern Reproductive Biology Mini-Symposium, Student Presentation Judge, 2004-2005  
Southern Illinois University School of Medicine Trainee Research Symposium, Judge, 2007; 2013-2018  
SRBR, Trainee Research Day, Abstract Reviewer, 2008; 2010  
Illinois Symposium on Reproductive Biology, Judge, 2013  
SIU-SOM Symposium on Teaching and Learning, Poster Judge, 2016

#### **COMMUNITY SERVICE:**

Volunteer Volleyball Coach – Head Coach, Blue Lightning Volleyball Club, 2007-2012  
Volunteer Coach, High School Winter Volleyball Program, 2005-2012  
Tournament Director, Lincolnwood High School Winter Volleyball, 2007-2012  
Volunteer, USTA Challenger Tennis Tournament, 1999-present  
Illinois State Science Fair Judge, 1995; 1997; 1999  
Brain Awareness Week Volunteer, 1997-2007; 2011  
Volleyball Coach, Holy Cross School, Champaign, IL, 1995-1996  
Neuroscience Workshop for High School Health Students, Urbana High School, 2002-2007  
Illinois State Science Fair Coordinator, 2010  
USTA Midwest Section, Intercollegiate Committee, 2013-2015  
USTA Mid-South District League Committee, 2013-present

#### **MEMBERSHIPS IN SCIENTIFIC SOCIETIES:**

American Association for the Advancement of Science, 1990-present  
Sigma Xi, 1992-present  
Society for the Study of Reproduction, 1993-2012  
    Abstract Reviewer, 2001-2002  
    Platform Session Chair - Follicular Development, 1994  
    Mini-Symposium Co-Chair, 2005  
    By-Laws Committee, 2003-2006  
Society for Research in Biological Rhythms, 1996-present  
    Executive Committee, ex officio, 2010-present  
    Newsletter Editor, 2008-present  
    Program Committee, 2008; 2010  
    Bi-Annual Meeting Facilities Chair, 2008-2014  
    Communications Committee, 2007-present; Chair, 2012-present  
    Annual Meeting Session Chair – SCN, 2006  
    Annual Meeting Session Chair – Networked Clocks, 2014  
    Annual Meeting Session Chair – Metabolism and Microbiome, 2018

Women in Neuroscience, 2001-present  
Society for Neuroscience, 1996-2014  
Endocrine Society, 1993-present  
Society of Toxicology, 2005-present  
American Society for Pharmacology and Experimental Therapeutics, 2008-present  
Symposium Chair, 2011  
Councilor, Executive Committee, Division of Pharmacology Education, 2011-2012  
International Association of Medical Science Educators, 2009-present

#### **HONORS AND AWARDS:**

SIU School of Medicine Outstanding Educator Award, 2014  
SIU School of Medicine Academy Scholar, 2014-present  
Society of Toxicology, Best Paper Award, Honorable Mention, 2014  
College of Veterinary Medicine Helen and Norman Levine Research Award Finalist, 2005  
College of Veterinary Medicine Norton Teaching Award Finalist, 2005  
Membership in UIUC College of Veterinary Medicine Teaching Academy, 2004-2006  
U of I List of Teachers Ranked Excellent by Their Students, 1989-1991; 1999-2006  
ISCAVMA Teaching Excellence Award, 2004; 2006  
NIH Postdoctoral Fellowship, Individual National Research Service Award, 1998-1999  
NIH Postdoctoral Fellowship, Individual National Research Service Award, 1996-1998  
U of I Graduate College Travel Award, 1994, 1995  
Constance Campbell Research Award, 1993, 1994  
NIH Pre-doctoral Fellowship, Systems and Integrative Biology Training Grant, 1993-1994  
NIH Pre-doctoral Fellowship, Reproductive Biology Training Grant, 1991-1993  
Outstanding College Students of America, 1987  
Truman State University (TSU) President's Honorary Scholarship, 1982-1986  
Dean's List 8 Semesters, 1982-1986  
TSU Wray Reiger Award, Outstanding Student in Biology, 1984  
Beta Beta Beta Biological Honor Society, 1984-1986  
Cardinal Key National Honor Sorority, 1984-1986  
TSU Varsity Athletic Scholarship, 1982-1986  
TSU Varsity Volleyball Letter Winner, 1982-1986

#### **GRANT SUPPORT (Principal Investigator unless otherwise noted):**

##### **Pending Support**

NIH R15 ES030556-01, "Aryl hydrocarbon receptor interactions with the circadian clock in metabolic syndrome".  
Focus of the proposal is to examine mechanisms by which aryl hydrocarbon receptor interacts with the circadian clock to regulate adipose tissue function in healthy and disease states.

##### **Completed Support**

NS10170-01 NIH, National Research Service Award. “Role of cGMP in the circadian clock”, 1996-1998. Postdoctoral fellowship awarded to examine the role of cGMP and protein kinase G signal transduction mechanisms in light-induced phase resetting of the circadian clock. Proposal score was in the first 1%.

NS10170-03 NIH, National Research Service Award, Postdoctoral Fellowship. “Role of cGMP in the circadian clock”, 1998-1999. Competitive renewal of postdoctoral fellowship awarded to examine the role of the circadian clock gene, *timeless*, in light-induced phase resetting of the circadian clock.

NS22155, Co-Investigator, NIH RO1 “Physiological substrates of a circadian oscillator”, 2000-2004. Martha Gillette, PI. Awarded to examine interactions of PACAP and glutamate as mediators of light-induced phase resetting of the circadian clock.

UIUC College of Veterinary Medicine Governor’s Venture Technology Fund. “Circadian control of gonadotropin releasing hormone”, 2001. \$25,000 awarded to examine interactions of SCN neurons with the hypothalamic gonadotropin-releasing hormone neurons.

UIUC College of Veterinary Medicine Governor’s Venture Technology Fund. “Circadian control of gonadotropin releasing hormone”, 2002. \$10,000 extension of previous award.

UIUC College of Veterinary Medicine Governor’s Venture Technology Fund – Molecular Pharmacology Program, 2002. “Development of single-cell microarray technology”. \$7,000 awarded to develop technology to perform DNA microarray analysis from single mammalian neurons.

UIUC Research Board. “Endogenous protection from ischemic brain insult”, 2002-2003. \$25,000 awarded to build a system to analyze circadian rhythmicity *in vivo*.

UIUC College of Veterinary Medicine, Veterinary Medical Research Funds. “Transcriptional analysis of GnRH neurons”, 2004-2005. \$30,000 awarded to perform microarray analysis on GnRH neurons.

Field Endowment, College of Veterinary Medicine. Transcriptional analysis in the ovary of the *clock* mutant mouse, 2003-2004. \$6,000 awarded to perform microarray analysis on ovaries from *Clock* mutant mice.

USDA HATCH FUNDS “Luteinizing hormone regulation of circadian clock genes in the avian ovary”, 2005-2006. \$20,000 awarded to examine circadian clock gene function in the avian ovary.

NIH ES07326-01 Training program in endocrine, developmental and reproductive toxicology, 2005-2010. \$1,399,352. Role: Preceptor (15 total faculty members).

ES012948, NIH R21, “Environmental toxins disrupt ovarian circadian rhythms”, 2005-2007. Submitted under PA-03-107, the NIH Exploratory/Developmental Research Grant Award. \$275,000 awarded to examine the effects of dioxins on ovarian circadian clock genes.

ACS/IRG, “Aryl hydrocarbon receptor regulation of the tumor suppressor, *Per1*”, 2007-2008. **SA Tischkau**, PI.

NIH K99/R00, Pathways to Independence Award, “Assessment of psychostimulant addiction risk following developmental PCB exposure”. H Sable, PI and **SA Tischkau**, Co-Mentor.

SIU-Near Miss, “Mechanisms of circadian clock-regulated excitotoxic resistance”, 2010. K. Bottum PI, **SA Tischkau**, Co-Investigator.

SIU-CRC Excellence in Academic Medicine Award, “Mechanisms of endogenous neuroprotection in the suprachiasmatic nucleus”, 2011. **SA Tischkau**, PI.

SIU-SM CADRD, “Circadian dysregulation in a mouse model of alzheimer disease”, 2012. **SA Tischkau**, PI; 10% Commitment.

NIH 1 R01 ES017774-01, “Circadian clock disruption: A mechanism for dioxin-induced metabolic syndrome”, 2010-2015. **SA Tischkau**, PI; 25% Commitment.

SIU-GRC Team Development Grant, “Modulation of intracellular Ca<sup>2+</sup> homeostasis – A pharmacological target for cancer therapy” 2015. **SA Tischkau** and JA Copello, Co-PI’s. 10% commitment.

SIU Foundation Award (Alzheimer’s fund). “Effects of Circadian Clock Disruption on Cognitive Decline in a Mouse Model of Alzheimer’s Disease”. 2016-2017.

## PUBLICATIONS

### Books

Case Files: Pharmacology, 3<sup>rd</sup> edition. 2013. EC Toy, DS Loose, **SA Tischkau** and A Pillai, (eds). McGraw-Hill, New York.

### Book Chapters

Jackson JA, **SA Tischkau**, P Zhang, Y Yoshimura and JM Bahr. 1993. Involvement of plasminogen activator and collagenase and changes in extracellular during the proliferative and ovulatory phases in the chicken ovary. In: **Proceedings of the V International Symposium on Avian Endocrinology**. PJ Sharp (ed) pp 309-319.

Bahr JM, H-C Yao, K Volentine, **SA Tischkau**, L Robinson and Y Yoshimura. 1997. Regulation of ovarian functions by the germinal disc region in the chicken. In: **Advances in Comparative Endocrinology**. S Kawashima and S Kikuyama (eds) pp 1451-1456.

**Tischkau SA**. 2010. Drugs affecting uterine motility. In: **Brody’s Human Pharmacology: Molecular to Clinical, 5<sup>th</sup> edition**. L Wecker, L Crespo, G Dunaway, C Faingold and S Watts, editors. Mosby, Philadelphia, PA.

**Tischkau SA**. 2012. AhR and the circadian clock. In: **The Aryl Hydrocarbon Receptor in Biology and Toxicology**, R. Pohjanrihva, editor, John Wiley & Sons, Hoboken, NJ.

**Tischkau SA** and SL Krager. 2014. Orchestration of the circadian clock network by the suprachiasmatic nucleus In: **Neuronal Networks in Brain Function, CNS Disorders, and Therapeutics**. C Faingold and H Blumenfeld, editors. Academic Press, Waltham, MA. pp 179-192.

**Tischkau SA**. 2018 (In press). Chapter 48: Introduction to the Endocrine System. In **Brody's Human Pharmacology: Molecular to Clinical**. 6<sup>th</sup> ed. Wecker, ed., Mosby, Philadelphia, USA.

**Tischkau SA**. 2018 (In press). Chapter 49: Treatment of Hypothalamic and Pituitary Disorders. In **Brody's Human Pharmacology: Molecular to Clinical**. 6<sup>th</sup> ed. Wecker, ed., Mosby, Philadelphia, USA.

**Tischkau SA**. 2018 (In press). Chapter 52: Thyroid and Anti-thyroid Drugs. In **Brody's Human Pharmacology: Molecular to Clinical**. 6<sup>th</sup> ed. Wecker, ed., Mosby, Philadelphia, USA.

**Tischkau SA**. 2018 (In press). Precocious Puberty: Interactive Case for Medical Teaching. **Case Files Collection**. McGraw-Hill.

### Popular Press

**Tischkau SA** and K Labak. 2005. Circadian rhythms affect pet behavior. **Pet Talk**. College of Veterinary Medicine. University of Illinois at Urbana-Champaign. Article also published in the Champaign News-Gazette

### Reviews

Gillette MU and **SA Tischkau**. 1999. Cellular and biochemical mechanisms underlying circadian rhythmicity. **Recent Progress in Hormone Research**. 5:33-59. PMID: 10548871.

**Tischkau SA** and MU Gillette. 2005. Oligonucleotide methods for analyzing the circadian clock in the suprachiasmatic nucleus. **Methods in Enzymology**. 393:591-607. PMID: 15817314.

**Tischkau SA**. 2009. Circadian cycle. **Encyclopedic Review of Neuroscience**. Springer-Verlag, Marc Binder, editor. Vol.1 p. 251.

**Tischkau SA**. 2009. Clock. **Encyclopedic Review of Neuroscience**. Springer-Verlag, Marc Binder, editor. Vol.1 p. 350.

Karmarkar S, KM Bottum and **SA Tischkau**. 2010. Considerations for the use of anesthetics in neurotoxicity studies. **Comp. Med.** 60(4):256-62. PMID: 20819374.

**Tischkau SA** and SW Karmarkar. 2013. Influences of the circadian clock on neuronal susceptibility to excitotoxicity. **Front. Physiol.** | doi: 10.3389/fphys.2013.00313.

Wang C, ZM Zhang, CX Xu and **SA Tischkau**. 2014. Interplay between dioxin-mediated signaling and circadian clock: a possible determinant in metabolic homeostasis. **Int J Mol Sci**. 2014 Jul 1; 15(7):11700-12. doi: 10.3390/ijms150711700. PMID: 24987953.



Jaeger CD and **SA Tischkau**. 2016. Role of aryl hydrocarbon receptor in circadian clock disruption and metabolic dysfunction. **Environmental Health Insights**. 2016 Aug 17;10:133-41. doi: 10.4137/EHI.S38343. PMID: 27559298.

Khazaal AQ, CD Jaeger, KM Bottum, **SA Tischkau**. 2018. Environmental factors act through aryl hydrocarbon receptor activation and circadian rhythm disruption to regulate energy metabolism. **Journal of Receptor, Ligand and Channel Research**. 2018:10, 13-24. doi:10.2147/JLCR.5133886.

**SA Tischkau**. 2018. Interactions of aryl hydrocarbon receptor signaling with the molecular circadian clock: environmental determinants of metabolic disease. **Eur. J. Neuroscience**. In press.

### Journal Articles

**Tischkau SA** and VD Ramirez. 1993. A specific membrane binding protein for progesterone in the rat brain: sex differences and induction by estrogen. **Proc Natl Acad Sci** 90:1285-1289. PMID: 8433988.

Jackson JA, **SA Tischkau**, P Zhang and JM Bahr. 1994. Plasminogen activator production by the granulosa layer is stimulated by factors produced by the theca layer and inhibited by the LH surge in the chicken. **Biol Reprod** 50:812-819. PMID: 8199262.

Yoshimura Y, **SA Tischkau** and JM Bahr. 1994. Destruction of the germinal disc region of an immature preovulatory follicle suppresses follicular maturation and ovulation. **Biol Reprod** 51:229-233. PMID: 7948477.

**Tischkau SA** and JM Bahr. 1996. Avian germinal disc region secretes factors that stimulate proliferation and inhibit progesterone production by avian granulosa cells. **Biol Reprod** 54:865-870. PMID: 8924507.

**Tischkau SA**, JA Jackson, AC Finnigan-Bunick and JM Bahr. 1996. Granulosa layer: Primary site of regulation of plasminogen activator mRNA by LH in the avian ovary. **Biol Reprod** 55:75-79. PMID: 8793061.

**Tischkau SA**, LR Neitzel, JA Walsh and JM Bahr. 1997. Characteristics of the growth center of the avian preovulatory follicle. **Biol Reprod** 56:469-474. PMID: 9116148.

Ding, JM, GF Buchanan, **SA Tischkau**, D Chen, L Kuriashkina, LE Faiman, JM Alster, PS McPherson, KP Campbell and MU Gillette. 1998. A neuronal ryanodine receptor mediates light-induced phase delays of a circadian clock. **Nature** 394:381-384. PMID: 9690474.

**Tischkau SA**, JA. Barnes, F-J Lin, E Myers, JW. Barnes, E Meyer-Bernstein, WJ Hurst, PW Burgoon, D Chen, A Sehgal and MU Gillette. 1999. Oscillation and light induction of *mtimeless* mRNA in the mammalian circadian clock. **J. Neurosci** RC15:1-6. <sup>1</sup>equal contribution by these authors. PMID: 10366653.

**Tischkau SA**, EA Gallman, GF Buchanan and MU Gillette. 2000. Differential cAMP gating of glutamatergic signaling regulates long-term state changes in the suprachiasmatic circadian clock. **J. Neurosci**. 20:7830-7837. PMID: 11027248.

**Tischkau SA**, JW Mitchell, S-H Tyan, GF Buchanan and MU Gillette. 2003. CREB-dependent activation of Per1 is required for light-induced signaling in the SCN circadian clock. **J. Biol. Chem.** 278:718-723. PMID: 12409294.

**Tischkau SA**, ET Weber, SM Abbott, JW Mitchell and MU Gillette. 2003. Circadian clock-controlled regulation of cGMP/protein kinase G in the nocturnal domain. **J. Neurosci.** 23:7543-7550. PMID: 12930792.

Barnes JW, **SA Tischkau**, JA Barnes, JW Mitchell, PW Burgoon, JR Hickok and MU Gillette. 2003. Mammalian timeless is required for circadian rhythmicity. **Science** 203:439-441. <sup>1</sup>equal contribution by these authors. PMID: 14564007

**Tischkau SA**, JW Mitchell, LA Pace, JW Barnes, JA. Barnes and MU Gillette. 2004. Protein kinase G type II is required for night-to-day progression of the mammalian circadian clock. **Neuron** 43:539-549. PMID: 15312652.  
Karman BN and **SA Tischkau**. 2006. Circadian clock gene expression in the ovary: effects of luteinizing hormone. **Biol Reprod.** 75:624-632. PMID: 16807384

Mukai M and **SA Tischkau**. 2007. Effects of tryptophan photoproducts in the circadian timing system: searching for a physiological role for aryl hydrocarbon receptor. **Tox Sci.** 95:172-81. PMID: 17020875

Cariboni A, J Hickok, S Rakic, W Andrews, R Maggi, **SA Tischkau** and JG Parnavelas. 2007. Neuropilins and their ligands are important in the migration of gonadotropin-releasing hormone neurons. **J. Neurosci.** 27(9):2387-2395. PMID: 17329436

**Tischkau SA**, JA Cohen, JT Stark, KM Bottum and DR Gross. 2007. Time-of-day affects expression of hippocampal markers for ischemic damage induced by global ischemia. **Exp Neurol.** 208:314-322. PMID: 17936274

Mukai M, T-M Lin, RE Peterson, PS Cooke and **SA Tischkau**. 2008. Behavioral rhythmicity of mice lacking AhR and attenuation of light-induced phase shift by 2, 3, 7, 8-tetracholordibenzo-p-dioxin. **J Biol Rhythm.** 23:200-210. PMID: 18487412

**Tischkau SA** and M Mukai. 2009. Activation of aryl hydrocarbon receptor signaling by cotton balls used for environmental enrichment. **JAALAS.** 48(4):357-362. PMID: 19653942

Hickok JR and **SA Tischkau**. 2010. Regulation of circadian clock genes in gonadotropin releasing hormone neuronal populations. **Neuroendocrinology.** 91(1):110-20. PMID: 19786732

Bottum K, E Poon, B Haley, S Karmarkar and **SA Tischkau**. 2010. Suprachiasmatic nucleus neurons display endogenous resistance to excitotoxicity. **Exp Biol Med.** 235(2):237-46. PMID: 20404040

Xu, CX, SL Krager, DF Liao and **SA Tischkau**. 2010. Disruption of CLOCK/BMAL1 transcriptional activity is responsible for aryl hydrocarbon receptor-mediated regulation of the Period1 gene. **Tox Sci.** 115(1):98-108. PMID: 20106950

**Tischkau SA**, RA Howell, JR Hickok, SL Krager and JM Bahr. 2011. The luteinizing hormone surge regulates circadian clock gene expression in the chicken ovary. **Chronobiol. Int.** 28(1):10-20. PMID: 21182400.

**Tischkau SA**, CD Jaeger and SL Krager. 2011. Circadian clock disruption in the mouse ovary in response to 2, 3, 7, 8-tetrachlorodibenzo-*p*-dioxin. **Toxicol. Lett.** 201:116-122. PMID: 21182907

Karmarkar SW, KM Bottum, SL Krager and **SA Tischkau**. 2011. ERK/MAPK is essential for endogenous neuroprotection in SCN2.2 cells. **PLoS One** 6(8): e23493. doi:10.1371/journal.pone.0023493, PMID: 21858143

Wang C, CX Xu, SL Krager, KM Bottum, DF Liao and **SA Tischkau**. 2011. Aryl hydrocarbon receptor deficiency enhances insulin sensitivity and regulates PPAR- $\alpha$  pathway in mice. **Environmental Health Perspectives.** 119:1739-44. PMID: 21849270

Xu CX, C Wang, SL Krager, KM Bottum and **SA Tischkau**. 2013. Aryl hydrocarbon receptor activation attenuates Per1 gene induction and influences circadian clock resetting. **Tox. Sci.** 132(2): 368-378. PMID: 23291558. *Honorable Mention: Society of Toxicology Best Paper Award.*

Wang C, CX Xu, Y Bu, KM Bottum and **SA Tischkau**. 2014. Beta-naphthoflavone (db06732) mediates estrogen receptor-positive breast cancer cell cycle arrest through AHR-dependent regulation of PI3K/AKT and MAPK/ERK signaling. **Carcinogenesis.** 35(3):703-13. doi: 10.1093/carcin/bgt356. Epub 2013 Oct 26. PMID: 24163404

**Tischkau SA**, Y Mhaskar and VV Uteshev. 2014. Evidence for the exclusive expression of functional homomeric  $\alpha 7$  nAChRs in hypothalamic histaminergic tuberomammillary neurons in rats. **Neurosci Lett.** 2014 Mar 20;563:107-11. doi: 10.1016/j.neulet.2014.01.047. Epub 2014 Jan 31. PMID: 24486841.

Xu CX, C Wang, ZM Zhang, CD Jaeger, SL Krager, KM Bottum, J Liu, DF Liao and **SA Tischkau**. 2015. Disruption of aryl hydrocarbon receptor promotes energy expenditure and alleviates diet-induced adiposity and metabolic disorders. **Int J Obes.** 39(8):1300-9. doi: 10.1038/ijo.2015.63. Epub 2015 Apr 24. PMID: 25907315

LeVault KR, **SA Tischkau** and GJ Brewer. 2016. Circadian disruption reveals a correlation of an oxidative GSH/GSSG redox shift with learning and impaired memory in an Alzheimer's disease mouse model. **J Alzheimers Dis.** 49(2):301-16. doi: 10.3233/JAD-150026. PMID: 26484899

Jaeger CD, AQ Khazaal, CX Xu, M Sun, S Krager and **SA Tischkau**. 2017. Aryl hydrocarbon receptor deficiency alters circadian and metabolic rhythmicity. **J Biol Rhythms.** Mar 1:748730417696786. doi: 10.1177/0748730417696786. [Epub ahead of print] PMID: 28347186.

Jaeger CD, CX Xu, M Sun, S Krager and **SA Tischkau**. 2017. Aryl hydrocarbon receptor deficient mice are protected from high fat diet-induced disruption of metabolic rhythms. **Chronobiology Int.** 34(3):318-336. doi: 10.1080/07420528.2016.1256298. Epub 2017 Jan 19. PMID: 28102700.

#### **Invited Presentations:**

**Tischkau SA.** 1996. Physiology of the germinal disc region of preovulatory follicles in the chicken ovary. **Department of Molecular and Integrative Physiology Seminar Series**, University of Illinois at Urbana-Champaign.

**Tischkau SA**, AM Fox, LE Faiman and MU Gillette. 1997. A circadian clock control point in the late night: Regulation by protein kinase G. **1<sup>st</sup> Annual Sleep and Circadian Rhythms DataBlitz. Annual Meeting of the Society for Neuroscience.** New Orleans, LA.

**Tischkau SA** and MU Gillette. 1998. Winding the circadian clock: a *timeless* tale of kinase regulation? **Department of Molecular and Integrative Physiology Annual Retreat**, University of Illinois at Urbana-Champaign.

**Tischkau SA.** 2000. Cellular mechanisms for glutamatergic regulation of the suprachiasmatic nucleus. **Symposium on Cellular Mechanisms in the SCN. Annual Meeting of the Society for Research on Biological Rhythms.** Amelia Island, FL.

**Tischkau SA.** 2000. Glutamatergic regulation of molecular circadian timekeeping. Neuroscience Program. University of Illinois at Urbana-Champaign.

**Tischkau SA.** 2001. Signaling components in glutamatergic regulation of the molecular circadian clockworks. Department of Biology, Grand Valley State University.

**Tischkau SA.** 2001. Ionic regulation of neuronal cell membrane potential. Department of Biology, Grand Valley State University.

**Tischkau SA.** 2001. Protein kinase G: critical signaling component in the biological clock. Department of Biology, Florida State University.

**Tischkau SA.** 2001. Critical signaling components in regulation of the circadian clock. Department of Physiology, Southern Illinois University School of Medicine.

**Tischkau SA.** 2002. Protein kinase G: a critical signaling component in glutamatergic regulation of the molecular circadian clockworks. Department of Veterinary Biosciences, University of Illinois at Urbana-Champaign.

**Tischkau SA.** 2003. Protein kinase G signals state change: critical regulation of glutamatergic signaling in the circadian clock. Department of Pharmacology, University of Virginia.

**Tischkau SA.** 2003. Glutamate regulates circadian timing through protein kinase G. Department of Biology, University of Illinois at Springfield.

**Tischkau SA.** 2003. Circadian clock genes in the female reproductive system. **Bi-annual State of Illinois Reproductive Biology Retreat.** University of Illinois.

**Tischkau SA.** Reproductive rhythms. 2003. **ACCA Biology Seminar: Biorhythms.** Benedictine University, Lisle, IL.

**Tischkau SA** and BN Klementiev. 2004. Keeping time in the rat ovary: Expression of circadian clock genes. **Society for the Study of Reproduction.** Baltimore, MD.

**Tischkau SA.** 2004. The tick-tock of the ovarian clock. **Bi-annual State of Illinois Reproductive Biology Retreat.** University of Illinois.

Zimmerman CR and **SA Tischkau.** 2005. Expression of circadian clock genes in gonadotropin-releasing hormone neurons. **Society for the Study of Reproduction.** Cincinnati, OH.

**Tischkau SA.** 2005. Emergence of avian vacuolar myelinopathy in wild birds. **Wildlife Rounds.** University of Illinois College of Veterinary Medicine.

**Tischkau SA.** 2005. Shedding light on biological timing: Establishing a circadian link to reproduction. **Reproductive Biology Training Program.** University of Illinois at Urbana-Champaign.

**Tischkau SA.** 2005. Nocturnal checkpoint regulation of the mammalian circadian clock by protein kinase G. **2005 Gordon Conference on Chronobiology.** Salve Regina University. Newport, Rhode Island.

**Tischkau SA.** 2006. Protein kinase G: The next circadian clock gene? **Systems and Integrative Biology Training Grant, School of Molecular and Cellular Biology.** University of Illinois at Urbana-Champaign.

**Tischkau SA.** 2006. The chronobiology of fertility: the brain, the ovary and the environment. Department of Biology, University of Illinois at Springfield.

**Tischkau SA.** 2006. The chronobiology of fertility: the brain, the ovary and the environment. Department of Pharmacology, Southern Illinois University School of Medicine.

**Tischkau SA.** 2007. Circadian clock control of the hypothalamic-pituitary-gonadal axis. **Interdisciplinary Neuroscience Program Seminar Series,** University of Missouri at Columbia.

**Tischkau SA.** 2007. Mechanisms of circadian rhythmicity: light, clock genes and physiological targets. **Biology Program Seminar Series.** Truman State University.

**Tischkau SA.** 2007. Issues in reproductive pharmacology. Department of Chemistry, University of Illinois at Springfield.

**Tischkau SA.** 2008. Circadian regulation of neuroendocrine targets: Role of aryl hydrocarbon receptor, **Neuroscience Research Institute Seminar Series,** Indiana University School of Medicine.

**Tischkau SA.** 2008. Protein kinase G regulation of glutamatergic signaling in the circadian clockworks. Department of Biology, Rutgers University.

**Tischkau SA, BN Karman, SL Krager and C Xu.** 2008. Aryl hydrocarbon regulation of circadian rhythms. **Biennial Meeting of the Society for Biological Rhythms.** Sandestin, FL.

**Tischkau SA, BN Karman, M Mukai, SL Krager and C Xu.** 2008. Regulation of Per1 by aryl hydrocarbon receptor expression in the ovary. **Annual Meeting of the Society for the Study of Reproduction.** Kona, HI.

**Tischkau SA.** 2009. Glutamatergic signaling in the suprachiasmatic nucleus. Department of Biomedical Sciences, Iowa State University.

**Tischkau SA.** 2009. Aryl hydrocarbon receptor activation by tryptophan photoproducts alters circadian light responses. **International Congress on Photobiology.** Dusseldorf, Germany

**Tischkau SA.** 2010. Interactions of aryl hydrocarbon receptor with the molecular circadian clockworks. Department of Medical Microbiology, Immunology and Cell Biology. Southern Illinois University School of Medicine. Springfield, IL.

**Tischkau SA.** 2011. Overview of circadian clock dysfunction in health and disease. Symposium: Chronobiology in the modern curriculum - addressing disease linkage and pharmacological approaches. **ASPET-Experimental Biology.** Washington, DC.

**Tischkau SA.** 2011. Crosstalk between aryl hydrocarbon receptor signaling and the circadian clock. **AhR 2011.** Dusseldorf, Germany.

**Tischkau SA.** 2012. Aryl hydrocarbon receptor and the circadian clock: a research perspective. Department of Chemistry. University of Illinois at Springfield.

**Tischkau SA.** 2012. Regulation of breast cancer cell growth by the aryl hydrocarbon receptor. **Simmons Cancer Institute Seminar.** Southern Illinois University School of Medicine.

**Tischkau SA.** 2014. Is our environment making us fat? Aryl hydrocarbon receptor and circadian rhythms in metabolic disease. State University of New York – Buffalo, New York. Department of Pharmacology.

**Tischkau SA.** 2014. Teaching the science of medicine in the 21<sup>st</sup> century. Aichi Medical School, Nagoya, Japan.

**Tischkau SA.** 2015. Teaching and learning in the 21<sup>st</sup> century. **Reflections on Teaching lecture.** SIU Academy of Teaching and Learning.

**Tischkau SA.** 2015. Connecting with the millennial student. **GREAT Group Annual Meeting.** Baltimore, MD.

**Tischkau SA.** 2015. Interactions of the circadian clock and Aryl hydrocarbon receptor signaling in the development of metabolic dysfunction. Rush University. Department of Gastroenterology.

**Tischkau SA.** 2016. AMSPC knowledge objectives in medical pharmacology. **Annual Meeting the AMSPC.** San Jose, Costa Rica.

**Tischkau SA.** 2016. Circadian regulation of metabolism by environmental toxicants. **Conference on Circadian Rhythms in Gastrointestinal Disease.** Chicago, IL.

**Tischkau SA.** 2016. Are you ready to flip (your classroom)? **Lightning Talks.** Southern Illinois University Library.

**Tischkau SA.** 2016. Team-based learning. **Year 2 Curriculum Committee Retreat.** Southern Illinois University School of Medicine. Springfield, IL.

**Tischkau SA.** 2017. "Drilling down": Creating basic science learning objectives from clinical cases in a problem based learning setting. **Chicago Medical School**, Rosalind Franklin University.

**Tischkau SA.** 2018. Environmental determinants of Obesity. **Southern Illinois University Edwardsville, Department of Pharmaceutical Sciences Seminar.**

## **ABSTRACTS**

**Tischkau SA, S Veatch and GJ Schulte.** 1989. Evidence for a carrier-mediated transport mechanism for L-arginine and L-leucine in the intestine of the pacific hagfish. **Trans MO Acad Sci** 23:81.

**Tischkau SA and VD Ramirez.** 1991. Binding of progesterone to hypothalamic and corpus striatum cell membranes using progesterone conjugated to bovine serum albumin as a ligand shows sexual specificity in the rat. **The Endocrine Society 73<sup>rd</sup> Annual Meeting.** Washington DC.

**Tischkau SA, GS Panjwani, JW Wright and VD Ramirez.** 1991. Progesterone stimulates phosphatidylinositol metabolism in specific CNS structures of the female rat. **Society for Neuroscience Annual Meeting.** New Orleans, LA.

Yoshimura Y, **SA Tischkau** and JM Bahr. 1992. The role of the germinal disc region in follicular maturation and ovulation. **IX Ovarian Workshop.** Chapel Hill, NC.

**Tischkau SA, JA Jackson and JM Bahr.** 1992. Urokinase type plasminogen activator production by the germinal disc region of the hen changes with follicular maturation and exposure to LH. **IX Ovarian Workshop.** Chapel Hill, NC.

Jackson JA, **SA Tischkau** and JM Bahr. 1992. LH regulation of plasminogen activator production by granulosa and theca layers of the chicken follicle. **IX Ovarian Workshop.** Chapel Hill, NC.

**Tischkau SA, JA Jackson and JM Bahr.** 1992. LH regulation of plasminogen activator mRNA in the granulosa layer of the avian ovary. **Northwestern University Minisymposium on Reproductive Biology.**

**Tischkau SA and JM Bahr.** 1993. The germinal disc region directs proliferation and differentiation in developing avian ovarian follicles. **Northwestern University Minisymposium on Reproductive Biology.**

Jackson JA and **SA Tischkau.** 1993. Theca layer stimulates plasminogen activator production by the germinal disc region and peripheral granulosa layer and is not affected by LH in the chicken. **Annual Meeting of the Society for the Study of Reproduction.** Fort Collins, CO.

**Tischkau SA, JA Jackson, C Finnigan-Bunick and JM Bahr.** 1994. Granulosa layer: key site of transcriptional regulation of plasminogen activator by LH in avian preovulatory follicles. **X Ovarian Workshop.** Ann Arbor, MI.

**Tischkau SA**, JA Jackson, MS Bron, LR Talbert and JM Bahr. 1994. Proteins factors produced by the germinal disc region promote proliferation and inhibit progesterone production by granulosa cells in avian preovulatory follicles. **Annual Meeting of the Society for the Study of Reproduction**. Ann Arbor, MI.

**Tischkau SA**, JA Jackson, MS Bron, LR Talbert and JM Bahr. 1994. Germinal disc region-derived proteins promote proliferation and inhibit progesterone production by avian granulosa cells. **Northwestern University Minisymposium on Reproductive Biology**.

**Tischkau SA**, AM Fox, LE Faiman and MU Gillette. 1997. A circadian clock control point in the late night: Regulation by protein kinase G. **Annual Meeting of the Society for Neuroscience**. New Orleans, LA. NOTE: selected for presentation at the 1st Annual Sleep and Circadian Rhythms DataBlitz.

Kuriashkina LR, JM Ding, **SA Tischkau** and MU Gillette. 1997. Expression of M1 muscarinic cholinergic receptors in the rat suprachiasmatic nucleus. **Annual Meeting of the Society for Neuroscience**. New Orleans, LA

Ding JM, GF Buchanan, **SA Tischkau** and MU Gillette. 1997. Ryanodine receptors mediate glutamate induced phase delays of circadian rhythms in rat SCN. **Annual Meeting of the Society for Neuroscience**. New Orleans, LA.

**Tischkau SA** and MU Gillette. 1998. Protein kinase G regulation of a circadian clock control point: rapid phase resetting. **Annual Meeting of the Society for Neuroscience**. Los Angeles, CA.

**Tischkau SA**, JA Barnes, F-J Lin, E Myers, JW Barnes, E Meyer-Bernstein, WJ Hurst, PW Burgoon, D Chen, A Sehgal and Martha U. Gillette. 1999. Oscillation and light induction of *mtimeless* mRNA in the mammalian circadian clock. **Annual Meeting of the Society for Neuroscience**. Miami Beach, FL.

Gillette MU, D Chen, G Buchanan, J Ding, J Hannibal and **SA Tischkau**. 2000. A code of for light: nocturnal glutamate-PACAP interactions regulate shift amplitude of the suprachiasmatic circadian clock. **Annual Meeting of the Society for Research on Biological Rhythms**. Amelia Island, FL.

**Tischkau SA**, EA Gallman, GF Buchanan and MU Gillette. 2000. Activation of protein kinase A: a cellular mechanism for nocturnal glutamate-PACAP interactions in the SCN. **Annual Meeting of the Society for Research on Biological Rhythms**. Amelia Island, FL.

**Tischkau SA** and MU Gillette. 2000. Protein kinase G-mediated elevation of mPer1 is required for nocturnal glutamatergic circadian clock phase advance: a signal for light. **Annual Meeting of the Society for Neuroscience**. New Orleans, LA.

**Tischkau SA**, JS Pendergast, JW Barnes, PW Burgoon and MU Gillette. 2001. Type II protein kinase G is required for circadian clock progression. **Annual Meeting of the Society for Neuroscience**. San Diego, CA.

Barnes JA, JW Barnes, **SA Tischkau**, PW Burgoon, JW Mitchell and MU Gillette. 2002. Mammalian timeless is required for circadian rhythmicity. **Annual Meeting of the Society for Neuroscience**. Orlando, FL. NOTE: Selected for presentation at the 6<sup>th</sup> Annual Sleep and Circadian Rhythms DataBlitz.



**Tischkau SA**, SM Abbott, JW Mitchell, JW Barnes, JA Barnes and MU Gillette. 2002. Gated expression of protein kinase G-type II is required for progression of the mammalian circadian clock at dawn. **Annual Meeting of the Society for Neuroscience**. Orlando, FL

Mitchell JW, **SA Tischkau**, S-H Tyan, GF Buchanan, WJ Hurst and MU Gillette. 2002. Light/glutamate-induced resetting of the SCN circadian clock requires activation of a CRE-mediated pathway. **Annual Meeting of the Society for Neuroscience**. Orlando, FL

Barnes JW, **SA Tischkau**, JA Barnes, JW Mitchell, PW Burgoon, R Gillette and MU Gillette. 2002. Overexpression and knockdown of protein kinase G-II significantly alter expression of core elements in the mammalian circadian clock. **Annual Meeting of the Society for Neuroscience**. Orlando, FL

**Tischkau SA** and BN Klementiev. 2002. Keeping time in the rat ovary: Expression of circadian clock genes. **Society for the Study of Reproduction**. Baltimore, MD. Note: Selected for a platform presentation.

Stark JT, **SA Tischkau** and DR Gross. 2003. Estrogen decreases apoptotic and total cell death following cardiac arrest and resuscitation. **Experimental Biology Annual Meeting**. San Diego, CA.

Klementiev BN and **SA Tischkau**. 2003. The Clock is Ticking in the Ovary: Circadian clock components oscillate in the rat ovary. **Annual Meeting of the Society for the Study of Reproduction**. Cincinnati, OH.

Zimmerman CR and **SA Tischkau**. 2003. Expression of circadian clock genes in gonadotropin-releasing hormone neurons. **24<sup>th</sup> Annual Minisymposium on Reproductive Science**. Northwestern University, Evanston, IL.

Mitchell JW, **SA Tischkau**, S-H Tyan, LA Pace and MU Gillette. 2004. cGMP-dependent protein kinase-I $\beta$  mediates glutamate signaling in the suprachiasmatic circadian clock. **Bi-annual Meeting of the Society for Biological Rhythms**. Vancouver, BC.

**Tischkau SA**, JW Mitchell, JS Pendergast, LA Pace and MU Gillette. 2004. Protein kinase G- type-II is required for night-to-day progression of the mammalian circadian clock. **Bi-annual Meeting of the Society for Biological Rhythms**. Vancouver, BC.

Hickok JR, ME Layne, CR Zimmerman and **SA Tischkau**. 2004. Diurnal expression of clock genes in native gonadotropin releasing hormone neurons. **Bi-annual Meeting of the Society for Biological Rhythms**. Vancouver, BC.

Bottum KM, E Poon, M Comiskey, K Barry and **SA Tischkau**. 2004. The suprachiasmatic nucleus is protected against glutamate neurotoxicity. **Annual Meeting of the Society for Neuroscience**. San Diego, CA.

Barnes JW, JA Barnes, **SA Tischkau**, JA Weyhenmeyer and MU Gillette. 2004. Light signals target timeless protein through protein kinase G in the mammalian clockwork. **Annual Meeting of the Society for Neuroscience**. San Diego, CA.

Hickok JR and **SA Tischkau**. 2004. Circadian clock regulation of gonadotropin releasing hormone neurons: the neural network that drives reproduction. **Understanding Complex Systems Symposium**. Department of Physics, University of Illinois at Urbana-Champaign.

Hickok JR and **SA Tischkau**. 2004. Transcriptional profiles of GnRH neurons: implications of circadian Input into the hypothalamic-pituitary-gonadal axis. **25<sup>th</sup> Annual Reproductive Biology Minisymposium**. Northwestern University. Note: J. Hickok received 1<sup>st</sup> place research award for presentation.

Klementiev BK and **SA Tischkau**. 2004. Entraining the ovarian clock: LH regulates clock gene expression in the rat ovary. **25<sup>th</sup> Annual Reproductive Biology Minisymposium**. Northwestern University.

Bottum KM, E Poon, M Comiskey and **SA Tischkau**. 2004. Endogenous neuroprotection in the suprachiasmatic nucleus. **Critical Care Conference**. Cleveland, OH.

Cohen JA and **SA Tischkau**. 2004. Circadian variation in hippocampal damage incurred by global ischemia insult. **Colgate-Palmolive Student Symposium**. University of Illinois at Urbana-Champaign.

Hales LJ and **SA Tischkau**. 2004. Circadian expression of *period1* in the immortalized GT1-7 cell line. **Summer Research Opportunities Program Symposium**. University of Illinois at Urbana-Champaign.

Klementiev BK and **SA Tischkau**. 2005. The ovulatory LH surge provides entrainment to the ovarian clock. **Annual Meeting of the Society for the Study of Reproduction**. Quebec City, Quebec, Canada.

Escutia K, M Mukai and **SA Tischkau**. 2005. Induction of *cyp1a1* by light and AhR in the liver. **Summer Research Opportunities Program Symposium**. University of Illinois at Urbana-Champaign.

Hickok JR, JW Mitchell and **SA Tischkau**. 2005. Circadian regulation of GnRH neuronal gene expression. **Annual Meeting of the Society for Neuroscience**. Washington, DC.

Poon E, K Bottum and **SA Tischkau**. 2005. Endogenous Neuroprotection in the suprachiasmatic nucleus. **CMB Symposium**. University of Illinois at Urbana-Champaign.

Cohen J, K Bottum, J Stark, D Gross and **SA Tischkau**. 2005. Estrogen status is associated with damage from global ischemia in hippocampal CA1 neurons. **Biennial Illinois Reproductive Biology Conference**. Monticello, IL.

Hickok J and **SA Tischkau**. 2005. What is a GnRH neuron, anyway? **Reproductive Biology Mini-symposium**. Northwestern University. Note: J Hickok won the research excellence award for this presentation.

Hickok J and **SA Tischkau**. 2005. Gene expression profiles in GnRH neurons. **Biennial Illinois Reproductive Biology Conference**. Monticello, IL.

Klementiev BN, and **SA Tischkau**. 2005. Circadian clock/AhR Interaction in the ovary: A potential mechanism for TCDD-induced toxicity. **Biennial Illinois Reproductive Biology Conference**. Monticello, IL.

Mukai M, TM Lin, RE Peterson, PS Cooke and **SA Tischkau**. 2005. Potential role of aryl hydrocarbon receptor in light regulation of circadian rhythm, **Biennial Illinois Reproductive Biology Meeting**. Monticello, IL.

Mukai M, TM Lin, RE Peterson, PS Cooke, and **SA Tischkau**. 2005. Potential role of aryl hydrocarbon receptor in light regulation of circadian rhythm. **Cell and Molecular Biology & Molecular Biophysics 18<sup>th</sup> Research Symposium**. Urbana, IL.

Escutia K, M Mukai and **SA Tischkau**. 2005. AhR-Induced *cyp1a1* expression in liver after light exposure. **Biotechnology Center Poster Competition**. University of Illinois at Urbana-Champaign. Note: K Escutia recognized as finalist for excellence award for presentation.

Cruz-Torres A, J Hickok and **SA Tischkau**. 2005. Regulation of GnRH neurons by estrogen status. **Summer Research Opportunities Program Symposium**. University of Illinois at Urbana-Champaign.

Howell R, J Bahr and **SA Tischkau**. 2005. Clock genes in the avian ovary. **Biennial Illinois Reproductive Biology Meeting**. Monticello, IL.

Bottum KM, E Poon and **SA Tischkau**. 2005. Is the suprachiasmatic nucleus a valid model system for neuroprotection? **Annual Meeting of the Society for Neuroscience**. Washington, DC.

Mukai M, TM Lin, RE Peterson, PS Cooke and **SA Tischkau**. 2006. Circadian expression of AhR and its signaling targets and the role of AhR in circadian rhythm. **Biennial Meeting of the Society for Research in Biological Rhythms**. Sandestin, FL.

Mukai M and **SA Tischkau**. 2006. Role of AhR in circadian rhythms: Effects of 2, 3, 8, 8-tetrachlorodibenzo-p-dioxin (TCDD). **Gordon Conference on Environmental Endocrine Disruptors**. Il Ciocco, Lucca (Barga), Italy.

Mukai M and **SA Tischkau**. 2006. Adverse effect of dioxins on the biological clock. **Phi Zeta Research Symposium, University of Illinois at Urbana-Champaign**. April 15, 2006. Note: M Mukai received 1<sup>st</sup> place award for presentation.

Howell RE, JM Bahr and **SA Tischkau**. 2006. Characterization of the avian circadian system using *cbmal1*, *ccry1*, *cper2* and the effect of luteinizing hormone. **Annual Meeting of the Society for the Study of Reproduction**. Omaha, Nebraska.

Silva-Melendez P and **SA Tischkau**. 2006. Circadian clock gene expression in gonadotropin releasing hormone neurons. **Summer Research Opportunities Program**. University of Illinois at Urbana-Champaign.

Bottum KM, E Poon, J Cohen, J Stark, D Gross and **SA Tischkau**. 2006. Suprachiasmatic nucleus (SCN) neuroprotection is associated with stability in caspase and calcium buffering protein levels following neurotoxic insult. **Annual Meeting of the Society for Neuroscience**. Atlanta, GA.

Cohen JA, JT Stark, KM Bottum, DR Gross and **SA Tischkau**. 2007. The hippocampus shows circadian variation in susceptibility to global ischemia. **International Stroke Conference**. San Francisco, CA.

**Tischkau SA**, BN Karman, SL Krager and C Xu. 2008. Aryl hydrocarbon regulation of circadian rhythms. **Semi-annual Neuroscience Retreat, Southern Illinois Chapter of the Society for Neuroscience**.

Bottum KM, R Trammell, J Lipcammon, A Annamalai, G Costin, **SA Tischkau** and D Resch. 2008. Serum brain derived neurotrophic factor is not a good biomarker of depression. **Society for Neuroscience Annual Meeting**. Washington, DC.

**Tischkau SA**, J Cohen, J Stark, K Bottum and D Gross. 2008. Estrogen status is associated with damage from global ischemia in hippocampal CA1 neurons. **Society for Neuroscience Annual Meeting**. Washington, DC.

Karmarkar SW, KM Bottum and **SA Tischkau**. 2009. Diurnal variation in NMDA receptor subunits and pro-survival factors in the hippocampus. **Society for Neuroscience Annual Meeting**. Chicago, IL.

Xu CX, SL Krager and **SA Tischkau**. 2009. Disruption of CLOCK/BMAL1 transcriptional activity is responsible for aryl hydrocarbon receptor-mediated regulation of the period1 gene. **Society for Neuroscience Annual Meeting**. Chicago, IL.

Karmarkar SW, KM Bottum and **SA Tischkau**. 2009. Diurnal variation in NMDA receptor subunits and pro-survival factors in the hippocampus. **University of Illinois at Springfield. 9<sup>th</sup> Annual Research Symposium**. Note: SW Karmarkar won 2<sup>nd</sup> place in the oral presentation category for this work.

Karmarkar SW, KM Bottum and **SA Tischkau**. 2009. Diurnal variation in NMDA receptor subunits and pro-survival factors in the hippocampus. **Southern Illinois University School of Medicine. 20<sup>th</sup> Annual Research Symposium**.

Karmarkar SW, SL Krager, KM Bottum and **SA Tischkau**. 2010. Mechanisms of neuroprotection in the suprachiasmatic nucleus. **Society for Neuroscience Annual Meeting**. San Diego, CA.

Karmarkar SW, SL Krager, JA Cohen, JT Stark, **SA Tischkau** and KM Bottum. 2011. Caspase activation and MAPK pathways are important in endogenous neuroprotection in suprachiasmatic nucleus neurons. **Annual Meeting of the American Stroke Association**. Los Angeles, CA.

Karmarkar SW, SL Krager, KM Bottum and **SA Tischkau**. 2011. Mechanisms of neuroprotection in the SCN2.2 neurons. **Southern Illinois University School of Medicine. 22<sup>nd</sup> Annual Research Symposium**. Carbondale, IL. Note: SW Karmarkar won 1<sup>st</sup> place in the oral presentation category for this work.

Xu CX, C Wang, SL Krager, KM Bottum and **SA Tischkau**. 2012. Aryl hydrocarbon receptor activation represses light-induced phase resetting of the clock through inhibition of Per1. **Southern Illinois University School of Medicine. 23<sup>rd</sup> Annual Research Symposium**. Springfield, IL. Note: CX Xu won a 3<sup>rd</sup> place award for the poster presentation.

Jaeger CD, RA Trammell, LA Toth and **SA Tischkau**. 2012. Shift work enhances high fat diet-induced unfolded protein response, **Southern Illinois University School of Medicine. 23<sup>rd</sup> Annual Research Symposium**. Springfield, IL.

Karmarkar S, S Krager, K Bottum and **SA Tischkau**. 2012. Upstream regulators of ERK in mediating neuroprotection in SCN2.2 cells. **Southern Illinois University School of Medicine. 23<sup>rd</sup> Annual Research Symposium**. Springfield, IL. Note: SW Karmarkar won 2<sup>nd</sup> place in the oral presentation category for this work.

Wang C, CX Xu, KM Bottum and **SA Tischkau**. 2012.  $\beta$ -naphthoflavone mediates cell cycle arrest in estrogen receptor-positive breast cancer cells through inhibition of PI3K/AKT pathway and regulation of MAPK/ERK. **31<sup>st</sup> Summer Symposium in Molecular Biology**. Pennsylvania State University.

Xu CX, C Wang, SL Krager, KM Bottum and **SA Tischkau**. 2012. Aryl hydrocarbon receptor activation represses light-induced phase resetting of the clock through inhibition of Period1. **31<sup>st</sup> Summer Symposium in Molecular Biology**. Pennsylvania State University.

Xu CX, C Wang, C Jaeger, S Krager, K Bottum and **SA Tischkau**. 2013. Ablation of aryl hydrocarbon receptor alleviates diet-induced obesity, hepatostosis and inflammation in mice. **Southern Illinois University School of Medicine. 24<sup>th</sup> Annual Research Symposium**. Carbondale, IL. Note: CX Xu won a 3<sup>rd</sup> place award for the poster presentation.

Jaeger CD, RA Trammell, LA Toth and **SA Tischkau**. 2013. Clock dysfunction alters the rhythmic expression of aryl hydrocarbon receptor dependent protein, tribbles3. **Southern Illinois University School of Medicine. 24<sup>th</sup> Annual Research Symposium**. Carbondale, IL. Note: CD Jaeger won a 1<sup>st</sup> place award for the oral presentation.

Xu CX, C Wang, CD Jaeger, SL Krager, KM Bottum and **SA Tischkau**. 2013. Aryl hydrocarbon receptor deficiency attenuates diet-induced obesity and insulin resistance in mice. **Annual Meeting of the American Diabetes Association**. Chicago, IL.

Wang C, CX Xu, KM Bottum and **SA Tischkau**. 2013. Beta-naphthoflavone (DB06732) differentially mediates breast cancer cell cycle arrest through regulation of pi3k/akt and mapk/erk signaling. **Southern Illinois University School of Medicine. SCI Symposium**. Springfield, IL.

Xu CX, C Wang, K Bottum, S Krager, C Jaeger and **SA Tischkau**. 2014. A central role of aryl hydrocarbon receptor in high-fat diet-induced hepatic steatosis. **Annual Meeting of the Society of Toxicology**. Phoenix, AZ. Note: CX Xu received an excellence award from SOT for this work.

Wang C, CX Xu, SL Krager, C Jaeger, KM Bottum and **SA Tischkau**. 2014. Aryl hydrocarbon receptor activation impairs insulin signaling through degrading IRS-1. **Annual Meeting of the Society of Toxicology**. Phoenix, AZ.

Xu CX, C Wang, K Bottum, CD Jaeger, S Krager and **SA Tischkau**. 2014. Role of aryl hydrocarbon receptor in insulin resistance and metabolic disorders. **American Diabetes Association Annual Meeting**. San Francisco, CA. Note: CX Xu won a travel award from the ADA for this work. The poster was highlighted for excellence by the conference organizers.

Xu CX, C Wang, K Bottum, CD Jaeger, S Krager and **SA Tischkau**. 2014. Aryl hydrocarbon receptor deficit protects against insulin resistance and metabolic disorders. **Southern Illinois University School of Medicine. 25<sup>th</sup> Annual Research Symposium**. Springfield, IL.

Jaeger CD and **SA Tischkau**. 2014. A model of shift work to examine the effects of circadian disruption on metabolism. **Southern Illinois University School of Medicine. 25<sup>th</sup> Annual Research Symposium**. Springfield, IL. Note: CD Jaeger won a 1<sup>st</sup> place award for the poster presentation.

Jaeger CD and **SA Tischkau**. 2014. AhR +/- mice are protected from the harmful effects of circadian disruption induced by shift work and high fat diet. **Society for Research on Biological Rhythm Biennial Meeting**. Big Sky, Montana. Note: CD Jaeger received a Merit award from SRBR for this work.

Jaeger CD and **SA Tischkau**. 2015. Aryl hydrocarbon receptor +/- mice are protected from high fat diet-induced disruption of metabolic rhythms. **Society of Toxicology Annual Meeting**. San Diego, CA.

Sun M and **SA Tischkau**. 2015. The aryl hydrocarbon receptor is a novel regulator of the circadian nuclear receptor rev-erb  $\alpha$ . **Society of Toxicology Annual Meeting**. San Diego, CA. M. Sun received a Travel Award from SIU-SM for this work.

Sun M, J Lin and **SA Tischkau**. 2015. The aryl hydrocarbon receptor modulates both circadian rhythm and metabolism through regulating the circadian nuclear receptor rev-erb $\alpha$ . **Southern Illinois University School of Medicine. 26<sup>th</sup> Annual Research Symposium**. Carbondale, IL.

Jaeger CD and **SA Tischkau**. 2015. Aryl Hydrocarbon Receptor +/- mice are protected from high fat diet-induced disruption of metabolic rhythms. **Southern Illinois University School of Medicine-26<sup>th</sup> Annual Trainee Research Symposium**. Carbondale, IL. Note: CD Jaeger won a 1<sup>st</sup> place award for the oral presentation.

Loulousis MM, S Krager, Y Lv, **SA Tischkau** and JA Copello. 2016. Drugs that inhibit the sarcoplasmic reticulum Ca<sup>2+</sup> ATPase (SERCA) and prevention of breast cancer cell proliferation. **Annual Meeting of the American Physiological Society**. San Diego, CA.

Sun M, J Lin, CD Jaeger, S Krager, A Khazaal, K Bottum and **SA Tischkau**. 2016. Involvement of white adipose tissue circadian clocks in chronic  $\beta$ -naphthoflavone-induced disruption of energy metabolism. **Southern Illinois University School of Medicine. 27<sup>th</sup> Annual Research Symposium**. Springfield, IL. Note: M Sun won a 3<sup>rd</sup> place award for the oral presentation.

Khazaal A, S Krager and **SA Tischkau**. 2016. The role of aryl hydrocarbon receptor in adipocyte physiology. **Southern Illinois University School of Medicine. 27<sup>th</sup> Annual Research Symposium**. Springfield, IL. Note: A Khazaal won a 3<sup>rd</sup> place award for the oral presentation.

**Tischkau SA**, Jaeger CD, CX Xu, M Sun and S Krager. 2016. Aryl hydrocarbon receptor deficiency alters circadian and metabolic rhythmicity. **Biennial Meeting of the Society for Research on Biological Rhythms**. Tampa, FL.

Lin J, M Sun, S Krager, A Khazaal, K Bottum and **SA Tischkau**. 2016. Involvement of white adipose tissue circadian clocks in chronic  $\beta$ -naphthoflavone induced disruption of energy metabolism. **Internal Medicine Research Symposium**. Southern Illinois University School of Medicine. Note: J Lin won a 1<sup>st</sup> place award for the poster presentation.

Khazaal A and **SA Tischkau**. 2016. The inhibitory role of aryl hydrocarbon receptor in adipogenesis. **AhR 2016**. Rochester, NY.

**Tischkau SA**, Jaeger CD, CX Xu, M Sun and S Krager. 2016. Defects in circadian and metabolic rhythmicity in AhR-deficient mice. **AhR 2016**. Rochester, NY.

AQ Khazaal, M Sun, and **SA Tischkau**. 2016. Environmental Pollutants Induce Alteration in Circadian Clock and Lipid Metabolism in Adipose Tissue. **3<sup>rd</sup> Midwest Chronobiology Symposium**. College of Veterinary Medicine, University of Illinois Urbana Champaign, Urbana, Illinois.

Britz J, M Cleveland, ER Hascup, KN Hascup and **SA Tischkau**. 2016. Circadian activity and metabolic measures in a pre-symptomatic APP/PS1 Alzheimer's disease mouse model. **3<sup>rd</sup> Midwest Chronobiology Symposium**. College of Veterinary Medicine, University of Illinois Urbana Champaign, Urbana, Illinois.

AQ Khazaal, M Sun and **SA Tischkau**. 2017. Beta-naphthoflavone-induced activation of aryl hydrocarbon receptor inhibits circadian regulation of lipolysis in adipose tissue. **28<sup>th</sup> Annual Research Symposium**. SIU School of Medicine, Carbondale, IL. Note: A Khazaal won 2<sup>nd</sup> place for his oral presentation.

Britz J, M Cleveland, ER Hascup, K Hascup and **SA Tischkau**. 2017. Activity monitoring and cognitive measures in pre-symptomatic APP/PS1 Alzheimer's disease model. **28<sup>th</sup> Annual Research Symposium**. SIU School of Medicine, Carbondale, IL.

Khazaal AQ and SA Tischkau. 2017. Molecular regulation of mesenchymal stem cells by aryl hydrocarbon receptor ligands. **Annual Meeting of the International Society for Stem Cell Research**. Boston MA.

Britz J, CD Jaeger, AQ Khazaal and **SA Tischkau**. 2018. Behavioral Change and Metabolic Effects in a Mouse Model of Circadian Disruption. **Society for Research on Biological Rhythms Biennial Meeting**. Amelia Island, FL.

Britz J, CD Jaeger, AQ Khazaal and **SA Tischkau**. 2018. Implication on behavior and metabolism in a mouse model of chronic circadian disruption. **29<sup>th</sup> Annual Research Symposium**. SIU School of Medicine, Springfield, IL. Note: J. Britz was awarded 1<sup>st</sup> place for his poster presentation.

Khazaal AQ and **SA Tischkau**. 2018. Aryl Hydrocarbon Receptor Modulates Mesenchymal Stem Cells Differentiation into Mature Adipocytes. **29<sup>th</sup> Annual Research Symposium**. SIU School of Medicine, Springfield, IL.

Hascup ER, J Britz, MK Russell, **SA Tischkau**, HA Boger and KN Hascup. 2018. Glutamate neurotransmission, cognition, and risk factors in Alzheimer's disease. **Annual Meeting of the Society for Neuroscience**. San Diego, CA.