

# DEBORAH SUSAN KREISS

Binghamton University, Freshman Research Immersion Program,  
Neuroscience Stream Research Educator, Binghamton NY 13902  
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## - - - - - I. PROFESSIONAL HISTORY - - - - -

- A. Assistant Professor, Visiting  
Psychology Dept & Neurosci. Program, Macalester College (July '17 – June '18)
- B. Assistant Professor, Visiting  
Psychology Dept & Neurosci. Program, Washington & Lee Univ (July '16 – June '17)
- C. Assistant Professor, Visiting  
Psychology Dept, Ithaca College (July '15 - June '16)
- D. Assistant Professor, Visiting  
Psychology Dept & Neuroscience Program, Colgate University (Aug '11 - June '15)
- E. Assistant Professor  
Life Sciences Dept, Chattanooga State Community College (Aug '08 - July '11)
- F. Assistant Professor  
Dept of Biol. & Environmental Sci., Univ. of TN at Chattanooga (Aug '04 - May '08)
- G. Assistant Professor, Visiting  
Depts of Biology and Chemistry, Colby College (Aug '02 - July '04)
- H. Assistant Professor  
Department of Biology, University of Central Arkansas (Aug '97 - May '00)
- I. Postdoctoral Scientist  
Natl. Inst. of Neurological Disorders & Stroke, N.I.H., Bethesda, MD (Jul '93 -'97)  
Postdoctoral Advisor: Dr. Judith Walters, Chief, Neurophysiological Pharmacology Section
  - 1. Senior Staff Fellow, Neurophysiological Pharmacology Section, July '95-July '97
  - 2. Postdoctoral Fellow, Pharmacological Research Program, July '93-June '95
- J. Doctoral Student of Neuroscience  
Institute of Neurosci., Univ. of Penn. Medical School, Phil., PA (Aug '88 - May'93)  
Thesis Advisor: Dr. Irwin Lucki, Depts of Psychiatry, Neurosci. & Pharmacology  
Doctor of Philosophy Degree awarded May 1993  
Title of Thesis - Regulation of Serotonin Release by 5-HT<sub>1A</sub> Autoreceptors.

## K. Undergraduate Student

Cornell University, College of Arts & Sciences, Ithaca, NY (Sept '82 - May '86)  
Bachelor of Arts Degree, June 1986, with double majors in Chemistry and Biology & Society

## - II. RESEARCH INTERESTS & EXPERIMENTAL EXPERTISE -

### A. Research Interests

1. biological basis of pathology and treatment of Obsessive Compulsive Disorder
2. evaluation of potential animal models of Obsessive Compulsive Disorder
3. physiological mechanisms mediating the therapeutic effects of psychoactive agents

### B. Experimental Expertise

1. Determination of neurotransmitter systems and receptor subtypes affecting rat behavior using pharmacologically selective agents
2. Identification of neuronal regions and circuits mediating behavior via comparison of c-FOS protein expression in the brain tissue of behaviorally expressive and non-expressive rats
3. Examination of the effects of psychotherapeutic agents upon the firing rate and pattern of behaviorally relevant neuronal populations using *in vivo*, extracellular electrophysiology
4. Examination of the effects of psychotherapeutic agents upon neurotransmitter levels in specific brain regions using *in vivo* microdialysis and *in vitro* tissue homogenates followed by identification and quantification of dialysate content using high performance liquid chromatography (HPLC)
5. Localization of receptor and transporter proteins subtypes via immunocytochemistry and autoradiography

## - - - III. PEER-REVIEWED PUBLICATIONS - - -

Kreiss DS and De Deurwaerdère, P (2017) Purposeless oral activity induced by meta-chlorophenylpiperazine (m-CPP): undefined tic-like behaviors? *Journal of Neuroscience Methods*. 292:30-36

Kreiss DS, \*Coffman CF, \*Fiacco NR, \*Granger JC, \*Helton BM, \*Jackson JC, \*Kim LV, \*Mistry RS, \*Mizer TM, \*Palmer LV, \*Vacca JA, \*Winkler SS, and \*Zimmer BA (2013) Ritualistic Chewing Behavior induced by mCPP in the rat is an animal model of Obsessive Compulsive Disorder. *Pharmacology, Biochemistry and Behavior* 104:119–124 \* denotes student authors

Allers KA, Bergstrom DA, Ghazi LJ, Kreiss DS, and Walters JR (2005) Do systemically administered glutamate antagonists affect subthalamic nucleus activity? Relevance to pharmacotherapy of Parkinson's disease. In *The Basal Ganglia VIII*. JP Bolam, CA Ingham, and PJ Magill (Eds) Kluwer Academic/Plenum Publishers, New York

Allers KA, Bergstrom DA, Ghazi LJ, Kreiss DS, and Walters JR (2005) MK801 and amantadine exert different effects on subthalamic neuronal activity in a rodent model of Parkinson's disease. *Experimental Neurology* 191: 104-118

- Allers KA, Kreiss DS, and Walters JR (2002) Neuronal Firing Patterns in the Subthalamic Nucleus: Effects of dopamine receptor stimulation on multisecond oscillations. In The Basal Ganglia VI. AM Graybiel, MR DeLong, ST Kitai (Eds) Kluwer Academic/Plenum Publishers, New York pp. 245-254
- Allers KA, Kreiss DS, and Walters JR (2000) Multisecond oscillations in the subthalamic nucleus: Effects of apomorphine and dopamine cell lesion. *Synapse* 38:38-50
- Kreiss DS, Mastropietro CW, Rawji SS, and Walters JR (1997) The response of subthalamic nucleus neurons to dopamine receptor stimulation in a rodent model of Parkinson's disease. *Journal of Neuroscience*. 17:6807-6819
- Kreiss DS and Lucki I. (1997) Chronic administration of the 5-HT<sub>1A</sub> receptor agonist 8-OH-DPAT differentially desensitizes 5-HT<sub>1A</sub> autoreceptors of the dorsal and median raphe nuclei. *Synapse*. 25:107-116
- Kreiss DS, Anderson LA, and Walters JR. (1996) Apomorphine and dopamine D<sub>1</sub> receptor agonists increase the firing rates of subthalamic nucleus neurons. *Neuroscience*. 72:863-876
- Kreiss DS, Bergstrom DA, Gonzalez AM, Huang KX, Sibley DR, and Walters JR. (1995) Dopamine receptor agonist potencies for inhibition of cell firing correlate with dopamine D<sub>3</sub> receptor binding affinities. *European Journal of Pharmacology*. 277:209-214
- Kreiss DS and Lucki I. (1995) Effects of acute and repeated administration of antidepressant drugs on extracellular levels of 5-hydroxytryptamine measured *in vivo*. *Journal of Pharmacology and Experimental Therapeutics*. 274:866-876
- Kirby LG, Kreiss DS, Singh A, and Lucki I. (1995) The effect of 5,7-dihydroxytryptamine lesions on basal and fenfluramine-induced serotonin release in striatum. *Synapse*. 20:99-105
- Kreiss DS and Lucki I. (1994) Differential regulation of serotonin (5-HT) release in the striatum and hippocampus by 5-HT<sub>1A</sub> autoreceptors of the dorsal and median raphe nuclei. *Journal of Pharmacology and Experimental Therapeutics*. 269:1268-1279
- Kreiss DS and Lucki I. (1994) Discriminative stimulus properties of the serotonin uptake inhibitor sertraline. *Experimental and Clinical Psychopharmacology*. 2:1-12
- Lucki I, Singh A, and Kreiss DS. (1994) Antidepressant-like behavioral effects of serotonin receptor agonists. *Neuroscience and Biobehavioral Review*. 18:85-95
- Kreiss DS, Wieland S, and Lucki I. (1993) The presence of a serotonin uptake inhibitor alters pharmacological manipulations of serotonin release. *Neuroscience*. 52:295-301
- Kreiss DS and Lucki I. (1992) Desensitization of 5-HT<sub>1A</sub> autoreceptors by chronic administration of 8-OH-DPAT as assessed with *in vivo* microdialysis. *Neuropharmacology*. 31:1073-1075
- Doty RL, Kreiss DS, and Frye RE. (1990) Human odor intensity perception: Correlation with frog epithelial adenylate cyclase activity and transepithelial voltage response. *Brain Research*. 527:130-4

## - - - IV. RECENT RESEARCH PRESENTATIONS - - -

\* denotes student authors

- \*Hilber KM, \*Brantner C, \*Carter E, \*Fryling W, \*Li F, \*Mochida S, \*Mudrick H, \*Nazarova K, \*Stelzner M, and Kreiss DS (2018) Overcoming the one trial tolerance of rat behavior in the Elevated Plus Maze (EPM). Society for Neurosciences Conference, San Diego, CA.
- \*Peebles L, \*Hilber K, \*Bice J, \*Busby Z, \*Fryling W, \*Stelzner M, and Kreiss DS (2018) Grooming displays robust face validity in the neonatal clomipramine exposure rat model of obsessive compulsive disorder. Society for Neurosciences Conference, San Diego, CA.
- \*Davis CC, \*Singerman KW, \*Belforti SJ, \*Ferrero AK, \*Wubah AA and Kreiss DS (2017) Who's Your Daddy? Transgenerational epigenetic effects of the neonatal clomipramine exposure rodent model of Obsessive Compulsive Disorder. *Society for Neurosciences Conference*. Washington, D.C.
- \*Stephens JL, \*Chartampelia E, \*Dangler AT, \*Ellis ED, \*Palmatary HL, and Kreiss DS (2017) Compared to male rats, female rats display increased OCD-like compulsive behaviors in the Hole Board and Marble Arena and decreased anxiety behaviors in the Elevated Plus Maze. *Society for Neurosciences Conference*. Washington, D.C.
- \*Bower AC, \*Agostini TJ, \*Brandt ZM, \*Dalia KA, \*Guignon MK, \*Kim C, \*Rakouska MK, \*Spruill EH, \*Chartampila E, \*Davis CC, and Kreiss DS (2017) Effects of enrichment on anxiety-like and compulsive-like behaviors in an animal model of Obsessive Compulsive Disorder (OCD). *Faculty for Undergraduate Neuroscience Conference*. Washington, D.C.
- \*Bower AC, \*Agostini TJ, \*Brandt ZM, \*Dalia KA, \*Guignon MK, \*Kim C, \*Rakouska MK, \*Spruill EH, \*Chartampila E, \*Davis CC, and Kreiss DS (2017) Effects of enrichment on anxiety-like and compulsive-like behaviors in an animal model of Obsessive Compulsive Disorder (OCD). *Spring Conference*. Washington & Lee University, Lexington, VA
- \*Stephens JL, \*Davis CC, \*Singerman KW, \*Belforti SJ, \*Chartampila E, \*Dangler AT, \*Ellis ED, \*Ferrero AK, \*Palmatary HL, \*Wubah AA, and Kreiss DS (2017) Comparison between the Expression of Behaviors that "Model" Obsessive Compulsive Disorder (OCD) in Female versus Male Rats. *SSA Conference*. Washington & Lee University, Lexington, VA
- \*Lockhart SR, \*Marinaro DD, and Kreiss DS (2016) Effects of environment in behaviors in the elevated plus maze, marble arena, and hole board in the neoclopramine rodent model of Obsessive Compulsive Disorder. *Society for Neurosciences Conference*, San Diego, CA.
- \*Laiks LS, \*Barnes AM, \*Gronseth EC, \*Solin AM, \*Burke L, \*Kasparson LJ, \*Matthijssen C, \*Scalzo A, and Kreiss DS (2015) Comparison of behaviors under Light versus Dark conditions in the neoclopramine rodent model of Obsessive Compulsive Disorder (OCD). *Society for Neurosciences Conference*, Chicago, IL.
- \*Hyde AL, \*Mulder HS, \*Craig KM, \*Frank SE, \*Kasparson LJ, and Kreiss DS (2014) The serotonin 5-HT<sub>2</sub> antagonist mianserin, but not the serotonin 5-HT<sub>2</sub> agonist mCPP (meta-chlorophenyl-piperazine), shows predictive validity in the behavioral rat model of Obsessive Compulsive Disorder induced via neonatal exposure to clomipramine. *Society for Neurosciences Conference*, Washington, D.C.
- Kreiss DS, \*Frank SE, \*Craig KM, \*Mulder HS, \*Hyde AL, and \*Laiks LS (2014) Neonatal exposure to clomipramine is a behavioral rat model of Obsessive Compulsive Disorder offering face validity as well as predictive validity for the GABA agonist diazepam, the serotonin uptake inhibitor fluoxetine, and the norepinephrine uptake inhibitor desipramine. *Society for Neurosciences Conference*,

Washington, D.C.

- \*Hyde AL, \*Kasparson LJ, \*Laiks LS, \*Craig KM, \*Frank SE, \*Mulder HS, and Kreiss DS (2014) Neonatal exposure to clomipramine is a behavioral rat model of Obsessive Compulsive Disorder offering not only face validity, but also predictive validity for the GABA agonist diazepam, the norepinephrine uptake inhibitor desipramine, the serotonin uptake inhibitor fluoxetine, and the serotonin 5HT<sub>2</sub> antagonist mianserin. *Faculty for Undergraduate Neuroscience Conference*, Washington, D.C.
- \*Belluardo J, \*Bavley C, \*Trychta K, \*Pesch A, and Kreiss DS (2013) Comparison of two novel animal models of Obsessive Compulsive Disorder: Alteration of hole-poke and marble burying behaviors induced by either acute mCPP or neonatal clomipramine exposure. *Society for Neurosciences Conference*, San Diego, CA.
- \*Bavley C, \*Belluardo J, Rettstatt E, \*Trychta K, and Kreiss DS (2013) Neonatal exposure to clomipramine is a model of Obsessive Compulsive Disorder with unique face and predictive validity. *Society for Neurosciences Conference*, San Diego, CA.
- \*Rettstatt E, \*Trychta K, \*Kasparson L, \*Krelko M, \*Laiks L, \*Panger J, \*Walsh A, and Kreiss DS (2013) Elevated Plus Maze behavior of rats neonatally exposed to clomipramine is dramatically altered by prior environmental experience. *Society for Neurosciences Conference*, San Diego, CA.
- \*Kasparson L, \*Hyde A, \*Laiks L, \*Simmons Q, and Kreiss DS (2013) Evaluation of a potential animal model of Obsessive Compulsive Disorder: Effects of mCPP upon exploratory and checking behaviors. *Faculty for Undergraduate Neuroscience Conference*, San Diego, CA.

## - - - - - V. COURSES TAUGHT - - - - -

### A. Psychology Department, Neuroscience Program, Macalester College

#### 1) **Seminar: Neurobiology of Anxiety and Depression [PSYC 394]** Fall '17

This discussion-based course addressed neurobiological approaches for the treatment of anxiety and depressive disorders. We discussed how therapeutic strategies have evolved along with our understanding of the etiology of these disorders and the advantages/disadvantages of past and current therapeutic methodologies. We explored the development of novel techniques that may shape the future treatment of these debilitating disorders.

#### 2) **Brain, Mind & Behavior [PSYC 180]** Fall '17, Spring '18

Study of the biochemical/physiological processes that affect and mediate the emotional, psychological, and behavioral states of humans.

#### 3) **Behavioral Neuroscience with Lab [PSYC 248]** Spring '18

This upper-level seminar course for majors explored the physiology underlying the relationship between the brain, the body, and behavior. Implications for the understanding and treatment of human psychiatric disorders arising from current investigative methodologies were discussed. In lab, students investigated alterations in behavior expressed by rats in an animal model of Obsessive Compulsive Disorder. Students participated in discussions of pertinent literature and use of animal models to investigate psychiatric disorders. Student also engaged in all aspects of the scientific process by conducting experimental studies involving rats, performing data analysis/interpretation, and presentation of research findings.



## **B. Psychology Department, Neuroscience Program, Washington & Lee University**

### **1) *Psychopharmacology* [PSYC 296] May Term '17**

During the intensive 5-week May Term students enroll in a single course and meet five days a week as a class. For my version of this course, students spent the mornings in a seminar format addressing neurotransmitter systems and psychotherapeutic agents that alter them. In the afternoons, students were involved in research concerning an animal model of Obsessive Compulsive Disorder. Over the Term, students engaged in all aspects of the scientific process including review of relevant literature, observation/documentation of rat behaviors in a variety of standard protocols used in the field of animal models (Hole-Board, Marble Arena, Elevated Plus Maze, and Open Field Arena), data analysis/interpretation, and presentation of research findings.

### **2) *Advanced Methods in Systems Neuroscience Research* [PSYC 353] Spring '17**

Students in this research-based course investigated alterations in behavior expressed by rats in an animal model of Obsessive Compulsive Disorder. Students participated in discussions of pertinent literature and use of animal models to investigate psychiatric disorders. Student also engaged in all aspects of the scientific process by conducting experimental studies involving rats, performing data analysis/interpretation, and presentation of research findings.

### **3) *Introduction to Neuroscience* [NEURO 120] Spring '17**

Study of the anatomical structures/pathways and biochemical/physiological processes that affect and mediate the emotional, psychological, and behavioral states of the organism.

### **4) *Psychoactive Drugs and Behavior* [PSYC 150] Fall '16, Spring '17**

A non-majors introduction to broad psychological perspectives of drug use, misuse, and abuse. The pharmacological and physiological actions of psychoactive drugs, as well as personality and social variables that influence their use, were considered. Emphasis was given to historically significant and currently popular drugs of abuse.

### **5) *Seminar: Neurobiology of Anxiety and Depression* [PSYC 395B] Fall '16**

This discussion-based course addressed neurobiological approaches for the treatment of anxiety and depressive disorders. We discussed how therapeutic strategies have evolved along with our understanding of the etiology of these disorders and the advantages/disadvantages of past and current therapeutic methodologies. We explored the development of novel techniques that may shape the future treatment of these debilitating disorders.

## **C. Psychology Department, Ithaca College**

### **1) *Senior Seminar: Neurobiology of Psychiatric Disorders* [PSYC 492] Spring '16**

The goal of this course was to provide students with a more sophisticated appreciation of the current neurophysiological perspective of the biological basis of psychological disorders. The selected disorders were addressed in terms of the disruption/compromise of behavior, movement, emotion, and cognition.

### **2) *Behavioral Neuroscience* [PSYC 311] Fall '15, Spring '16**

Study of the anatomical structures/pathways and biochemical/physiological processes that affect and mediate the emotional, psychological, and behavioral states of the organism.

### **3) *Behavioral Neuroscience Lab* [PSYC 312] Fall '15, Spring '16**

Designed to complement PSYC 311. Students dissected sheep brains, examined histological preparations of brain tissue, and conducted behavioral observations of rat behaviors.

**4) *Research Team on Animal Models of OCD* [PSYC 302] Fall '15, Spring '16**

This Research Team investigated an animal model of Obsessive Compulsive Disorder. Students observed and recorded rat behaviors in a variety of standard protocols used in the field of animal models. As part of the Team, students also had the opportunity to engage in review of behavioral neuroscience literature and perform data analysis/interpretation.

**5) *Psychopharmacology* [PSYC 367] Fall '15**

An introduction to the psychological, biological, and socio-cultural factors related to the use of psychoactive drugs. Students learned the pharmacological, psychological, and biological mechanisms of action for each major class of psychoactive drugs (recreational and therapeutic), including patterns of use and abuse by individuals, along with medical and sociocultural factors that affect the use of psychoactive drugs in human populations.

**D. Psychology Department, Neuroscience Program, Colgate University**

**1) *Introduction to Brain and Behavior* [NEURO 170] Spring '15**

This course introduced students to the physiological mechanisms mediating fundamental activities of the nervous system: stimuli detection and transduction, neuronal communication, assimilation and interpretation of information, anatomical modification underlying plasticity of function, and the circuitry influencing the somatic, autonomic, emotional, and cognitive components of a behavioral response.

**2) *Drugs, Brain and Behavior* [CORE SP 156S] Fall '11, Spring '12, Spring/Fall '13, Spring/Fall '14, Spring '15**

The courses of the Scientific Perspectives CORE Program are designed to provide students with an understanding of how scientific knowledge is obtained and applied to broader societal issues. This CORE course explored the processes in the brain and nervous system that mediate drug effects on behavior and physiology and how scientific research is used to further our understanding of the biological basis of human psychology.

**3) *Introduction to Psychology* [PSYCH 150] Spring/Fall '12, Spring/Fall '13, Spring '14**

This team-taught lower division course introduced students to the scientific study of human behavior. Topics included the biological basis of behavior, perception, learning, cognition, personality, and social relationships.

**4) *Brain, Physiology and Behavior* [PSYCH/NEURO 373] Spring '12, Spring '13, Spring/Fall '14**

This upper-level seminar course for majors explored the physiology underlying the relationship between the brain, the body, and behavior. Implications for the understanding and treatment of human psychiatric disorders arising from current investigative methodologies were discussed.

**5) *Psychopharmacology* [PSYCH/NEURO 377] Fall '12**

This upper-level seminar course for majors focused on the effects of drugs upon psychological processes and behavior in humans.

**6) *Research Methods* [PSYCH 200] Fall '11**

This course required for majors was an introduction to methods of psychological research. Students were provided with the opportunity to learn how to formulate testable hypotheses, critically review the scientific literature, design experiments, interpret experimental results, and write a research report.

## **E. Life Sciences Department, Chattanooga State Community College**

***Human Anatomy & Physiology* [BIOL 2010, BIOL 2020]** Fall '08, Spring/Fall '09, Spring /Summer/ Fall '10, Spring '11

This two-semester course for students interested in allied Health careers overviewed the structure and function of the major organ systems of the body. The required laboratory component of the course exposed students to how anatomical features underlie the functioning of the human body.

## **F. Dept of Biological & Environmental Sci., Univ. of TN at Chattanooga**

**1) *Animal Physiology* [BIOL 323]** Spring '05, Spring '06, Spring '07, Spring '08

The lectures of this upper-level course I created for Biology majors provided a detailed analysis of selected aspects of animal physiology. The required laboratory component of the course enabled students to experience current experimental approaches used to examine physiological mechanisms underlying behavioral output.

**2) *Human Physiology* [BIOL 208/209]** Fall '05, Fall '06, Fall '07, Fall '08

This lower division course for applied Health majors overviewed the function and dysfunction of the major organ systems of the human body. The required laboratory component of the course exposed students to the examination and measurement of human physiological functions.

**3) *Physiological Psychology* [PSY 314]** Fall '04, Fall '05, Fall '06, Fall '07, Fall '08

The lectures of this upper-level course for Psychology majors addressed the physiological bases of behavior with emphasis on the neurological processes mediating sensation, movement, cognitive functions, and behavior of humans.

## **G. Depts of Biology and Chemistry, Colby College**

**1) *Neurobiology* [BIO 274]** Spring '03

The lectures of this course for Biology majors addressed the neurological processes mediating sensation, movement, cognitive functions, and behavior across the animal kingdom. The required laboratory component of the course enabled students to examine the neurophysiology of invertebrate behaviors.

**2) *Human Anatomy and Physiology* [BIO 198]** Spring '03

This lower division course for non-Biology majors overviewed the function and dysfunction of the major organ systems of the human body.

**3) *The Neurobiology of Mental Illness* [BIO 374]** Fall '02

This upper level seminar course I created explored the physiological processes in the human brain underlying the origin, symptoms, and treatment of various mental disorders (e.g. schizophrenia, anxiety, depression, obsessive compulsive disorder, drug abuse). The techniques, findings, and goals of current neuroscience research on these mental disorders were discussed. Student presentations on selected mental disorders were a main feature of the second half of the course.

**4) *Laboratory Instructor for Biochemistry of the Cell* [BC 367]** Fall '03

This upper division course examined the biochemistry of cellular processes. Topics included the structure and function of the major classes of biological molecules (amino acids, proteins, lipids, and carbohydrates). Associated laboratories enabled students to become familiar with a wide range of instrumental techniques used to analyze biochemical reactions critical to the functioning of the cell.



**5) Laboratory Instructor for *The Cellular Basis of Life* [BIO 163] Fall '02**

The lower division course examined the cell as the fundamental structural unit of all life. The course also explored the diversity of life and the principles of evolution. Associated laboratories enabled students to become familiar with some of the experimental techniques used to address current biological problems.

**6) Laboratory Instructor for *General Chemistry I* [CH 141] Fall '03, Spring '04**

The introductory course explored the fundamental principles of chemistry, with examples selected from inorganic chemistry; stoichiometry; atomic theory; chemical bonding; thermochemistry; gases, liquids, and solids; solutions; chemical equilibria; electrochemistry; chemistry of certain important elements; radioactivity. Associated laboratories enabled students to become familiar with current chemical experimental techniques.

## **H. Department of Biology, University of Central Arkansas**

**1) *Experimental Neurobiology* [BIOL 4425] Spring '00**

The lectures of this upper division course I created exposed the students (either pursuing a Biology Major or a Master's Degree) to current hypotheses concerning the neurological processes mediating thought, emotion, and behavior across the animal kingdom. The students' ability to understand, perform, interpret, and communicate a scientific investigation was refined through a series of student-presentations and laboratory exercises involving molecular pharmacology procedures, animal behaviors which model human disease conditions, basic histological techniques for neuroanatomical localization, and measurement of brain activity via *in vivo* electrophysiology.

**2) *Introduction to Neuroscience* [BIOL 3370] Fall '97, Spring/Summer/Fall '98 & '99, Spring '00**

The students who enrolled in this course I created were introduced to the physiological mechanisms mediating fundamental activities of the nervous system: stimuli detection and transduction, neuronal communication, assimilation and interpretation of information, anatomical modification underlying plasticity of function, and the circuitry influencing the somatic, autonomic, emotional, and cognitive components of a behavioral response. The majority of the upper division students who took this course were pursuing a post-baccalaureate degree in either Occupational or Physical Therapy.

**3) *How the Mind Works* [BIOL 6102] Spring '99**

The informal atmosphere of this graduate-level seminar course I designed enabled discussions of the biological basis of human thought and emotion to be tailored to the specific interests of the seven participating Master's Degree students and thus facilitated the creation of intellectually stimulating interactions.

**4) *Human Anatomy and Physiology* [BIOL 2403] Fall '97, Fall '98, Fall '99**

This lower division course I revised utilized both lecture and laboratory approaches to provide the students with an overview of the function/dysfunction of the major organ systems of the human body.

## **I. Natl. Inst. of Neurological Disorders & Stroke, N.I.H., Bethesda, MD**

***Biological Basis of Mental Disorders* (Natl. Inst. of Health Graduate School)**

This graduate level course I created addressed the pathophysiology and treatment of major psychiatric disease states.

## **- - - - VI. HONORS, AWARDS, and GRANTS - - - -**

### **A. Pedagogical Honors and Awards**

- ▶ **Torch Medal Awardee in Recognition as Influential Professor by Colgate 2015 Senior (May '15)**  
Ellen Gronseth
- ▶ **Torch Medal Awardee in Recognition as Influential Professor by Colgate 2015 Senior (May '15)**  
Alexander Barnes
- ▶ **Torch Medal Awardee in Recognition as Influential Professor by Colgate 2015 Senior (May '15)**  
Lillian Laiks
- ▶ **Torch Medal Awardee in Recognition as Influential Professor by Colgate 2015 Senior (May '15)**  
Alexandria Solin
- ▶ **Torch Medal Awardee in Recognition as Influential Professor by Colgate 2015 Senior (May '15)**  
Alexander Hyde
- ▶ **Torch Medal Awardee in Recognition as Influential Professor by Colgate 2013 Senior (May '13)**  
Charlotte Bavely
- ▶ **Torch Medal Awardee in Recognition as Influential Professor by Colgate 2013 Senior (May '13)**  
Josephine Belluardo
- ▶ **Recognized as Influential Professor by Univ of TN Outstanding 2008 Senior Awardee (Apr '08)**  
Catherine Coffman
- ▶ **Nominated for the 2006 Univ of TN National Alumni *Outstanding Teacher Award* (Nov '06)**
- ▶ **Recognized as Influential Professor by Univ of TN Outstanding 2007 Senior Awardee (Apr '07)**  
Nicholas Fiacco
- ▶ **Nominated for the 2005 Univ of TN National Alumni *Outstanding Teacher Award* (Nov '05)**
- ▶ **Recognized as Influential Professor by Univ of TN Outstanding 2006 Senior Awardees (Apr '06)**  
Bernadette Helton
- ▶ **Recognized as Influential Professor by Univ of TN Outstanding 2006 Senior Awardees (Apr '06)**  
Emily Mitchell
- ▶ **Recognized as Influential Professor by Univ of TN Outstanding 2006 Senior Awardees (Apr '06)**  
David Nelsen
- ▶ **Recognized as Influential Professor by Univ of TN Outstanding 2006 Senior Awardees (Apr '06)**  
Ben Zimmer
- ▶ **Nominated for Teacher of the Year by Gamma Beta Phi, Univ. Central AR Honor Society (Apr '98)**

### **B. Research Grants and Donations**

- ▶ **\$ 3,000 UTC Instructional Excellence Grant (Feb '08)** to purchase 2 "cutting edge" physiology

computer interface units for Human Physiology and Animal Physiology courses

- ▶ **Research Associates Award from UTC Office of Grants and Program Review (Jan '07)** released me from 3 credit hours of teaching responsibility at UTC during the Spring 2007 semester so that I could complete a NIH AREA grant (R15) proposal to evaluate whether mCPP-induced effects in the rat can serve as an animal model of Obsessive Compulsive Disorder.
- ▶ **\$ 3,000 Faculty Research Award from UTC UC Foundation (Dec '06)** supported my research "Evaluation of Ritualistic Chewing Behaviors and cFOS Expression Induced by mCPP in Rats as an Animal Model of Obsessive Compulsive Disorder".
- ▶ **\$37,000 of the psychotherapeutic agent, fluvoxamine (10 gm) provided by Solvay Pharmaceuticals (Sept '06)** enabled me to conduct research concerning the behavioral and neurophysiological effects of this drug at the Univ of TN at Chattanooga.
- ▶ **Principal Co-Investigator on grant for \$251,720 from National Science Foundation (Aug '05,** along with Drs S. Richards, G. Grant, P. Kovach, and S. Symes) "Acquisition of a LC-MS-MS for Research in Biology, Environmental Science, and Chemistry at UT Chattanooga"
- ▶ **\$49,000 of the psychotherapeutic agent, fluvoxamine (10 gm) provided by Solvay Pharmaceuticals (Jan '00)** enabled me to conduct research concerning the behavioral and neurophysiological effects of this drug at the Univ of Central Arkansas
- ▶ **\$19,000 of the psychotherapeutic agent, fluoxetine (5 gm) provided by Eli Lilly & Co. (June '99)** enabled me to conduct research concerning the behavioral and clinical effects of this drug at the Univ of Central Arkansas.
- ▶ **\$7,000 supplemental funds provided by the Univ. of Central AR Research Council (May '99)** enabled continued progress on project previously funded in May '98 (*see below*).
- ▶ **\$14,000 provided by the University of Central Arkansas Research Council (May '98)** for student wages, purchase of research equipment, supplies, and rats related to research on the *Effects of Chronic Exposure to Serotonin Uptake Inhibitors on Basal Ganglia Output*.

## C. Awards for Faculty Mentored Student Research Projects

- ▶ **\$2,000 provided by Colgate University Research Council (Nov '14)** to defray travel and per diem costs for my undergraduate research students (Lauren Kasparson, Lillie Laiks) to attend the 2014 *Convention of the Society for Neuroscience* (Washington, DC) so that they could attend presentations and disseminate research results.
- ▶ **\$3,000 provided by Colgate University Research Council (Nov '13)** to defray travel and per diem costs for my undergraduate research students (Lauren Kasparson, Alec Hyde, Quinnet Simmons) to attend the 2013 *Convention of the Society for Neuroscience* (San Diego, CA) so that they can attend presentations and disseminate research results.
- ▶ **\$ 4,000 Student Summer Research Award provided by Colgate University (Apr '13)** for Lilly Laiks, Lauren Kasparson, Alec Hyde and Quinnet Simmons – Title: Evaluation of mCPP-Induced Behavioral Effects as an Animal Model for Obsessive Compulsive Disorder
- ▶ **\$ 4,000 Student Summer Research Award provided by Colgate University (Apr '12)** for Lauren Kasparson and Jennifer Panger – Title: Neonatal Clomipramine: an Animal Model for Obsessive Compulsive Disorder?

- ▶ **Faculty for Undergraduate Neuroscience Mentor Award (Nov '08)** for being one of the twelve national faculty-student teams selected for recognition at Society for Neurosciences Convention (Washington, DC)
- ▶ **\$ 1,000 Provost Student Research Award provided by University of Tennessee @ Chattanooga (Apr '08)** for Rishi Mistry – Title: Investigation of *m*-CPP-Induced Neurophysiological Effects as an Animal Model for Obsessive Compulsive Disorder
- ▶ **Student Assistant Stipend provided by University of Tennessee @ Chattanooga Honor's Program (Jan '08)** for Rishi Mistry to investigate cFOS expression in rats
- ▶ **\$600 provided by the Biology Dept of University of Tennessee @ Chattanooga (Oct '06)** defrayed travel and per diem costs for my undergraduate research students (Nick Fiacco, Jennifer Jackson, Lee Kim, Tyler Walpole, Stuart Winkler) to attend the 2006 *Convention of the Society for Neuroscience* (Atlanta, GA) so that they could attend presentations and disseminate research results.
- ▶ **\$ 1,000 Provost Student Research Award provided by University of Tennessee @ Chattanooga (May, '06)** for Jennifer Jackson – Title: An Investigation of the Role of Dopamine in *m*CPP-Induced Behavior in Rats as an Animal Model for Obsessive Compulsive Disorder.
- ▶ **\$ 1,000 Provost Student Research Award provided by University of Tennessee @ Chattanooga (May '06)** for Lee Kim – Title: “Effect of Serotonin and Norepinephrine Uptake Inhibitors on *m*CPP-Induced Ritualistic Chewing Behaviors in Rats”
- ▶ **\$600 provided by the Biology Dept of University of Tennessee @ Chattanooga (Nov '05)** defrayed travel and per diem costs for my undergraduate research students (David Nelsen, Stuart Winkler, Benjamin Zimmer) to attend the 2005 *Convention of the Society for Neuroscience* (Washington, DC) so that they could attend presentations and disseminate research results.
- ▶ **Student Assistant Stipend provided by University of Tennessee @ Chattanooga Honor's Program (Sept '05)** for Stuart Winkler to investigate rodent behaviors
- ▶ **\$ 1,000 Provost Student Research Award provided by University of Tennessee @ Chattanooga (April '05)** for Benjamin Zimmer – Title: Evaluating *m*CPP-induced behavior as an Animal Model for Obsessive Compulsive Disorder.
- ▶ **\$ 1,000 Provost Student Research Award provided by University of Tennessee @ Chattanooga (April '05)** for David Nelsen – Title: Effects of *m*CPP on Basal Ganglia Neuronal Activity as Assessed by cFOS Protein Immunocytochemistry.
- ▶ **Best Student Poster Presentation Award provided by the Arkansas Chapter of the Society for Neuroscience (Oct '99)** acknowledged the presentation by my research students Lolita Palmer, Jason Granger and Jay Vacca.
- ▶ **\$2,700 provided by the University of Central Arkansas Research Council (Sept '99)** defrayed travel and per diem costs for my research students (Lolita Palmer, Jason Granger, and Jay Vacca) to attend the 1999 *Convention of the Society for Neuroscience* (Washington, DC) so that they could attend presentations/ workshops and could disseminate research results.
- ▶ **\$1,400 provided by the Dean of the College of Natural Sciences & Mathematics (April '99)** enabled purchase of research supplies needed for research project, “*Evaluation of an Animal Behavior as a Model for Obsessive Compulsive Disorder*”, conducted by students Synde Canarina, Barbara Metzger and Sherin Varghese.

- ▶ **\$3,900 provided by the Arkansas Scientific Information Liaison Office, SILO (Nov '98)** enabled me to conduct the research project, *Effects of Chronic Psychotherapeutic Agents on Neurotransmission in the Basal Ganglia*, and for my thesis student's (J. Granger) travel to a scientific conference to present research findings.

## D. Funds for Travel

- ▶ **\$2,000 provided by Colgate University Travel Fund (Nov '14)** to defray travel and per diem costs of the 2014 *Convention of the Society for Neuroscience* (Washington, DC) so I could present research results obtained with undergraduate students, attend educational presentations/workshops, and interact with peers in the research field.
- ▶ **\$1,700 provided by Colgate University Travel Fund (Nov '13)** to defray travel and per diem costs of the 2013 *Convention of the Society for Neuroscience* (San Diego, CA).
- ▶ **\$500 provided by the Chattanooga State College Professional Development Committee (Oct '08)** defrayed travel and per diem costs of the 2008 *Convention of the Society for Neuroscience* (Washington, DC) so I could present research results obtained with undergraduate students, attend educational presentations/workshops, and interact with peers in the research field.
- ▶ **\$500 provided by the University of Tennessee @ Chattanooga UC Foundation Faculty Development Office (Oct '06)** defrayed travel and per diem costs of the 2006 *Convention of the Society for Neuroscience* (Atlanta, GA) so I could present research results obtained with undergraduate students, attend research-oriented presentations/workshops, and interact with vendors of laboratory instrumentation.
- ▶ **Funds provided by the University of Tennessee @ Chattanooga Office of Grant Resources (Apr '05)** enabled me to attend a conference on "The Art of Grantsmanship" presented by the Council of Undergraduate Research April 17-19, 2005 (Washington DC)
- ▶ **\$1,000 provided by the University of Tennessee @ Chattanooga Lupton Professional Fund (Oct '04)** defrayed travel and per diem costs of the 2004 *Convention of the Society for Neuroscience* (San Diego, CA) so I could attend research-oriented presentations/workshops and interact with vendors of laboratory instrumentation.
- ▶ **\$360 provided by the University of Central Arkansas Research Council (Sept '99)** defrayed travel and per diem costs of the 1999 *Convention of the Society for Neuroscience* (Miami, FL) so I could attend research-oriented presentations/workshops and disseminate research results.
- ▶ **\$360 provided by the Univ. of Central Arkansas Instructional Development Fund (Sept '99)** defrayed travel and per diem costs of the 1999 *Convention of the Society for Neuroscience* (Miami, FL) so that I could attend seminars/workshops pertaining to undergraduate neuroscience education and could present my novel method for enhancing the intellectual involvement of pre-health professional students.
- ▶ **\$1,000 provided by the National Science Foundation (NSF # 9555095, June '98)** covered lodging, instruction, and material expenses for the *Crawdad Workshop*, which was held at Cornell University (Ithaca, New York) and concerned neurophysiological laboratory exercises for undergraduates.



- ▶ **Funds provided by the American Society for Pharmacology & Experimental Therapeutics (March '94)** covered travel and per diem costs to attend the XIIth Congress of Pharmacology Conference.

## E. Salary and Stipend Support

- ▶ **\$ 5,000 Univ of TN at Chattanooga Summer Research Faculty Salary Stipend (summer '05)**
- ▶ **50% Salary for 5 weeks provided by the Univ. of Central AR Research Council (summer '99)** to subsidize my research endeavors.
- ▶ **50% Salary for 5 weeks provided by the Univ. of Central AR Research Council (summer '98)** to subsidize my research endeavors.
- ▶ **Bonus Award provided via recommendation of the Univ. of Central AR Dept of Biology Chairman (Aug '98)** in recognition of my performance as a faculty member.
- ▶ **Postdoctoral Training Grant provided by the National Institute on Drug Abuse (Aug '96)** to subsidize research endeavors for the project, *Predisposition Factors Underlying Addictive Behavior* (1-F32-DA05763-01).
- ▶ **Salary Support provided by the National Institute of General Medicine (June '93-'95)** to subsidize my research endeavors conducted at the National Institute of Neurological Disorders & Stroke.
- ▶ **Stipend Support provided by the Dept of Health and Human Services (Aug '88-'90)** to subsidize my participation in the University of Pennsylvania Neuroscience Doctoral Program.

## - - - - VII. MENTORING EXPERIENCE - - - -

### A. Thesis Advisor for Bachelor's Degree Students with Departmental Honors.

Kirstin Craig (Aug '13-May '14, Neuroscience Program, Colgate Univ.) Thesis: *"Evaluation of the Validity of a Neoclozapine Rat Model for Obsessive-Compulsive Disorder Using the Hole Poke Board and Marble Arena Behavioral Assays"*

Sam Frank (Aug '13-May '14, Neuroscience Program, Colgate Univ.) Thesis: *"The Use of Diazepam to Strengthen the Predictive Validity of the Neo-Clozapine Obsessive-Compulsive Disorder Rat Model"*

Emily Restatt (Aug '12-May '13, Neuroscience Program, Colgate Univ.) Thesis: *"Effects of Neonatal Clozapine Exposure as Assessed via the Elevated Plus Maze: A New Model for Obsessive-Compulsive Disorder?"*

Josephine Belluardo (Aug '12-May '13, Neuroscience Program, Colgate Univ.) Thesis: *"Hole Poke Behavior of the Neoclozapine Rat is a Valid Model of Obsessive Compulsive Disorder"*

Charlotte Bavely (Aug '12-May '13, Neuroscience Program, Colgate Univ.) Thesis: *"Validation of the Neoclozapine Model of Obsessive-Compulsive Disorder Using Marble Behaviors in the Rat"*

Rishi Mistry (June '07-May '09, Psychology Dept, UTC) Thesis: *"Investigation of m-CPP-Induced Neurophysiological Effects as an Animal Model for Obsessive Compulsive Disorder"*

Catherine Coffman (June '07-May '08, Biology Dept, UTC) Thesis: *"Role of Cortical Structures in Mediation of a Behavior that is a Potential Animal Model of OCD"*

Tammie Mizer (June '07-May '08, Biology Dept, UTC) Thesis: *"Observing c-Fos Expression in the Thalamus of Rats as an Animal Model for OCD"*

Jennifer Jackson (Jan '06-May '07, Biology Dept, UTC) Thesis: *"Investigation of the Role of Neurotransmitter Systems in mCPP-Induced Behavior in Rats as an Animal Model for Obsessive Compulsive Disorder"*

Lee Kim (Jan '06-May '07, Biology Dept, UTC) Thesis: *"Effects of Various Pretreatment Drugs on mCPP-Induced Ritualistic Chewing Behavior in Rats"*

Bernadette Helton (Jan '05-May '06, Biology Dept, UTC) Thesis: *"m-Chlorophenylpiperazine-induced Ritualistic Chewing Behavior as Potential Animal Model of Obsessive Compulsive Disorder"*

David Nelsen (Jan '05-May '06, Biology Dept, UTC) Thesis: *"Development of a Technique for mCPP Induced c-FOS Expression in Rats"*

Stuart Winkler (Jan '05-May '06, Biology Dept, UTC) Thesis: *"Definition and Evaluation of mCPP-Induced Ritualistic Chewing Behaviors in Rats as Related to a Putative Animal of Obsessive Compulsive Disorder"*

Sarah Abbott (Sept '99-May '00, Univ. Central AR) Thesis: *"Conscious and Nonconscious Influences on Decision-Making"*.

Jason Granger (Feb '98-May '99, Univ. Central AR) Thesis: *"The Relationship between a Rodent Behavior and Neuronal Activity in the Basal Ganglia"*.

Sherin Varghese (Jan '99-Aug '99, Univ. Central AR) Thesis: *"Evaluation of an Animal Behavior as a Model for Obsessive Compulsive Disorder"*.

## **B. Thesis Advisor for Bachelor's Degree Students.**

Liam Peebles (Jan-May '18, Neuroscience Program, Macalester College) Thesis: Grooming displays robust face validity in the neonatal clomipramine exposure rat model of obsessive compulsive disorder.

Katie Hilber (Aug-Dec '17, Neuroscience Program, Macalester College) Thesis: Overcoming the one trial tolerance of rat behavior in the Elevated Plus Maze (EPM).

Ellen Gronseth (Jan-May '15, Neuroscience Program, Colgate Univ.) Thesis: The effect of dark compared to light environment on the neocloimipramine model of Obsessive Compulsive Disorder"

Lillian Laiks (Aug '14-May '15, Neuroscience Program, Colgate Univ.) Thesis: "Habit Systems: What Happens When They Dysfunction?"

Alexandria Solin (Jan-May '15, Neuroscience Program, Colgate Univ.) Thesis: "Evaluation of Light Dark Condition in the Neocloimipramine Model of Obsessive Compulsive Disorder"

Alexander Barnes (Jan-May '15, Neuroscience Program, Colgate Univ.) Thesis: A Comparison of OCD-like Behaviors for a Neo-Clomipramine Model of OCD in the Light versus in the Dark"

Lauren Kasparson (Aug-Dec '14, Neuroscience Program, Colgate Univ.) Thesis: "The effects of mianserin and memantine on the neo-clomipramine rodent model of Obsessive Compulsive Disorder (OCD): a comparative analysis of serotonergic and glutamatergic antagonists"

Lindsay Burke (Aug-Dec '14, Neuroscience Program, Colgate Univ.) Thesis: "Effect of the NMDA receptor antagonist Memantine on Hole Poking Behavior in the Neo-Clomipramine Rodent Model of Obsessive Compulsive Disorder "

Chase Matthijssen (Aug-Dec '14, Neuroscience Program, Colgate Univ.) Thesis: "Investigation into the effects of memantine using the neonatal clomipramine exposure model of OCD"

Hillary Mulder (Aug-Dec '13, Neuroscience Program, Colgate Univ.) Thesis: "Evaluation of the Neocloimpramine Model of Obsessive-Compulsive Disorder by Manipulation of Serotonin 5HT2 Receptors"

Alexander Hyde (Aug-Dec '13, Neuroscience Program, Colgate Univ.) Thesis: "*The Effect of mCPP and Mianserin on Neo-Clomipramine Model of Obsessive Compulsive Disorder (OCD)*"

Ali Pesch (Aug-Dec '12, Neuroscience Program, Colgate Univ.) Thesis: "*The Effect of m-chlorophenylpiperazine (mCPP) on the Exploratory Behavior of Rats in the Hole-Board Apparatus: A Possible Model of Obsessive Compulsive Disorder*"

Kathleen Trychta (Aug-Dec '12, Neuroscience Program, Colgate Univ.) Thesis: "*mCPP-induced Effects on Marble-burying as a Potential Model for OCD*"

Ashley Walsh (Aug-Dec '12, Neuroscience Program, Colgate Univ.) Thesis: "*A Possible Animal Model of Obsessive-Compulsive-Like Behavior in Rats: Investigation of mCPP in the Elevated Plus Maze*"

Michelle Krelko (Jan-Aug '12, Neuroscience Program, Colgate Univ.) Thesis: "*Time Course of the expression of OCD-like behaviors following rat neonatal exposure to clomipramine*"

### **C. Thesis Advisor for Master's Degree Students.**

Jason Granger (Aug '99-May '00, Univ. Central AR) Thesis: "*Investigation of Patterned Electrical Activity in the Basal Ganglia and Examination of a Correspondence with the Expression of a mCPP-induced Rodent Behavior*".

Lolita Palmer (June '99-May '00, Univ. Central AR) Thesis: "*Identification of the Neuronal Circuits Mediating mCPP-induced Rodent Behavior via Immunohistological Visualization of c-FOS Protein*".

### **D. Member of Thesis Committee for Students with Departmental Honors.**

Jonathan Durham (Sept '06–April '07, UTC) Thesis: "*Analysis of Buddhist-Based Concept of Self-Compassion and the Religious Motivations and Beliefs of Christians*".

Karin Tillstrom (Sept '06–April '07, UTC) Thesis: "*Lessons in Giftedness for the Gifted Student*".

Jamie King (Sept '06–April '07, UTC) Thesis: "*What's that Smell? – Head Injury can cause Problems for your Nose*".

Nicholas Fiacco (Dec '06–Dec '07, UTC) Thesis: "*The Ethics of Pain Management and Care*".

Maikel Botros (Sept '06–May '07, UTC) Thesis: “*Complexation Studies of Mixed-Donor Ligands with the Heavy Metal Ions Hg(II) and Cd(II)*”

Laura Cecere (Sept '06–Aug '07, UTC) Thesis: “*The Use of Bacterial Batteries to Generate Hydrogen Gas*”.

Ashley Rousselle (Sept '06–Aug '07, UTC) Thesis: “*French Canadian to Quebecois: The Development of a National Identity*”.

Tangee Davis (Aug '04–May '05, UTC) Thesis: “*Mutational Analysis of Candidate Gene(s) Mapped to the Genetic Locus for Hereditary Neuralgic Amyotrophy*”.

Jill Wentzell (Aug '02–May '03, Colby College) Thesis: “*Screening the Human Genome for Trinucleotide Repeat Expansions*”.

## **E. Member of Thesis Committee for Master's Degree Students.**

Shannon Campbell (May '08 - May '09, Psychology Dept, Univ of TN at Chatt) Thesis: “*Enhanced mysticism, perception and cognition of psychedelic states of consciousness: Assessment of a new questionnaire.*”

Steven Barger (Sept '04-May '05, Biology Dept, Univ of TN at Chatt) Thesis: “*The Cleveland Utilities Industrial Pretreatment Program*”.

Terry Perry (Feb '00–May '00, Univ. Central AR) Thesis: “*In Vivo Manipulation of Physiology through Genetic Engineering*”.

DeLynn Hollerman (Jan '98–May '00, Univ. Central AR) Thesis: “*A Comparison of Apoptotic Induction in the Gut of *Aplysia californica* and the Sprague-Dawley Rat*”.

Joe Daniels (Jan '98-May '98, Univ. Central AR) Thesis: “*Possible Polymorphism in the Human Rad51 Gene*”.

## **F. Supervisor of Graduate Student Teaching Assistantship.**

Beverly Hamilton (Aug -Dec '05, Univ. of TN at Chatt) Lab for *Human Physiology* [BIOL 208]

Lolita Palmer (Aug -Dec '99, Univ. of Central AR) Lab for *Human Anatomy & Physiology* [BIOL 2405]

Jason Granger (Jan- May '00, Univ. of Central AR) Lab for *Experimental Neurobiology* [BIOL 4425]

Kelley Johnson (Jan- May '00, Univ. of Central AR) Lab for *Experimental Neurobiology* [BIOL 4425]

## **G. Mentor/Supervisor of Undergraduate Students' Research Projects.**

### **Macalester College**

Johnny Bice (Jan-May '18)  
Zach Busby (Aug '17 – May '18)  
William Fryling (Aug '17 – May '18)  
Fancy Li (Aug '17 – May '18)  
Haley Mudrick (Aug '17 – May '18)  
Liam Peebles (Jan-May '18)

Collin Brantner (Aug-Dec '17)  
Ellie Carter (Aug '17 – May '18)  
Katie Hilber (Aug '17 – May '18)  
Sasha Mochida (Aug-Dec '17)  
Kristina Nazarova (Aug-Dec '17)  
Marge Stelzner (Aug '17–May '18)

### **Washington & Lee University**

Thomas Agostini (Apr-May '17)  
Alyssa Bower (Apr-May '17)  
Liza Chartampila (Jan-Apr '17)

Shannon Belforti (Jan-Apr '17)  
Zach Brandt (Apr-May '17)  
Kate Dalia (Apr-May '17)

Washington & Lee University	Audrey Dangler (Jan-Apr '17) Emily Ellis (Jan-Apr '17) Meg Guignon (Apr-May '17) Hannah Palmatary (Jan-Apr '17) Kyle Singerman (Aug '16-Apr '17) Jennifer Stephens (Aug '16-Apr '17)	Camilla Davis (Aug '16-Apr '17) Andrea Ferrero (Jan-Apr '17) Christian Kim (Apr-May '17) Makena Rouska (Apr-May '17) Liz Spruill (Apr-May '17) Araba Wubah (Jan-Apr '17)
Ithaca College	Tessa Alderman (Aug '15-May '16) Mina Hubert (Jan-May '16) Sedona Lockhart (Aug '15-May '16) Anthony Manere (Aug-Dec '15) Alaina Moise (Aug '15-May '16)	Nicole Bond (Jan-May '16) Kayleigh Jones (Jan-May '16) Derek Marinaro (Jan-May '16) Diamond Minoso (Aug '15-May '16) Molly Robbins (Jan-May '16)
Colgate University	Alex Barnes (Aug '14-May '15) Jo Belluardo (Aug '12-May '13) Lindsay Burke (Aug '14-Dec '14) Samantha Frank (Aug '13-May '14) Sierra Grzybowski (Jan-May '12) Lauren Kasparson (May '12-Dec '14) Lillie Laiks (May '12-May '15) Hillary Mulder (Aug '13-May '14) Ali Pesch (Aug-Dec '12) Ali Scalzo (May '13-May '15) Alex Solin (Jan '15-May '15) Ashley Walsh (Aug-Dec '12)	Charlotte Bavely (Aug '12-May '13) Dominka Burek (Jan-May '12) Kirstin Craig (Aug '13-May '14) Ellen Gronseth (Aug '14-May '15) Alec Hyde (May '13-May '14) Michelle Krelko (Jan-May '12) Chase Matthijssen (Aug '14-Dec '14) Jenny Panger (May-Aug '12) Emily Resttatt (Aug '12-May '13) Quinnel Simmons (May-July '13) Kathlen Trychata (Aug '12-May '13)
University of Tennessee	Catherine Coffman (Jan '07-May '08) Nick Fiacco (Aug '06-Dec '07) Patrick Flanagan (Jan-Dec '06) Elisha Flessner (Jan-May '05) Jennifer Jackson (Jan '06- May '07) Rishi Mistry (Jun '07-May '09) David Nelsen (Jan '05-May '06) John Stewart (Jan-May '05) Stephanie Turner (Aug-Dec '05) Tyler Walpole (Aug-Dec '06) Faith Williams (Aug-Dec '05)	Ashley Everett (May-Aug '05) Cyril Fider (Aug '06- May '08) Ben Zimmer (Jan '05-May '06) Bernadette Helton (Jan '05-May '06) Lee Kim (Jan '06-May '07) Tammie Mizer (June '07- May '08) Andy Richie (Aug-Dec '06) Ross Terry (June '07- May '08) Bradly Thrasher (Jan-May '07) Chris Waynick (Jan-May '05) Stuart Winkler (Jan '05-Dec '06)
University of Central AR	Brad Becker (Aug-Dec '98) Courtney Calhoun (Jan-May '00) Synde Canarina (Jan-May '99) Patti Goad (Aug '97-May '98) Jason Granger (Jan '98-May '99)	Barbara Metzger (Jan-May '99) Belinda Starkey (Jan-May '00) Jay Vacca (Jan '99-May '00) Sherin Varghese (Jan-May '99) Subin Varghese (Aug-Dec '99)

## I. Academic Advisor for PreProfessional Students

College of Arts & Sciences, Univ. of TN at Chattanooga. (Aug '04-May '08)

- Pre-Dental Students
- Pre-Pharmacy Students
- Pre-Medical Students
- Pre-Doctoral Students

## J. Academic Advisor for Undergraduate Pre-Optometry Students.

College of Natural Science and Mathematics, Univ. of Central AR. (Aug '98-May '00)



**K. Advisor for PreProfessional Student Internships.**

Michael Hernandez ( May-Aug '08, Univ. CTN at Chatt) pre-dentistry internship  
Charlie Liggert (Jan-May '00, Univ. Central AR) pre-dentistry internship  
Jessica Frigon (Aug-Dec '99, Univ. Central AR) pre-optometry internship

**L. Supervisor of Medical Student Research Assistant.**

Chris Mastropietro. National Institute of Neurological Disorders and Stroke (May-Aug '96)

**M. Supervisor of Full-time Research Technician.**

Saima Rawji. National Institute of Neurological Disorders and Stroke (July '96–July '97)

**N. Supervisor of Thesis Research for Doctorate Candidate.**

Kelly Allers. National Institute of Neurological Disorders and Stroke (Jan-May '96)  
Lynn Kirby. University of Pennsylvania (Aug '92-May '93)

**O. Supervisor of Undergraduate Research.** Inst. of Neurosci., Univ. of PA (Jan '90-Dec '92)

**- - - - - VIII. INVITED PRESENTATIONS - - - - -**

***"Why do We Drink?"***

April '13 Scientific Perspectives Seminar Series, Division of Natl Sci and Math, Colgate University.

***"The Broken Brain of the Drug Addict"***

Feb '06 Faculty Seminar Series, Department of Chemistry, UTC.  
April '05 Faculty Seminar Series, Department of Psychology, UTC.

***"Use of HPLC to Measure 5-HT Release in vivo Following Antidepressant Treatment"***

Mar '03 Department of Chemistry Seminar Series, Colby College.

***"Neurological Dysfunction Arising from Abnormalities of the Basal Ganglia"***

Oct '02 Department of Biology Seminar Series, Colby College.

***"Researching the Neurobiology of Obsessive Compulsive Disorder"***

Feb '00 The Biology Club, Department of Biology, University of Central Arkansas.  
April '00 Spring Seminar Series, Anatomy Dept, University of Arkansas Medical School.

***"Evaluation of a Rat Behavior as a Model for Obsessive Compulsive Disorder"***

Mar '99 Graduate Student Recruitment Day, Biology Dept, Univ. of Central Arkansas.  
April '99 The Biology Club, Department of Biology, University of Central Arkansas.

***"Drug Addiction: A Legal, Moral, and Biological Issue"***

Feb '99 High Tables Seminar Series, Honors College, University of Central Arkansas.  
Feb '98 The Biology Club, Department of Biology, University of Central Arkansas.

**Panelist for Female Neuroscience Graduate Students**

Oct '99 Organized by *Women In Neuroscience* during the Society for Neuroscience Convention.

***"Electrophysiology: Measuring the Electrical Activity of the Brain"***

April '98 Research Seminar Series, Department of Physics, University of Central Arkansas.

***"Dopaminergic Regulation of Subthalamic Nucleus Neuronal Activity"***

May '96 Postdoctoral Seminar Series, Oregon Health Sciences University.

April '95 Postdoctoral Seminar Series, National Institute of General Medical Sciences.

**Panelist for Workshop *"Raising the Profile of Substance Abuse & Alcoholism Research"***

Mar '96 National Institute of Medicine.

***"Regulation of 5-HT Release: Modification Following Treatment with Antidepressants"***

Mar '95 Psychiatry Department, University of Illinois at Chicago.

July '93 Section Seminar Series, National Institute of Neurological Disorders and Stroke.

May '92 Basal Ganglia Seminar Series, Department of Neuroscience, Princeton University.

**- - IX. PROFESSIONAL and COMMUNITY SERVICE - -**

**Emergency Response Team**

(Sept '15-May '16) Ithaca College

**Science Teachers Affiliates Program: Biology of Psychiatric Disorders Workshop**

(Mar '13) Funded by HHMI grant to Colgate University for local K-12 school teachers

**Science and Nature Club**

(Aug '10-July '11) Chattanooga State Community College

**Science Olympiad Tournaments for Regional Elementary, Middle, & High Schools**

(Feb '09, May '09, Feb '10, May '10) Chattanooga State Community College

**Member of Year of Science 2009 Committee.**

(Nov '08-Feb '10) Chattanooga State Community College

**Brain Awareness Presentation.**

(May '08) 3-hour set of modules on the brain, 4th graders at Red Bank Elementary School, Chatt. TN

**Member of University Academic Petitions Committee.**

(Aug '07-May '08) University of Tennessee at Chattanooga.

**Member of University Departmental Honor's Committee.**

(Aug '06-May '08) University of Tennessee at Chattanooga.

**Member of University Faculty Evaluation of Administration Committee.**

(Aug '06-May '07) University of Tennessee at Chattanooga.

**Member of Departmental Tri-Beta Honor Society Advisory Committee.**

(Aug '06- May '08) Department of Biological/Environmental Sciences, Univ. of TN.

**Member of Departmental Curriculum/Planning Committee.**

(Aug '04- May '08) Department of Biological/Environmental Sciences, Univ. of TN.

**Member of Departmental Pre-Professional Advising Committee.**

(Aug '04- May '08) Department of Biological/Environmental Sciences, Univ. of TN.

**Member of Department of Biology Vertebrate Biologist Faculty Search Committee.**

(Nov '04-March '05) University of Central Arkansas.

**Judge for Local Science Fair Competition.** (March '05, '06, '08) Chattanooga Regional Science and Engineering Fair for high school and middle school students. Chattanooga, TN

**Community Representative on Ethics Forum of Maine HealthReach Community Health Centers, Waterville, Maine.** (Sept '02-July '04)

**Member of Advisory Committee for the Chairman of the Department of Biology, University of Central Arkansas.** (Aug '98-May '99; Aug '99-May '00) Elected by faculty to serve on this 3-person committee for two separate one-year appointments.

**Member of Research Committee for College of Natural Sciences & Mathematics.** (Aug '98-Aug '01) Elected by the faculty to serve on this University of Central Arkansas committee for a 3-year appointment.

**Member of University Energy Conservation Committee.** (Jan '99-Dec '01) Three year University of Central Arkansas appointment.

**Member of University Committee for Sexual Harassment.** (Aug '98-Aug '01) Three year University of Central Arkansas appointment.

**Member of College of Natural Sciences and Mathematics Open House Committee.** (Aug-Dec '98) University of Central Arkansas.

**Member of Department of Biology Neurobiologist Faculty Search Committee.** (Oct '98-March '99) University of Central Arkansas.

**Mentor for Female Neuroscience Graduate Students.** (Oct '97, Nov '98, Oct '99) Organized by *Women In Neuroscience* during annual Society for Neuroscience Convention.

**Judge for Student Recipient of Women in Neuroscience Travel Award.** (Sept '99) Award provides stipend for student travel to the 1999 Society for Neuroscience Convention.

**Judge for Statewide Science Fair Competition.** (April '98, April '99) Arkansas State Science Fair Competition for high school students. Arkansas Junior Academy of Science high school paper and presentation competition.

**Judge for Local Science Fairs.** (Feb '98) Competition among local 6-8th grade students of *Carl Stewart Middle School* and *Bob Courtway Middle School*, Conway, AR.

**Career Advisor/Mentor.** (Jan '00-March '94) Cornell University Alumni Association.

**Under-Represented Minority Advisor.** (April '94) Minority Research Supplements Program, National Institutes of Health.

**Moderator. Dopamine Oral Communication Session.** (June '94) XIXth Collegium Internationale Neuropsychopharmacologium Conference.

- - - - - **X. REFERENCES** - - - - -

**Dr. Joan Ostrove.** Chair, Macalester College, Psychology Department (met Jul '17)  
Professor of Psychology, Macalester College, 1600 Grand Avenue, St. Paul, MN 55105  
ostrove@macalester.edu (651) 696-6775

**Dr. Karla Murdock.** Chair, Washington & Lee University, Psychology Department (met Jul '16)  
Professor of Psychology, W & L Univ, 204 W. Washington St, Lexington, VA 24450  
murdockk@wlu.edu (540) 458-8248

**Dr. Tyler Lorig.** Colleague, Washington & Lee University, Psychology Department (met Jul '16)  
Professor of Psychology, W & L Univ, 204 W. Washington St, Lexington, VA 24450  
lorigt@wlu.edu (540) 458-8839

**Dr. Judith Pena-Shaff.** Chair, Ithaca College, Psychology Department (met Jul '15)  
Professor of Psychology, Ithaca College, 953 Danby Road, Ithaca, NY 14850  
jpenaper@ithaca.edu (607) 274-7083

**Dr. Spencer Kelly.** Chair Jul '13 – Jul '15, Colgate University, Psychology Department (met Aug '11)  
Professor of Psychology, Director of Neuroscience Program, Colgate University, Hamilton, NY 13346  
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