**Curriculum Vitae**

**Margaret J. Gill**

mjgill@noctrl.edu

**Education**

*Kansas State University*, Manhattan, KS

Graduate Studies in Behavioral Neuroscience

Advisor: Dr. Mary E. Cain

M.S. in Psychology, September 2008

PhD in Psychology, August 2010

*Luther College*, Decorah, IA

B.A. in Psychology, May 2005

**Employment History**

2013-present Assistant Professor, North Central College, Naperville, IL

2010-2013 Postdoctoral Fellow, Medical University of South Carolina, Charleston, SC

2005-2010 Graduate Student, Kansas State University, Manhattan, KS

**Teaching Experience**

**Instructor of Record**

*Advanced Behavioral Neuroscience*

North Central College

I currently teach an upper level advanced behavioral neuroscience course for Neuroscience minors. I prepare the syllabus, and give lectures, create and grade exams, and papers. Much of this course is seminar based, with students reading papers that correspond to the technique used that week in lab. This is a unique course as each group of students is given a rodent and go through an experiment, learning laboratory animal ethics, and such techniques as stereotaxic surgery, microinfusions, behavioral analysis, perfusions, slicing, immunohistochemistry, and data quantification. The lecture and lab culminate in a 10 page APA style research paper on their “experiment.”

*Behavioral Neuroscience*

North Central College

This is a mid-level non-lab neuroscience course that investigates and applies basic neuroscience principles to a range of topics. This course is for neuroscience minors and psychology majors who have completed introduction to neuroscience. The primary focus of this course is learning to read primary literature and teaching students to how to digest this information and explain scientific research to the general public. As such, students read and discuss a variety of articles throughout the course. Students write a paper that compares and contrasts the findings in a popular press article with the primary literature article from which the findings originate. The class culminates with a presentation of primary literature that is geared toward a general population.

*Introduction to Neuroscience*

I am the instructor for a Introduction to Neuroscience course for minors and non-minors. This is a laboratory course in which students learn about the basic brain areas and principles of neural communication. Sensory modalities are also covered in this course. Methods utilized in neuroscience are covered in depth, as well as careers in neuroscience ranging from academia to entrepreneurship. Laboratories for this course accompany the information covered in lecture to apply concepts.

*Drugs and Behavior*

North Central College

I am the instructor for a 200 level Drugs and behavior course for psychology majors. This course covers the historical impact of laws/regulations on drug scheduling, pharmacology, and the actions of a range of elicit and pharmaceutical drugs. A large amount of the take home work for this course is devoted to reading the autobiography of Dr. Carl Hart entitled “High Price.” This novel is an excellent resource for students, and provide a social commentary on factors that impact drug abuse that many students and researchers don’t commonly think about.

*General Psychology*

North Central College, Kansas State University

I am the instructor for a General Psychology lecture course for majors and non-majors. This is a typical survey course of psychology that introduces numerous psychological fields to students.

*Research Methods*

College of Charleston

I was the instructor for a Research Methods course for majors. I designed a course syllabus, course objectives, in addition to creating and grading exams, papers, and assignments. The content of this course ranged from research study design to teaching students about statistical analyses and SPSS.

*Psychobiology*

Kansas State University

I was the instructor for a Psychobiology course for majors. I designed the course syllabus and created course objectives. I prepare and give lectures two times a week, as well as create and grade exams, papers, and assignments. Responsibilities also included meeting with students to further discuss course material.

*Psychology of Human Sexuality*

Kansas State University

I was be the co-instructor for a Human Sexuality course for majors and non-majors. With the assistance of another graduate student we will design a course in human sexuality, including creating and giving lectures twice a week, in addition to creating and grading exams and assignments.

**Teaching Assistant**

*Psychobiology,* Spring 2007, Fall 2007, and Spring 2008

Department of Psychology, Kansas State University

Guest lectured on *C-fos* immunohistochemistry; Fall 2007

Guest lectured on Addiction; Fall 2007

*Drugs and Behavior,* Fall 2006, Spring 2007, and Fall 2007

Department of Psychology, Kansas State University

Guest Lectured on Amphetamines; Fall 2007

Guest Lectured on Neurotransmitters; Spring 2007

Guest Lectured on Alcohol; Spring 2007

Guest Lectured on Alcohol; Summer 2009

*General Psychology,* Fall 2006, Spring 2009

Department of Psychology, Kansas State University

Guest Lectured on the Brain, Spring 2009

Psychobiology, Drugs and Behavior, and General Psychology were lecture courses for which I assisted professors by attending class, taking notes during lectures, writing exam questions, and meeting with students to discuss course material. Responsibilities also included grading assignments, papers, and exams, as well as computing grades electronically.

**Guest Lectures**

*Psychopharmacology*, Spring 2012

Guest Lectured to graduate students on antidepressants and anxiolytics, MUSC

**Research Experience**

*North Central College,* Naperville, IL

Assistant Professor, 2013-present

I currently conduct research that investigates the neural underpinnings of psychostimulant abuse in differentially reared rats. My laboratory utilizes a range of behavioral and molecular techniques to determine the changes responsible for the protective effect observed with differential rearing.

*Medical University of South Carolina,* Charleston, SC

Postdoctoral Fellow, 2010-2013

Conduct research investigating the neurological and behavioral effects of psychostimulant abuse using a self-administration model as well as optogenetic techniques.

*Kansas State University*, Manhattan, KS

Graduate student research, 2005-2010

Conducted behavioral research involving the neurological effects of environmental enrichment combined with drug and non-drug stimuli. Additionally, I investigated the effects of d-cycloserine on operant responding, and the role of the amygdala in producing amphetamine-induced hyperactivity in HR and LR rats.

*Kansas State University,* Manhattan, KS

Office of Educational Innovation and Evaluation

Graduate research assistant, 2005-2006

Evaluated state and privately funded programs such as KANED which worked to connect every Kansas school to the internet, and Kauffman Foundation’s Chalkwaves which examined the effects of technology in science and math classrooms.

*University of Iowa*, Iowa City, IA

Undergraduate research, summers 2003 & 2004

Conducted research investigating genetic components of cleft lip and cleft palate.

**Publications and Presentations**

**NCBI URL** http://www.ncbi.nlm.nih.gov/sites/myncbi/margaret.gill.1/bibliography/49644284/public/?sort=date&direction=%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20descending

**Journal Articles**

(\* indicates undergraduate students supervised, \*\*indicates a developing scholar supervised)

**Gill, M.J.,** Weiss, M.L.,and Cain, M.E. (2014) Effects of differential rearing on amphetamine-induced *c-fos* expression in rats. *Drug and Alcohol Dependence, 145*, 231-234.

**Gill, M.J.,** Ghee, S.M., \*Harper, S.M., See, R.E. (2013) Inactivation of the lateral habenula reduces anxiogenic behavior and cocaine seeking under conditions of heightened stress. *Pharmacology, Biochemistry, and Behavior,* *111*, 24-29.

**Gill, M.J.,** \*Arnold, J., & Cain, M.E. (2012) The role of mGluR5 during conditioned hyperactivity and sensitization in differentially reared rats. *Psychopharmacology, 221*(2), 227-237.

Cain, M.E., Mersmann, M.G., **Gill, M.J.,** & \*Pittenger, S.T. (2012) Dose dependent effects of differential rearing on amphetamine-induced hyperactivity. *Behavioural Pharmacology, 8*, 744-753.

**Gill, M.J.** and Cain, M.E. (2011) Effects of satiety on sucrose-reinforced responding in rats raised in enrichment. *Behavioural Pharmacology, 22*(1), 40-48*.*

Cain, M.E., Coolon, R.A., & **Gill, M.J.** (2009) The contribution of the central nucleus of the amygdala to individual differences in amphetamine-induced hyperactivity. *Behavioural Brain Research, 202*(1), 11-8*.*

Mersmann, M.G., Gregg, P., **Gill, M.J.,** Haddon, T.N., & Cain, M.E. (submitted, 2014) Individual differences in response to novelty are associated with altered c-fos expression in the mesocorticolimbic pathway.

**Gill, M.**J., \*Bowen, K.R., Saucier, D., & Cain, M.E. (in preparation, 2011) Effects of Differential rearing and psychostimulants on psychostimulant-induced hyperactivity: A meta-analysis.

**Book Chapters**

**Gill, M.J,** Gabriele, A., & Reichel, C.M. (2011). Rodent models of relapse: Chronic drug treatments following abstinence and extinction. In Murray, J.E. (Ed.), *Exposure therapy: New developments*: Nova Science Publishers.

**Oral Presentations**

(\* indicates undergraduate students supervised, \*\*indicates a McCain scholar supervised)

**Gill, M.J.** Bringing mobile apps into the classroom. Faculty for Undergraduate Neuroscience, Triennial Meeting July 2017, Chicago, IL.

**Gill, M.J.** & Cain M.E. Environmental solutions: Enrichment as a means of prevention and intervention. Winter Conference on the Brain, Annual Meeting January 2009, Copper Mountain, CO.

**Gill, M.J.**, \*\*Gutierrez, M.M., \*Dawley, W.B., and Cain, M.E. Effects of visual stimuli on sucrose-reinforced responding in rats raised in enriched versus impoverished environments. Midwestern Psychological Association, Annual Meeting May 2007, Chicago, IL.

**Poster Presentations**

(\* indicates undergraduate or graduate students supervised, \*\*indicates a McCain or developing scholar supervised)

\*Orban, Z.S., \*John, C.A., \*Evenson, K.M., \*Lopez, O.R., \*Jantz, D.A., \*Olesen, K.R., and **Gill, M.J.** *C-fos* expression in addiction circuitry of differentially reared rats following reinststatement of cocaine-seeking. Society for Neuroscience, Annual Meeting November 2017, Washington D.C.

\*Bailey, M., \*Kuipers, D., \*Cromwell, M.C., \*Orban, Z.S., \*Roybal, K., \*Simgla, E., \*Burchett, J., and **Gill, M.J.** Effects of differential rearing on cocaine self-administration in female rats. Society for Neuroscience, Annual Meeting November 2017, Washington D.C.

\*Lundquist, A., \*Falzarano, H., \*Smigla, E., \*Bartoli, E., \*Kendall, E., \*Wrobleski, R., Milovanovic, M., Stefanik, M.T., Wolf, M.E., and **Gill M.J**. PEPA and glutamate: the role of infralimbic AMPA receptors in diminishing reinstatement of cocaine seeking behavior of differentially reared rats. Society for Neuroscience, Annual Meeting November 2016, San Diego, CA.

\*Cromwell, M.C., \*John, C.A., \*Bartoli, E., \*Kendall, E., \*Wrobleski, R., \*Lundquist, A., Milovanovic, M., Stefanik, M.T., Wolf, M.E., and **Gill M.J.** Role of nucleus accumbens shell AMPA receptors in cocaine-seeking behavior of differentially reared rats. Society for Neuroscience, Annual Meeting November 2016, San Diego, CA.

\*Orban, Z.S., \*John, C.A., \*Evenson, K.M., \*Lopez, O.R., \*Jantz, D.A., \*Olesen, K.R., and **Gill, M.J.** Corticostriatal *c-fos* Expression in Differentially Reared Rats Following Reinstatement of Cocaine-Seeking Behaviors. Society for Neuroscience, Annual Meeting November 2016, San Diego, CA.

\*Falzarano, H., \*Lundquist, A., \*Smigla, E., \*Bartoli, E., \*Kendall, E., \*Wrobleski, R. & **Gill, M.J**. PEPA and glutamate: the role of infralimbic AMPA receptors in diminishing cue-induced drug seeking behavior. National Conference on Undergraduate Research, Annual Meeting April 2016, Asheville, NC.

\*Cromwell, M. C., \*John, C. A., \*Orban, Z. S., \*Bartoli, E., \*Kendall, E., \*Wrobleski, R. & **Gill, M.J.** Role of accumbal AMPA on cocaine self-administration in differentially reared rats. National Conference on Undergraduate Research, Annual Meeting April 2016, Asheville, NC.

**Gill, M.J., \***Orban, Z.S., \*John, C.A., \*Evenson, K.M., \*Lopez, O.R., \*Jantz, D.A., & \*Olesen, K.R. C-fos expression in the striatal circuitry following reinstatement in differentially reared rats. Winter Conference on Brain Research, Annual Meeting January 2016, Breckenridge, CO.

\*John, C.A., \*Orban, Z., \*Evenson, K., \*Lopez, O., \*Jantz, D., \*Olesen, K., & **Gill, M.J.** Dorsolateral striatum c-fos expression following reinstatement of cocaine seeking in differentially reared rats. Faculty for Undergraduate Neuroscience Poster Session, Society for Neuroscience, Annual Meeting October 2015, Chicago, IL.

\*John, C.A., \*Cromwell, M.R., & **Gill, M.J.** Impact of differential rearing on set-shifting ability. Faculty for Undergraduate Neuroscience Poster Session, Society for Neuroscience, Annual Meeting November 2014, Washington D.C.

\*Eby, S**.,** **Gill, M.J**. Exploratory study of trauma-induced anxiety using quantitative electroencephalography. Midwestern Psychological Association, Annual Meeting May 2014, Chicago, IL.

**Gill, M.J.,** Kaufling, J., See, R.E. Role of the lateral habenula and tail of the ventral tegmental area in locomotor activity. Dopamine Conference, June 2013, Sardinia, Italy.

\*Harper, S.M., **Gill, M.J**., & See, R.E. The influence of the lateral habenula on heightened states of anxiety. Faculty for Undergraduate Neuroscience Poster Session, Society for Neuroscience, Annual Meeting October 2012, New Orleans, LA.

**Gill, M.J.,** Ghee, S., & See, R.E. Temporary inactivation of the lateral habenula reduces anxiogenic behavior. Society for Neuroscience, Annual Meeting October 2012, New Orleans, LA.

**Gill, M.J.,** Jhou, T.C., Do, P.H., & See, R.E. The role of the lateral habenula in the reinstatement of cocaine-seeking. Conference on Problems of Drug Dependence. Annual Meeting June 2012, Palm Springs, CA.

**Gill, M.J.,** Waters, R.P., Riegel, A.C., & See, R.E. Neuronal and behavioral effects of optogenetic modulation of the lateral habenula. Society for Neuroscience, Annual Meeting November 2011, Washington, DC.

**Gill, M.J.,** Riegel, A.C., & See, R.E. Hyperpolarization of the lateral habenula following optical stimulation of halorhodopsin expressing neurons. Frontiers in Neuroscience, Annual Meeting April 2011, Seabrook Island, SC.

**Gill, M.J.** & Cain, M.E. Role of mGluR5 during conditioned hyperactivity in differentially reared rats. Society for Neuroscience, Annual Meeting November 2010, San Diego, CA.

Reinhardt, E.K., **Gill, M.J.,** & Cain, M.E. The effects of differential rearing on the extinction of Pavlovian conditioned fear. Society for Neuroscience, Annual Meeting November 2010, San Diego, CA.

\*Eck, M.J., **Gill, M.J.,** Cain, M.E. Environmental enrichment influences the response to inescapable novelty and amphetamine-induced sensitization. Society for Neuroscience, Annual Meeting November 2010, San Diego, CA.

**Gill, M.J., \***Eck, M., \*Reinhardt, E., Coolon, R.A., & Cain, M.E. Inactivation of the amygdala influences amphetamine-induced and conditioned hyperactivity in high and low responder rats. Society for Neuroscience, Annual Meeting October 2009, Chicago, IL.

\*Bowen, K.R., \*\*Velazquez, F.J., **Gill, M.J.**, & Cain, M.E. The effects of d-cycloserine in sucrose-maintained high and low responder rats. Society for Neuroscience, Annual Meeting October 2009, Chicago, IL.

**Gill, M.J.,** & Cain, M.E. Effects of differential rearing on amphetamine-induced *c-fos* expression in the basolateral amygdala and nucleus accumbens. Winter Conference on the Brain, Annual Meeting January 2009, Copper Mountain, CO.

**Gill, M.J., \*\***Guttierez, M.M., & Cain, M.E. Effects of differential rearing on amphetamine-induced *c-fos* expression in the amygdala. Society for Neuroscience, Annual Meeting November 2008, Washington D.C.

Cain, M.E., **Gill, M.J.,** & Coolon, R.A. (Nov,2008). The role of the central nucleu of the amygdala in individual differences in amphetamine-induced sensitization and reinstatement. Society for Neuroscience, Annual Meeting November 2008, Washington, D.C.

\*Cooper-Synder, J., **Gill, M.J**., & Cain, M.E. (2008). Effects of differential rearing on amphetamine-induced c-fos expression in the nucleus accumbens. Merck Merial NIH Veterinary Scholars Symposium, Michigan State University College of Veterinary Medicine.

**Gill, M.J.**, Coolon, R.A., and Cain, M.E. Effect of amygdala inactivation on conditioned hyperactivity and sensitization in high responder and low responder rats. Conference on Problems of Drug Dependence, Annual Meeting June, 2008, San Juan, Puerto Rico.

\*Steiner, A.P., **Gill, M.J**., Ha, R.A., & Cain, M.E. (2007). Dose dependent effects of d-cycloserine on operant responding. Midwestern Psychological Association, Annual Meeting May 2007, Chicago, IL.

\*Neises, A.M., \*Pittenger, S.T., **Gill, M.J.**, and Cain, M.E. Effects of Environmental Enrichment on Amphetamine Induced Hyperactivity. Midwestern Psychological Association, Annual Meeting May 2006, Chicago, IL.

**Gill, M.J.**, Zucchero, T.M., Cooper, M.E., Marazita, M.L., and Murray, J.C. Association of genotypes and phenotypes in Van der Woude syndrome. National Conference on Undergraduate Research, Annual Meeting April 2005, Lexington, VA.

**Gill, M.J.,** Zucchero, T.M., and Murray, J.C. Association of common variation in IRF6 with Van der Woude syndrome. National Conference on Undergraduate Research, Annual Meeting April 2004, Indianapolis, IN.

**Awards**

North Central College Junior Faculty Dissinger Teaching Award, May 2017

North Central College Summer Grant, Summer 2017

North Central College Summer Grant, Summer 2016

North Central College Faculty Reading Group, Summer 2016

Colman Foundation Entrepreneurship Fellow, September 2015- June 2017

North Central College Summer Grant, Summer 2015

North Central College Faculty Enhancement Grant, Fall 2015

North Central College Summer Grant, Summer 2014

College on Problems of Drug Dependence Early Investigator Travel Award, Spring 2012

Medical University of South Carolina Training Grant (T32), September 2010-2013

Kansas State University Graduate Student Travel Grant, October 2009

Kansas State University Psychology Department Travel Grant, January 2009

Kansas State University Psychology Department Travel Grant, November 2008

Kansas State University Graduate Student Travel Grant, November 2008

Kansas State University Psychology Department Travel Grant, June 2008

Kansas State University Graduate Student Travel Grant, June 2008

Kansas State University Graduate Student Travel Grant, May 2007

Kansas State University Psychology Department Travel Grant, May 2007

Kansas State University Graduate Student Travel Grant, May 2006

**Academic Memberships**

Nu Rho Psi, 2015-present

Faculty for Undergraduate Neuroscience, 2009 - present

Society for Neuroscience, Fall 2008-present

Midwestern Psychological Association, 2005 – 2008 & 2013-2014

Graduate Association of Psychology Students, Fall 2005 – Spring 2010

Vice President, 2006-2007

**Professional Development**

Faculty for Undergraduate Research Laboratory Workshop & Meeting, Summer 2017

Faculty for Undergraduate Research Laboratory Workshop & Meeting, Summer 2014

Survival Skills and Ethics Program Workshop, Fall 2008

**Funding**

Bailey, M., Kuipers, D., and Gill, M.J. (2017) North Central College Richter Grant. $5,000 to pay for supplies. Project: Role of the infralimbic cortex in reinstatement of cocaine seeking in differentially reared rats.

Gill, M.J. (2016) North Central College Summer Grant. $7,625 to pay for supplies and salaries for 2 undergraduates. Project: Sex differences during conditioned hyperactivity and sensitization of differentially reared rats.

Gill, M.J. (2015) North Central College Summer Grant. $9,500 to pay for supplies and salaries for 2 undergraduates. Project: Impact of rearing-induced changes on glutamate in rats with a cocaine history

Gill, M.J. (2014) North Central College Summer Grant. $9,500 to pay for supplies and salaries for 2 undergraduates. Project: Rearing-induced changes in neural expression during extinction and reinstatement.

**Courses Taught**

General Psychology

Drugs and Behavior

Research Methods

Biopsychology

Introduction to Neuroscience

Behavioral Neuroscience

Advanced Behavioral Neuroscience

Learning and Behavior

**Supervisory Experience**

Mentored NCC Independent Studies (NSC/PSY 499) – 12 students

Mentored NCC Undergraduate Researchers (NSC/PSY 295 or volunteers) – 23 students

Supervised Undergraduate Internships – 1 student

**Service**

**College-Wide Service**

Institutional Animal Care and Use Committee, Chair, Winter 2015-present

**Departmental Service**

Experimental Psychology Search Committee Member, Fall 2014

**Other College Service**

Served pancakes at Residential Life Pancake Breakfast, Fall 2013, 2014, Winter 2016

**Professional Service**

Poster Judge, Chicago Chapter Society for Neuroscience Annual Meeting, April 2014, 2015, 2016 & 2017