

G. Andrew Mickley, Jr.

January 2012

Present Address: Professor, Department of Psychology and the Neuroscience Program
Director of the Neuroscience Program
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Education: B.A. in Psychology (Sociology minor)
Graduated *With Honors* in Psychology, June 1970
Gettysburg College

M.A. in Experimental Psychology
(Physiological Psychology), June 1972
University of Virginia; Mentor: Phillip J. Best
Thesis: Learning Phenomena and their Relationship to Neural Activity
in the Hippocampus and Brainstem

Ph.D. in Experimental Psychology
(Physiological Psychology), August 1978
University of Virginia; Mentor: Phillip J. Best
Dissertation: Behavioral and Physiological Changes Produced by
Ionizing Radiation: Evidence for Hormone-Influenced Sex Differences
In the Rat.

Post-Graduate Training: 1978-1979 Post-doctoral training in Physiological Psychology in the
laboratory of *Dr. Herman Teitelbaum*, Armed Forces Radiobiology
Research Institute, Bethesda, MD

Sabbatical Experiences: 2000 Functional Magnetic Resonance Imaging (fMRI) of human brain.
Massachusetts Institute of Technology (with Dr. Sue Corkin) and
University of Pittsburgh (with Dr. Julie Fiez)

Current Research Interests: Neuropharmacological modulation of brain development. Memory
and learning in fetuses and neonates. Behavioral correlates of neural plasticity. Neural correlates
of acquisition, extinction and spontaneous recovery of conditioned taste aversions.

Professional
Experience:

2006-Present

Professor, Department of Psychology and the Neuroscience Program
Chairman, Neuroscience Program

Baldwin-Wallace College

Berea, OH 44017-2088

Teach courses in Psychology and Neuroscience. Conduct research concerning the neural substrate of fetal/neonatal behaviors and the role of glutamate and NMDA receptors in early memory formation. With NIMH support, conduct research concerning the neural substrate of learning, extinction and spontaneous recovery of defensive reactions to fear. Mentor students of Neuroscience and Psychology. Chair Neuroscience Studies Committee.

2006-Present

Executive Director, Nu Rho Psi ($\nu\rho\psi$)

Manage the only National Honor Society to recognize scholarly work in Neuroscience. *Nu Rho Psi* was established by the Faculty for Undergraduate Neuroscience in 2006 and incorporated in the state of Ohio in 2011.

2002-2010

Director, Faculty-Student Collaboration (FSC)

Baldwin-Wallace College

Directed the undergraduate research program including the Summer Scholars Program, FSC Courses, Student Scholar travel grants. Expanded the program to include the arts and humanities. Established and served as Managing Editor of the *B-W Journal of Research and Creative Studies*.

2002-2006

Associate Academic Dean

Professor, Department of Psychology

Director, Neuroscience Program

Baldwin-Wallace College

Berea, OH 44017-2088

Oversaw administration of Baldwin-Wallace College faculty development, new faculty orientation, faculty awards program, fall conference, aspects of faculty governance, student concerns, curriculum development, assessment of the academic program, Board of Academic Appeals and faculty grants/contracts. Taught courses in Principles of Neuroscience and Physiological Psychology. Conducted research concerning the neural substrate of fetal/neonatal behaviors, the role of glutamate and NMDA receptors in early memory formation and the neural substrate of extinction learning. Mentored students of Neuroscience and Psychology. Chaired the Neuroscience Studies Committee and newly formed Faculty-Student Collaborative Scholarship Program.

1993-2002
Professor and Chair, Department of Psychology
Director of the Neuroscience Program
Carnegie Hall
Baldwin-Wallace College
Berea, OH 44017-2088

Taught courses in Principles of Neuroscience, Physiological Psychology, Psychopharmacology, Principles of Psychology, Research Methods I, II, and Special Topic Seminars. Conducted research concerning neural transplantation, neonatal behaviors and the role of glutamate and NMDA receptors in early memory formation. Mentored students of Psychology. Provide leadership of Psychology Department. Chaired Neuroscience Studies Committee.

1990-1993
Adjunct Professor, Division of Radiological Sciences
University of Texas Health Sciences Center at San Antonio
San Antonio, TX 78284-7800

Taught behavioral radiobiology in graduate Radiobiology course. Acted as Co-Investigator on research projects developing a high-speed network for digital radiological imaging resources (e.g., PET, MRI). Acted as Associate Investigator on an NIH-sponsored training grant in Environmental Radiation Toxicology.

1989-1993
Scientific Director, Behavioral Neuroscience Group
Directed Energy Division
Armstrong Laboratory for Human Systems
Brooks Air Force Base, TX 78235-5000

Performed research in the fields of Behavioral Neuroscience, Neurotoxicology and Neuropharmacology. Managed a multidisciplinary research department studying the behavioral and biological effects of non-ionizing microwave radiations. Directed and coordinated the scientific program of the Directed Energy Division. This department included over 40 psychologists, physiologists, physicists, chemists, engineers and technicians and had an annual budget of more than five million dollars. Practiced Total Quality Management. Conceived, performed and published experiments concerning the neural substrate of learning and memory, neural transplantation, radiofrequency radiation effects on memory, thermotolerance, heat shock protein production, local cerebral glucose utilization and blood flow.

1989-1993, Adjunct Associate Professor
Division of Life Sciences
University of Texas at San Antonio
San Antonio, TX 78285-0662

Taught Neuroscience within undergraduate course on Human Physiology and Performance. Maintained collaborations concerning functional evaluations of neural graft/host interconnections.

1983-1989, Chief, Experimental Psychology Division,
Behavioral Sciences Department,
The Armed Forces Radiobiology Research Institute,
Bethesda, MD 20814-5145

Directed the research of 15 scientists and technicians. Designed, performed and published experiments that used opiates and excitatory amino acids to model effects of ionizing radiations. Pioneered neural grafting to reverse appetitive disorders and hippocampal damage. Techniques used: Intracranial drug injections, microdissection, neural transplantation, rotation, passive avoidance and locomotor movement analyses. Lectured physicians and other health care providers on the behavioral and psychological effects of ionizing radiation exposure.

1983-1989, Adjunct Associate Professor,
Department of Physiology
Uniformed Services University of the Health Sciences,
Bethesda, MD 20814-5145

Provided lectures on neurophysiology and behavior to first-year medical students in the Human Physiology course.

1981-1983, Associate Professor, 1979-1981, Assistant Professor,
Department of Behavioral Sciences and Leadership,
The United States Air Force Academy,
CO 80840

Course Director for Honors Introductory Psychology, Learning/Experimental Psychology and Psychobiology courses. Advised undergraduate students at the Academy and graduate student research at the *University of Colorado*. Received the largest research grant in U.S. Air Force Academy history. Planned, performed and published experiments concerned with opiate-induced changes in behavior and the use of pharmacological agents to model radiogenic behavioral changes. Supervised one technician, other faculty teaching associates and five student laboratory assistants per semester. Received United States Air Force Research and Development Award (a National Honor) for scientific excellence.

1981-1983, Adjunct Associate Professor
Department of Psychology,
University of Colorado,
Colorado Springs, CO 80840

Advised and supervised psychology graduate students who were matriculating at the University of Colorado at Colorado Springs while conducting behavioral neuroscience research in my laboratory at the United States Air Force Academy.

1976-1979, Principal Investigator,
Physiological Psychology Division,
Behavioral Sciences Department,
The Armed Forces Radiobiology Research Institute,
Bethesda, MD 20814-5145

Conceived, designed, performed and published experiments on the psychopharmacology of catalepsy, movement and the behavioral toxicology of ionizing radiation. Techniques used: Active/passive avoidance and locomotor activity measurements, peripheral and intracranial drug injections, brain stimulation, stereotaxic surgery and 2-Deoxyglucose autoradiography. Supervised two research technicians. Taught Basic Neuroanatomy/Neurophysiology to nursing students at Walter Reed Army Medical Center.

1975, Instructor of Psychology,
San Antonio College

Taught courses (e.g., Abnormal Psychology, Introductory Psychology) in the undergraduate Psychology curriculum.

1974-1976, Test Review Psychologist
1972-1974, Test Psychologist
USAF Occupational Measurement Center
Lackland AFB, TX

Directed the development and review of achievement tests for USAF airmen promotions. Used psychometric techniques to insure reliability and validity of tests spanning over 30 career fields. Managed teams of 5-20 specialists, test psychologists and reviewers responsible for test construction.

1971-1972 Philip Francis DuPont
Teaching Fellow,
Department of Psychology,
University of Virginia
Charlottesville, VA

Taught undergraduate course in Physiological Psychology. Performed experiments that described changes in single brain neuron electrophysiology during learning.

Military Service: Commissioned June 1970, *United States Air Force*
Active Duty: 1972 - 1993,
Retired, Lieutenant Colonel,
AFSCs: 2675, Behavioral Scientist; 2611, Scientific Manager

Special Assignment: 1986-1988, Founding Member and Officer in Charge of the Medical Radiobiology Advisory Team. Provided rapid behavioral analysis, medical advice and treatment for victims of radiation accidents worldwide.

- Grants Awarded: 1977-1979 and 1984-1989 Defense Nuclear Agency, Funded Research and Technology Work Units in Behavioral Neuroscience. (Awarded \$1,000,000)
- 1979-1980 Grant from USAF School of Aerospace Medicine: Radiogenic Changes in Physiology and Behavior. (Awarded \$90,000)
- 1981-1983 Grant from Defense Nuclear Agency: Neuroanatomical and Neuropharmacological Substrates of Radiogenic Changes in Behavior. (Awarded \$300,000)
- 1989-1993 USAF School of Aerospace Medicine intramural funding of research in Behavioral Toxicology of Radiofrequency Radiation Exposure. (Awarded \$600,000)
- 1991-1993 AFOSR Independent Laboratory Research Grant (*peer-reviewed, extramural*): Neural Transplantation and Memory. (Awarded \$138,000)
- 1994-1996 National Science Foundation Grant (*peer-reviewed, extramural*): Instrumentation to facilitate undergraduate experiences in behavioral neuroscience. (Awarded \$77,912)
- 1995-1996 Gund Foundation Grant
Neural transplantation and conditioned taste aversions. (Awarded \$3,000)
- 1996-1999 National Science Foundation Grant (*peer-reviewed, extramural*): Neuropharmacology of early memory formation (IBN-9514799). (Awarded \$210,000)
- 1997 National Science Foundation Grant (*peer-reviewed, extramural*): Undergraduate Research Supplement (To pay for student salaries in Summer). (Awarded \$6,000)
- 1998 National Science Foundation Grant (*peer-reviewed, extramural*): Undergraduate Research Supplement (To pay for student salaries in Summer). (Awarded \$12,000)

Grants (Cont.)

1999 National Science Foundation Grant (*peer-reviewed, extramural*): Undergraduate Research Supplement (To pay for student salaries in Summer). (Awarded \$5,000)

2000 National Science Foundation Grant (*peer-reviewed, extramural*): Undergraduate Research Supplement (To pay for student salaries in Summer). (Awarded \$10,000)

2001-2003 National Institutes of Health Grant (*peer-reviewed, extramural*): Brain mechanisms of learning and extinction. (Awarded \$100,000)

2003-2006 National Institutes of Health Grant (*peer-reviewed, extramural*): Neural Mechanisms of Extinction and Spontaneous Recovery. (Awarded \$150,000)

2004-2007 McGregor Fund (*peer-reviewed, extramural*): Summer Scholars Program, Baldwin-Wallace College. (Awarded \$100,000)

2006 Gund Foundation Grant (*peer-reviewed, intramural*): Extinction and spontaneous recovery alters *c-fos* expression in the brain (\$3,000)

2006-2009 National Institutes of Health Grant (*peer-reviewed, extramural*): Neural Mechanisms of Extinction and Spontaneous Recovery. (Awarded \$150,000)

2007 Gund Foundation Grant (*peer-reviewed, intramural*): Extinction and spontaneous recovery alters *c-fos* expression in the brain (Awarded \$3,000)

2008 Codrington Foundation Grant (*peer-reviewed, extramural*): Summer Scholars Program, Baldwin-Wallace College (\$25,000)

2008 Gund Foundation Grant (*peer-reviewed, intramural*): EU Extinction and spontaneous recovery alters *c-fos* expression in the brain (Awarded \$3,000)

2008 Research and Publication Grant (*peer-reviewed, intramural*): Measurement of NMDA NR2B receptors in fetal rat brain (Awarded \$2,217)

Grants (Cont.)

2009 Codrington Foundation Grant (*peer-reviewed, extramural*): Summer Scholars Program, Baldwin-Wallace College (Awarded \$25,000)

2009 Gund Foundation Grant (*peer-reviewed, intramural*):
The role of the Periaqueductal Gray in the spontaneous recovery of
a conditioned taste aversion (Awarded \$3,000)

2009-2011 National Institutes of Health Grant (*peer-reviewed, extramural*): Supplement to Neural Mechanisms of Extinction and Spontaneous Recovery: “Summer Research Opportunities for Undergraduates” (Awarded \$42,739)

2009-2011 National Institutes of Health Grant (*peer-reviewed, extramural*): Network of educators and undergraduates for research in neuroscience. Co-PI with Dr. Cheryl Frye, University of Albany, NY. (\$2,000,000 requested – *Not funded*)

2010 Codrington Foundation Grant (*peer-reviewed, extramural*): Summer Scholars Program, Baldwin-Wallace College (Awarded \$15,000)

2010 Baldwin-Wallace College, Faculty Development grant (*peer-reviewed, intramural*): to support the Summer Scholars Program, Baldwin-Wallace College (Awarded \$8,400)

2011 Baldwin-Wallace College, Faculty Development grant (*peer-reviewed, intramural*): to support travel to 2011 IBNS meeting, Baldwin-Wallace College (Awarded \$1,485)

Professional
and Honorary
Societies:

Association for Psychological Science (APS) (*Fellow*)
American Association for the Advancement of Science,
British Brain Research Association,
Council on Undergraduate Research (Counselor, 2001-Present)
European Brain and Behavior Society,
Faculty for Undergraduate Neuroscience (FUN) (*Fellow*),
International Behavioral Neuroscience Society
(*Founding Member and Fellow*)
International Brain Research Organization,
International Society for Neuroimmunomodulation,
Midwestern Psychological Association (*Charter Fellow*),
Radiation Research Society,

Society for Neuroscience
Advisory Council, North East Ohio Chapter Society for Neuroscience
Society of Toxicology, Neurotoxicology Specialty Section
International Neurotoxicology Association
World Federation of Neuroscientists,

Honor Societies:

Nu Rho Psi (*Founding member and Executive Director*)
Psi Chi (National Psychology Honorary),
Phi Sigma Society (Biological Research Honorary),
Sigma Xi (National Research Honorary)
Omicron Delta Kappa (Leadership, Honorary member)

Journal and Grant
Review Activities:

Journal Referee for:

Brain Research Bulletin
Developmental Psychobiology
Journal of Neuroscience
Learning & Memory
Life Sciences
Neuroscience
Physiology and Behavior
Pharmacology, Biochemistry and Behavior
Radiation Research
Science

Grant Referee for:

National Institutes of Health (*Ad Hoc*: Neurology B Study Section)
National Science Foundation
National Research Council
Public Health Service
Veteran's Administration

Editorial Board Memberships:

Associate Editor, *Journal of Neural Transplantation and Plasticity*
(1995-1996)
Editor, 1981-1982, *Proceedings of the Psychology in the DoD*
Symposium
Managing Editor, 2008-Present, *Journal of Research and Creative Studies*

Awards & Citations: Distinguished Alumnus award (2010), Gettysburg College

Strosacker Award for Excellence in Teaching (2009)
Baldwin Wallace College

Awards & Citations (Cont.):

Ohio Professor of the Year (2008): The Carnegie Foundation for the Advancement of Teaching and the Council for Advancement and Support of Education

Educator of the Year (2007): Faculty for Undergraduate Neuroscience

Ohio Top Educator Award (2003): *Ohio Magazine*

Gigax Faculty Scholarship Award – Baldwin-Wallace College

United States Air Force Research and Development Award in Radiation Biology (1981): USAF

Cited in: Men of Achievement, Who's Who in the East, Who's Who in American Education, Who's Who in Science and Engineering, Who's Who of Emerging Leaders in America, The International Directory of Distinguished Leadership.

Other Memberships: Member, Hanson House (Traumatic Brain Injury support organization) Advisory Board (2011-present)

Chair, Nominating Committee, International Behavioral Neuroscience Society (1995-96; 2008-2010).

Member, Institute of Electrical and Electronics Engineers (IEEE) Standards Coordinating Committee SCC28 on Non-Ionizing Radiation Hazards; Member, IEEE/USA Committee on Man and Radiation;

Peer-reviewed Journal Publications and Book Chapters:

Learning and Memory:

Best, P.J., Best, M.R. and Mickley, G.A. Conditioned aversion to visual environmental stimuli resulting from gastrointestinal distress. Journal of Comparative and Physiological Psychology, 1973, 85, 250-257.

Mickley, G.A., Cobb, B.L., Mason, P.A. and Farrell, S. Disruption of a putative working memory task and selective expression of brain c-fos following microwave-induced hyperthermia, Physiology and Behavior, 1994, 55, 1029-1038.

Mickley, G.A., Lovelace, J.D., Farrell, S.T. and Chang, K.S. The intensity of fetal taste aversion is modulated by the anesthesia used during conditioning. Developmental Brain Research, 1995, 85, 119-127.

Cobb, B.L., Ryan, K.L., Frei, M.R., Guel-Gomez, V. and Mickley, G.A. Chronic administration of L-NAME in drinking water alters working memory in rats. Brain Research Bulletin, 1995, 38, 203-207.

Mickley, G.A. and Cobb, B.L. Thermal tolerance reduces hyperthermia-induced disruption of working memory: a role for endogenous opiates? Physiology and Behavior, 1998, 63, 855-865.

Mickley, G.A., Schaldach, M.A., Snyder, K.J., Balogh, S.A., Len, T., Neimanis, K., Goulis, P.M., Hug, J., Sauchak, K., Remmers-Roeber, D.R., Carter, C. and Yamamoto, B.K. Ketamine Blocks a Conditioned Taste Aversion (CTA) in Neonatal Rats. Physiology and Behavior, 1998, 64, 381-390.

Mickley, G.A., Remmers-Roeber, D., Crouse, C., Walker, C. and Dengler, C. Detection of novelty by perinatal rats. Physiology and Behavior, 2000, 70, 217-225.

Mickley, G.A., Remmers-Roeber, D., Crouse, C. and Peluso, R. Ketamine blocks a taste-mediated conditioned motor response in perinatal rats. Pharmacology, Biochemistry and Behavior, 2000, 66, 547-552.

Mickley, G.A., Remmers-Roeber, D., Crouse, C. and Peluso, R. Ketamine blocks a taste recognition memory in fetal rats. Pharmacology, Biochemistry and Behavior, 2000, 67, 575-581.

Mickley, G.A., Remmers-Roeber, D.R., Dengler, C.M., Kenmuir, C.L. and Crouse, C. Paradoxical effects of ketamine on the memory of fetuses of different ages. Developmental Brain Research, 2001, 127, 71-76.

Mickley, G.A., Remmers-Roeber, D.R., Dengler, C.M., McMullen, C.A., Kenmuir, C.L., Girdler, B., Crouse, C. and Walker, C. Simple behavioral methods to assess the effect of drugs or toxins on sensory experience. Journal of Neuroscience Research Methods, 2002, 115, 85-92.

Mickley, G.A., Kenmuir, C.L., Dengler-Criss, C.M., McMullen, C., McConnell, A.M. and Valentine, E. Repeated exposures to gustatory stimuli produce habituation or positive contrast effects in perinatal rats. Developmental Psychobiology, 2004, 44, 176-188.

Mickley, G.A., Kenmuir, C.L., McMullen, C. A., Yocom, A. M., Valentine, E. L., Dengler-Criss, C.M., Weber, B., Wellman, J. A. and Remmers-Roeber, D. R. Dynamic Processing of Taste Aversion Extinction in the Brain. Brain Research, 2004, 1061/1, 79-89.

Mickley, G.A., Kenmuir, C.L., McMullen, C., Snyder, A., McConnell, A.M., Likins-Fowler, Valentine, E., Weber, B. and Biada, J.M. Long-term age-dependent behavioral changes following a single episode of fetal N-methyl-D-Aspartate (NMDA) receptor blockade. BMC Pharmacology, 2004, 4:28. Available: <http://www.biomedcentral.com/1471-2210/4/28>

Mickley, G.A., Kenmuir, C.L., Yocom, A.M., Wellman, J.A., and Biada, J.M. A Role for prefrontal cortex in extinction of a conditioned taste aversion. Brain Research, 2005, 1051, 176-182.

Mickley, G.A., Hoxha, Z., Bacik, S., Kenmuir, C.L., Wellman, J.A., Biada, J.M. and DiSorbo, A. Spontaneous recovery of a conditioned taste aversion differentially alters extinction-induced changes in c-Fos protein expression in rat amygdala and neocortex. Brain Research, 2007, 1152, 139-157.

DiSorbo, A., Wilson, G.N., Bacik, S., Hoxha, Z., Biada, J.M. and Mickley, G.A. Time-dependent retrograde amnesic effects of muscimol on conditioned taste aversion extinction. Pharmacology, Biochemistry and Behavior, 2009, 92, 319-326.

Mickley, G.A., Disorbo, A., Wilson, G.N., Huffman, J., Bacik, S., Hoxha, Z., Biada, J.M. and Kim, Y.-H. Explicit disassociation of a conditioned stimulus and unconditioned stimulus during extinction training reduces both time to asymptotic extinction and spontaneous recovery of a conditioned taste aversion. Learning & Motivation, 2009, 40, 209-220.

Wilson, G.N., Mickley, G.A., and Matera, K.M. The efficacy of ellagic acid in attenuating neurophysiological and cognitive-behavioral symptoms associated with infusion of amyloid-beta (A β) peptide fragments in adult rats. Journal of Research and Creative Studies, 2010, 3(1), 15-30. Available: http://www.bw.edu/resources/dean/fscs/jrcs/JRCS_Vol_3_Issue_1.pdf

Mickley, G.A., Wilson, G.N., Remus, J.L., Ramos, L., Ketchesin, K.D., Biesan, O.R., Luchsinger, J. and Prodan, S. Periaqueductal gray *c-fos* expression varies relative to the method of conditioned taste aversion extinction employed. Brain Research, 2011, 1423, 17-29.

Wilson, G.N., Biesan, O.R., Remus, J.L. and Mickley, G.A. Baclofen alters gustatory discrimination capabilities and induces conditioned taste aversion. BMC Research Notes, 2011, 4, 527. Available: <http://www.biomedcentral.com/1756-0500/4/527>

Mickley, G.A., Remus, J.L., Ramos, L., Wilson, G.N., Biesan, O.R. and Ketchesin, K.D. Acute, but not chronic, exposure to D-Cycloserine facilitates extinction and modulates spontaneous recovery of a conditioned taste aversion. Physiology and Behavior, 2012, 105, 417-427.

Neural Transplantation:

Mickley, G.A., Teitelbaum H. and Reier, P.J. Fetal hypothalamic brain grafts reduce the obesity produced by ventromedial hypothalamic lesions. Brain Research, 1987, 424, 238-248.

Mickley, G.A., Ferguson, J.L., Nemeth, T.J. and Mulvihill, M.A. Neural grafts reverse behavioral deficits associated with early radiation-induced brain damage. Brain Research, 1990, 509, 280-292.

Mickley, G.A., Ferguson, J.L., Mulvihill, M.A. and Nemeth, T.J. Early neural grafts transiently reduce the behavioral effects of radiation-induced fascia dentata granule cell hypoplasia. Brain Research, 1991, 550, 24-34.

Hippocampus and Behavior:

Mickley, G.A. and Ferguson, J.L. Enhanced acoustic startle responding in rats with radiation-induced hippocampal granule cell hypoplasia. Experimental Brain Research, 1989, 75, 28-34.

Mickley, G.A., Ferguson, L.J., Nemeth T.J., Mulvihill, M.A. and Alderks, C. Spontaneous Perseverative turning in rats with radiation-induced hippocampal damage. Behavioral Neuroscience, 1989, 103, 722-730.

Mickley, G.A., Ferguson, J.L., Mulvihill, M.A. and Nemeth, T.J. Progressive behavioral changes during the maturation of rats with early radiation-induced hypoplasia of fascia dentata granule cells. Neurotoxicology and Teratology, 1989, 11, 385-393.

Mickley, G.A., Ferguson, J.L. and Nemeth, T.J. Serial injections of MK-801 (Dizocilpine) in neonatal rats reduce behavioral deficits associated with X-ray induced hippocampal granule cell hypoplasia. Pharmacology, Biochemistry and Behavior, 1992, 43, 785-793.

Stress, Opioids and Endorphins:

Mickley, G.A., Stevens, K.E., White, G.A., and Gibbs, G.L. Endogenous opiates mediate radiogenic behavioral change, Science, 1983, 220, 1185-1187.

Mickley, G.A., Stevens, K.E., Burrows, J.M., White, G.A., and Gibbs, G.L. Morphine tolerance offers protection from radiogenic performance deficits. Radiation Research, 1983, 93, 381-387.

Mickley, G.A., Stevens, K.E., White, G.A. and Gibbs, G.L. Changes in morphine self-administration after exposure to ionizing radiation: Evidence for the involvement of endorphins. Life Sciences, 1983, 33, 711-718.

Mickley, G.A., Sessions, G.R., Bogo, V. and Chantry, K.H. Evidence for endorphin-mediated cross-tolerance between chronic stress and the behavioral effects of ionizing radiation. Life Sciences, 1983, 33, 749-754.

Mickley, G.A., Stevens, K.E., Moore, G.H., Deere, W., Mueller, G., White, G.A., and Gibbs, G.L. Ionizing radiation alters beta-endorphin-like immuno-reactivity in brain but not blood. Pharmacology, Biochemistry, and Behavior, 1983, 19, 979-983.

Mickley, G.A., Stevens, K.E. and Galbraith, J.A. Quaternary naltrexone reverses morphine-induced behaviors. Physiology and Behavior, 1985, 35, 249-253.

Mickley, G.A. Histamine H2 receptors may mediate morphine-induced locomotor hyperactivity of the C57BL/6J mouse. Behavioral Neuroscience, 1986, 100, 79-84.

Stevens, K.E., Mickley, G.A. and McDermott, L.J. Brain areas involved in production of morphine-induced locomotor hyperactivity of the C57BL/6J mouse. Pharmacology, Biochemistry and Behavior, 1986, 24, 1739-1747.

Mickley, G.A., Mulvihill, M.A. and Postler, M.A. Brain mu and delta opioid receptors mediate different locomotor hyperactivity responses of the C57BL/6J mouse. Psychopharmacology, 1990, 101, 332-337.

Psychopharmacology:

Mickley, G.A. and Teitelbaum, H. Movement induced in cataleptic rats: Differential effects produced by electrical stimulation of the lateral hypothalamus, substantia nigra, and reticular formation. Psychopharmacology, 1978, 57, 145-149.

Teitelbaum, H., Giammatteo, P. and Mickley, G.A. Differential effects of localized lesions of n. accumbens on morphine- and amphetamine-induced locomotor hyperactivity in the C57BL/6J mouse. Journal of Comparative and Physiological Psychology, 1979, 93, 745-751.

Mickley, G.A. and Teitelbaum, H. Yohimbine blocks lateral-hypothalamic-mediated behaviors. European Journal of Pharmacology, 1979, 60, 143-151.

Brain Mechanisms of Radiation-Induced Behavioral Change:

Mickley, G.A. and Teitelbaum, H. Persistence of lateral hypothalamic-mediated behaviors after a supralethal dose of ionizing radiation. Aviation, Space and Environmental Medicine, 1978, 49, 868-873.

Mickley, G.A. Blood Pressure and Behavior of Male and female Rats are Differentially Altered Immediately After Exposure to Ionizing Radiation. Proceedings, Psychology in the Department of Defense (Sixth Symposium), USAFA-TR-76-12, 1978, 349-351.

Mickley, G.A. Behavioral and physiological changes produced by a supralethal dose of ionizing radiation: Evidence for hormone-influenced sex differences in the rat. Radiation Research, 1980, 81, 48-75.

Mickley, G.A. Antihistamine Radiation Protection is Dissimilar from Estrogen Radiation Protection. Proceedings, Psychology in the Department of Defense (Seventh Symposium), USAFA-TR-80-12, 1980, 325-329.

Mickley, G.A. Antihistamine provides sex-specific radiation protection, Aviation, Space, and Environmental Medicine, 1981, 52, 247-250.

Mickley, G.A., Teitelbaum, H., Parker, G.A., Vieras, F., Dennison, B.A. and Bonney, C.H. Radiogenic changes in the behavior and physiology of the spontaneously hypertensive rat: evidence for a dissociation between acute hypotension and incapacitation, Aviation, Space, and Environmental Medicine, 1982, 53, 633-638.

Mickley, G.A., Stevens, K.E., Lawrence, G.H., Gibbs, G.L. and White, G.A. Atropine Fails to Counter Radiogenic Behavioral Deficits. Proceedings, Psychology in the Department of Defense (Eighth Symposium), USAFA-TR-82-10, 1982, 498-506.

Stevens, K.E., Mickley, G.A., Lawrence, G.H., Fraass, R.G. and Polonsky, R. Neutron Irradiation Produces Behavioral Changes Which Are not Reversed by Atropine, Proceedings, Psychology in the Department of Defense, (Eighth Symposium), USAFA TR-82-10, 1982, 507-515.

Mickley, G.A., Stevens, K.E., Galbraith, J.A., White, G.A. and Gibbs, G.L. Quaternary Naltrexone Reverses Radiogenic and Morphine-Induced Locomotor Hyperactivity. Proceedings, Psychology in the Department of Defense (Ninth Symposium), USAFA TR 84-2, 1984, 77-81.

Mickley, G. A. and Stevens, K.E. Stimulation of muscarinic acetylcholine receptors of the hypothalamus acutely reverses radiogenic hypodipsia of the rat. Aviation, Space and Environmental Medicine, 1986, 57, 250-255.

Mickley, G.A. Radiation safety. The Washington Post Health Section: A Weekly Journal of Health, Science and Technology, 1988 4/5, 4.

Kandasamy, S.B., Hunt, W.A., and Mickley, G.A. Implication of prostaglandins and histamine H1 and H2 receptors in radiation-induced temperature responses of rats. Radiation Research, 1988, 114, 42-53.

Mickley, G.A., Bogo, V., Landauer, M. and Mele, P., Current Trends in Behavioral Radiobiology. In, Terrestrial Space Radiation and its Biological Effects, NATO ASI Series A: Life Sciences Vol. 154 (P.D. McCormack, C.E. Swenberg and H. Bucker, Eds.) Plenum Press, New York, 1988, pp. 517-536.

Mickley, G.A., Bogo, V., and West, B. Behavioral and Physiological Changes with Exposure to Ionizing Radiation. In, R. Zajtchuk, D.P. Jenkins and R.F. Bellamy (Eds). Textbook of Military Medicine, Part 1, Vol. 2, Medical Consequences of Nuclear Warfare, (R.I. Walker and T.J. Cerveny, Eds). TMM Publications Office of the USA Surgeon General, Falls Church, 1989, pp. 105-151.

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Human Psychology:

Mickley, G.A. Psychological Effects of Nuclear Warfare, In, Military Radiobiology, (Eds. J. Conklin and R. Walker) Academic Press, NY, 1987, pp. 303-319.

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Mickley, G.A. Can animals serve as useful models for research on the psychological effects of radiation exposure? In The Medical Basis for Radiation Accident Preparedness, III: Psychological Perspective, Elsevier, 1991, 99, 25-38.

Research Techniques:

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Mickley, G.A., Hoxha, Z., Biada, J., Kenmuir, C and Bacik, S. Acetaminophen self-administered in the drinking water increases the pain threshold of rats (*Rattus norvegicus*) Journal of the American Association of Laboratory Animal Science. 2006, 45(5), 48-54.

Academic Administration:

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Undergraduate Research:

Mickley, G.A. College-Wide Curricular Reform to Provide Faculty-Student Collaborative Scholarly Experiences at Baldwin-Wallace College. In. Designing, Implementing, and Sustaining a Research-Supportive Undergraduate Curriculum: A Compendium of Successful Curricular Practices from Faculty and Institutions Engaged in Undergraduate Research. K. K. Karukstis, and T. Elgren (Eds), CUR, Washington DC, 2007.

Mickley, G.A. Fledgling journal takes off. In. Publishing an undergraduate research journal. A. Hart (Ed.), CUR, Washington DC, 2011.

Neuroscience Education:

Mickley, G.A., Kenmuir, C.L. and Remmers-Roeber, D. Mentoring undergraduate students in neuroscience research outside of the classroom setting: A model system at Baldwin-Wallace College. Journal of Undergraduate Neuroscience Education. 2003, 1(2), A28-A35.

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Other Publications (Not Peer-Reviewed):

Mickley, G.A. A Book Review of Stress Induced Analgesia, by M.D. Tricklebank and G. Curzon. Book Reviews in the Neurosciences. The Blors Corp. Madison, Summer, Number 68, 1985.

Mickley, G.A., Microwave radiation, thermal tolerance and heat shock proteins. Invited review article In: Strughold Researcher, (A publication of the USAF School of Aerospace Medicine) June 1990.

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http://sciencecareers.sciencemag.org/career_development/previous_issues/articles/2008_03_28/career_development_a0800044 . 28 March 2008

Mickley, G.A., Learning about learning via the CTA paradigm, *Conditioned Taste Aversion Highlights*. http://www.american.edu/academic.depts/cas/psych/Mickley_Highlight.pdf . May 2008

Abstracts and Presentations:

Council on Undergraduate Research National Conference

2010 What every undergraduate psychology major should know: The knowledge, skills and values of psychological research

2010 The golden thread: How to sustain an undergraduate research laboratory using peer mentoring and clear expectations

Society for Neuroscience:

1978 Role of n. accumbens in morphine induced locomotor activity in the C57/BL mouse.

1981 Radiation-induced hyperactivity in the C57BL/6J mouse: Evidence for the release of endogenous opiates.

1982 Changes in morphine self-administration after exposure to ionizing radiation: Evidence for the involvement of beta-endorphin.

1982 Haloperidol catalepsy is antagonized by a high dose of morphine in the C57BL/6J mouse.

1983 Changes in brain glucose utilization after an injection of morphine or exposure to ionizing radiation.

1984 Antihistamines alter morphine-induced locomotor hyperactivity.

1985 Brain grafts reduce the obesity produced by ventromedial hypothalamic lesions.

1986 Perseverative spontaneous turning: A new behavioral measure of hippocampal damage.

1987 The role of opioid delta receptors in the production of locomotor hyperactivity of the C57BL/6J mouse.

1987 Radiation-induced hippocampal damage produces locomotor hyperactivity and spontaneous perseverative turning but not enhanced turning speed.

1988 Progressive changes produced by radiation-induced hippocampal damage.

1988 Interaction of the endogenous opioid system and radiation in the suppression of appetitive behavior.

1989 Neural transplantation in adult rats with early radiation-induced hypoplasia of fascia dentata granule cells: Selective attenuation of behavioral deficits.

1989 Stress produces an acute and long-term enhancement of the acoustic startle response: A role for endogenous opioids.

1989 Endogenous opioid and dopaminergic interactions produce a hypersalivation response following exposure to ionizing radiation.

1990 Selective and transient behavioral benefits are produced by neural grafts that promptly follow radiation-induced hypoplasia of fascia dentata granule cells.

1990 Isolation suppresses both immune and neuroendocrine functioning and decreases the locomotor activity of normal and immunosuppressed C3H/HeN mice.

1991 MK-801 reduces behavioral deficits associated with X-ray-induced hippocampal granule cell hypoplasia.

1991 Microwave-induced brain hyperthermia alters local cerebral glucose utilization.

1991 High energy electron and proton irradiation of rat brain induces degeneration detectable with the cupric silver stain.

1991 Survival and connectivity of neural grafts within normal and damaged hippocampal tissue visualized with voltage-sensitive probes.

1992 Thermal stressors produce non-uniform brain temperature gradients and alterations in local cerebral glucose utilization (LCGU).

1992 *C-fos* in the rat hypothalamus after thermal and fluid challenges.

1993 Anesthetic-dependent enhancement of taste aversion learning *in utero*.

- 1993 Hyperthermia-induced changes in behavior and stress proteins are altered by thermotolerance.
- 1994 Chronic administration of L-NAME in drinking water alters working memory in rats.
- 1995 Ketamine blocks a conditioned taste aversion (CTA) in neonatal rats.
- 1996 N-methyl-D-aspartate (NMDA) receptor blockade differentially modulates fetal and neonatal conditioned taste aversions (CTA): Brain ketamine content.
- 1997 Further evidence for behavioral organization in the rat fetus: Perseveration/isolation of spontaneous motor behavior.
- 1998 The duration of taste recognition memory (TRM) in peri-natal rats.
- 1999 Ketamine blocks associative and non-associative learning in fetal rats.
- 2000 Paradoxical effects of ketamine on the memory of fetuses of different ages.
- 2001 A role for gustatory neocortex (GNC) in the detection of a familiar taste and the extinction of a conditioned taste aversion (CTA).
- 2002 Long-term age-dependent effects of a single episode of fetal N-Methyl-D-aspartate (NMDA) receptor blockade: The ketamine paradox revisited.
- 2003 *C-fos* protein expression in the brain during the extinction of a conditioned taste aversion (CTA).
- 2004 Spontaneous recovery of a conditioned taste aversion reverses extinction-induced changes in c-Fos expression in rat gustatory neocortex.
- 2005 Ketamine enhances positive contrast effects (PCEs) and up-regulates N-methyl-D- aspartate (NMDA) NR2B receptors in fetal rats.
- 2006 Spontaneous recovery (SR) of a conditioned taste aversion (CTA) differentially alters extinction-induced changes in *c-fos* protein expression in rat amygdala (AMY) and neocortex
- 2007 Muscimol alters extinction of a conditioned taste aversion
- 2008 Spontaneous recovery of fear may be attenuated without a corresponding change in c-Fos expression in the medial prefrontal cortex, gustatory neocortex, or amygdala
- 2008 Efficacy of ellagic acid in attenuating symptoms associated with amyloid-beta infusion in the adult rat

2009 D-Cycloserine fails to facilitate extinction of a conditioned taste aversion and potentiates spontaneous recovery

2010 Acute, but not chronic, exposure to D-Cycloserine facilitates extinction of a conditioned taste aversion

2010 Systemic baclofen decreases gustatory discrimination and induces conditioned taste aversion in adult rats

2011 Latent inhibition of a conditioned taste aversion in fetal rats is age-dependent.

International Behavioral Neuroscience Society:

1993 Hyperthermia-induced changes in working memory are altered by thermotolerance.

1994 The intensity of fetal taste aversion learning is modulated by the anesthesia used during conditioning.

1997 State-dependent learning does not explain ketamine-induced blockade of conditioned taste aversions in neonatal rats.

1998 NMDA receptor blockade and sensory experience.

1999 Ketamine blocks taste recognition memory (TRM) in perinatal rats.

2000 Development of positive contrast gustatory learning in fetal rats.

2001 Changes in brain c-fos expression during extinction of a conditioned taste aversion (CTA)

2004 The role of gustatory neocortex in the extinction and spontaneous recovery of a CTA

2005 The effects of ketamine on the expression of NMDA NR2B receptor subunits

2005 Memory deficits in neonatal and juvenile rats following chronic stress

2006 Time-dependant effects of systemic muscimol on extinction of a conditioned taste aversion.

2008 Explicit disassociation of a CS and US during extinction training reduces both time to asymptotic extinction and spontaneous recovery of a conditioned taste aversion

2011 *C-fos* expression in the Periaqueductal gray varies relative to the method of conditioned taste aversion extinction employed

Radiation Research Society:

- 1977 Lateral hypothalamic brain stimulation counteracts radiation-induced akinesia.
- 1980 Post-irradiation hypotension fails to predict behavioral incapacitation.
- 1981 Reversal of radiogenic adipsia by cholinergic stimulation of the hypothalamus.
- 1982 Morphine-tolerant rats are resistant to radiogenic incapacitation.
- 1983 Stress pre-treatment reduces subsequent radiation-Induced behavioral changes.
- 1984 Selective brain lesions reduce morphine- and radiation-induced locomotor hyperactivity of the C57BL/6J mouse.
- 1988 Dose rate and sex effects on the suppression of appetitive behavior following exposure to gamma-spectrum radiation.

Society of Toxicology:

- 1979 Persistence of lateral hypothalamic-mediated behaviors after a supralethal dose of ionizing radiation.
- 1987 Ionizing radiation induces hypothermia in guinea pigs.
- 1992 Microwave-induced hyperthermia disrupts working memory.

Abstracts and Presentations at Other Society Meetings:

- 1972 Visual stimuli as a secondary unconditioned stimulus in taste aversion. Proceedings of the 43rd Annual Meeting of the Eastern Psychological Association.
- 1977 Movement induced in cataleptic rats: Differential effects produced by electrical stimulation of the lateral hypothalamus, substantia nigra, and reticular formation, Program for the Psychonomic Society Eighteenth Annual Meeting.
- 1980 Role of histamine and beta endorphin in radiation-induced hypotension and acute performance decrement in the rat. Aviation, Space and Environmental Medicine.
- 1985 Neurophysiology of Sexual Behavior. Lecture as part of the Postgraduate course on sexuality in Medicine, Uniformed Services University of the Health Sciences.

1984-1989 Psychological Effects of Nuclear Warfare Lecture as part of The Medical Effects of Nuclear Weapons Course, Armed Forces Radiobiology Research Institute.

1986 Effects of ionizing radiation on the temperature of conscious rats, International Conference on Prostaglandin and Lipid Metabolism in Radiation Injury.

1987 Effects of WR-2721 and its thiol, WR-1065 on ionizing radiation-Induced hypothermia in guinea pigs, FASEB.

1987 Neonatal X-irradiation of the hippocampus enhances acoustic startle in adult rats, Radiation Research: Proceedings of the 8th International Congress of Radiation Research, London.

1987 Effects of ionizing irradiation on time and force measures during a shock avoidance task. 13th Annual Convention of the Association for Behavior Analysis.

1987 Current Trends in Behavioral Radiobiology. Paper presented at the NATO Advanced Study Institute on Terrestrial Space Radiation and its Biological Effects, Corfu, Greece.

1988 Neonatal X-irradiation of the hippocampus enhances acoustic startle in adult rats. Program of the fourth Annual F. Edward Hebert School of Medicine Conference on Military Medicine: The medical consequences of disaster and combat stress for individuals and organizations.

1989 Is neurotensin involved in radiation-induced hypothermia? FASEB.

1989 Neonatal X-irradiation of the hippocampus disproportionately reduces high speed movement. Conference on Military Medicine, Uniformed Services University of the Health Sciences.

1990 Neural graft/Hippocampal host interactions visualized using voltage sensitive dyes. Minority Biomedical Research Support Conference.

1992 Microwave-induced hyperthermia disrupts working memory and evokes selective expression of brain c-fos. Proceedings of The First World Congress for Electricity and Magnetism in Biology and Medicine.

1993 Computer reconstruction of grafts from serially sectioned rat brain. Proceedings of the Thirty-third Annual Meeting of The American Society for Cell Biology.

1994 Hyperthermia-induced changes in behavior and stress proteins are altered by thermotolerance and naltrexone. Proceedings of the 16th Annual Meeting of the Bioelectromagnetics Society.

1994 Microwave-induced brain hyperthermia alters local cerebral glucose utilization. Proceedings of the 16th Annual Meeting of the Bioelectromagnetics Society.

Selected Invited Lectures:

1991 New brains for old: The use of neural transplantation to reverse behavioral changes following brain damage, Gettysburg College, Gettysburg, PA. *Distinguished Alumnus Lecture*.

1992 Can Neural Grafts Reverse Behavioral Deficits Associated With Early Radiation-Induced Damage to the Hippocampus? Central Research Division, Pfizer Pharmaceuticals, Groton, CT.

1992 Repair of hippocampal damage with neural grafts. FISOONS Pharmaceuticals, Rochester, NY.

1992 Can Neural Grafts Reverse Behavioral Deficits Associated With Early Radiation-Induced Damage to the Hippocampus? Lederle Laboratories, Pearl River, NY.

1993 Behavioral effects of ionizing radiations. Department of Radiology, University of Texas Health Sciences Center, San Antonio, TX

1996 Fetal brains: Neural Transplantation, Learning and Memory. Gliotech, Cleveland, OH

1997 The learning world of the newborn, Cutting Edge Conference 1997: Neuroscience and Psychology, Midpark Library Media Center, OH

1997 Behavioral components of neural transplantation, Department of Psychology, Miami University, Oxford, OH

2000 Early memory formation: Behavior and pharmacology, Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology, Cambridge, MA.

2001 My memories of H.M; Early memory formation: Behavior and pharmacology, Department of Psychology and the Neuroscience Program, East Carolina State University, Greenville, NC.

2003 Mentoring undergraduate students in neuroscience research outside of the classroom setting: A model system at Baldwin-Wallace College, PKAL/NSF Conference, Oberlin College, Oberlin, OH.

2007 The behavioral pharmacology of early memory formation, University of Toledo School of Medicine, Toledo, OH

2009 The behavioral pharmacology of early memory formation, Department of Psychology, Miami University, Oxford, OH

2010 Neuroscience, MidPark High School, Middlebury Heights, OH "Going Global With Science" Lecture Series.