Curriculum Vitae

Donna L. Korol, Ph.D. Syracuse University Tel: 315.443.8780 <u>dlkorol@syr.edu</u>

Education

1983	B.S., Zoology, University of Wisconsin-Madison (Mentor: P. Lipton)
1985-1991	Ph.D., Neuroscience, University of Virginia (Mentor: P.C. Brunjes)
1991-1994	Postdoctoral Fellow (NIH), University of Arizona, Arizona Research Laboratories,
	Division of Neural Systems, Memory and Aging (Mentor: C.A. Barnes)

Positions Held

1994-1998	Instructor, Department of Psychology, University of Virginia
1994-1998	Research Assistant Professor, Department of Psychology, University of Virginia
1998-1999	Visiting Assistant Professor, Department of Psychology, Washington and Lee University
1999-2000	Assistant Professor, Department of Psychology, Binghamton University, SUNY
2000-2002	Research Assistant Professor, College of Medicine and Department of Psychology,
	University of Illinois at Urbana-Champaign
2002-2008	Assistant Professor, Department of Psychology and College of Medicine, University of
	Illinois at Urbana-Champaign
2004-2015	Affiliate, Institute for Genomic Biology, University of Illinois at Urbana-Champaign
2008-2012	Associate Professor, Department of Psychology, University of Illinois at Urbana-
	Champaign
2008-2012	Coordinator of outreach, Neuroscience Program, University of Illinois
2009-2012	Course Coordinator for Behavioral Sciences for M1, College of Medicine, University of
	Illinois at Urbana-Champaign
2009-2012	Affiliate, Department of Molecular and Integrative Physiology, University of Illinois at
	Urbana-Champaign
2012-2023	Associate Professor, Biology Department, Syracuse University, retired
2012-present	Affiliate, Department of Neuroscience & Physiology, Upstate Medical University
2012-2023	Faculty Affiliate, Aging Studies Institute, Syracuse University
2013-2017	Posse Foundation Mentor, Syracuse University LA Posse-II Scholars
2023-present	Program Director, InROADS, Aging Studies Institute, Syracuse University
2023-present	Faculty Associate, Aging Studies Institute, Syracuse University

Awards, Honors, and Fellowships

1984	NIMH Predoctoral Training Fellowship
1986-1986	Dupont Fellowship
1987-1990	NICHD Predoctoral Training Fellowship in Neural and Behavioral Development
1988	Association for Chemosensory Sciences, Conference Travel Award
1989-1990	University of Virginia Graduate School of Arts and Sciences Dissertation Year Award
1991-1994	NIA National Research Service Award (post-doctoral)
1996	Kellogg Insert of the Year Award for scientific review on Breakfast and Performance
2002	University of Illinois, Initiative on Aging incentive research award
2003	Neurobiology of Lipids, Editors' Choice award for noteworthy presentation at Society for
	Neuroscience annual meeting
2004-2005	Mabel Kirkpatrick Hohenboken Teaching Enhancement Award, University of Illinois,
	Department of Psychology
2002-2006	Recognized on the students' List of Excellent Teachers, University of Illinois
2008-2011	Recognized on the students' List of Excellent Teachers, University of Illinois

2008	University of Illinois, Provost's Campus Committee on Promotion and Tenure
	Outstanding Achievement Award
2009	Top Reviewer for Hormones and Behavior, Elsevier Press
2014	James K. Duah-Agyeman Faculty of the Year Award for the Center for Graduate
	Preparation and Achievement, Syracuse University

Professional Activities

Associate Editor

2020-present Frontiers in Aging Neuroscience, Frontiers Journal Series

Editorial Boards

2006-2015	Hormones and Behavior, Elsevier
2009-present	Neurobiology of Learning and Memory, Elsevier
2009-2020	Review Editor, Frontiers in Aging Neuroscience, Frontiers Journal Series
2012-2015	Conference Papers in Science: Neuroscience,

Guest Editor

2010-2011 Special issue of *Neurobiology of Learning and Memory*, Memory impairment and disease

Ad-hoc manuscript reviewer

American Journal of Clinical Nutrition; Behavioral and Brain Functions; Behavioral Neuroscience; Behavioural Brain Research; Behavioural Pharmacology; Behavioural Processes; Biological Psychiatry; Brain Research; eLife; Endocrinology; European Journal of Neuroscience; Experimental Gerontology; Experimental Neurology; Frontiers in Aging Neuroscience; Hippocampus; Hormones and Behavior; Journal of Neurochemistry; Journal of Neuroendocrinology; Journal of Neuroscience; Journal of Neuroscience Methods; Journal of Neuroscience Research; Learning and Memory; Molecular Therapy; Neurobiology of Aging; Neurobiology of Learning and Memory; NeuroImage; Neuroscience; Neuroscience Letters; Pharmacology, Biochemistry and Behavior; Physiology and Behavior; Proceedings of the National Academy of Sciences; PLoS One; Psychology and Aging; Psychoneuroendocrinology; Reproduction; Reviews in the Neurosciences; Scientific Reports; Stress

Grant Review Boards

2004, 2005	Member, NSF Advisory Panel for IOS, Neural Systems cluster/modulation programs (declined 2010; 2013; 2015)
2016	Invited Member, NSF Advisory Panel for IOS, Behavioral Systems cluster / Animal Behavior programs (alternate)
2016	Member, Canadian Institutes for Health Research
2018	NIH (declined due to family care obligations)

Ad-hoc grant reviewer

National Science Foundation; Alzheimer's Association; U.S. Veterans Affairs; PPP Foundation (UK), Medical Research Council (UK); Canadian Institutes for Health Research; Several university and state research award programs

Membership

Society for Neuroscience; Society for Behavioral Neuroendocrinology; Women in Neuroscience; American Association for the Advancement of Science; Association of Women in Science; Women's Health Research Cluster (University of British Columbia).

Service

Departmental a	and University
1991-1994	Committee on Gerontology, University of Arizona
1994-1998	Center on Aging, University of Virginia
2001-2006	Initiative on Aging, University of Illinois (final year, 2006)
2001-2003	Admissions Committee, Neuroscience Graduate Program, University of Illinois
2005-2006	Chair, Admissions Committee, Neuroscience Graduate Program, University of Illinois
2002	Organizer (and speaker) for Bench to Bedside symposium on Menopause: Making
	Choices, Medical Scholars Program, School of Medicine, University of Illinois
2002-2010	Graduate Awards Committee/Graduate Education Committee, Department of
	Psychology, University of Illinois
2003-2005	Executive Committee, Neuroscience Graduate Program, University of Illinois
2006-2007	Executive Committee, Neuroscience Graduate Program, University of Illinois
2010-2012	Executive Committee, Neuroscience Graduate Program, University of Illinois
2003-2005	Departmental Advisory Committee to Division of Animal Resources, Department of
	Psychology, University of Illinois
2007-2008	Teaching Plan Evaluation Committee, Department of Psychology, University of Illinois
2007-2010	Invited participant, annual Illinois Summer Neuroscience Institutes
2008-2012	Academic Disciplinary Committee, Department of Psychology, University of Illinois
2009	Search committee for Psych 100 coordinator, Department of Psychology, University of
	Illinois
2010-2012	Curriculum Revision, College of Medicine, University of Illinois
2010	Undergraduate Distinction Committee, Department of Psychology, University of Illinois
2011	Search Committee for Medical Scholars Program Coordinator, College of Medicine,
	University of Illinois
2011	Search Committee for Osher Lifelong Learning Institute Director, Urbana-Champaign
2011-2012	Independent Plans of Study (IPS) Advisor, College of LAS, University of Illinois
2011-2012	Staff and Faculty Awards Committee, Department of Psychology, University of Illinois
2012-present	Presenter, LSAMP workshops for annual and summer programs
2012-present	Faculty, Women in Science and Engineering (WiSE) programming
2012-2013	Governance committee, Neuroscience Initiative, Syracuse University
2012-2013	Curriculum committee, Neuroscience Initiative, Syracuse University
2013-2015	Curriculum committee, Neuroscience Program, Upstate Medical University
2013-2014	Search Committee Biochemistry faculty position, Syracuse University
2014-present	Faculty Advisory Board, LSAMP program, Syracuse University
2014-2015	Search Committee Neuroscience faculty position, Syracuse University
2014-present	Curriculum Committee, Department of Biology, Syracuse University
2015-2016	Graduate Committee, Department of Biology, Syracuse University
2016-present	Faculty Mentoring Committee, Department of Biology, Syracuse University
2017	Invited external panelist, Arizona State University Honors Program thesis committee
2020-2021	Chair, Department Inclusion, Diversity, Equity, and Access (IDEA) Website committee
2020-present	Member, Department IDEA committee
2021	Developer and mentor, <i>PowerLab I and II</i> , SU LSAMP- and SOURCE-sponsored virtual
2021 2022	research program. July 18-July 30, 2021
2021-2023	Faculty Advisor, Phi Delta Epsilon, International Medical Professional Fraternity
2021-present	Co-developer and program coordinator, Gelfand Family Interdisciplinary Research on Alzheimer's Disease Scholars (InROADS) program
	maneriner's Disease scholars (IIIKOADS) program

Societies, Conferences, Institutions2003Invited Organizer and Program Chair for the XXVII Winter Conference on the
Neurobiology of Learning and Memory, Park City, Utah, January 11-14

2003	Chair and speaker in session titled <i>Systems and cellular pathways of ovarian steroid actions on learning and memory</i> , at the XXVII Winter Conference on the Neurobiology of Learning and Memory, Park City, Utah, January 11-14
2003	Chair of Neuroscience Session, UIUC Initiative on Aging, First Annual Summer
	Conference, June 17-18
2007-2011	Society for Behavioral Neuroendocrinology Education Committee
2009	Invited session chair, Exercise, Physical Activity and Brain Function, at the XXXIII
	Winter Conference on the Neurobiology of Learning and Memory, Park City, Utah,
	January 3-6
2012	Invited co-chair, Data Blitz Session, XXXVI Winter Conference on the Neurobiology of
	Learning and Memory, Park City, Utah, January 4-7
2014-2018	Invited mentor, Society for Neuroscience professional development workshops, Career
	Development Topics: A Networking Event
2022	Session co-organizer and speaker: Spritzer, M.D., Korol, D.L., Toufexis, D.J., Brake,
	W.G. Regulation of learning strategies by sex steroids in males and females, 11 th
	International Meeting on Steroids and Nervous System, Torino, Italy.
2024-	Invited Member, American Psychological Association Committee on Animal Research
	and Ethics (CARE).

Public Engagement and Outreach

1991-1992	Volunteer, Med-Start program, University of Arizona
1993-1998	Leader, tutorials and debates on Animal Rights v. Animal Research, area schools,
	Charlottesville, VA
1994-1999	Developer, project-based curricula (HOWS - Hands On With Science) for teaching
	neuroscience to 7-12 graders, Tandem Friends School, Charlottesville, VA and to 6-8
	graders at Village Middle School for girls, Charlottesville, VA
1998-2002	Mentor for pre-college science teachers through the Society for Neuroscience
1998-present	Outreach Partner, Society for Neuroscience
2001	Developer and facilitator, GirlZone workshop on Bodacious Brains, Champaign-Urbana,
	October 20
2001-2002	Co-organizer, Brain Awareness Week event, Neuroscience Program, University of
	Illinois
2002	Invited presenter, Society for Neuroscience Hands-on Workshops for Educators
2003-2009	Organizer, Brain Awareness Day, Neuroscience Program, University of Illinois
2005-2006	Invited participant, Freeman Fellows program, UIUC. [Facilitated roundtable discussions
	about academic integrity with Freeman Fellows.]
2008	Invited participant, University of Illinois' Osher Lifelong Learning Institute (OLLI)
2008	Co-organizer, exhibits for Chicago Science in the City, December 27-29
2008-2012	Co-developer and facilitator, Project NEURON, Neuroscience Teacher Institute
2009	Coordinator, OLLI course on Brains in Society
2010-2012	Co-developer, neuroscience curricula and S.T.A.R. program for Don Moyer Boys and
	Girls club
2010-2012	Member, Senior Project Committee, University Laboratory High School, Urbana, IL
2011	Mentor, University of Illinois' University Laboratory High School iSTEM interns
2011	Mentor, OLLI-NSP Citizen-Scientist program
2011	Coordinator, Academic program on Brain and Behavior, Circle Academy, Urbana, IL
2011-2013	Co-developer, F.I.N.D. (Faces in Neuroscience Discovery) series at Orpheum Children's
	Science Museum
2011-2013	Co-developer, FIND Orphy: Portable science for the public, collaborative museum
	exhibit with the Orpheum Children's Science Museum, Champaign, IL

2013-2014	Developer, with Mark Morris Dance Group and SU Arts Engage, Dance for Parkinson's
	workshop titled, Movement for Healthy Aging. April 11-12, 2014
2015-2018	Co-founder, funded Movement for Healthy Aging Initiative, dance through exercise and
	exercise through dance program for under-resourced communities
2019-2020	Participant, BGSO community outreach program, Westcott Community Center

Research Funding and Consulting *Pending*

2024-2027	NIH AREA, Determining the roles of brain-derived neurotrophic factor (BDNF) and neuronal synchrony in the memory-enhancing effects of testosterone in the aging male brain. Role: Consultant (M. Spritzer PI)
2024-2027	
Current	
Completed	
2019-2023	NIH R01 NS105826, Impact of dysfunctional BDNF on dopamine terminal remodeling in the Parkinsonian striatum
	Role: Senior personnel, paid consultant (K. Steece-Collier, PI)
2021-2022	Collaboration for Unprecedented Success and Excellence (CUSE) program, Intergenerational Transmission of Cognitive Impairment in Later Life. Role: co-I (M. Silverstein, PI)
2018-2022	NIH R21 AG057947, Age-related changes in learning and memory mediated by noradrenergic regulation of astrocytes
2016-2017	Role: PI NSF IOS 1318490: <i>Contributions of astrocytes to metabolic modulation of memory</i> Role: Co-I (P. Gold, PI)
2016-2017	NIH R56: <i>Mechanisms of cognitive impairment in sleep apnea syndrome</i> Role: Consultant (I. Topchiy, PI)
2010-2017	NIH P50 AT006268, from ODS, NCCIH, and NCI Dietary Supplement Research Centers: Botanicals (W. Helfrich Program PI; subcontract from UIUC) <i>Botanical Estrogens: Mechanisms, Dose and Target Tissues</i> Role: Project PI at SU (S. Schantz, Project PI)
2016-2017	New York State Appropriations, New York State Office of Children and Family Services: <i>Movement for Healthy Aging</i> Role: Co-I (J. Wilmoth, PI, M. Pagan, Co-I)
2016-2017	Health foundation of Western and Central New York: <i>Movement for Healthy Aging</i> <i>Initiative</i> Role: Co-I (J. Wilmoth, PI; M. Pagan, Co-I)
2014-2016	NIH/NINDS 5R21 NS085502: Exercise recovers cholinergic dysfunction through neurotrophin modulation
2013-2015	Role: consultant (L. Savage, PI) NIH P30 AG034464, Pilot project for Center for Aging and Policy Studies, Syracuse University: Use it and boost it: Enhancing cognition in elderly with prior mental activity
2013-2015	Role: PI NIH P30 AG034464: Pilot project for Center for Aging and Policy Studies, Syracuse University. <i>Energizing the aging brain for optimal learning and memory</i> Role: Co-PI (P. Gold, PI)
2012-2013	Public Engagement grant, University of Illinois: <i>FIND Orphy</i> Role: Co-PI (Barbara Hug, co-PI)

2011-2012	Supplement to NIH 1 R25 RR024251-01A2 MAA: Brain CASE (Computer Aided Student Exploration): development of a video game on traumatic brain injury Role: Co-PI (B. Hug, PI)
2011-2012	NSF IOS 118414, Supplement to IOB 0520876: <i>Estrogen, learning strategy, and neural systems: Timing and cellular mechanisms.</i> Role: PI
2009-2015	NIH 1 R25 RR024251, SEPA program: Project NEURON: <u>N</u> ovel <u>E</u> ducation for <u>Understanding Research on <u>N</u>euroscience. <u>https://neuron.illinois.edu/</u> Role: Co-PI (B. Hug, PI)</u>
2009-2013	NSF IOS 0843175: <i>Neuroendocrine modulation of LTP durability</i> Role: PI
2005-2011	NSF IOB 0520876: Estrogen, learning strategy, and neural systems: Timing and cellular mechanisms. Role: PI
2005	Society for Neuroscience Katrina relief award: <i>Research support for displaced students</i> Role: Mentor
2004-2010	NIH P01 AG024387 (Helferich PI) <i>Phytoestrogens and Aging: Dose, Timing & Tissue.</i> <i>Project 3: Dietary estrogens and cognitive function during aging</i> Role: Project co-I: (S. Schantz, Project PI)
2003-2008	UIUC VCR and Initiative on Aging: <i>Incentive funds</i> Role: Co-PI (of five co-Is)
2002-2012	University of Illinois, Initiative on Aging Incentive Award: <i>Strategy Shifts in Aging Female Rats</i> Role: PI
2000-2004	NSF IBN 0081061: Estrogen modulation of learning strategy: A neural systems approach Role: PI
1998-1999	Austin Foundation Memorial Fund: <i>Development of innovative secondary school</i> <i>curriculum to create Renaissance High School, Charlottesville, VA</i> Role: Co-PI (G. Kessler and M. Davis, Co-PIs)
1996-1999	Kellogg Company Research Award: <i>Breakfast and behavior in the elderly: Regulation</i> <i>by post-prandial glucose</i> Role: PI
1994-1997	Mars Corporation Research Award: <i>Glucose and nutritional effects on cognition in children</i> Role: Co-PI (P. Gold, Co-PI)

Extramural Training and Instructional Support

2000-2010	NIH 5 T32 ES007326-10: Research Training Program in Environmental Toxicology
	Role: Preceptor (PI: S.L. Schantz)
2002-2012	NIH T32 HD00733: Advances in Sensory and Developmental Neuroscience (ASDN)
	Training program (formerly, Developmental Psychobiology and Neurobiology training
	program).
	Role: Preceptor (PI: W.T. Greenough)
2015-2018	NIH R36: Curcumin Supplementation and Aging Skeletal Muscle
	PI: Candace Receno, PhD candidate
	Role: Co-mentor (Mentor: K. DeRuisseau)

Publications (Trainee contributors: post-doc[#], graduate⁺, undergraduate^{*}) NCBI Bibliography of peer reviewed journal articles and book chapters

Peer reviewed articles and chapters

- 1. Sternberg, D.B., Korol, D., Novack, G.D. and McGaugh, J.L. (1986). Epinephrine-induced memory facilitation: Attenuation by adrenoceptor antagonists. *European Journal of Pharmacology*, 129, 189-193.
- 2. Steward, O., White, G., Korol, D., and Levy, W.B. (1988). Cellular events underlying long-term potentiation and depression in hippocampal pathways: Temporal and spatial constraints. In: P.W. Landfield and S.A. Deadwyler (Eds), *Long-Term Potentiation: From Biophysics to Behavior*. Alan R. Liss, Inc., New York, pp. 139-166.
- 3. Brunjes, P.C., Korol, D.L., and Stern, K.G. (1989). Prenatal neurogenesis in the telencephalon of the precocial mouse *Acomys cahirinus*. *Neuroscience Letters*, 107, 114-119.
- 4. Korol, D.L., and Brunjes, P.C. (1990). Rapid changes in 2-DG uptake and amino acid incorporation following unilateral odor deprivation: A laminar analysis. *Developmental Brain Research*, 52, 75-84.
- 5. Brunjes, P.C., *Caggiano, A.O., Korol, D.L., and Stewart, J.S. (1991). Unilateral olfactory deprivation: Effects on succinate dehydrogenase histochemistry and ³H-leucine incorporation in the olfactory mucosa. *Developmental Brain Research*, 62, 239-244.
- 6. Korol, D.L., and Brunjes, P.C. (1992). Unilateral naris closure and vascular development in the rat olfactory bulb. *Neuroscience*, 46, 631-641.
- 7. Korol, D.L., Abel, T.W., Church, L.T., Barnes, C.A. and McNaughton, B.L. (1993). Hippocampal synaptic enhancement and spatial learning in the Morris swim task. *Hippocampus*, 3, 127-132.
- Barnes, C.A., Jung, M.W, McNaughton, B.L., Korol, D.L., Andreasson, K. and Worley, P.F. (1994). LTP saturation and spatial learning disruption: Effects of task variables and saturation levels. *Journal of Neuroscience*, 14, 5793-5806.
- 9. Korol, D.L. (1996). Breakfast and Performance. *Journal of American Dietetic Association*, 96, A993-A996.
- Norris, C.M., Korol, D.L. and Foster, T.C. (1996). Increased susceptibility to induction of longterm depression and long-term potentiation reversal during aging. *Journal of Neuroscience*, 16, 5382-5392.
- 11. Wilkniss, S.M., Jones, M.G., Korol, D.L., Gold, P.E. and Manning, C.A. (1997). Age-related differences in an ecologically based study of route learning. *Psychology and Aging*, 12, 372-375.
- 12. Wilkniss, S.M., Jones, M.G., Korol, D.L., and Manning, C.A. (1997). Visuospatial recall in cortical and subcortical dementias. *Brain and Cognition* 35, 356-359.
- 13. Korol, D.L. and Gold, P.E. (1998). Glucose, memory, and aging. *American Journal of Clinical Nutrition*, 67, 764S-771S.
- 14. Manning, C.A., Stone, W.S., Korol, D.L. and Gold, P.E. (1998). Glucose enhancement of 24-h memory retrieval in healthy elderly humans. *Behavioural Brain Research*, 93, 71-76.
- Gold, P.E., McIntyre, C. K., McNay, E., Stefani, M. and Korol, D.L. (2001). Neurochemical referees of dueling memory systems. In: P.E. Gold and W. Greenough (Eds), *Memory Consolidation: Essays in Honor of James L. McGaugh, A Time to Remember*. American Psychological Association Book Publishers, Washington D.C. pp. 219-248.
- Korol, D.L. and Manning, C.A. (2001). Effects of estrogen on cognition: Implications for menopause. In: M.E. Carroll and J.B. Overmier (Eds), *Animal Research and Human Health: Advancing Human Welfare Through Behavioral Science*. American Psychological Association Book Publishers, Washington D.C., pp. 305-322.
- 17. Korol, D.L. and *Kolo, L.L. (2002). Estrogen-induced changes in place and response learning in young adult female rats. *Behavioral Neuroscience*, 116, 411-420.
- 18. Korol, D.L. (2002). Enhancing cognitive function across the life span. In: D. Harman (ed) *Increasing the Healthy Life Span: Conventional Measures and Slowing the Innate Aging Process.* Annals of the New York Academy of Sciences, 959, 167-179.

- 19. *Marriott, L.K. and Korol, D.L. (2003). Short-term estrogen treatment in ovariectomized rats augments hippocampal acetylcholine release during place learning. *Neurobiology of Learning and Memory*, 80, 315-322.
- 20. Allred, C.D., Allred, K.J., Ju, Y.H, Clausen, L.M., Doerge, D.R., Schantz, S.L., Korol, D.L., Wallig, M.W., and Helferich, W.G. (2004). Dietary genistein results in larger MNU-induced, estrogen-dependent mammary tumors following ovariectomy of Sprague-Dawley rats. *Carcinogenesis*, 25, 211-218.
- 21. Korol, D.L., *Malin, E.L., *Borden, K.A., *Busby, R.A., and *Couper-Leo, J.M. (2004). Shifts in preferred learning strategy across the estrous cycle in female rats. *Hormones and Behavior*, 45, 330-338.
- 22. Conrad, C.D., Jackson, J.L., *Wieczorek, L., Baran, S.E., Harman, J., Wright, R.L., and Korol, D.L. (2004). Acute stress impairs spatial memory in male but not female rats: Influence of estrous cycle. *Pharmacology, Biochemistry, and Behavior*, 78, 569-579.
- Korol, D.L. (2004). Role of estrogen in balancing contributions from multiple memory systems. *Neurobiology of Learning and Memory*, 82, 309-323. <u>http://www.f1000biology.com/article/15464412/evaluation</u>
- 24. ⁺McElroy, M.W. and Korol, D.L. (2005). Intrahippocampal muscimol shifts learning strategy in gonadally intact young adult female rats. *Learning and Memory*, 12, 150-158.
- 25. Erickson, K.I., Colcombe, S.J., Raz, N., Korol, D.L., Scalf, P., Webb, A., Cohen, N.J., McAuley, E., and Kramer, A.F. (2005). Selective sparing of brain tissue in postmenopausal women receiving hormone replacement therapy. *Neurobiology of Aging*, 26, 1205-1213.
- 26. ⁺Zurkovsky, L., *Brown, S.L., and Korol, D.L. (2006). Estrogen modulates place learning through estrogen receptors in the hippocampus. *Neurobiology of Learning and Memory*, 86, 336-343.
- ⁺Zurkovsky, L., *Brown, S.L., *Boyd, S.E., *Fell, J.A., and Korol, D.L. (2007). Estrogen modulates learning in female rats by acting directly at distinct memory systems. *Neuroscience*, 144, 26-37.
- 28. Korol, D.L. and Gold, P.E. (2007). Modulation of learning and memory by adrenal and ovarian hormones, In: R.P. Kesner and J.L. Martinez (Eds), *Neurobiology of Learning and Memory*, 2nd Edition, Elsevier, New York, NY, 243-268.
- 29. Erickson, K.I., Colcombe, S.J., Elavsky, S., McAuley, E., Korol, D.L., Scalf, P., Kramer A.F. (2007). Interactive effects of fitness and hormone treatment on brain health in post-menopausal women. *Neurobiology of Aging*, 28, 179-185.
- 30. Korol, D.L. and Gold, P.E. (2008). Epinephrine converts LTP from transient to durable form in awake rats. *Hippocampus*, 18, 81-91.
- Wang, V.C., Sable, H.J.K., Ju, Y.H., Allred, C.D., Helferich, H.G., Korol, D.L., and Schantz, S.L. (2008). Effects of chronic estradiol treatment on delayed spatial alternation and differential reinforcement of low rates of responding. *Behavioral Neuroscience*, 122, 794-804.
- 32. Dohanich, G.P., Korol, D.L., and Shors, T.J. (2009). Steroids and Cognition, In: D. Pfaff, A. Arnold, R. Rubin, S. Fahrbach, and A. Etgen (Eds), *Hormones, Brain and Behavior*, 2nd edition, Academic Press, New York, NY, 539-576.
- #Erickson, K.I. and Korol, D.L. (2009). The effects of hormone replacement therapy on the brains of postmenopausal women: A review of human neuroimaging studies. In: W. J. Chodzko-Zajko, A.F. Kramer, and L. Poon (Eds), *Enhancing Cognitive Functioning and Brain Plasticity*, Human Kinetics, Champaign, IL. 133-158.
- 34. Wang, V.C., [#]Neese, S.L., Korol, D.L., and Schantz, S.L. (2009). Chronic estradiol replacement impairs performance on an operant delayed spatial alternation task in young, middle-aged, and old rats. *Hormones and Behavior*, 56, 382-390.
- McLaughlin, K.J., Wilson, J.O., Harman, J. Wright, R.L., Wieczorek, L.A., Gomez, J., Korol, D.L., and Conrad, C.D. (2010). Chronic 17β-estradiol or cholesterol prevents stress-induced hippocampal CA3 dendritic retraction in ovariectomized female rats: Possible correspondence between CA1 spine properties and spatial acquisition. *Hippocampus*, 20, 768-786.

- [#]Neese, S.L., Wang, V.C., Doerge, D.R., Woodling, K.A., Andrade, J.E., Helferich, W.G., Korol, D.L., and Schantz, S.L. (2010). Impact of dietary genistein and aging on executive function in rats. *Neurotoxicology and Teratology*, 32, 200-211.
- Gold, P.E. and Korol, D.L. (2010). Hormones and Memory. In: G.F. Koob, M. Le Moal, and R. F. Thompson (Eds), *Encyclopedia of Behavioral Neuroscience*, Volume 2, (R. Dantzer, section Ed), pp. 57-64, Oxford: Academic Press.
- 38. [#]Neese, S.L., Korol, D.L., Katzenellenbogen, J.A., and Schantz, S.L. (2010). Impact of estrogen receptor alpha and beta agonists on delayed alternation in middle-aged rats. *Hormones and Behavior*, 58, 878-890.
- 39. Wang, V.C., [#]Neese, S.L., Korol, D.L., and Schantz, S.L. (2011). Estradiol impairs response inhibition in young and middle-aged, but not old rats. *Neurotoxicology and Teratology*, 33, 405-414.
- 40. ⁺Zurkovsky, L., *Serio, S.J., and Korol, D.L. (2011). Intrastriatal estradiol in female rats impairs response learning within two hours of treatment. *Hormones and Behavior*, 60, 470-477.
- 41. Frick, K.M. and Korol, D.L. (2011). Introduction to the special issue of Neurobiology of Learning and Memory on memory impairment and disease. *Neurobiology of Learning and Memory*, 96, 505-506.
- 42. [#]Newman, L.A., Korol, D.L., and Gold, P.E. (2011). Lactate produced by glycogenolysis in astrocytes regulates memory processing. *PLoS ONE*, 6(12), e28427.
- 43. [#]Neese, S.L., Bandara, S.B., Doerge, D.R., Helferich, W.G., Korol, D.L., and Schantz, S.L. (2012). Effects of multiple daily genistein treatments on delayed alternation and a differential reinforcement of low rates of responding task in middle-aged rats. *Neurotoxicology and Teratology*, 34, 187-195.
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- Scavuzzo, C.J., Park, S.L., Collier, R.L., and Korol, D.L (2010). Blockade of TrkB receptor signaling impairs learning in physically active but not sedentary male rats. 40th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 36, 202.11.
- Gold, P.E., Korol, D.L., and Scavuzzo, C.J. (2010). Physical and cognitive activity induce changes in brain and liver glycogen levels in young adult male Sprague-Dawley rats. 40th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 36, 407.16.
- Pisani, S.L., Huffman, J.C., Katzenellenbogen, J.A., Neese, S.L., Schantz, S.L., and Korol, D.L. (2011). Acute administration of ERα- and ERβ-selective agonists impairs response learning in ovariectomized young adult rats. 41st Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 37, 282.06.
- Gold, P.E., Scavuzzo, C.S., Korol, D.L., and Newman, L.A. (2011). Hippocampal extracellular lactate increases during learning: a role for astrocytes in learning and memory. 41st Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 37, 823.14.
- Scavuzzo, C.J., Korol, D.L., and Gold, P.E. (2011). Training-induced changes in brain glycogen levels are task- and brain region-specific. 41st Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 37, 823.16.
- Pisani, S.L., Katzenellenbogen, J.A., and Korol, D.L. (2012). Effects of acute administration of ERselective agonists on place and response learning in ovariectomized young adult rats. 16th Annual Meeting for the Society for Behavioral Neuroendocrinology, P1.55.

- Tunur, T., Zendeli, L., and Korol, D.L. (2012). Effects of ovarian hormones on pattern separation in female rats. 16th Annual Meeting for the Society for Behavioral Neuroendocrinology, P1.65.
- Tunur, T., Zendeli, L., and Korol, D.L. (2012). Nuances of pattern separation determine modulation by estradiol. 42nd Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 38, 92.08.
- Morris, K.A., Mitterling, K.L., Rocha-Cabrero, F., Gold, P.E., and Korol, D.L. (2012). Bilateral injection of 6-OHDA into the dorsolateral striatum improves spatial working memory in rats: implications for Parkinson's Disease. 42nd Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 38, 756.03.
- Korol, D.L., Gold, P.E., and Scavuzzo, C.J. (2012). Extracellular levels of BDNF in the hippocampus measured with microdialysis change differentially during and after place and response learning. 42nd Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 38, 916.15.
- Scavuzzo, C.J., Korol, D.L., and Gold, P.E. (2012). Engagement in a spatial working memory task enhances subsequent place and response learning through BDNF signaling. 42nd Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 38, 916.16.
- Mitterling, K.L., Anderson, K., and Korol, D.L. (2012). The effects of exercise on learning and hippocampal succinate dehydrogenase histochemistry: Sex differences and the interaction of estradiol. 42nd Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 38, 916.17.
- Gold, P.E., Newman, L.A., Scavuzzo, C.J., and Korol, D.L. (2012). A role for astrocytes in metamodulation of memory: Working memory and hippocampal extracellular lactate levels vary based on prior training. 42nd Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 38, 916.18.
- Pisani, S.L., Jung, V.E., and Korol, D.L. (2012). Site- and task-specific ERK activation following genistein treatment corresponds to temporal aspects of learning. 42nd Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 38, 916.19.
- Pisani, S.L., Neese, S.L., Schantz, S.L., and Korol, D.L. (2013). Estradiol but not equal enhances place learning in middle-aged female rats: Relationship to site-specific ERK activation. 17th Annual Meeting for the Society for Behavioral Neuroendocrinology, P2.13.
- Pisani, S.L., Neese, S.L., Schantz, S.L., and Korol, D.L. (2013). Activation of the membrane estrogen receptor GPER regulates place and response learning in ovariectomized young adult rats according to dose and timing. Annual conference on Rapid Responses to Steroid Hormones.
- Korol, D.L. and Gold, P.E. (2014). To eat, to drink, perchance to think: Bioenergetics of hippocampus and striatum dissociate by cognitive strategy and reward type. 11th International Conference on Brain Energy Metabolism, *How energy metabolism shapes brain function*". Copenhagen, Denmark.
- Gold, P.E. and Korol, D.L. (2014). Use it and boost it: Learning induces long-term adaptations in brain glycogen and lactate concentrations 11th International Conference on Brain Energy Metabolism, *How energy metabolism shapes brain function*". Copenhagen, Denmark. May 11-14, 2014.
- Dash, M.B., Ajayi, S. Folsom, L., Gold, P.E., and Korol, D.L. (2014). Hippocampal evoked response variability associated with spontaneous infraslow fluctuations in EEG activity. 44th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 40, 303.18.
- Pisani, S.L. and Korol, D.L. (2014). The ERα agonist PPT enhances place learning but impairs response learning in ovariectomized young adult rats: Viewing the role of ERK activation through a multiple memory systems lens. 44th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 40, 451.07.
- Wang, W., Yuhan, B., Korol, D.L., and Gold, P.E. Bioenergetics and memory: Regulation by estradiol. 44th Annual Meeting for the Society for Neuroscience Society for Neuroscience Abstracts 40, 451.09.
- Scavuzzo, C.J., Gold, P.E., and Korol, D.L. (2014). GSK3β inhibition in the hippocampus and striatum is task-specific. 44th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 40, 464.07.

- Korol, D.L., Newman, L.A., and Gold, P.E. (2014). Senile or sage? Improved memory and sensitivity to cognitive priming accompany aging in male rats. 44th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 40, 653.09.
- Newman, L.A., Korol, D.L., and Gold, P.E. (2014). Memory deficits in Alzheimer's disease model mice coincide with appearance of amyloid plaques and are preceded by insensitivity to glucose enhancement of memory. 44th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 40, 690.16.
- Tunur, T., Castelan, L., Hawley, W.R., Gold, P.E., and Korol, D.L. (2014). A tale of two memory systems: Differential involvement in two pattern separation tasks. 44th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 40, 749.05.
- Castro, S.L., Jaumotte, J.D., Smeyne, R.J., Korol, D.L., Ambroisio, F., DeVallejo, A.N., Cameron, J.L., Newman, L.A., Cole, K., Barry, K., and Zigmond, M.J. (2015). Does housing in an enriched environment promote healthy aging detectable by peripheral biomarkers? Studies in older laboratory animals. 9th Annual Aging Institute Research Day, University of Pittsburgh Medical Center, March 30, 2015.
- Tunur, T. and Korol, D.L. (2015). Opposing effects of estrogens on two different pattern separation tasks. 19th Annual Meeting of the Society for Behavioral Neuroendocrinology, June 10-14. P3.44.
- Wang, W., Gold, P.E., and Korol, D.L. (2015). Estradiol increases extracellular glucose concentration in hippocampus of young adult female rats. 19th Annual Meeting of the Society for Behavioral Neuroendocrinology, P3.52.
- Newman, L.A., Gardner, R.S., Hamling, B.V., Korol, D.L., and Gold, P.E. (2015). Aging in rats leads to task-dependent impairments and improvements in learning that are accompanied by changes in markers of brain energetics. 45th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 41, 179.21.
- Zigmond, M.J., Ambrosio, R., Castro, S.L., Jaumotte, J.D., Korol, D.L., Newman, L.A., Sanders, L.H., Smeyne, R.J., and Vallejo, A.D. (2015). An enriched environment modulates factors associated with healthy brain aging in rats. 45th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 41, 205.26.
- Wang, W., Gold, P.E., and Korol, D.L. (2015). Estradiol increases extracellular glucose concentration in the hippocampus of young adult female rats. 45th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 41, 614.03.
- Kundu, P., Tunur, T., Korol, D., Bandara, S., Monaikul, S., Helferich, W.G., and Schantz, S. (2015). The effects of the botanical estrogen isoliquiritigenin on cognition in young adult female rats. 45th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 41, 614.05.
- Kundu, P., T. Tunur, D. Korol, S. Bandara, S. Monaikul, W.G Helferich, S. Schantz (2015). The effects of Licorice Root Components on Cognition. Journey Through Science Day, New York Academy of Sciences. Dec 14. New York city, New York.
- Ondera, C.E., P. Kundu, W.G Helferich, D. Korol, I. Khan, S. Schantz (2016). Licorice root: a phytoestrogen supplement with neuroprotective effects on cognition. Merial Veterinary Scholars Symposium, Ohio State University College of Veterinary Medicine.
- Kundu, P., Tunur, T., Korol, D., Bandara, S., Monaikul, S., Helferich, W.G., and Schantz, S. (2016). The effects of estrogenic components of licorice root on cognition. Meeting of 16th annual International Conference on Botanicals (ICSB) and 5th Interim American Society of Pharmacognosy (ASP). Planta Medica, 82, PC40 DOI:10.1055/s-0036-1578742.
- Wang, W., D'Amico, E.C., and Korol, D.L. (2016). Estradiol regulates bioenergetics in hippocampus and striatum of young adult female rats. 46th Annual Meeting for the Society for Neuroscience, Society for Neuroscience Abstracts 42, 179.02
- Kundu, P, Korol, D.L., Bandara, S., Monaikul, S., Helferich, W.G., and Schantz, S. L. (2016). The effects of estrogenic components of licorice root on cognition. 46th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 42, 174.01
- Hamling, B., Newman, L. A., Korol, D.L., and Gold, P.E. (2016). Age-related impairments in memory in rats are accompanied by decreased lactate production by astrocytes in the hippocampus and are

rescued by intrahippocampal lactate infusions. 46th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 42, 182.19.

- Gardner, R.S., Newman, L.A., Gold, P.E, and Korol, D.L. (2016). A multiple memory systems approach to age-related changes in cognition: Differential modulation of BDNF in hippocampus and striatum in rats. 46th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 42, 182.22
- Receno, C.N., Liang, C., Korol, D.L., and DeRuisseau, K.C. (2017). Curcumin supplementation effects on aging skeletal muscle. Experimental Biology Annual Meeting, Chicago, IL, FASEB Journal 31, 1 Supplement:1021.22
- Mercado, N.M., Korol, D.L., Gardner, R.S., Sortwell, C.E., Collier, T. J., Steece-Collier, K. (2017). Does dysfunctional BDNF limit remodeling of the aged Parkinsonian striatum? American Society for Neural Therapy and Repair, 2017 Annual Conference, Cell Transplantation, 26, 717-718.
- Korol, D.L., Wang, W., D'Amico, E.C., and Gold, P.E. (2017). Estradiol regulates metabolic substrates in hippocampus and striatum of young adult female rats. 21st Annual Meeting of the Society for Behavioral Neuroendocrinology, P2.17.
- Gold, P.E., Wang, W., White, C.G., Castelan, L., and Korol, D.L. (2017). Shifts in learning abilities with age and estrogen status in Fischer-344 rats. 21st Annual Meeting of the Society for Behavioral Neuroendocrinology, P3.10.
- Wang, W. and Korol, D.L. (2017). Estradiol regulation of energy substrates and memory modulation. 47th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 43, 159.1.
- Korol, D.L., Wang, W., White, C.G., Castelan, L.A., and Gold, P.E. (2017). Estradiol interacts with agerelated changes in response and place learning in female 344 rats. 47th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 43, 159.11.
- Kundu, P., Korol, D.L., Helferich, W.G., Ondera, C.E., and Schantz, S.L. (2017). The effects of components of licorice root on a novel object task in rats. 47th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 43, 159.12.
- Gardner, R.S., Korol, D.L., and Gold, P.E. (2017). Long-term effects of prior cocaine and morphine exposure on hippocampal-dependent and striatal-dependent learning in rats. 47th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 43, 794.19.
- Korol, D.L. and Gold, P.E. (2018). Aging is not all bad: Preserved and diminished cognitive functions in senescent rats based on availability of energy substrates in the brain. *Cell Symposia*, Aging and Metabolism, Sitges, Spain, P1.66.
- Ajayi, S., Amer, A., Gold, P., and Korol, D. (2018). Monitoring fluctuations in brain extracellular estradiol in freely-moving female rats. 48th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts*, 44, 314.01.
- Wang, W., and Korol, D.L. (2018). Estradiol modulates extracellular hippocampal glucose and lactate during spatial working memory in female rats. 48th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts*, 44, 314.02.
- Gardner, R.S., Gold, P.E., and Korol, D.L. (2018). A multiple memory systems approach to understand cognitive aging: Not all aging is equal. 48th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts*, 44, 512.13.
- Ajayi, S., Gold, P.E., and Korol, D.L. (2019). Relationship between hippocampal extracellular and circulating levels of estradiol in freely-moving female rats. 23rd Annual Meeting of the Society for Behavioral Neuroendocrinology, P1.20.
- Prakapenka, A.V., Berlin, A., Elman, R., Ramirez-Estevez, N., and Korol, D.L. (2019). Evaluation of ovarian hormone-dependent behavior in a female rat model of the human brain derived neurotrophic factor (BDNF) Val66Met single nucleotide polymorphism. 23rd Annual Meeting of the Society for Behavioral Neuroendocrinology, P1.29.
- Ambalavanar, M.T., Gardner, R.S., Gold, P.E., and Korol, D.L. (2019). Enhanced response learning with intrastriatal infusions of a BDNF mimic, 7,8-dihydroxyflavone. 49th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts*, 45, 513.15.

- Prakapenka, A.V., Campanico, M.M., Elman, R., Berlin, A., Ramirez-Estevez, N., Sortwell, C.E., Collier, T.J., Steece-Collier, K., and Korol, D.L. (2019). Impaired BDNF signaling disrupts modulation of cognition and behavior by estrogens in female rats. 49th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts*, 45, 586.09.
- Shukla, N., Elendu, D., Garn, C., Newman, L.A., Gold, P.E., and Korol, D.L. (2019). Shifts in lactate during learning and memory with age from the hippocampus to the striatum: A focus on within trial extracellular lactate levels. 49th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts*, 45, 600.02.
- Prakapenka, A.V., Roberts, S.P., Myers, D.C., Berlin, A., Gold, P.E., and Korol, D.L. (2021). The ripple effect of a single nucleotide polymorphism in the BDNF gene on estradiol-mediated cognition in middle-aged female rats. 24th Annual Meeting of the Society for Behavioral Neuroendocrinology, P3.48.
- Moosa, S., Kohlmeir, A., Kujawa, S., Korol, D., Prakapenka, A. (2024). Estradiol interacts with the Val66Met single nucleotide polymorphism in the brain derived neurotrophic factor gene to alter endometrial thickness in a rat model. *Endocrine Society Annual Conference*, June 1-4, Boston, MA

Science Education and Outreach Presentations

- Whalen, C.J., Nelson, M.E., Korol, D.L., and Beshers, S.N. (2006). Brain Awareness Day at the University of Illinois Urbana-Champaign: Promoting neuroscience in the community. 36th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts*, 32, 23.13.
- Shah, S.M., Blattner, M., Beshers, S., Hug, B., and Korol, D.L. (2008). Brain power: Branching out, forming connections, and building networks through community outreach at the University of Illinois. 38th Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts*, 34, 227.16.
- Brown, J.W., Blattner, M.S., Mitterling, K.L., Morrisette, S., Ogrodnik, J.M., Watson, P.D.K., Zengin Bolatkale, H., Reese, G.C., Korol, D.L., Hug, B. (2011). The cutting edge: integrating contemporary neuroscience and molecular biology to teach about regeneration and the nervous system. 41st Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 37, 22.06SU.
- Blattner, M.S., Allen, J.R., Allen, A., Brown, J., Lauren, H., Mitterling, K.L., Ogrodnik, J. Planey, J., Zengin Bolatkale, H., Korol, D.L., and Hug, B. (2011). From the classroom to the community: taking neuroscience into diverse community settings. 41st Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 37, 22.10SU.
- Mitterling, K.L., Allen, A., Allen, J., Blattner, M.S., Brown, J.W., Lauren, H., Morrisette, S., Ogrodnik, J.M., Planey, J., Wathson, P.D.K., Zangin Bolatkale, H., Korol, D.L., and Hug, B. (2011). Do you see what I see? A novel secondary school curriculum for guiding explorations on the evolution of visual perception. 41st Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts* 37, 22.12SU.
- Lutz, C.C., Blattner, M., Jasti, C., Lauren, H., Mazur, K., Naeger, N., Planey, J., Prathap, S., Stengele, A., Talbot, K., Wolfe, T., Korol, D.L., and Hug, B. (2012). Changing student minds: neuroscience as a bridge between science and society. 42nd Annual Meeting for the Society for Neuroscience, *Society for Neuroscience Abstracts*, 28, 27.18SA
- Hug, B., Jarosewich, T., and Korol, D. (2012). Educative curriculum materials that allow for learned adaptations: Ensuring quality of implementation. NARST, Indianapolis, IN.
- Talbot, K., Jasti, C., Hug, B., & Korol, D. (2013). Using a Project Based Science Unit, What changes our minds? to Link Next Generation Science Standards, Common Core Standards and Student Engagement, NSTA Teacher workshop, San Antonio, TX.
- Wallon, R., Planey, J., Talbot, K., Jasti, C., Hug, B., & Korol, D. (2013). Using a project-based science unit, *What changes our minds?*, to link Next Generation Science Standards, common core standards and student engagement. Teacher workshop at the NSTA National Conference on Science Education, San Antonio, TX.

Scavuzzo, C.J., Lutz, C., Wallon, R., Patterson, S., Hug, B., & Korol, D. (2014). Using real scientific research to develop students' ability to analyze and interpret data: Making connections to the scientific practices. Workshop at the NSTA National Conference on Science Education, Boston, MA.

Invited Addresses

Conferences and Colloquia

- Unilateral odor deprivation: Rapid effects on cellular regulatory events (co-author, P.C. Brunjes). *Association for Chemoreception Sciences*, 10th Annual Meeting, 1988.
- Experience and the developing olfactory bulb (co-author, P.C. Brunjes). XIV Conference on the Neurobiology of Learning and Memory, Park City, Utah, January 7-10, 1990.
- Experience and the Brain: The Neurobiology of Memory Function and Dysfunction. Guest Lecturer, Mount St. Mary's College, Emmitsburg, MD. October 5, 1992.
- Effects of gonadal steroid fluctuations on learning in the swim task and on hippocampal primed burst potentiation in female rats. David Olton data blitz, XIX Conference on the Neurobiology of Learning and Memory, Park City, Utah, January 8-11, 1995.
- Glucose and memory function across the life span. Symposium on School Breakfast and Learning, Napa, California, August 28-30, 1995.
- The Aging Brain: Mechanisms for Changes in Learning and Memory. Guest Lecturer, Mount St. Mary's College, Emmitsburg, Maryland, March 24, 1995.
- Glucose effects on cognitive performance in school children, young adults, and the elderly. Kellogg Asia Pacific Nutrition Advisory Panel (KAPNAP) Symposium, Bangkok, Thailand, May 7-9, 1997.
- Enhanced LTD in the aged brain: A model for forgetting. Mahidol University, Bangkok, Thailand, May 11, 1997.
- Estrogen and learning strategy in rats. David Olton data blitz, XXII Conference on the Neurobiology of Learning and Memory, Park City, Utah, January 11-14, 1998.
- Glucose effects on cognition in young and elderly humans: A question of task difficulty. 7th Annual meeting for the International Behavioral Neuroscience Society, Richmond, VA, June 19-21, 1998.
- Memory, aging and estrogen: Shifts in neural processing. Psychology Department colloquium series, Binghamton University, Binghamton, NY, March 5, 1999.
- Memory, estrogen, and aging: Shifts in neural processing. Research Seminar in Biopsychology series, University of Connecticut, Storrs, CT, April 6, 2000.
- Estrogen-dependent shifts in learning strategy depend on length of hormone deprivation. David Olton data blitz, XXV Conference on the Neurobiology of Learning and Memory, Park City, Utah, January 7-10, 2001.
- Enhancing cognitive functions across the life span. 9th Congress of the International Association of Behavioral Gerontology, Vancouver, British Columbia, June 27-30, 2001
- Estrogen shifts learning strategy through actions on specific neural systems. XXVII Winter Conference on the Neurobiology of Learning and Memory, Park City, Utah, January 11-14, 2003.
- Sweet Memories: Glucose consumption and cognition in humans. Session: Nutrients, Neurotransmitters, and Mental Performance, Martine Orosco, Organizer. European Winter Conference on Brain Research, March. Les Arcs, France. UNABLE TO ATTEND (international travel warnings), 2003.
- Learning and Memory: What's hormones got to do with it? Keynote Address, Learning Brain Expo, conference for educators, Chicago, IL July 17, 2003
- State of the brain in 2003: A synthesis. Presentation and workshop at the Learning Brain Expo, conference for educators, Chicago, IL, July 17, 2003.
- Aging brain and its functional implications. Continuing Education colloquia: Geriatrics for Nonphysicians, University of Illinois, Department of Family Medicine, Kankakee, IL, September 26, 2003.

- Ovarian steroids orchestrate learning strategy through modulation of memory systems. Satellite symposium titled, *Independence and Interaction among Multiple Memory Systems*, 33rd Annual Meeting for the Society for Neuroscience, November 7, 2003.
- Independent actions of estrogen on memory systems. David Olton data blitz, XXVIII Conference on the Neurobiology of Learning and Memory, Park City, Utah, January, 8-11, 2004.
- Making sense out of mixed results: Estradiol enhances and impairs cognitive function depending upon the neural system tapped by the task. Behavioral Neuroscience weekly seminar series, Department of Psychology, Arizona State University, February 25, 2004.
- Making sense out of mixed results: Deciphering the cognitive effects of estradiol through a memory systems approach. Department of Zoology seminar series, Miami University, Oxford, OH, March 3, 2005.
- Estrogen and memory: A neural systems approach. Program in Neuroscience seminar series, Marquette University, December 12, 2005.
- Estrogen modulates learning and memory through estrogen receptors in hippocampus and dorsal striatum. David Olton data blitz, XXX Anniversary Conference on the Neurobiology of Learning and Memory, Park City, Utah, January 5-8, 2006.
- Deciphering the cognitive effects of estradiol through a memory systems approach. Session on Estrogen effects on the hippocampus across the life span, Winter Conference on Neural Plasticity, Barbados, February 19-25, 2006.
- Effects of ovarian steroids on learning and memory: Deciphering mixed results. University of Massachusetts-Amherst Neuroscience and Behavior colloquium series, April 11, 2007.
- Viewing the cognitive effects of estradiol through a memory systems lens. Neuroscience Program Colloquium Series, Tulane University, New Orleans, LA, September 28, 2007.
- Estradiol and exercise interact to modulate BDNF. David Olton data blitz, XXXII conference on the Neurobiology of Learning and Memory, Park City, Utah, January 3-6, 2008.
- Colloquium: Viewing the cognitive effects of estradiol through a memory systems lens. Seminar: Jog your memory, stretch your brain: Aging, exercise, and estradiol effects on learning and memory. Center for Studies in Behavioral Neurobiology, Concordia University, Montreal, Canada, April 4-5, 2008.
- Effects of exercise on response learning and brain BDNF levels (Scavuzzo co-author). David Olton data blitz XXXIII Conference on the Neurobiology of Learning and Memory, Park City, Utah, January 3-6, 2009.
- Spinning science into sound-bites: Exercise and learning and memory what do hormones got to do with it? Two presentations to discuss brain function for scientists and science writers. Science writers' workshop, Wesleyan University, Middletown, Connecticut, November 17, 2009.
- Viewing the cognitive effects of estrogens through a memory systems lens. In the symposium: Sugar, Sex, and Stress: Hormone Modulation of Memory Processes. American Psychological Association annual meeting, San Diego, CA, August 12, 2010.
- Women are from Venus except when they are from Mars: Effects of estrogens on brain function. University of Wisconsin Neuroscience Program seminar series, April 21, 2011.
- Jog your memory, stretch your brain. Keynote speaker, University of Wisconsin undergraduate neuroscience annual Neuro Night, Madison, WI, April 21, 2011.
- Women are from Venus except when they are from Mars: Effects of estrogens on brain function. Syracuse University, Departments of Biology and Psychology, June 3, 2011.
- Jog your memory, stretch your brain. 4th Annual Christopher Comer Undergraduate Neuroscience Seminar, UIC Laboratory of Integrative Neuroscience, Chicago, IL September 28, 2011.
- Metamodulation: Neural mechanisms of learning, memory, and plasticity. Syracuse University, Biology Department, Syracuse, NY, October 31, 2011.
- Jog your memory: How physical and mental activity modulate subsequent cognition. SIU chapter of SfN, Southern Illinois University, Carbondale, IL, February 13, 2012
- Jog Your (multiple) Memory (systems). Satellite Symposium at Society for Neuroscience: Independence and Interaction of Multiple Memory Systems, New Orleans, LA, October 12, 2012.

- Jog Your Memory: Implications for Parkinson's Disease. Neuroscience Program Seminar, Upstate Medical University, Syracuse, NY, November 13, 2012.
- Jog Your Memory: Metamodulation through physical and mental activity, Binghamton University, Departments of Biology and Psychology, Binghamton, NY, May 30, 2013.
- Use it and Boost it with Cognitive and Physical activity. Hamilton College, Clinton, NY, April 10, 2014.
- Use it and Boost it with Mental and Physical Activity: A role for BDNF. University of Pittsburgh Medical Center, Basic Biology of Aging work group, Pittsburgh, PA, March 9, 2015.
- Jog your memory with physical and mental activity. University of Connecticut, Department of Psychology seminar series, Storrs, CT, October 7, 2015.
- Hormones have their ups and downs: Bidirectional effects of estrogens on learning and memory. Middlebury College, Department of Biology Seminar, Middlebury, VT, April 7, 2017.
- The road to estrogens and aging: a personal journey. Behavioral Neuroscience group, Arizona State University, Tempe, AZ, April 14, 2017.
- Making sense out of mixed results: Viewing the effects of estrogens on cognition through a multiple memory systems lens. American University Symposium on *Sex differences: From Neuroscience to the Clinic and Beyond*, Washington D.C., April 20-21, 2017.
- Hormones have their ups and downs: Opposing effects of estrogens on different types of learning. University of Vermont, Dennis Repole Memorial Lecture, Burlington, VT, April 19, 2018.
- Jog your memory with physical and mental activity: A role for BDNF. University of Vermont, Department of Psychological Sciences seminar series, Burlington, VT, April 20, 2018.
- Viewing the cognitive effects of estrogens through a memory systems lens. University of Massachusetts-Amherst, Neuroscience and Behavior Program seminar series, Amherst, MA, February 27, 2019
- Fueling the female brain for cognition. Invited speaker, 32nd annual meeting, Winter Conference on Neuroplasticity (WCNP), St. Kitts, Feb. 8-15, 2020.
- Making menopause metabolic across multiple memory systems. University of North Carolina, T32 postdoctoral training program in Reproductive Mood Disorders, Oct. 7, 2020.
- Use it and boost it with physical and mental activity: A role for BDNF in brain plasticity associated with lifestyle enrichment. Invited speaker, 14th Annual World Congress of the Society for Brain Mapping and Therapeutics (SBMT). [postponed to July 11, 2021 due to COVID].
- Jog your memory with physical and mental activity: A role for BDNF. Instituto de Neurobiologia, Universidad Nacional Autónoma de México, Queretaro, MX, October 29, 2021.
- Invited Session on Regulation of Learning Strategies by Sex Steroids in Males and Females; speaker: Starring role of astrocytes in estradiol-mediated shifts in learning strategies; 12th International Meeting on Steroids and Nervous System, Torino, Italy, February 21, 2022.
- Estrogens, memory, and neurometabolism. Invited speaker, 15th Annual World Congress of the Society for Brain Mapping and Therapeutics (SBMT). Los Angeles, CA, March 11, 2022.
- Making menopause metabolic across multiple memory systems. University of British Columbia's Women's Health Seminar Series, April 4, 2022. <u>https://www.youtube.com/watch?v=R_A9qsdAKyY</u>
- A single nucleotide polymorphism in the BDNF gene accelerates reproductive senescence in female rats. Invited speaker, 16th Annual World Congress of the Society for Brain Mapping and Therapeutics (SBMT). Los Angeles, CA, *February 16-19, 2023*.
- Dueling roles of hippocampus and striatum in cognitive aging. Invited speaker, 17th Annual World Congress of the Society for Brain Mapping and Therapeutics (SBMT). Los Angeles, CA, *March 14-17, 2024*.

Public Lectures

- Exploring Neuroscience: A day in the lives of women in STEM. BrownBagger series, University High, Urbana, IL, November 22, 2011.
- Aging and Saging. St. Camillus Brain Health Workshop, Syracuse, NY, November 4, 2015.
- Aging and Saging. Manlius Senior Center, Fall speaker series, Manlius, NY, October 5, 2016. https://www.youtube.com/watch?v=gjBelaiop0Q&t=44s

- Aging, Saging, and Science. MPowerU at Syracuse Jewish Family Services, hosted speaker series, Syracuse, NY, March 27, 2017.
- Forgetting to remember. Institute for Retired Persons, Syracuse, NY, April 4, 2019.
- Aging through rose-colored glasses. Invited keynote, Women's Brain Health BeBrainPowerful fundraiser sponsored by *UsAgainstAlzheimer's* at Kayne Griffin Corcoran Gallery, Los Angeles, CA, June 18, 2019.
- Use it and boost it! MPowerU hosted speaker series at Syracuse Jewish Family Services, Syracuse, NY, December 6, 2021.

Intramural Presentations

University of Illinois, Urbana-Champaign

- Shifts in neural plasticity as a model for age-related changes in forgetting. Neuroscience Program Seminar series, September 26, 2000.
- Ovarian control of the mind: Steroidal selector of learning strategy. Developmental division Brown Bag seminar series, Department of Psychology, October 13, 2000.
- Strategy shifts with estrogen. UIUC Medical Scholars program Bench to Bedside symposium, Menopause: Making choices, January 28, 2002.
- Forgetting to Remember: Synaptic Mechanisms of Age-Related Memory Changes. Initiative on Aging, Spring Seminar Series, April 22, 2002.
- Estrogen and Memory: Friend or Foe? VCHP divisional Brown Bag Seminar series, Department of Psychology, December 4, 2002.
- Ovarian steroids orchestrate learning strategy through modulation of memory systems. Cognitive Division Brown Bag Seminar Series, Department of Psychology, November, 21, 2003.
- Making room for memories: A synaptic approach. Brain and Cognition division weekly Brown Bag series, Department of Psychology, February 9, 2004.
- Viewing shifts in learning strategy through a neural systems lens: Estradiol, exercise, and elderly rats. Sensory and Developmental Neuroscience Training Program weekly seminar series, March 9, 2007.
- Learning and memory: What's hormones got to do with it? Keynote address at the inaugural annual Illinois Summer Neuroscience Institute, May 20, 2007.
- Neurobiology of Learning and Memory: Modulation by hormone, age, and fitness. Undergraduate Neuroscience Society faculty seminar series, April 24, 2008.
- Women are from Venus except when they are from Mars. Keynote dinner address, annual Neuroscience Program open house, February 8, 2008.
- You and Your Brain on Steroids. Neuroscience Program sponsored course, Your Brain and You, Osher Lifelong Learning Institute, February 11, 2008.
- Jog Your Memory, Stretch Your Brain: Building a Model of Menopause. Keynote address, 2nd Annual Illinois Summer Neuroscience Institute, May 18, 2008.
- Women are from Venus except when they are from Mars: Lessons from rats. Reproductive Biology Seminar series, September 17, 2008.
- Women are from Venus except when they are from Mars: Lessons learned from rats. VCHP brown bag lunch series, Department of Psychology, September 24, 2008.
- Estrogens Dictate Cognitive Strategy: A Tale of Two (Neural) Systems. Department of Molecular and Integrative Physiology seminar series, February 26, 2009.
- Jog your Memory. Advances in Sensory and Developmental Neuroscience Training Program weekly seminar series, April 3, 2009.
- Neural mechanisms of learning, memory, and forgetting. Session From models to molecules", Illinois Summer Neuroscience Institute, May 20, 2010.

Syracuse University

Shifting systems with age: Implications for Parkinson's disease. Aging Studies Institute, Inclusive Design Challenge. February 1, 2013.

Your Brain on Hormones. Visiting LSAMP students from University of Texas-Permian Basin, March 13, 2013.

Research and professional development. Summer LSAMP scholar workshop, June 14, 2013.

Peer Evaluation Panel, Women in Science and Engineering (WiSE), October 29, 2013.

Preparing the Perfect Poster Presentation. Summer Research Undergraduates, Department of Biology, 2014.

The Myths of Alzheimer's Disease(s): book discussion. Aging Studies Institute, March 21, 2014.

- Writing the research report: Create your own narrative. Spring LSAMP scholar workshop, February 20, 2015.
- Movement for Healthy Aging a revolutionary idea. Aging Studies Institute brownbag (M. Pagan & J. Wilmoth co-presenters), November 13, 2015.
- Biotechnology and Aging: From simple to sophisticated. Guest lecture, Aging and Society, Sociology 364/664, M. Silverstein instructor, November 19, 2015.

Science writing with a plot in mind: Create your own narrative. Summer LSAMP scholars, July 7, 2017.

Reading the scientific literature: Searching for the needle in the haystack. Spring LSAMP scholar workshop, March 24, 2018.

Create your own narrative: Science writing with a plot in mind. Summer LSAMP scholars, July 26, 2019.

Trainees (*+ identifies with underrepresented group*) **Post-doctoral** Associates

Former

- Kirk Erickson, Ph.D. May 2005-May 2008. Currently Professor, Department of Psychology, University of Pittsburgh, Pittsburgh, PA
- Steven Neese, Ph.D. (Co-mentor; PI Susan Schantz, Ph.D.) 2007-2013. Currently Associate Professor at Cornell College, Mount Vernon, IA

Ramkumar Kuruba, Ph.D. November 2009-August 2010. Currently Research Associate, Texas A & M University, Health Science Center, College Station, TX

Lori Newman, Ph.D. 2009-2017. (Co-mentor with Paul Gold, Ph.D.). Currently Assistant Professor, Psychology, Vassar College, Poughkeepsie, NY

- Tumay Tunur, Ph.D. July 2011-August 2015. Currently Assistant Professor, Kinesiology, California State University, San Marcos, San Marcos, CA
- Michael Dash, Ph.D. January 2012-August 2014 (Co-mentor with Paul Gold, Ph.D.). Currently Associate Professor at Middlebury College. Middlebury, VT
- Wayne Hawley, Ph.D. June 2013-May 2014. Currently Associate Professor at Edinboro University, Edinboro, PA
- Robert Gardner, Ph.D., February 2015-June 2021 (Co-mentor with Paul Gold, Ph.D.). Currently research associate, Upstate Medical University, Syracuse, NY.
- Alesia Prakapenka, Ph.D., January 2019-January 2022. Currently Assistant Professor at Midwestern University, Chicago, IL

Graduate Students

Current

*Stephen Ajayi, Biology Department, Syracuse University, PhD program, Fall 2016-present

Former

Molly McElroy, Ph.D., Neuroscience Graduate Program, University of Illinois: September, 2000 to March, 2007. Dissertation title: Ovarian Hormone Modulation of Learning Strategy Preferences: A Role for Hippocampal Disinhibition. Currently Media Relations Manager at Fred Hutchinson Cancer Research Center, Seattle, WA.

Timothy Zorn, MS. Neuroscience Graduate Program, University of Illinois: 2001 to 2004, Master's in Biology, August, 2004. Thesis title: *Peripheral epinephrine given pre- or post-tetanus enhances the persistence of LTP in adult rats.* Currently high school biology teacher, Champaign, IL.

- Lilia Zurkovsky, Ph.D., Neuroscience Graduate Program, University of Illinois: August, 2001 to April, 2008. Dissertation title: *Estradiol has distinct effects on the hippocampal and striatal memory systems*. Currently Medical Science Liaison, Teva Pharmaceuticals. Indianapolis, IN.
- Claire Scavuzzo, Ph.D., Neuroscience Graduate Program, University of Illinois: August, 2009 to June 2014. Dissertation title: *Use it and Boost it with Physical and Cognitive Activity*. Currently post-doctoral researcher (PI Clayton Dickson) and lecturer at University of Alberta.
- Samantha Pisani, MD/Ph.D., Medical Scholars Program, Neuroscience Program, University of Illinois: August, 2008 to September, 2014. Dissertation title: *Estrogenic modulation of place and response learning via specific receptor-mediated mechanisms*. Currently Resident Fellow in Radiology -UCSF.
- Katherine McCoy (Mitterling), MS. Neuroscience Graduate Program (UIUC) and Department of Biology, Syracuse University: August 2008 to August, 2015. Thesis title: *Assessing motor and cognitive function to detect shifts in brain function in two models of Parkinson's disease*. Currently Research Technician, University of Rochester, Rochester, NY.
- Wei Wang, Ph.D., Biology Department, Syracuse University: September 2013-August 2019. Dissertation title: *Estradiol modulation of metabolic substrates in two memory systems*. Currently Bioinformatics Scientist II, Azenta Life Sciences, Newark, NJ.
- Clementine Harvey, Biology Department, Syracuse University, MS. InROADS scholar, Fall 2020-August 2023.

Rotation and Visiting Students

Jennifer Kim, Neuroscience Graduate Program, University of Illinois; May 2003 to September 2003

- ⁺Maritza Alvarado, Medical Scholars Program, Neuroscience Graduate Program, University of Illinois, January, 2003 to October, 2003
- ⁺Cynthia Colon-Rivera, Neuroscience Graduate Program, University of Illinois, Minority Fellow: 2004-2006 (co-mentor); Currently RN in US.
- Johannes Bohacek, SfN sponsored visiting student from University of New Orleans, Neuroscience Graduate Program, September 2005-December, 2005
- ⁺Luis Aguerrevere, SfN sponsored visiting student from University of New Orleans, Neuroscience Graduate Program, September 2005-December, 2005
- Robert Hoffman, medical student, UIUC College of Medicine, summer research assistant, 2007

Steven Beckoff, medical student, UIUC College of Medicine, summer research assistant, 2010

⁺Franklyn Rocha Cabrero, Medical Scholars Program, Neuroscience Graduate Program, University of Illinois, completed rotation January 2011 to January 2012

Livia Andrzejczuk, Biology Department, Syracuse University, March - July, 2013

⁺Nycole Maza, Neuroscience, Upstate University, March – June, 2013

Megan Gribble, Neuroscience, Upstate University, March - June, 2013

⁺Deion Burks, Biology Department, Syracuse University, October – January, 2013

- Spandita Dutta, Biology Department, Syracuse University, Spring, 2014
- Jeremy Sloane, Biology Department, Syracuse University, Spring, 2014

Geoffrey Eill, Neuroscience, Upstate University, Spring-Summer, 2014

William Haws, Biology Department, Syracuse University, Fall, 2014

Rachel Sager, Neuroscience, Upstate University, Fall, 2014

⁺Natosha Mercado, Neuroscience, Michigan State University, Spring 2017

Roxanne Crouch, Biology Department, Syracuse University, PhD program, 2015-2017

Candace Receno, Exercise Science, Syracuse University, PhD

Post-bac Researchers

Kassandra Carrillo, Biomedical Forensics Science, MS program, Syracuse University. October 2017-August 2018; June 2019-present.

⁺Matthew Campanico, Biomedical Forensic Science, MS program, Syracuse University, June 2018-June 2019.

Matthew Spindler, Department of Biology, Guelph University, post-bac intern, 2018-2021

Undergraduate Honors and Distinction Students

University of Virginia

⁺Ki Goosens, PhD: Howard Hughes Fellow, Department of Biology (1995), co-mentor with Tom Foster University of Virginia

- Katherine Ragozzino (Unick), MS, Distinguished Majors Thesis (1995), co-mentor with Tom Foster, Department of Psychology, University of Virginia; Recipient of the Frank Finger Award for Excellence in Research
- Lacy Kolo, PhD, JD: Distinguished Majors Thesis (1998), Interdisciplinary Studies in Neuroscience, University of Virginia

Lisa Marriott, PhD: Distinguished Majors Thesis (1999), Interdisciplinary Studies, University of Virginia

Washington and Lee University

John Boothby, Senior Thesis (1999), Department of Psychology

University of Illinois

Diana Thomas (2000-2002), Distinguished Major, Honors program, Department of Biology

Kelly Gallagher (2001-2002), Distinguished Major, Departments of Biology and Psychology

Stephanie Brown (May 2002-Aug 2004), Department of Psychology Honors Program

Lindsay Wieczorek (summer 2002, 2003), UIUC Howard Hughes Fellow, Recipient of Ernest Lindholm Outstanding Undergraduate Student in Behavioral Neuroscience Award, Department of Biology,

Honors program, Arizona State University

Trisha Pruis (2002-2005), Distinguished major, Department of Biology and Psychology Honors Program Laura Pignotti (2003-2004), Distinguished Major, Department of Biology

Jenny Fell (May 2004-2006), Department of Psychology Honors Program

Sarah Debrey (2004-2005), IPS-Neuroscience, Distinguished Major, Department of Psychology

Steve Serio (2004-2007), Department of Psychology, Honors Program

Yelena Grinberg (2005-2008), Distinguished Major, Molecular and Cell Biology and Psychology

Deanne Fornelli (2005-2006), Distinguished Major Department of Psychology

Dawn Epstein (2006-2007), Distinguished Major, Department of Psychology

Lauren Decker (Thurlwell) (2006-2008), Distinguished major, Molecular and Cell Biology, Psychology, Chemistry

Claire Scavuzzo (2006-2008), Molecular and Cell Biology, Distinguished Major, Department of Psychology

Sarah Stone (2007-2009), Distinguished Major, Molecular and Cell Biology

Stephany Park (Fall 2009-Spring 2011), Distinguished Major, Molecular and Cellular Biology Jessie Zhang (summer 2009-Spring 2011), Distinguished Major, Molecular and Cellular Biology

Katherine Anderson (Fall 2010-Spring 2012), Department of Psychology Honors Program

Carolyn Draus (Fall 2011-Spring 2013), Distinguished Major, Biochemistry

Syracuse University

Georgia Bascaglia (Fall 2012-May 2014), ILM Neuroscience, Biology, Renee Crown Honors, WiSE Honors; Currently (PhD 2020) Analyst at Forte Information Resources

⁺Luis Castelan (Fall 2012-Spring 2015), Distinction in Biology, Philosophy, LSAMP Scholar, Renee Crown Honors

Sam Lauffer (Fall 2012-Spring 2015). Distinction in Biology, Renee Crown Honors

Brooke Hamling (Fall 2012-Spring 2016). Distinction in Biology Renee Crown Honors Margaret Blasi (Fall 2013-Spring 2015). Distinction in Biology Ella D'Amico (Fall 2013-Spring 2016), Distinction in Biology, Coronat Scholar, Renee Crown Honors Luke Loftus (Summer 2014-Spring 2016), Biochemistry/Neuroscience ILM, Renee Crown Honors ⁺Amber Barrow (Fall 2014-Spring 2017), Biology/Neuroscience ILM and Chinese studies; LSAMP Scholar, Renee Crown Honors, Remembrance Scholar Elizabeth Reynolds (Fall 2014-Spring 2016), Biology/Neuroscience ILM, Renee Crown Honors Caitlin White (Spring 2015-2017), Biology, Neuroscience, Renee Crown Honors ⁺Giovanni Pacheco (Fall 2015-Spring 2017), Biology/Biotech/Neuroscience ILM, LSAMP Scholar ⁺Chizobam Nwagwu (Fall 2015-Spring 2017), Biology, Renee Crown Honors, LSAMP Scholar ⁺Jonathan Cotto (Fall 2015-Spring 2017), Distinction in Biology, Rebekah Schwartz (Fall 2017-Spring 2020), Distinction program, Biology, Renee Crown Honors ⁺Matthew Ambalavanar (Fall 2017-Spring 2020), Distinction program, Biology, Renee Crown Honors Julia Fisher (Spring 2018, Spring 2021), Biology, Renee Crown Honors capstone thesis advisor ⁺Morgan Temple (Fall 2018-Spring 2020), Biology, Renee Crown Honors Jenna Staples (Spring 2019), Biology, Renee Crown Honors Sarah Riddle (deceased; Spring 2019-Spring 2021), Biology, Distinction in Biology, ⁺Alexandra Santiago Molina (Spring 2019-Spring 2021), Biology, Distinction in Biology *Symone Roberts (Fall 2019-Spring 2021), Biology, McNair Scholar McKenna Brower (Fall 2019-Spring 2021), Biology, Distinction in Biology Kyra Harvey (Fall 2019-Spring 2021), Biology, Neuroscience ILM, Distinction in Biology Taylor Drabick (Fall 2019-Spring 2022), Biology, Renee Crown Honors Program Jules Kouki (Spring 2020-Spring 2022), Biology, Distinction in Biology Michaela Martin (Spring 2020-Spring 2022), Biology, Renee Crown Honors Program Monica Ciaffi (Spring 2020-present), Biology Renee Crown Honors Program

Undergraduate Research Assistants

University of Virginia

Paul Grinwald: Department of Psychology (1994), University of Virginia Rachel Smith, Cognitive Studies (1997), University of Virginia Whitney Wallace, Department of Psychology (1998), University of Virginia

Washington and Lee University

Emily Malin, PhD (1999), Department of Psychology; Recipient of the first annual Oliver Award for Intellectual Curiosity in Psychology, 1999Kristine Borden (1999), Department of Psychology

⁺Dawn Coulthurst (1999), Department of Biology

<u>Binghamton University</u> Jodi-Ann Gravina (2000), Department of Psychology Carrie Joseph (2000), Department of Psychology

University of Illinois

Meghann Hennelly (2001-2002), Department of Psychology and Biology Krista Anderson (2001-2003), Department of Psychology, James Scholar Ila Englof (2002), Department of Biology Niamh Condon (May 2002-May 2004), Department of Psychology Sara Boyd (summer 2002), Department of Psychology Kathy Hagman (2002-2003), Department of Psychology Bengi Altinbilek (2003), exchange student from Bogazici University, Istanbul, Turkey Diana Greyz (2003), Department of Psychology Christopher Hanson (2003-2004), Departments of Biochemistry and Psychology Michael Boyd (2003-2004), Department of Psychology John Kenny (2003-2004), Departments of Psychology and AeroEngineering Abigail Galle (2003-2004), Department of Psychology Bobby Oestreicher (Jan 2004-Jan 2005), Department of Psychology Astha Agarwal (2004-2005), Department of Psychology Soumva Venkiteswaran (2004-2005), Department of Psychology Adrien Harney (2004-2006), Department of Psychology Arpit Agarwal (2005) undeclared major Michael Moenk (2005), Department of Psychology Bryan Kolberg (2005-2006), Department of Psychology ⁺Tobi Adelaja (2006), UIUC Howard Hughes Fellow, Integrative Biology Blake Spindler (2006-2007), Molecular and Cell Biology ⁺Zuha Warraich (2006-2007), Molecular and Cell Biology Shruti Gupta (2006-2007), Psychology and Spanish ⁺Edward Malkowski (2006-2007), Psychology Sarah Dalton (2007-2008), Psychology ⁺Lauren Lilly (summer 2007), SROP fellow, Reproductive Biology Training Program Elizabeth Katta (2007-2009), Molecular and Cellular Biology ⁺Raquel Collier (2008-2009), Molecular and Cellular Biology Robin Smith (2008-2009), Molecular and Cellular Biology Gianna Gross (summer 2008), Political Science (University of Wisconsin-Madison) Ashley Ginsberg (2008-2010), Psychology Jeremy Schlake (2008-2010), Molecular and Cellular Biology, and Psychology Leigh Komperda (2009-Spring 2010), Molecular and Cellular Biology Hilarie Carhill (2009-Spring 2010), Psychology Charles O'Connor (Fall 2009-Spring 2010), Molecular and Cellular Biology Colin Therriault (summer 2009-Spring 2011), Molecular and Cellular Biology Martina Gabra (Spring 2010-Summer 2010), Molecular and Cellular Biology Jack Huffman (Summer 2010-Fall 2011). Psychology Daniel Wickland (Fall 2010-Spring 2011), Independent Program of Study, Neuroscience Vivian Jung (Fall 2010-Spring 2012), Molecular and Cellular Biology Timothy Weng (Spring 2011), Psychology Stephen Burbick (Fall 2011), Molecular and Cellular Biology Ishwer Patel (Fall 2011-2012), Molecular and Cellular Biology Liridon Zendeli (Fall 2011-2012), Molecular and Cellular Biology Erin Gunderson (Fall 2011-2012), Molecular and Cellular Biology Parth Patel (Spring 2012), Molecular and Cellular Biology Anna Jones (Spring 2012), Molecular and Cellular Biology David Lee (Spring 2012), Molecular and Cellular Biology Andrew Sheriff (Spring 2012), Psychology and Molecular and Cellular Biology Syracuse University Frances Batarse (Fall 2012-Spring 2013), Psychology, ILM Neuroscience Madison Davis (Fall 2012-Spring 2014), Biology, Anthropology minor Sydney Zagger (Fall 2012-Spring 2014), Biology, ILM Neuroscience

Dean Phillips (Fall 2012-Fall 2013), Biology

Lynde Folsom (Fall 2012-Spring 2014), Philosophy and Biology

Brian Yuhan (Fall 2012-Spring 2014), Biology

Dan Guerra (Fall 2012-Spring 2013), Biology

Amanda Audesse (Spring 2013-Spring 2014), Psychology, ILM Neuroscience

⁺Alejandro Mercato Capote (Spring 2013), Psychology, ILM Neuroscience

⁺Rosa Leon (Spring 2013), Biology +Stephen Ajayi (Spring 2013-Spring 2015), Biochemistry Katelyn Edel (Fall 2012-Spring 2014), Linguistics, ILM Neuroscience Umar Mahmood (Spring 2014-Spring 2015), Biochemistry Bilal Milak (Spring 2014-Fall 2015), Biology Shirley Gao (Spring 2014-Spring 2016), Biology Nicholas Frangella (Spring 2014-Spring 2016), Biology Ashley Sterpka (Summer 2014-Summer 2015), Biology Kathryn Lanza (Summer 2014-Spring 2015), Psychology, ILM Neuroscience, ⁺Raychel Lewis (Fall 2014-Spring 2016), Biology Erin Dickey (Fall 2014-Spring 2016), Biochemistry Ian Liebling (Summer 2015-Spring 2017), Biology, +Stephanie Morales (Fall 2015), Biology ⁺Kennedy Ukelegharanya (Fall 2015-Spring 2017), Biology ⁺Christina Ly (Fall 2016-Spring 2017), Biology Marc Kurek (Fall 2016-Spring 2017), Biology Riley Williams (Fall 2016-Spring 2018), Biology Angelique Ruggiero (Fall 2016-Spring 2018), ILM Neuroscience, Psychology *Naara Ramirez-Estevez (Fall 2016-Spring 2019), Biology Jillian Gavin (Fall 2016-Spring 2018), Biochemistry Emily Green (Summer 2017), Biology, University of Miami, Miami, FL Nick Tuta (Summer 2017), Biology-Honors, Middlebury College, Middlebury, VT John Cote (Summer 2017), Neuroscience, Wesleyan University, Middletown, CT. Amer Nasser Amer (Fall 2017-Spring 2018), Biology Ally Stanton (Fall 2017-Spring 2018), Public Health Mary Ross (Fall 2019), Biology Eric Velizhinskiy (Fall 2017-Spring 2020), Biology Ryan Blake (Fall 2017-Spring 2020), Biology Brooke Rhinesmith (Spring 2018-Spring 2020), Biology; ILM Neuroscience, SOURCE scholar Kevin Zhang (Summer 2018), Biology-Honors, Middlebury College, Middlebury, VT ⁺Kierra McInnis (Summer 2019), LSAMP scholar, Monroe Community College, Rochester, NY. William Lewis (Spring 2020-Spring 2021), Biology ⁺Hanan Gusau (Spring 2020-Fall 2020), Biology Shaheer Ahmad (Spring 2020-Fall 2021), Biology Daulton Myers (Spring 2020-Spring 2022), Biochemistry, Neuroscience ILM, InROADS scholar Mackenzie Allen (Spring 2021-Spring 2022), Biology, InROADS scholar

High School Students

Sarah Pfander (Summer 2004; 2005), University High Laboratory School, Urbana, IL Arielle Gross (summer 2006, 2007), Central High School, Champaign, IL Emily Rosengren (summer 2007, 2008), University High Laboratory School, Urbana, IL Emma Anselin (summer 2007), University High Laboratory School, Urbana, IL Claire Williams (2008-2010), Urbana High School, Urbana, IL Jasper Maniates-Selvin (summer 2009- 2010), University High Laboratory School, Urbana, IL John Vaughen (Fall 2009-Dec 2010), University High Laboratory School, Urbana, IL Fiona Weingartner (Summer 2010-Spring 2011), University High Laboratory School, Urbana, IL Sydney Muchnik, (Summer 2010-Spring 2011), University High Laboratory School, Urbana, IL Heather Lin (Summer 2010-Spring 2011), University High Laboratory School, Urbana, IL Heather Lin (Summer 2010), Centennial High School, Champaign, IL Marie Lilly (Summer 2011), University High Laboratory School, Urbana, IL

Joseph Song (Summer 2011), University High Laboratory School, Urbana, IL ⁺Tahar Bowen-Pinto (Summer 2011), University High Laboratory School, Urbana, IL Sunjay Koshy (Summer 2011), University High Laboratory School, Urbana, IL Shruti Vaidya (Summer 2012), University High Laboratory School, Urbana, IL Sarah Vaughen (Summer 2012), University High Laboratory School, Urbana, IL Vickie Chang (Summer 2012), University High Laboratory School, Urbana, IL Dan Frank (Summer 2015, 2016), Jamesville-Dewitt High School, Dewitt, NY; BA at OSU Fares Awa (Spring 2016-Fall 2017), Manlius Pebble Hill High School, Jamesville, NY; currently attending Dartmouth Medical School. Abel Ratanaphan (Summer 2016), Jamesville-Dewitt High School, Dewitt, NY Dhruv Thota (Summer 2016) Jamesville-Dewitt High School, Dewitt, NY Rachel Elman (Summer 2016-Summer 2019), Fayetteville-Manlius High School, Fayetteville, NY; currently attending Washington University Annika Berlin (Fall 2018-Summer 2020), Rondout Valley High School, Accord, NY; currently attending **UMass-Amherst** Awards and Honors Won by Trainees

Post-Docs

Alesia Prakapenka:

NIA Butler-Williams Scholar, 2020

Graduate Students

Molly McElroy:

AAAS Mass Media Science and Engineering Fellows program, 2006

Lilia Zurkovsky:

Society for Neuroscience travel award, 2006

UIUC Initiative on Aging conference travel award for graduate students, 2005

NICHD Developmental Psychobiology & Neurobiology Training Grant (HD 00733) Predoctoral award, 2004-2006

Claire Scavuzzo:

Society for Behavioral Neuroendocrinology travel award, 2010.

Samantha Pisani:

UIUC College of Medicine Buetow Memorial Travel award, 2010, 2013

UIUC College of Medicine Hazel I. Craig Summer Research Assistanceship, University of Illinois College of Medicine, 2011.

NIH Office of Dietary Supplements Research Practicum and Travel Stipend, June 2012

UIUC Graduate College Travel award, 2012

Wei Wang:

Conference Travel award 2016-2018: Neuroscience program, Syracuse University

Undergraduate and high school students

- Emily Malin: First annual Oliver Award for Intellectual Curiosity in Psychology, Washington and Lee University, 1999
- Claire Scavuzzo: Honorable mention (tied for 4th place) for undergraduate poster competition. Chicago chapter, Society for Neuroscience, 2008

Trisha Pruis: University of Illinois, undergraduate travel award, 2004

- ⁺Luis Castelan: Ruth Meyer summer research fellowship, 2013 (declined); Louis Stokes Alliance for Minority Participation fellowship, summer 2013; SU College of Arts and Science Honors Travel award; SU Department of Biology Senior Award for Research, May 2015
- *Stephen Ajayi: Ruth Meyer summer research fellowship, 2013; Department of Biology Research Achievement Award, May 2015

Amanda Audesse: Ruth Meyer summer research fellowship, 2013

Brian Yuhan: Ruth Meyer summer research fellowship, 2013; Research Achievement Award, May 2014 Georgia Buscaglia: Ruth Meyer summer research fellowship, 2013

Lynde Folsom: Ruth Meyer summer research fellowship, 2013

Brian Yuhan: Department of Biology Academic and Research Achievement Award, May, 2014.

- Margaret Blasi: Ruth Meyer summer research fellowship (2014, declined) and Department of Biology Award for Research and Scholarship, May, 2015
- Sam Lauffer: Department of Biology Award for Research and Scholarship, May, 2015

Ella D'Amico: Coronat Scholarship for summer research, Summer, 2015; Department of Biology Academic and Research Achievement award, May 2016

Amber Barrow: LSAMP summer (2015) and academic year fellow, 2015-2016; Remembrance Scholar, 2016-2017; Neuroscience summer research fellowship, 2016; Renee Crown Honors Stipend (\$4000); Department of Biology Research Achievement Award, May 2017

Elizabeth Reynolds: Ruth Meyer summer research fellowship, 2015; Department of Biology Research Achievement Award, May 2016

- Brooke Hamling: Ruth Meyer summer research fellowship, 2013; Donald Lundgren Award for Outstanding Achievement in Biology, May 2016
- Luke Loftus: Department of Biology Research Achievement Award, May 2016
- Caitlin White: Syracuse University summer research fellowship, 2016, 2017
- Giovanni Pacheco: Hispanic honors summer research fellowship, 2016
- Ian Liebling: Department of Biology Research Achievement Award, May 2017
- Jonathan Cotto: Department of Biology Research Achievement Award, May 2017
- Giovanni Pacheco: Department of Biology Research Achievement Award, May 2017
- Rachel Elman (Jamesville-Dewitt high school): Central New York Science and Engineering Fair Grand Prize - Intel ISEF finalist, Lemoyne College Scholarship, APA Award for Outstanding Research in the Psychological Sciences, Upstate Dean's Award in the Biological Sciences, Naval Science Award
- Matthew Ambalavanar: Donald Lundgren Award for Outstanding Achievement in Biology, 2020; Chancellor's Citation for Excellence in Student Research 2020; Department of Biology Academic and Research Achievement Award, May 2020; College of Arts and Sciences Marshal; Honors program/ Syracuse University SOURCE travel funds for 2019 Society for Neuroscience conference
- Brooke Rhinesmith: Syracuse University SOURCE research funds, Spring 2020; Department of Biology Research Achievement Award, May 2020

Rebecca Schwartz: Department of Biology Academic and Research Achievement Award; Syracuse University Honors program research funds

Taylor Drabick: Syracuse University SOURCE research funds, 2020; Honors research funds summer 2021.

McKenna Brower: Syracuse University SOURCE research funds 2020-21; SU Research fair poster award (2nd place); Department of Biology Academic and Research Achievement Award, May 2021

Sarah Riddle: Syracuse University SOURCE summer stipend and research funds, 2020

- Kyra Harvey: Syracuse University SOURCE summer stipend and research funds, 2020; Department of Biology Academic and Research Achievement Award, May 2021
- Daulton Myers: Syracuse University SOURCE summer stipend and research funds 2020, 2021; Robert Clarke Biotech research award, winter research award, 2020-21; 3rd place, research poster presenter award 2022; senior undergraduate research award 2022.
- Jules Kouki: Syracuse University SOURCE summer stipend and research funds 2020, 2021; Robert Clarke Biotech winter research award, 2020-21.
- Symone Roberts: Syracuse University SOURCE, academic research support 2020; Falk College Research in Public Health award, Spring 2021
- Annika Berlin (Rondout Valley high school): National Association of Biology Teachers Science Research Award, ISEF competition, April 2020.

Masters and PhD Thesis Committee Member (program, role)

In Progress

Starlette Douglass (PhD Behavioral Neuroscience, Albany University; member) Aya Kobeissi (PhD Neuroscience, Upstate Medical University; member) Agnes Asubonteng (PhD Biology, SU; member/chair) Chris Ware (PhD Neuroscience, Georgia State University; outside member) Jacqueline Thompson (PhD Neuroscience, Upstate Medical University; member) Tamara Hamilton (PhD, Higher Education, SU; member)

Completed

Lisa Henry, MS (Binghamton University, external member) Jennifer Tropp, PhD (University of Connecticut, external member) Julie Markham PhD (Psych, UIUC) Kirk Erickson PhD (Psych, UIUC) Clint Canal PhD (NSP, UIUC) Jason Pych PhD (Psych, UIUC) Victor Wang PhD (NSP, UIUC) Carol Curtis PhD (MIP, UIUC) Darien Hall PhD (NSP, UIUC) Georgina Aldridge PhD (MSP/NSP, UIUC) Maggie Blattner PhD (MSP/NSP, UIUC) Ken Morris PhD (MSP, Neuroscience, UIUC) Claudia Lutz PhD (NSP, UIUC) Jennifer Provyn PhD (Psychology, SU; Grad School Rep, chair) Melissa Morales PhD (Psychology, Binghamton University, outside examiner) Corinne Ostock PhD (Behavioral Neuroscience, Binghamton University, outside examiner) Amanda Hoffman PhD (Chemistry, SU; Grad School Rep, chair) Luis Flores PhD (Psychology, UIUC) Yu Ho Kim PhD (Exercise Science, SU) Deion Burks (MS Biology, SU; Chair) Candace Receno (PhD Exercise Science, SU; co-mentor) Jacqueline Augustine (PhD Exercise Science, SU; Grad School Rep, chair) Jennifer Welch (PhD Higher Education Administration, SU; Grad School Rep. chair) Natosha Mercado (PhD Neuroscience, MSU; member) Margaret McCoy (MS Biology, SU; chair) Joshua Burton (PhD Biology, SU; member and reader) Jessica O'Connell (MS Biology, SU; member) Alexis Zajiceke (PhD Neuroscience, Upstate Medical University; member) Nicholas Ngyen (PhD Neuroscience, Upstate Medical University; member) Nicole Reitz (PhD, Behavioral Neuroscience, Binghamton University; outside examiner)

Diagnostic / Qualifying Exam Committee Member

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