

TÜMAY TUNUR

Department of Kinesiology
College of Education, Health and Human Services
California State University San Marcos
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EDUCATION

Ph.D. in Cell and Molecular Biology

Tulane University, New Orleans, LA | May 2011
Department of Cell and Molecular Biology

Dissertation: *The Role of K⁺ Channel Interacting Protein 3 in Learning Strategies and Hippocampus-Dependent Memory in Male and Female Mice*
Committee: Laura A. Schrader, Ph.D. (Advisor), Ben Hall, Ph.D., Jeffrey Tasker, Ph.D., Jill Daniel, Ph.D.

B.S. in Biology

Middle East Technical University (METU), Ankara, Turkey | June 2006
Department of Biology

TEACHING EXPERIENCE

Instructor, Movement Pedagogy (KINE 311), California State University San Marcos, San Marcos, CA | Fall 2017.

- Designed and developed this brand new core course for the Department of Kinesiology.
- Facilitated advocacy for physical activity for K-12 by student projects.
- Incorporated student-led lesson development and instruction for teaching labs.
- Utilized grades by attrition modified from the Sheldon scale.

Instructor, Movement and Brain Function (PPE 500), Syracuse University, Syracuse, NY | Fall 2016.

- Introduced an innovative course, which brings two disciplines –Exercise Science and Neuroscience- together, to the Exercise Science Department.
- Designed the course and prepared syllabus.
- Designed movement labs where students can utilize a variety of physical activity tools to further develop their understanding of course material.
- Replaced exams with quizzes, in- and out-of- class assignments, and a final project.
- Facilitated small group discussions and use of movement for science education.
- Collected mid-semester evaluations from students.

Instructor, *Motor Behavior Across Lifespan* (PPE 385), Syracuse University, Syracuse, NY | Fall 2015, Spring 2016, Fall 2016, Spring 2017

- Introduced use of technology such as clickers into the lectures.
- Collaborated with the instructor of record for the other section to coordinate and redesign lecture material.
- Introduced Process Oriented Guided Inquiry Learning (POGIL) based group activities.
- Redesigned the lab contents and the curriculum.
- Introduced Parkinson's Dance project and led student workshops for the required program participation portion of the course for both sections.
- Guided students through SU Fit Families program for children with autism.

Instructor, *Exercise Physiology* (PPE 497), Syracuse University, Syracuse, NY | Spring 2016

- Designed the lectures and the syllabus for the labs for the course.
- Introduced use of technology such as clickers into the lectures.

Instructor, *Introduction to Exercise Science* (PPE 295), Syracuse University, Syracuse, NY | Fall 2015, Spring 2016, Spring 2017

- Introduced Process Oriented Guided Inquiry Learning (POGIL) based group activities.
- Introduced use of technology such as clickers into the lectures.
- Designed the lectures and the recitations for the course.

Instructor, *Dance, Exercise, and Brain Function* (BIO 300), Syracuse University, Syracuse, NY | Fall 2014, Fall 2013.

- Introduced an innovative course, which brings two disciplines -Dance and Neuroscience- together, to the Biology Department.
- Designed the course and prepared syllabus.
- Designed a dance portion of the course where students can apply what they learn in class.
- Replaced exams with discussion forums, in- and out-of- class assignments, and a video final project.
- Facilitated small group discussions and use of movement for science education.

Guest lecturer, *Kinesiology* (PPE 395), Syracuse University, Syracuse, NY | Spring 2014.

- Prepared and lectured movement and neuroscience section of the class.
- Facilitated small group discussions about mental training, imagery, and effects of exercise on cognition.

Instructor, *Intro to Biopsychology* (BIO 200/ PSY 223), Syracuse University, Syracuse, NY | Fall 2012.

- Designed the course and prepared syllabus.
- Prepared and evaluated exams, as well as in- and out-of- class assignments.
- Facilitated small group discussions.
- Shared course responsibilities with two other instructors.

Guest lecturer, *Systems Neuroscience*, Tulane University, New Orleans | Spring 2010, Spring 2009, Spring 2008.

Teaching Assistant, *General Biology, Cellular Neuroscience, Cell Biology Laboratory* | 2006-2008, Tulane University, New Orleans.

EXTRACURRICULAR TEACHING EXPERIENCE

Future Professoriate Program participant | 2015-to date

- Created an online teaching portfolio.
- Attended numerous Certificate for Undergraduate Teaching (CUT) seminars:
 - Effective and Efficient Assessment | October 2016
 - Active Learning: Making the Most of ‘Lecture’ Time | October 2016
 - Crafting the Teaching Philosophy | March 2015
 - Fundamentals of Instructional Design | October 2015
 - Leading and Effective Classroom Discussion? Questions Are the Answer | October 2015
 - Universal Design for Learning: Foundations and Applications | November 2015
- Worked with a mentor in teaching, Dr. Kevin Heffernan, to improve on evaluating and assessing students.
- Acquired the Teaching Assistant Program to observe and record my lecture and received a written evaluation.

Teaching workshop attendee

- Participated in a Teaching Expo, California State University San Marcos, San Marcos, CA | October 2017
- Participated in “Doing Assessment as if Teaching and Learning Matter Most: a fast-paced, highly interactive, hands-on session provides research-based guidelines and practical strategies for learning-centered and faculty-directed assessment at classroom and course levels”, Syracuse University, Syracuse, NY | October 2016
- Participated in Professional Development workshop designed for Dance for Parkinson’s Disease, offered by Mark Morris Dance Company, Brooklyn, NY | October 2015
- Attended to the Syracuse University Future Professoriate Program Annual Conference, Hamilton, NY | May 2015, May 2016
- Participated in Process Oriented Guided Inquiry Learning (POGIL) workshop, Syracuse University, Syracuse, NY | December 2014
- Participated in Teacher’s Training workshop designed for Dance for Parkinson’s Disease, offered by Mark Morris Dance Company, Brooklyn, NY | February 2012

Dance instructor | 2006 to date.

- Volunteered as a salsa instructor for first and second grade students
- Formed and managed a touring dance company, trained instructors and dancers
- Organized salsa workshops for the elderly
- Taught adult classes to mixed populations

STUDENT ADVISING

Graduate student advising

Teaching assistants: John Holohan, Marisa Benson, Candace Receno, Chen Liang, Gianpietro Revollo, Department of Exercise Science, Syracuse University, Syracuse, NY | 2015- 2016

Master students: Michael Mangano (AT), Department of Exercise Science, Syracuse University, Syracuse, NY | 2015- to date; Catalina Cotis (MS), Donald Moran (AT), Department of Exercise Science, Syracuse University, Syracuse, NY | 2016- to date

Health and Exercise Science Learning Community (HES LC)

Syracuse University, Syracuse, NY | 2015- to date

Undergraduate student supervision in research

Kara Dorothy Rickford, Department of Exercise Science, Syracuse University, Syracuse, NY | 2015-to date

Amber Barrow, Erin Dickey, Umar Mahmood, Stephen Ajayi, Amanda Audesse, Brian Yuhan, Luis Castelan, Rosa Leon at Biology Department, Syracuse University, Syracuse, NY | 2012-2015

Liridon Zendeli, Parth Patel at the Department of Psychology, University of Illinois at Champaign-Urbana, Champaign, IL | 2011- 2012

Lindsey C. Peller, Michelle R. Champagne at the Department of Cell and Molecular Biology Tulane University, New Orleans | 2008-2011

- Trained the students in experimental techniques
- Mentored the students in evaluation and presentation of research findings
- Guided the students in analyzing and presenting data at meetings and conferences
- Discussed career options

High school student supervision in research

Department of Psychology, University of Illinois at Champaign-Urbana, Champaign, IL | 2011-2012

RESEARCH EXPERIENCE

Postdoctoral Teaching Associate, Syracuse University, Exercise Science Department | August 2015 – to date.

Projects: *Moving Through Glass*

Parkinson's Dance Program

SU Fit Families – children with autism

Postdoctoral Research Associate in Neuroscience, Syracuse University, Department of Biology, Donna Korol, Ph.D. (PI) | August 2012 to August 2015.

Project: *Effects of estrogens in object and spatial memory in female rats*

Postdoctoral Research Associate in Neuroscience, University of Illinois at Urbana-Champaign, Department of Psychology, Donna Korol, Ph.D. (PI) | July 2011- August 2012.

Project: *Effects of estrogens in object and spatial memory in female rats*

Graduate Student, Tulane University, New Orleans, Department of Cell and Molecular Biology

Laura Schrader, Ph.D. (PI) | 2007-2011.

Project: *Ovarian hormones and KChIP3 regulation of learning strategy selection in mice*

Undergraduate Research Assistant, METU, Department of Biology, Ankara, Turkey | 2005-2006.

Project: *Treatment effects of endemic plant extracts on malignant human lymphocytes*

Undergraduate Research Intern, Louisiana State University Health Science Center, New Orleans, Department of Cell Biology and Anatomy | Summer 2005.

Project: *NMDA receptor- and BAX- regulated neuronal cell death in mice brain*

Undergraduate Research Assistant, METU Sub Aqua Society, Ankara, Turkey | 2003-2004

Project 1: *Conservation of Posidonia oceanica and prevention of Caulerpa racemosa invasion in Turkey's coastal seas*

Project 2: *Patara-Tekirova project of recycling of fresh water discharges and documentation of marine caves in Turkey's coastal seas*

AWARDS AND GRANTS

Orange Circle Award, Moving Through Possibilities Program, “*The Orange Circle Award honors individuals who go above and beyond in their daily lives and who possess a deep responsibility for extraordinary philanthropic acts*” | 2016

Tolley Medal Fund, Moving Through Glass Research Project, “*Syracuse University established the Tolley Medal in 1966 to recognize outstanding contributions by national and international leaders in what was then known as adult education*”, \$5,500 | 2016

Honorable Mention Award, poster presentation at Tulane Research Days, Tulane University, New Orleans, Louisiana | 2011.

PUBLICATIONS

Tunur T., Rickford K., and Columna C. Re-defining PD: Parkinson's Dance. (*in press; PALAESTRA*)

Kundu P., **Tunur T.**, Korol DL., Bandara S., Monaikul S., Helferich WG., Schantz SL. (2016). The Effects of Estrogenic Components of Licorice Root on Cognition. *Planta Medica*, 82:05.

Tunur T., Stelly CE., Schrader LA. (2013). KChIP3/DREAM/Calsenilin modulates strategy selection and estradiol-dependent learning and memory. *Learning and Memory*, 20:686-694.

Tunur T., Dohanich G., Schrader LA. (2010). Pre-exposure to context affects learning strategy selection in mice. *Learning and Memory*, 17:328-31.

Alexander JC., Bridgeman CM., **Tunur T.**, Rands V., Stelly CE., Karhson D., Bowlby, MR., An WF., Sweatt JD., Schrader LA. (2009). The Role of KChIP3 in contextual fear conditioning. *Learning and Memory*, 16:167-177.

Bridgeman C.M., Springer S., Maxson M., **Tunur T.**, Schrader LA. (2008). The role of K⁺ channels in synaptic plasticity. *Cell Science Reviews*.

MANUSCRIPTS IN PREPARATION

- Tunur T.**, and Columna C. Augmented Reality-Based Dance Application on Mobility and Balance of Persons with Parkinson's Disease: A Pilot Study
- DeBlois A., Yates L., Levental D., Columna C., **Tunur T.** Feasibility of Augmented Reality-Based Dance Intervention for People with Parkinson's Disease: Moving Through Glass Application
- Homiack D., **Tunur T.**, Yu D., Maxson M., Hurwitz S., Chen A., Mahnke A., Inglis F., and Schrader LA. Lack of DREAM/Calsenilin/KChIP3 enhances maturational properties of dentate gyrus granule cells and pattern separation in male mice.
- Tunur T.**, Castela LA, Audesse A., Yuhan BT., Korol DL. Estrogen regulation of pattern separation via ER-alpha and ER-beta.
- Tunur T.**, Korol DL. Estrous cycle modulates pattern separation in young adult rats

SELECTED PRESENTATIONS

- Living an Active Life with Parkinson's Disease Conference, Syracuse, NY, oral presentation and demo class, "Moving Through Possibilities: Parkinson's Dance" | 2016.
- Orange Circle Award Presentation, Syracuse, NY, demo class, "Moving Through Possibilities: Parkinson's Dance" | 2016.
- Tolley Medal Award Presentation, oral presentation, New York City, NY, "Moving Through Possibilities: Parkinson's Dance" | 2016.
- Syracuse University Future Professoriate Program Annual Conference, Hamilton, NY, panel session, "Making the Most Out of Your Postdoc Experience" | 2016.
- Parkinson's Conference, Cicero, NY, oral presentation, "Moving Through Possibilities: Parkinson's Dance" | 2015.
- Society for Neuroscience Meeting, Chicago, IL, poster presentation, P614.05 "The effects of the botanical estrogen isoliquiritigenin on cognition in young adult female rats" | 2015.
- Society for Behavioral Neuroendocrinology Meeting, Pacific Grove, CA, poster presentation, "Opposing effects of estrogens on two different pattern separation tasks" | 2015.
- Society for Neuroscience Meeting, Washington, DC, poster presentation, P749.05 "A tale of two memory systems: Differential involvement in two pattern separation tasks" | 2014.
- Society for Neuroscience Meeting, New Orleans, LA, poster presentation, P92.08 "Nuances of pattern separation determine modulation by estradiol" | 2012.
- Society for Behavioral Neuroendocrinology Meeting, Madison, Wisconsin, poster presentation, P1.65 "Effects of ovarian hormones on pattern separation in female rats" | 2012.
- Society for Behavioral Neuroendocrinology Meeting, Queretaro, Mexico, poster presentation, P1.14 "Ovarian hormones and KChIP3 in learning strategies and synaptic plasticity" | 2011.

Neurobiology of Learning and Memory, 35th Annual Winter Conference, Park City, Utah, data blitz presentation, “Role of KChIP3 in pattern separation” | 2011.

Tulane Research Days, Tulane University, New Orleans, Louisiana, poster presentation |2011.

Neurobiology of Learning and Memory, 34th Annual Winter Conference, Park City, Utah, data blitz presentation, “Role of KChIP3 in learning strategy selection in male and female mice” | 2011.

Society for Behavioral Neuroendocrinology Meeting, Michigan State University, East Lansing, poster presentation, P2.28 “Interaction of KChIP3 and estrogen in hippocampal-dependent memory” | 2009.

Neuroscience Retreat, Louisiana State University, New Orleans, poster presentation, “Shifts in strategy selection in water plus-maze across estrous cycle in female mice” | 2009.

SKILLS

Physical and Cognitive Assessment Techniques:

Montreal Cognitive Assessment (MOCA; certified on 08/22/16), Unified Parkinson’s Disease Rating Scale (UPDRS; certified on 08/22/16), mini-BESTest, Beck’s Depression Inventory, Test in Gross Motor Development in children (TGMD-2), Physical Activity Scale in Elderly (PASE), Activity Balance Confidence scale (ABC), Parkinson’s Disease Quality of Life questionnaire (PDQL).

Behavioral Techniques:

Rodent handling, ovariectomy surgeries, cannula implantation surgeries, subcutaneous, intrastriatal, and intraparietal injections, lavage technique, anxiety tests (open field, elevated plus-maze), fear conditioning, Morris water-maze, water-plus maze, pattern separation (metric change in object location tasks), place and response training, and object memory tasks.

Cell and Molecular Techniques:

Cell culture techniques, β -galactosidase assay, luciferase assay, brain (the hippocampus and the striatum) and uterus dissection in mice and rats, perfusion, hippocampal slice preparation, paraffin sectioning, cryosectioning, Cresyl Violet staining, TUNEL assay, immunohistochemistry, protein extraction and assays, surface biotinylation, western blot, co-immunoprecipitation.

Electrophysiological Techniques:

Stereotaxic surgery (electrode implantations), *in vivo* and *in vitro* LTP recordings.

SERVICE TO THE PROFESSION

Outreach and public engagement

SU FIT Families, physical activity workshop for children with autism and their families, Syracuse University | 2016

Dance workshop for Disability Awareness Month, Syracuse University, Syracuse, NY | 2016

Moving Through Possibilities, on-going dance classes for people with Parkinson's disease, Dance Theater of Syracuse | 2015 – to date

Workshop on Parkinson's Dance, Madison County Office of Aging | 2015

Movement for Healthy Aging, on-going dance classes for people with Parkinson's disease, sponsored by Aging Studies Institute, Syracuse University | 2014-2015

Dance for PD[®] Seminar for Parkinson's Disease Awareness Month featuring *Mark Morris Dance Company*, Brooklyn, NY at Syracuse University | 2014

Ad hoc manuscript reviewer

Neurobiology of Learning and Memory | 2011, 2013, 2014

Poster session judge

Society for Behavioral Neuroendocrinology Meeting, Atlanta | 2013

Member

Society for Neuroscience | 2007 to date

Society for Behavioral Neuroendocrinology | 2009 to date

Dance for Parkinson's Disease | 2012 to date

International Parkinson and Movement Disorder Society | 2016 to date