G. Duygu Yilmaz

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RESEARCH EXPERIENCE & EDUCATION

Rutgers University – Newark, New Jersey
PhD Candidate (Mentor: Juan Mena-Segovia) Sep 2018 – Present
- Functional investigation of midbrain inhibitory inputs to dopamine neurons and its effects on adaptive action control

Rutgers University – Newark, New Jersey
Rotation PhD Student (Mentor: Icnelia Huerta-Ocampo) Sep 2017 – June 2018
- Anatomical tracing of an external source of acetylcholine to striatum in mice

Bogazici University – Istanbul, Turkey
Research Assistant (Mentors: Resit Canbeyli & Çağrı Temuçin Ünal, Bengi Ünal) Sep 2016 – June 2017
- Effects of lateralization on susceptibility to depression in a rat model of behavioral despair
- Anatomical differences between hippocampal and septal areas in rats that use response or place strategies in a spatial learning task

Ruhr University – Bochum, Germany
Summer Research Intern (Mentors: Onur Gunturkun & Daniel Lengersdorf) June – Aug 2015
- Effects of acute stress on extinction learning in a contextual learning paradigm in pigeons

Bogazici University – Istanbul, Turkey
BA in Psychology (Mentor: Resit Canbeyli) Sep 2011 – June 2016
- The role of day length and circadian rhythms on cognitive and developmental processes in rats

FUNDING, AWARDS, & HONORS

- Dean's Dissertation Fellowship, Rutgers University—Newark Sep 2023 – May 2024
- Doctoral Student Academic Advancement Program, Rutgers University—Newark Sep 2022 – Aug 2023
- Professional Development Fund, Rutgers University—Newark May 2018

CONFERENCE PRESENTATIONS

Zhang, S., Kim, Y., **Yilmaz, D.**, Gut, N. K., Mena-Segovia, J. (2023). Neuronal dynamics of pedunculopontine GABAergic neurons during action sequence initiation and execution. Society for Neuroscience, Washington DC, USA.

Yilmaz, G. D., Gut, N. K., Zhang, S., Mena-Segovia, J. (2023). Dynamics of pedunculopontine nucleus neurons during adaptive motor behavior. 14th IBAGS Meeting, Stockholm, Sweden.

Gut, N. K., Kondabolu, K., **Yilmaz, G. D.**, Torres, A., Mena-Segovia, J. (2019). GABAergic inhibition of midbrain neurons by the pedunculopontine nucleus: Implications for motor behavior. 13th IBAGS Meeting, Biarritz, France

Yilmaz, D. G., Dedeoglu, G., Atesyakar, N., Alashan, D., Buyukyabat, C., Adibelli, E., Tiryaki, S., & Canbeyli, R. (2016). The effects of paw lateralization and time of testing on behavioral despair on Wistar rats. 46th Annual Meeting of Society for Neuroscience, San Diego, USA.

Tunckol, E., Afacan, K., **Yilmaz, D.**, Caglayan, A., Gurbuz, E., & Canbeyli, R. (2013). Behavioral despair is inversely related to performance in a previous Y-Maze task in male Wistar rats. 45th European Brain and Behavior Society Meeting, Munich, Germany.

Lacin E., Tunckol E., Soyman E., **Yilmaz D.**, Caglayan A. and Canbeyli R. (2012). Paradoxical prolonged effect of zinc administration in forced swim tests. 42nd Annual Meeting of Society for Neuroscience, New Orleans: Society for Neuroscience, 2012.

PUBLICATIONS

Gut, N. K., **Yilmaz, D.**, Kondabolu, K., Huerta-Ocampo, I., & Mena-Segovia, J. (2022). Selective inhibition of goal-directed actions in the mesencephalic locomotor region. BioRxiv. https://doi.org/10.1101/2022.01.18.476772

Soyman, E., **Yilmaz, G. D.**, & Canbeyli, R. (2018). Head-turning asymmetry: A novel lateralization in rats predicts susceptibility to behavioral despair. Behavioral brain research, 338, 47-50. https://doi.org/10.1016/j.bbr.2017.10.008

PROFESSIONAL DEVELOPMENT & WORKSHOPS

- Participated in various iJobs workshops and seminars
- MINT Optoelectrode Workshop Series at the University of Michigan, MI, 2022
- SciPhD Certificate Program – The Business of Science for Scientists, Jan 2022
- Neuromatch Academy – Computational Neuroscience Courses, Aug 2021
- Erdös Institute – Cöding Bootcamp, May 2020

MONTORING & TEACHING EXPERIENCE

- Mentored 3 Undergraduate Research Assistants (2019-2022)
- Lecturer, Behavioral and Neural Sciences Graduate Program, Bootcamp (2019 - 2022)
- Teaching Assistant, Rutgers University, Network & Complexity Neuroscience (2021)
- Teaching Assistant, Rutgers University, Foundations in Neuroscience III (2020)
- Teaching Assistant, Rutgers University, Foundations in Neuroscience II (2019)
- Teaching Assistant, Bogazici University, Special Topics in Psychobiology of Circadian Rhythms (2015)

SKILLS

Technical: Extracellular Electrophysiology in awake rodents (using acute silicon probes), Fiber Photometry in freely moving rodents, Optogenetic manipulations, Behavioral training and testing of rodents, Immunohistochemistry, Anatomical tracing techniques (traditional constructs & viral vectors), Stereotaxic surgeries, Electronic Circuit Building, Microscopy and Imaging, Genotyping and colony management

Analytical: MATLAB, R, Python, C, FIJI/ImageJ, Adobe Illustrator, JASP, Arduino/Raspberry Pi programming and prototyping, git, Principal Components Analysis, Mixed Effects Modeling, Generalized Linear Models, ANOVA/ANCOVA/MANOVA