



Evgeny Shlevkov, Ph.D.

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Friday, September 18, 2026

12:00-1:00 pm – Morgridge Hall Seminar Room 7560

Zoom Meeting: 966 3372 9112

<https://uwmadison.zoom.us/j/96633729112?pwd=tHFc9i1dAAgmXe05uWtw8wXBIQZxGB.1>

Passcode: 621125

From Genetics to Therapeutics: Mapping Druggable Mechanisms in Brain Disorders

Abstract: In my talk, I will illustrate how integrating pharmacology with advanced cellular technologies—including high-content imaging, iPSC modeling, and machine learning—complements human genetics in the quest to map druggable cellular signaling nodes in neurodegenerative and neurodevelopmental disorders. I will present how the combination of genetics and cell biology guides the nomination and prioritization of drug targets, how high-content imaging can be used to identify druggable mechanisms driving disease-associated cellular phenotypes, and how machine learning can help identify convergent phenotypes in iPSC models derived from patients. These methods and concepts can be applied across indications, offering a powerful platform for the translational investigation of brain disorders.

Bio: Evgeny Shlevkov, Ph.D., serves as Assistant Director of Drug Discovery at the Lieber Institute for Brain Development and holds a dual appointment as Assistant Professor of Physiology, Pharmacology, and Therapeutics at the Johns Hopkins University School of Medicine. His laboratory focuses on the search for therapeutics for schizophrenia and related neurodevelopmental disorders. To achieve this goal, the laboratory employs a diverse range of cell-based techniques, from drug screening assays in heterologous systems to AI-powered phenotypic profiling of human induced pluripotent stem cell (hiPSC)-derived models. Prior to joining the Lieber Institute, Evgeny was Head of Neurobiology at Myrobalan Therapeutics, a CNS-focused startup. In this role, he designed and implemented the company's in vitro pharmacology strategy, overseeing a portfolio of candidates—ranging from Lead Identification (ID) to Pre-Clinical Candidate (PCC) stages—across kinase inhibitors, GPCR inhibitors, and ion channel positive allosteric modulators (PAMs). Earlier in his career, Evgeny led pipeline and exploratory programs at Biogen, where he co-discovered the first bona fide small-molecule activator of the Parkin E3 ligase, a first-in-class therapeutic for Parkinson's disease.



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