



MMI 291 Seminar Series

Current Theme: Interdisciplinary Research

Winter Quarter 2021 – CRN 33311

Friday Seminar – 12:10-1 p.m.



“Epigenomic Profiling of Neurodevelopmental Disorders”

Research / Bio

Dr. Laufer is a Canadian Institutes of Health Research (CIHR) Banting postdoctoral fellow in the laboratory of Dr. Janine LaSalle at the University of California, Davis and completed his graduate studies at the University of Western Ontario in the laboratory of Dr. Shiva Singh. Dr. Laufer currently serves as the Epigenetics Editor for EpiGenie. The fundamental biological question his research seeks to answer is: How does epigenetic variation impact neurodevelopment? To answer this question, his research examines DNA methylation profiles of the most common environmental and genetic causes of neurodevelopmental disorders. From the environmental perspective, he has examined prenatal exposures to alcohol or maternal obesity and from the genetic perspective he has examined Down Syndrome. Towards this end, he utilizes novel bioinformatic approaches to analyze low-pass whole-genome bisulfite sequencing (WGBS) data from sample sources such as cell free fetal DNA, newborn dried blood spots, post-mortem human brain, neuronal cell culture, and rodent models, which has enabled the discovery of regions of differential methylation that are involved in neurodevelopmental disorders.

Publications

Low-Pass Whole Genome Bisulfite Sequencing of Neonatal Dried Blood Spots Identifies a Role for RUNX1 in Down Syndrome DNA Methylation Profiles., Laufer, Bl., Et al. Human Molecular Genetics, 2020 Nov

Whole genome bisulfite sequencing of Down syndrome brain reveals regional DNA hypermethylation and novel disorder insights. Laufer, Bl., Et al. Epigenetics, 2019 July

Associative DNA methylation changes in children with prenatal alcohol exposure. Laufer, Bl., Et al. Epigenetics, 2015 July

Jan
29



Benjamin Laufer, Ph.D.
CIHR Banting Postdoctoral Fellow
LaSalle Lab
University of California, Davis

Jan. 29, 2021
12:10 – 1 p.m.
ZOOM Meeting

Medical Microbiology
& Immunology
School of Medicine

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We hope to see you there!