

MATAS VITKAUSKAS

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EDUCATION

Yale-NUS College , Singapore	Aug 2018 - May 2022
Major: Life Sciences; Minor: Physical Sciences (Chemistry)	
CAP – 4.47/5.00 ; Major CAP – 4.79/5.00	

PUBLICATIONS

Vitkauskas, Matas, and Ajay S. Mathuru 2020. "Total Recall: Lateral Habenula and Psychedelics in the Study of Depression and Comorbid Brain Disorders" *International Journal of Molecular Sciences* 21, no. 18: 6525. <https://doi.org/10.3390/ijms21186525>

AWARDS AND HONORS

- McGill Graduate Excellence Award (7,790 CAD).
- Yale-NUS Summer Research Program scholar 2019 (Grant award 3500 SGD)
- NUS Outstanding Undergraduate Researcher Prize 2020 (Cash award of 2000 SGD)
- Harvard Summer Honors Undergraduate Research Program (SHURP) scholar (Grant award 3000 USD)
- Presented in Leadership Alliance National Symposium 2021
- Presented in Yale-NUS Summer Research Symposium 2021
- 2nd place in 10x Genomics Spatial Transcriptomics Hackathon 2024 (Prize award 200 SGD)

RESEARCH EXPERIENCE

McGill University , PhD Student, Canada	Jul 2025 - Present
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- PhD program in Human Genetics. Supervisor: [Dr. Gustavo Turecki](#).
- Analyzing RNAseq and EMseq data of pyramidal neurons from Prefrontal Cortex of depressed suiciders with history of childhood abuse.
- Studying Paraventricular Thalamus using snRNAseq in the context of childhood abuse.

Genome Institute of Singapore (GIS) , Research Officer, Singapore	Jul 2022 – Jul 2025
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- Supervisor: [Dr. Jinyue Liu](#)
- Preparing a first-author paper *Temporal and spatial characterization of a human midbrain-like organoid model of cellular vulnerability in Parkinson's disease*.
 - o Analysis of in-house and publicly available scRNAseq and MERFISH spatial transcriptomic data.
- Studying Glioblastoma Multiforme tumor biopsies and ligand-receptor interactions between invasive tumor subtypes and their immediate cellular neighborhoods using CosMx spatial transcriptomics.
- Characterized cell-type-specific DE effects caused by Smchd1 mutation in embryonic gonads of mice in a collaboration with [Dr. Xue Shifeng lab](#) at NUS.

- Yale-NUS, Undergraduate research, Singapore** Aug 2021– May 2022
- Supervisor: [Dr. Jan Gruber](#).
 - Wrote bachelor-thesis titled *Cosmetic neurology at scale: developing a high-throughput phenotypic screening for novel nootropics in D. melanogaster.*
 - Created custom Arduino behavioral set-up for vibrational conditioning, CAFÉ feeding assay using capillaries and created hypoxia recovery assay.
- Brigham and Women's Hospital, Summer Research Intern, Online** May 2021– Sept 2021
- Supervisor: [Dr. William Renthal](#).
 - Studied cell-type-specific enhancers in Dorsal Root Ganglion.
 - Analysis of scRNAseq and complementary scATACseq datasets in mice.
- Institute of Molecular Cell Biology (IMCB), Intern, Singapore** May 2020 – May 2021
- Supervisor: [Dr. Ajay Mathuru](#).
 - Ran behavioral tests that investigated the role of oxytocin receptors in scotophobic and thigmotactic behavior using OpenCV.
- Yale-NUS College, Lab Assistant, Singapore** Sep – Dec 2019
- Supervisor: [Dr. Philip Johns](#).
 - Extracted over 100 RNA samples for a study investigating aggressive behavior in *t. discus* flies.
- Duke-NUS Centre for Computational Biology, Intern, Singapore** May - July 2019
- Supervisor: [Dr. Steven Rozen](#).
 - Evaluated the performance of softwares used in mutational signature analysis (e.g. SigProfiler, SignatureAnalyzer, signeR, deconstructSigs).
 - Formated variant calling files (VCFs).

VOLUNTEERING EXPERIENCE

- Academic Buddy LT, Student Mentor, Online** Aug 2018 - Present
- Singapore Society for Neuroscience (SfN.SG), Newsletter editor and Web Master, Singapore** Mar 2023 - Jul 2025
- Integrative Neuroscience Association, Staff writer, Lithuania** Dec 2020 - Mar 2023

Computer skills and Languages

Languages: Lithuanian (Native), English (Fluent), French (Intermediate(B1)), Chinese (Elementary).

Technical Skills: R studio (Advanced), Python (Intermediate), OCaml (Elementary), C++ (Elementary).

Interests: DJing, Classic Guitar, Basketball, Snowboarding.