

ADELAJDA TURKU

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EDUCATION

PhD Candidate, Biomedical Sciences, **Icahn School of Medicine at Mount Sinai**, NY, 2023—2028

BA/MA, dual degree, Biological Sciences (Honors) conc. in Biotech, **Hunter College**, NY, 2020—2023

AS, Associate in Science, Chemistry (Honors), **Bergen Community College (BCC)**, NJ, 2017—2020

SKILLS

Molecular Biology. Gel electrophoresis. Primer design, Real-Time PCR, standard PCR, and reverse-transcription PCR. Mouse husbandry, tissue dissections, brain perfusions, cryostat brain sections, immunofluorescence staining, microscopy (wide-field and confocal). Fluorescence-Associated Cell Sorting (FACS), RNA-sequencing analysis.

Other. Project management, organization, teamwork, mentoring.

EXPERIENCE

PhD Candidate, at Neurodev Lab, Icahn School of Medicine at Mount Sinai (ISMMS), Manhattan, NY Fall 2023—Present

- Investigating changes of cortical astrocyte abundance and morphology upon genetic-driven deletion of the kinase, by collecting brain tissue samples, immunostaining with fluorescence markers, for confocal imaging and Imaris/Fiji/KuPath software analysis.
- Optimizing protocols to isolate antibody-targeted astrocyte nuclei from brain tissue via FAS sorting, for downstream RNA sequencing transcriptomics to assess changes of pathways in astrocytes upon kinase inactivation.
- Presenting in departmental seminars and conference poster sessions, engaging in scientific writing/presentations, and addressing questions to an audience with diverse backgrounds.

Rotating PhD student, at Icahn School of Medicine at Mount Sinai (ISMMS), Manhattan, NY

08/2023—Present

Selected with 60 students from a 1,200 international pool of applicants (top 5%)

- Inquired changes of astrocytes abundance in the developing brain cortex upon deletion of a disease-associated kinase using genetic mouse model by collecting brain tissue, imaging and quantifying for glial cell markers (Dr. Panagiotakos lab).
- Investigated epigenetic modifications of a pioneer transcription factor involved in cycling of hair follicle stem cells using proximity ligation assay (PLA) on *in vivo* mouse skin sections (Dr. Millar's lab).
- Engineered CAR-T cells targeting BCMA-expressing multiple myeloma cells to measure *in-vitro* cancerous cells killing, and validating results via phenotypic analysis using flow cytometry (Dr. Parekh's lab).

Student Researcher, at Neurobio Lab, Hunter College (CUNY), Manhattan, NY

01/2022—05/2023

- Evaluated the efficacy of a kinase inhibitor to treat multiple sclerosis symptoms in mouse model, staining brain tissue, imaging with wide-field microscope, quantifying markers via ImageJ/Imaris, and analyzing via PRISM (thesis).
- Prepared gels of different elastic modulus to mimic the brain extracellular environment and study the effect of the extracellular matrix in oligodendrocyte cells differentiation.

Scientific Summer Intern, Novartis Institute for Biomedical Research (NIBR), Cambridge, MA

06/2022—09/2022

Selected with 30 students from 800 applicants across the nation (top 4%)

- Identified expression levels of a G-protein coupled-receptor (GPCR) responsible for a metabolic disease, in diverse cell lines via reverse-transcriptase PCR, and its protein activity via calcium flux assay.
- Assessed high-affinity binding antibodies for an ion pump leading to heart failure by conducting ELISA and FRET assays.

Research Intern at Microbio Lab, 3SP Program, Bergen Community College (BCC), Paramus, NJ

06/2018—12/2019

STEM Student Scholar Program (3SP) is a selective program for the top 2% STEM students at BCC.

- Developed a real-time PCR assay for rapid detection of *E. coli* in pharmaceutical products, with low levels of bacterial contamination to optimize quality control of non-sterile pharmaceutical products.
- Detected microbial cellulase gene from soil via PCR, cloning, and phylogenetics analysis, identifying the enzymes degrading cellulose to glucose, with high potential of using cellulose as a source of fuel.

Peer Support, Bergen Community College (BCC), Paramus, NJ

01/2018—08/2020

- Peer tutor for college-level STEM courses to a diverse student population providing homework help or preparing study group sessions. Awarded the D. Scalcione award for tutoring mathematics courses with dedication and enthusiasm.
- Supplemental Instructor Leader for microbiology course across multiple semesters, preparing and leading tri-weekly study sessions based on learning techniques for 20+ student groups.
- Peer mentor for Pathway Scholars Program, training students on time management and goal setting to meet their academic goals. Returning as an alumnus holding workshops on transferring tips.

PROJECTS

NJ Governor's STEM Scholar's Project: Brain network and addiction 07/2019—05/2020
Investigated the neuronal network response to sugar to study addiction. Selected as top 1% STEM student in the state of NJ to conduct the project while leading and mentoring a group of outstanding high school students in STEM.

Brain Tingles project: ASMR and college student anxiety 06/2018—06/2019
Trained peers to use Electroencephalogram to conduct the first comprehensive study on ASMR. First place from 1,300 projects at Spring 2019 PTK convention. First place from 150 projects at regional 2019 STEM C^2 conference at BCC.

MEMBERSHIPS, AWARDS AND SCHOLARSHIPS

- Albanian PhD Circle, organization bringing together outstanding Albanians from across the world, Spring 2025—Present
- 2023 Women in Bio, national organization supporting women's careers, leadership in the life sciences, Fall 2023—Present
- 2020 AKA Education Advancement Scholarship, for academic achievement and financial need, Fall 2020
- Jack Kent Cooke (JKC) Scholarship Semifinalist, as top one-third of 1,500 national applicants, Jan. 2020
- Distinguished Officer Team Member, PTK Honors Society, for outstanding work in the college chapter, Spring 2019
- NJ STEM Scholar, for top STEM student in NJ for academic achievement and research engagement, Fall 2019
- 2018 PTK Global Leader of Promise, for academic achievement and leadership potential, Fall 2018
- Recipient of the BCC Scholarship for academic achievement, Spring 2018, and Spring 2019

PUBLICATIONS

1. Jimenez, L., Vasquez, J., **Turku, A.**, Pincus, L. PCR detection, cloning, and genetic identification of microbial cellulases genes in soils. **BIOS**. August 23, 2022. [Link](#)
2. Jimenez, L., Peca, S., Bochis, J., Vasquez, J., Zapata, S., Ramadan, R., Gardner, M., Perez, S., Pinto, A., Pincus, L., Fadiga, L., and **Turku, A.**. Nasal carriage of *Staphylococcus aureus* among a healthy suburban population: genotypic diversity and frequency of pathogenicity genes. **Journal of Microbiology and Experimentation**. October 25, 2021. [Link](#)
3. **Adelajda Turku**. The Microbio Pamphlet. **Amazon**. January 10, 2021. [Link](#)
4. Jimenez, L., Pinto, A., **Turku, A.**, Perez, S., Molina, V. Rapid Detection of *Escherichia coli* by Real-Time PCR in Pharmaceutical Products Contaminated by Low Levels of *Bacillus megaterium*, *Burkholderia cepacia*, *Escherichia coli*, and *Staphylococcus aureus*. **American Pharmaceutical Review**. August 26, 2019. [Link](#)
5. Alpha Epsilon Phi Chapter of PTK, Bergen Community College, Paramus NJ. Transforming Health Through Music Therapy. **2018- 2019 Civic Scholar: Phi Theta Kappa Journal for Undergraduate Research**. [Link](#)

(SELECTED) PRESENTATIONS

1. Departmental Work in Progress (WIP). **Investigating the role of disease-associated kinase in developing cortical astrocytes**. **May 2025, Cell Development and Regenerative Biology (CDRB) Program**, Graduate School at Icahn School of Medicine at Mount Sinai (ISSM), New York (NY), USA. **February 2025, Neurodevelopmental Disorders (NDD) Program**, Graduate School at Icahn School of Medicine at Mount Sinai (ISMMS), New York NY (NY), USA.
2. Conference poster sessions. **Adelajda Turku**, Vicente Pedrozo, Raquelle Sloan, Shreya Nagarajan, Ralitsa Petrova, and Georgia Panagiotakos. **Investigating the role of disease-associated kinase in developing cortical astrocytes**. **May 2025, Friedman Brain Institute (FBI) Retreat**, New York, (NY), USA. **November 2024, The Mindich Child Health and Development Institute, (MCHDI) Retreat**, New York (NY), USA. **October 2024, Institute for Regenerative Medicine (IRM) Retreat**, Wilkes-Barre, Pennsylvania (PA), USA.
3. **Adelajda Turku**, Ace Alcantara, Carmen Melendez-Vasquez. Does ROCK2 inhibition promote remyelination in a cuprizone mouse model? **Hunter Undergraduate STEM Research Conference**, April 2023, Manhattan, New York.
4. **Turku, A.**, Alarcon-Contreras, V., Berdichevski, A., Jamontt, J. Expression and activity of an endogenous GPR in human cell lines EA.hy926 and PC3. **Symposium of Novartis Institute for Biomedical Research (NIBR)**, August 2022, Cambridge, MA.
5. Pincus, L., S. Vazquez, **A. Turku**, and L. Jimenez. Characterization of microbial communities responsible for the biodegradation of cellulose in soils. **52nd Annual Meeting of the Metropolitan Association of College and University Biologists**, October 2019, Monmouth University, West Long Branch, New Jersey.
6. **Turku, A.**, A. Pinto, V. Molina, and L. Jimenez. Rapid Detection of *Escherichia coli* Contamination in Pharmaceutical Products using Real-Time PCR. **51st Annual Meeting of the Metropolitan Association of College and University Biologists**, October 2018, Queensborough Community College, Bayside, New York.
7. Alpha Epsilon Phi Chapter Officers. *Transforming Health Through Music Therapy*. Brain Tingles: Exploring a Holistic Approach to Alleviate Anxiety through EEG Brainwave Monitoring. **STEM C^2 Research Summit Conference**, May 2019, Bergen Community College, NJ.