Maxim Ohairwe Ermoshkin

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EDUCATION

NEW YORK UNIVERSITY, New York, NY, August 2020 – Present
Doctor of Philosophy in Biology, Thesis Advisor: Enrique Rojas

MARINE BIOLOGICAL LABORATORY, Woods Hole, MA, June 2023-August 2023
Physiology: Modern Cell Biology Using Microscopic, Biochemical and Computational Approaches

UNIVERSITY OF RICHMOND, Richmond, VA, May 2020
Bachelor of Science in Biochemistry and Molecular Biology, *minors in Mathematics and Computer science*
Sum cum laude

RESEARCH EXPERIENCE

Doctoral Research, **New York University, Department of Biology**, Spring 2021 - Present

- Quantitative microscopy, chemical perturbations and biophysical modeling to study the fundamental constraints on cell shape in tip growing cells across the tree of life with **Enrique Rojas**
- This work is published in *Cell Reports*

Physiology Course, **Marine Biological Laboratory**, Summer 2023

- Advanced microscopy and cell biological techniques to study a variety of organisms and questions including Choanoflagellate gamete formation, *Toxoplasma* and *Neospora* coinfection dynamics and transcription factor punctae in *Ashbya gossypii* nuclei
- Worked with **Nicole King**, **Amy Gladfelter** and **Sebastian Lourido**

BI.G Summer Program, **Institute for Quantitative and Computational Biosciences, UCLA**, Summer 2019

- Advanced image analysis to study the effect of the cytokine TNF-α on survival of cells infected with the HSV-1 virus under **Roy Wollman**

Undergraduate research, **University of Richmond, Department of Biology**, Fall 2016- Fall 2019

- Image analysis to analyze of the behavior of mitochondria in CAD neurites with **Omar Quintero**
- DNA extraction and sequencing to study evolution of neotropical frog species under **Rafael O. De Sá**

PUBLICATIONS

Maxim E. Ohairwe, Branka D. Zivanovic and Enrique R. Rojas. (2024) A fitness landscape instability governs the morphological diversity of tip-growing cells. *Cell Reports.* https://doi.org/10.1016/j.celrep.2024.113961

CONFERENCES: CONTRIBUTED TALKS AND POSTERS

- 2024: Fungal Genetics, Pacific Grove CA - *Contributed Talk and Poster*
- 2023: American Society of Cell Biology (ASCB) , Washington DC - *Contributed Talk and Poster*
- 2023: Physics of Life Symposium, The Graduate Center CUNY, New York NY - *Contributed Talk*
- 2022 : American Society of Cell Biology (ASCB) , Washington DC - *Poster*
- 2019: American Society of Cell Biology (ASCB) , Washington DC - *Poster*
- 2019: Annual Biomedical Research Conference for Minority Students (ABRCMS), Anaheim CA- *Poster*
- 2019: Fall Diversity conference in University of Minnesota, Minneapolis MN - *Poster*
- 2018: Annual National Research and Ethics Conference (ANREC), Kampala Uganda

AWARDS

- **MacCracken Fellowship,** Fall 2020 – present
- **Oldham Richmond Scholarship**, Fall 2016 – May 2020
- **Spider Internship fund**, Summer 2019

LEADERSHIP, VOLUNTEERING & ACTIVITIES

AfterSchool Mentoring Program by New York Academy of Sciences Spring 2023
Scientist Mentor

- Volunteering with 3rd-5th grade children at the Chinatown YMCA

Summer Undergraduate Research Program(SURP) Summer 2022
Mentor

- Guided two undergraduate students on a research project over a 10 week period in our lab

Black in STEM and Blackacademics Fall 2020 -present
Graduate participant

- Participate in Affinity groups aimed at increasing visibility and connection between Black scientists and students

Graduate Housing Associated Government Fall 2020 - Spring 2021
Director of Business Administration

- Volunteered to organize social events and activities for first year graduate students at NYU

First iGEM Team at University of Richmond Spring 2019 - Fall 2019
Member

- Joined the inaugural team from University of Richmond that attended iGEM, an international synthetic biology competition https://2019.igem.org/Team:Richmond_UR/Team

Osmosis Magazine Fall 2018 - Spring 2019
Writer

- Authored an article titled "A Biologically Modified World" in Fall 2018 issue of the on campus magazine at University of Richmond

SKILLS

- Microscopy including phase contrast, epifluorescence and confocal imaging techniques
- Maintenance, storage and identification of cultures in fungal, oomycete and bacterial species
- Quantitative image analysis pipeline development including machine learning-based techniques
- Proficient in Matlab and Python with experience using NumPy, Pandas, SciPy and scikit-image packages
- Experience using Java and R programming languages
- Languages: Bilingual in Russian and English; intermediate Italian, French and Luganda