

Leon Jacob Mahoa Winogura Wagner

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EDUCATION

Weill Cornell Graduate School of Medical Sciences , New York, NY	<i>Expected 2029</i>
Doctor of Philosophy, Pharmacology	
University of Michigan , Ann Arbor, MI	<i>May 2024</i>
Master of Science in Engineering, Biomedical Engineering	
Concentration: Biomaterials and Regenerative Medicine	
GPA: 4.00/4.00	
University of Michigan , Ann Arbor, MI	<i>April 2023</i>
Bachelor of Science, Cellular and Molecular Biomedical Science	
GPA: 3.77/4.00	

RESEARCH, INTERNSHIP, & WORK EXPERIENCE

Daniel Heller Lab , Memorial Sloan Kettering Cancer Center	
<i>Ph.D. Student</i>	<i>January 2025 – present</i>
<ul style="list-style-type: none">Design experiments regarding lipid nanoparticle drug delivery for cancer- and senescence-related pathologies, using flow cytometry and confocal microscopy.Present detailed research updates periodically at group meetings.	
PRrecision Immune MicroEnvironments (Aaron Morris) Lab , University of Michigan	
<i>Research Assistant</i>	<i>January 2023 – May 2024</i>
<ul style="list-style-type: none">Designed experiments regarding incorporation of full-length recombinant proteins into PEG-based hydrogels to improve functional material properties at a biologically relevant level.Wrote and defended Master's Thesis.Assisted in conducting <i>in vivo</i> mouse studies, implanting antigen-coated scaffolds and analyzing via flow cytometry.Presented ongoing research updates, participated in journal club, and collaborated with colleagues.	
Merck & Co. , West Point, PA	
<i>Investigative Toxicology Intern</i>	<i>May - August 2022</i>
<ul style="list-style-type: none">Led independent project for assay development in Immunotoxicology group within Nonclinical Drug Safety.Designed experiments to optimize use of IsoPlexis single cell cytokine secretion measurement technology.Presented findings from summer project to 40+ scientists and directors and showcased at a poster session.	
Brendon Baker and Laura McCauley Labs , University of Michigan	
<i>Undergraduate Research Assistant</i>	<i>May - December 2021</i>
<ul style="list-style-type: none">Analyzed cryosectioned bone samples stained with immunofluorescent antibodies using confocal microscopy.Fabricated polymer-based microfluidic devices to produce biomimetic particles to study macrophage efferocytosis.Harvested, cultured, and differentiated bone marrow stromal cells from mice.	
Optofluidic Bioassay, LLC , Ann Arbor, MI	
<i>ELISA Production Intern</i>	<i>February - May 2021</i>
<ul style="list-style-type: none">Performed chemical surface modification of over 100 novel microfluidic 96-well ELISA plates per week.Streamlined production and inventory operations with small team, reporting directly to Chief Technology Officer.Streamlined production and inventory operations with small team, reporting directly to Chief Technology Officer.	

PUBLICATIONS

Kannan R, Koh AJ, Kent RN 3rd, Bhutada K, Wasi F, **Wagner L**, Kozloff K, Baker BM, Roca H, and McCauley L. CCL2/CCR2 Signalling in Mesenchymal Stem/Progenitor Cell Recruitment and Fracture Healing in Mice. 2024. *Journal of Cellular and Molecular Medicine*. DOI: 10.1111/jcmm.70300

AWARDS

University Honors – University of Michigan	<i>Fall 2019, Fall 2020, Winter 2021, Winter 2022, Fall 2022</i>
Gold Medal – International Genetically Engineered Machine (iGEM)	<i>2022</i>

PRESENTATIONS

Master's Thesis Defense, University of Michigan
Incorporating Full-Length Recombinant Proteins into Poly(ethylene glycol)-Based Hydrogels for the Modification of Material Properties
Leon J M W Wagner (Oral Presentation)

PROJECTS

HIV Therapeutic Research Proposal, University of Michigan

November – December 2022

Quantitative Cell Biology

- Created research proposal for HIV therapeutic utilizing RNA interference.
- Simulated interaction between treatment and cellular products using MATLAB to justify efficacy.

Drug-Eluting Hip Implant Design, University of Michigan

August – December 2022

Introduction to Biomedical Engineering Design

- Collaborated with small team to design drug-eluting hip implant using SOLIDWORKS.
- Simulated dynamics of incorporated diffusible osseointegration agent over time, and displacement under maximal stresses, using COMSOL.
- Verified, validated, and derived parameters for computational modeling through extensive literature review.

ACTIVITIES

Interview Days Planning Committee, Weill Cornell Graduate School of Medical Sciences

Pharmacology Recruitment Chair

December 2024 – March 2025

Coordinated volunteers for Interview Days events for incoming class of 2026.

Biomedical Engineering Graduate Student Council, University of Michigan

Social Committee Member

September 2023 – May 2024

Planned community-building events for graduate students and faculty in BME with teams.

Michigan Synthetic Biology Team, University of Michigan

Active Member and Social Media Director

January 2022 – April 2023

- Facilitated team meetings for design of experiments testing viability of encapsulation and release of antimicrobial peptides using recombinant encapsulin proteins.
- Awarded Gold Medal at International Genetically Engineered Machine competition (iGEM).
- Promoted organization through social media and coordinated team bonding events.

Bioethics Society, University of Michigan

Active Member

January 2021 – April 2023

Facilitated and contributed to discussions of matters of ethics in the modern medical field.

Arbor Promotion Group, Ann Arbor, MI

Active Member

September 2019 – April 2022

Coordinated with local business to bring musical artists with a medium-to-large-sized following to Ann Arbor.

Michigan Impact Investing Symposium, University of Michigan

Marketing Strategist

January 2020 – March 2020

Strategized in a team to advertise symposium on investing with a social and societal impact focus to students.

SKILLS

Computer: FlowJo, Prism, MATLAB, C++, Python, R, SOLIDWORKS, COMSOL, Microsoft Office Suite

Laboratory: Flow Cytometry, Confocal Microscopy, Cell Culture, Organoid Culture, Hydrogel Design/Synthesis, Aerobic Bacterial Culture, DNA Transformation, PCR, Nickel Ion Chromatography, Western Blot, Cryosectioning, ELISA, Gel Electrophoresis

Language: German (working proficiency), English (native proficiency)

Technical: Arc Welding, Carpentry