Mitchell Read Slobodian

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PERSONAL PROFILE

PhD level researcher with 4 years of laboratory and research experience. I have 2 first author publications and authorship on an additional 6 papers. I have been cited over 260 times since 2019. I have taught other Master's students and Undergraduate Thesis students and taught Undergraduate labs and courses.

RESEARCH INTEREST

I have a strong interest in environmental research, with a focus on interactions between the gut microbiome and environmental contaminants. Environmental remediation is very important to me, and I would like to stay within this field.

PUBLICATIONS

- **First Author Publications**
  - Slobodian MR *et al.* The Effects of Essential and Non-Essential Metal Toxicity in the *Drosophila melanogaster* Insect Model: A Review. *Toxics*. 2021; 9(10):269.
- **Co-First Author Publications**
  - Tieu A & Slobodian M, *et al*. Methods and efficacy of extracellular vesicles derived from mesenchymal stromal cells in animal models of disease: a preclinical systematic review protocol. *Systematic reviews*. 2019; 8(1), 322.
- **Featured Publications**
  - Tieu A *et al*. An Analysis of Mesenchymal Stem Cell-Derived Extracellular Vesicles for Preclinical Use. *ACS nano*, 2020; *14*(8), 9728–9743.
  - Daypuk J *et al*. Online Adaptation to "Gotcha! Which fly trap is the best? An introduction to experimental data collection and analysis." *CourseSource*. 2021.
  - Bailey JM *et al.* Mesenchymal Stromal Cell-derived Extracellular Vesicles in Preclinical Animal Models of Tumor Growth: Systematic Review and Meta-analysis. *Stem Cell Rev and Rep.* 2021.
  - Gupta M *et al*. Preclinical Studies of MSC-Derived Extracellular Vesicles to Treat or Prevent Graft Versus Host Disease: a Systematic Review of the Literature. *Stem cell reviews and reports*, 2020; 1–9. Advance online publication.
  - Aziz J *et al*. Impact of Exercise Training on Hematological Outcomes Following Hematopoietic Cell Transplantation: A Scoping Review. *Clinical and Investigative Medicine (Online)*, 2021; *44*(2), E19-E26.
  - Levesque DC *et al*. (2023). An Interactive Protocol for In-Classroom DNA Extraction. CourseSource 10.

EDUCATION

2024 PhD in Biomolecular Sciences
School of Natural Sciences
Laurentian University, Sudbury, Ontario

- Awarded the Ontario Graduate Scholarship – Valued at $15 000.
- Received Graduate Teaching Assistant Award – Valued at $13 500.
- Awarded Dean's Entrance Scholarship – Valued at $5 000.

Thesis Title: Degradation of plastic waste by a novel bacterial consortium.
Thesis Supervisor: Dr. Sujeenthar Tharmalingam, Dr. Vasu Appanna

2023 Master's of Chemical Sciences
School of Natural Sciences
Laurentian University, Sudbury, Ontario
- Awarded the Ontario Graduate Scholarship – Valued at $15 000.
- Received Graduate Teaching Assistant Award – Valued at $9 600.

Thesis Title: The impacts of sex and genetic background on the response of *Drosophila melanogaster* to essential and non-essential metal toxicity.
Thesis Supervisor: Dr. Thomas Merritt

2020 Bachelor's of Science in Biochemistry (Specialization)
School of Natural Sciences
Laurentian University, Sudbury, Ontario
- Graduated Cum Laude with Honour's
- Dean's List – 2017, 2019, 2020

Undergraduate Thesis Title: The impact of nickel toxicity on the *Drosophila melanogaster* gut microbiome.
Thesis Supervisor: Dr. Thomas Merritt

RESEARCH EXPERIENCE

Biomine LTD., Sudbury, Ontario
May 2023 – April 2024
Research Scientist
- Researched the potential of *Pseudomonas fluorescens* and *Pseudomonas putida* to be used as effective methods of environmental plastic remediation.
- Implemented new tools like bioinformatics to efficiently obtain relevant data for simultaneous projects.
- Adapted to new project goals quickly based on the results obtained and the needs of the company.
- Effectively worked and maintained multiple lab spaces under multiple supervisors.

Dr. Thomas Merritt Laboratory, Laurentian University, Sudbury, Ontario
September 2020 – August 2022
Master's Student
- Master's thesis topic: The impacts of sex and genetic background on the response of *Drosophila melanogaster* to essential and non-essential metal toxicity.
- Developed my own unique protocol for the creation and use of nickel and copper contaminated fly food to accurately simulate a fly's natural diet.
- Developed my own protocol for the determination of ingested metal content using ICP-MS.
- Created SOPs for use by other members of the lab in future research.
- Performed a variety of lethality and assays using the model organism *D. melanogaster*.
- In addition to performing my own research, I helped to teach other undergraduates proper research techniques and methodology.

Ottawa Hospital Research Institute (OHRI)
May 2019 – August 2019
Summer Research Student

- Co-authored on a scoping review on the effectiveness of mesenchymal stromal cell-derived exosomes and microvesicles in pre-clinical models of regenerative therapy.

PROFESSIONAL APPOINTMENTS

Laboratory Teacher
Laurentian University, 2022-2023

The technologist in charge of teaching the undergraduate labs for the Biochemistry I (2nd Year), Biochemistry II (3rd Year), General Chemistry I (1st Year), and General Chemistry II (1st Year) courses. Prepared clear, concise, and easy to follow laboratory procedures that even those with minimal lab experience can follow and understand. Performed all duties in both French and English.

CONFERENCES

- Slobodian MR *et al*. Terephthalic acid metabolism in *Pseudomonas fluorescens* produces value added products: a metabolomic study. Oral presentation at the Northern Health Research Conference; June 10-11, 2024; Sudbury, Ontario
- Slobodian MR *et al*. The impacts of sex and genetic background on the response of *Drosophila melanogaster* to essential and non-essential metal toxicity. Poster presented at: 63rd Annual *Drosophila* Research Conference (Dros22); April 6-10, 2022; Online.
- Slobodian MR *et al*. Reviewing the toxic effects of essential and non-essential metals in *Drosophila melanogaster* and considerations for future research. Poster presented at: Canadian Fly Meeting 2021 (CanFly 2021); June 2021; Online.

TEACHING EXPERIENCE

Laurentian University, Sudbury, Ontario
October 2022 – December 2024
Laboratory Technologist

- The Technologist in charge of teaching the Undergraduate labs for the Biochemistry I (2nd Year), Biochemistry II (3rd Year), General Chemistry I (1st Year), and General Chemistry II (1st Year) courses.
- Preparing clear, concise, and easy to follow laboratory procedures that even those with minimal lab experience can follow and understand.
- Performed all duties in both French and English

Laurentian University, Sudbury, Ontario
September 2020 – Present
Organic Chemistry Graduate Teaching Assistant

- Taught the tutorial for the 2nd year Organic Chemistry course in French and English online using a graphic tablet and a variety of software.
- Created documents and answer sheets that current students use the teach the tutorials.

LANGUAGE AND CERTIFICATIONS

- **Language**
  - Bilingual French Certified at the DELF B2 level.
- **Certifications**
  - Bachelor's of Science in Biochemistry - Canadian Society for Chemistry Accredited degree.

SKILLS

- **Skills**
    - ICP-MS, Next-Gen Sequencing, Bioanalyzer, qPCR, HPLC
    - JMP Statistical Software, MetaboAnalyst
    - Programming Knowledge (Java)
    - Easily adaptable, strong communication, quick learner.

REFERENCES

Dr. Vasu Appanna – *Full Professor*, Laurentian University, Sudbury, ON, Canada – vappanna@laurentian.ca, 705-507-3942

Dr. Sujeenthar Tharmalingam – *Full Professor*, Northern Ontario School of Medicine, Sudbury, ON, Canada - sutharmalingam@nosm.ca, 647-216-1520