

EDUCATION

Ph.D. Candidate in Microbiology

College of Arts and Sciences | The Ohio State University
Advisor: Dr. Matthew Sullivan

Columbus, OH
August 2020 – Present

BS in Biological Sciences | GPA 4.0

Department of Mathematics and Sciences | Missouri Valley College
Minors in Chemistry & Forensic Science

Marshall, MO
August 2015 – December 2019

Honours Thesis: “Microbial Analysis of Rhizosphere and Non-rhizosphere Bacteria of *Lindera benzoin* and *Lithospermum canescens*.”

Advisor: Dr. Sarah MacDonald

ACADEMIC EXPERIENCE

Graduate Research Assistant

The Ohio State University Department of Microbiology

Columbus, OH
August 2020 – Present

- Presenting research at seminars to interdisciplinary audiences ranging from 4 to 20+ people
- Mentoring and training 2 undergraduate students on experimental design, performing wet and dry lab experiments and presentation skills.

Research project | “Investigating how HIV/ART-associated changes in the vaginal microbiome modulate the risk of low birth weight in their infants.”

- Processing vaginal samples for next-gen sequencing and performing bioinformatics analyses on 16S and metagenomic data of the vaginal microbiome
- Collaborating with two principal investigators for thesis work

Research project | “Changes in the gut microbiome after spinal cord injury”

- Developing research design for culturomics experiments to study gut bacteria after spinal cord injury

Graduate Teaching Assistant

The Ohio State University Department of Microbiology

Columbus, OH
2020, Spring 2022,

- Delivered presentations to a class of ~36 students three times per week
- Trained undergraduate students in essential microbiology lab techniques
- Provided technical support to students during projects

Undergraduate Honours Student Researcher

Missouri Valley College

Marshall, MO
August 2017 – December 2019

- Gathered information for the Missouri Department of Conservation deer management study
- Spearheaded three independent and collaborative research projects in Biochemistry, Microbiology and Ecology resulting in 5 conference presentations and a publication.

Research Project | “Microbial diversity of rhizosphere and non-rhizosphere of *Lindera benzoin* and *Lithospermum canescens*.”

- Collected soils from the rhizosphere of plants
- Cultured bacteria from soils using various growth conditions and identified them using 16S rRNA gene sequencing.

Research project | “Effect of heat on microbial growth in geophagic soils”

- Designed and implemented experiments to investigate how various heating sources affect microbial growth of 3 types of geophagic soils with varying physicochemical properties.

Research Project | “Effect of Water Quality on Unique Darter Species of Central Missouri”

- Collected water samples along the Salt Fork River in Marshall, MO and collected water quality measurements in the field.
- Counted darter fish in a few locations of the river using seine fishing

Medical Laboratory Intern*Fitzgibbon Memorial Hospital*

Marshall, MO

May 2019 – August 2019

- Conducted lab procedures e.g., differential counts, UA analysis, pregnancy & drug tests with the supervision of lab technicians
- Handled specimens according to laboratory protocols to maximize the accuracy and precision of results

LEADERSHIP & ACADEMIC SERVICE**Social Chair***The Ohio State University Student for the Advancement of Microbiology*

Columbus, OH

March 2022 – Present

- Facilitated social events for graduate students and faculty in the department.
- Organised professional development sessions with alumni and industry leaders.

Chapter President*Missouri Valley College Sigma Zeta National Science & Math Honour Society*

Marshall, MO

January 2019 – December 2019

- Facilitated in the revival of the Chi Chapter and recruited new members.
- Trained incoming executive board on recruitment and maintenance of the program

Secretary*Missouri Valley College Honours Program Student Advisory Board*

Marshall, MO

August 2018 – May 2019

- Organised and coordinated meetings
- Mentored 2 junior students in the honours program on study skills and setting professional development goals.

Department Student Representative*Missouri Valley College Student Research Symposium Committee*

Marshall, MO

January 2018– December 2018

- Represented the interests of the Math & Science department
- Organised the program for the symposium

Chairperson*Missouri Valley College Domestic Violence Awareness Committee*

Marshall, MO

January 2017 – December 2019

- Implemented programs to raise awareness against domestic violence in college aged people
- Worked with a team of 4 to write by-laws for a local domestic violence shelter

CONFERENCE PRESENTATIONS.

Ndlovu K.S. (2019). Microbial Analysis of Rhizosphere and Non-rhizosphere Bacteria of *Lindera benzoin* and *Lithospermum canescens*. *Missouri Valley College Student Research Symposium*. Marshall, MO.

Ndlovu K. S, Owen T., and Hiler W. (2019). Effects of Water Quality on Unique Darter Species of Central Missouri (Poster). *Alpha Chi National Honor Society Annual Convention*. Cleveland, OH

Ndlovu K.S. (2018). Evaluating the Effect of Heat in Microbial Growth in Geophagic Soils. *Alpha Chi National Honor Society Annual Convention*. Portland, OR

Ndlovu K.S. (2017). Cannibalism and the Law. *Missouri Valley College Student Research Symposium*. Marshall, MO.

PUBLICATIONS

Ndlovu K (2021) Microbial Analysis of Rhizosphere and Non-rhizosphere Bacteria of *Lindera benzoin* and *Lithospermum canescens*. *Aletheia* 6(1) DOI: 10.21081/ax0250

“The Monster in Me” (poem). *The Purple Patch*, vol. 16. September 2015.

AWARDS AND HONOURS

The Ohio State University, Columbus, OH.

Elizabeth M. Mote Memorial Award for Outstanding Teaching and Service, December 9, 2022.

Missouri Valley College, Marshall, MO.

Excellence in Student Research Award for Best Presentation, "Evaluating the Effect of Heat in Microbial Growth in Geophagic Soils." Missouri Valley College Student Research Symposium, December 1, 2017.

Excellence in Student Research Award for Best Poster Presentation, "Effects of Water Quality on Unique Darter Species of Central Missouri." Missouri Valley College Student Research Symposium, April 26, 2019.

Excellence in Student Research Award for Best Presentation, "Microbial Analysis of Rhizosphere and Non-rhizosphere Bacteria of *Lindera benzoin* and *Lithospermum canescens*." Missouri Valley College Student Research Symposium, December 9, 2019.

Alpha Chi National Honor Society (Member)

Since Oct 2017

Viking Voyage Research Fund (\$500)

May 2019 & Oct 2019

President's Scholarship (Full tuition)

Aug 2015-Dec 2019

Leadership scholarship (\$1000/semester)

Jan 2016-Dec 2019

LANGUAGES

IsiZulu (native proficiency)

Northern Ndebele (native proficiency)

English (bilingual proficiency)

IsiXhosa (moderately proficient)

Shona (moderately proficient)
