

Siri Froiland

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Education

Biochemistry and Molecular Biology, BSc

August 2021- May 2025

North Dakota State University

- Studied biochemistry with an emphasis in molecular biology
- Select courses include DNA recombinant technologies in prokaryotes and eukaryotes, gene expression and developmental genetics in prokaryotes and eukaryotes, protein research and analysis, and cellular signal transduction processes and metabolic regulation

Philosophy, Ethics, and Applied Humanities, BSc

August 2021- May 2025

North Dakota State University

- Studied philosophy under a traditional analytic program
- Select courses include traditional logic, philosophy of religion, aesthetics, epistemology and metaphysics, ethics, and ancient philosophy

Publications

T. Sultana, A. Tischer, R. Kutsi, **S. Froiland**, A., M. Auten, S. Sinha, and C. Colbert. "Biophysical characterization and structural insights into the complex between an extracytoplasmic function sigma factor, PupI, with the anti-sigma domain of the sigma regulator, PupR from *Pseudomonas capeferrum*." Manuscript under review.

R. Kutsi, B. Jernberg, V. Arnold, **S. Froiland**, P. Zak, A. Garcia, S. Sinha, and C. Colbert. "Biochemical characterization of the cell surface signaling complex between FecA and FecR involved in ferric citrate uptake in *E. coli*." Manuscript in preparation.

Research Experience

Research Assistant- Chemistry Education Research

January 2025- May 2025

North Dakota State University

- Explored student responses to organic chemistry

Research Assistant- Structural Biology Research

September 2023- May 2025

North Dakota State University

- Collaborated on a project involving nanodisc solubilization needed for protein structure research. Perform cloning, bacterial transformations, protein expressions, and purifications with multiple proteins. Conduct protein-protein interactions with affinity pulldowns and run and evaluate DNA and protein purity via gel electrophoresis

Research Assistant- Organic Synthesis Research

May 2023- August 2023

North Dakota State University

- Oversaw finding a method to purify specific organic compounds with unique solubilities, specializing with solubility assays and different methods of purification, such as recrystallization and flash chromatography. Conducted and interpreted structural analyses of these compounds, including mass spectrometry and HNMR data analysis

Teaching Experience

Teaching Assistant

August 2024- December 2024

North Dakota State University

- Taught Principals of Chemistry teaching laboratory, prepared and organized course materials, presented content, general lab procedures and lab safety to sections of 24 students, graded and assessed student work to ensure comprehension

Learning Assistant

January 2023- December 2024

North Dakota State University

- Assisted professors with active learning and tutored a variety of class subjects, including General Chemistry 1, General Chemistry 2, General Biology 2, and Organic Chemistry 1, with class sizes varying from 50 to 300 students. Hosted office hours outside class to assist students with classwork and conceptual knowledge

Course Development

Ethics of AI

Spring 2025

North Dakota State University

- Co- developed a course with a faculty member and another undergraduate
- Course adequately explains what AI is, and how it is currently used
- Course entails readings and discussions on several ethical topics, including art, gender and sexuality, military, and race, and how they are affected by AI

Work Experience

Assistant Network Infrastructure Engineer

North Dakota State University

May 2023- August 2023

- Completed a variety of tasks related to network equipment preparation, setup and installation.
- Worked with inside and outside network and telecommunications cabling and cabling infrastructures.
- Completed a variety of tasks related to network equipment preparation, setup and installation.

Laboratory Assistant

Sanford Health

June 2022- March 2023

- Trained in phlebotomy, worked with patients in a hospital setting, and collected, prepared, and processed biological specimens

Honors and Certifications

Training for Investigators, Staff, and Students Handling Biohazards

Completed- Nov 2024

Citi Training

Family Educational Rights and Privacy Act (FERPA) Training

Completed- August 2024

North Dakota State University

Initial Waste Handling Training

Completed- May 2023

North Dakota State University

NDSU Deans List

Awarded- 2021, 2022, 2023, 2025

North Dakota State University

Dr. Kevin and Jean Melicher Family Fund Scholarship

Awarded- May 2022

North Dakota State University

NDSU Presidential Honor Award
North Dakota State University

Awarded-January 2022

Leadership and Involvement

Blue Key National Honor Society

September 2023- May 2025

North Dakota State University

- Nomination-based honor society that recognizes college students at senior institutions of higher education for balanced and all-around excellence in scholarship, leadership, and service
- Previously served as corresponding secretary- maintain contact with alumni and nationals; served as Homecoming Show Chairperson- planned and hosted annual NDSU homecoming fundraiser show

Kappa Alpha Theta Sorority

September 2021- May 2025

North Dakota State University

- Greek letter collegiate society that nurtures intellectual and personal growth, as well as promotes scholarship, service, leadership, personal excellence, and sisterhood
- Previously served on executive board as Vice President Education- facilitated academic success amongst chapter and providing educational resources, Executive Panhellenic Delegate- served as liaison between the chapter and the National Panhellenic Council and Academics Chairman- promoted academic participation and wellbeing withing chapter

NDSU Gold Star Marching Band

August 2021- May 2025

North Dakota State University

- Previously served as Vice President- facilitated community outreach, marketing, and served as chief recruiting officer, whose duties included recruiting talented musicians and visiting high schools around neighboring states as a representative of the Challey School of Music