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Isolating and Sequencing Genes Coding for Metal-Reducing Enzymes in *Shewanella algae*, BrY

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Departmental Affiliation: Chemistry
College of Arts and Sciences

The Natural and Accelerated Bioremediation Research (NABIR) Program focuses on efficiently managing and reducing contamination of soil and groundwater by heavy metals and nuclear materials at Department of Energy (DOE) sites across the United States. In an effort to learn how to use microbes to accomplish this goal, four genes that code for metal-reducing enzymes expressed by the soil bacterium *Shewanella algae*, strain BrY are being sequenced. Polymerase Chain Reaction (PCR) is used to amplify the genes of interest, and the PCR products are purified by cloning and sent to the University of Chicago for sequencing. So far, partial sequences of two genes have been obtained. Once the complete sequences of all four genes have been obtained, the research will focus on the characterization of the metal-reducing enzymes themselves.

Information about the Authors:

Diana Stutzman is a senior biochemistry major and a creative writing and human biology minor. She became interested in the project through conversations with Dr. Goyne and an interest in microbiology. She will graduate next year and go on to obtain a Ph.D. with hopes of doing medical research. Thaomy Nguyen is a junior biology and chemistry double major. Emily Brenan is a junior biology and chemistry double major.

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