2013 Iota Sigma Pi Undergraduate Award for Excellence in Chemistry

Lisa Stephanie Cunden

Ms. Lisa Cunden is an outstanding undergraduate chemistry student at Smith College in Northampton, Massachusetts. On an advanced course of study in her undergraduate work in Chemistry, Lisa took many upper-level chemistry classes early on at Smith and impressed her faculty members with her enthusiasm, organizational skills, and academic capabilities. She has spent four years at Smith working with Dr. Robert Linck in the field of computational chemistry and is completing an undergraduate honors thesis on entropy and enthalpy contributions to the chelate effect by comparing the stabilities of polydentate and monodentate amine-derived complexes with copper(II) centers in the gas-phase, through a series of computational calculations. Her work with Linck contributed to a paper published in Inorganic Chemistry on $Fe(CO)_4$ and related compounds as isolobal fragments. Lisa spent the spring of her sophomore year studying in Australia where she found an interest in bioinorganic chemistry, an interest that she has further pursued at Smith under the guidance of Dr. Elizabeth Jamieson. Her interest in bioinorganic research continued at the Massachusetts Institute of Technology where she was a summer research fellow with Dr. Liz Nolan. Her research at MIT, "The Molecular Basis for Metal-Ion Sequestration by Human Calprotectin", contributed to a recent publication in the Journal of the American Chemical Society. Nolan describes Lisa as having "made tremendous contributions to chemical sciences, both in the areas of theory and experimentalism, as an undergraduate." Outside of the lab she is a student mentor for the Peer Mentoring Program, a program that promotes access for underrepresented students interested in science, technology, and math. She also works in Residential Life where she is actively engaged as a social justice and multiculturalism advocate. In the fall Lisa will be pursuing a PhD at MIT, and plans to pursue a career in academia while continuing to be an advocate for women of color in science.