

2007-2008 Speaker Series

The Center for Women in Science & Mathematics Speaker Series

Kassy Mies, Ph.D.

Assistant Professor, Chemistry

Mary Elizabeth Yarbrough Junior Professorship of Chemistry
Meredith College

5:00 p.m. SMB 160
March 18, 2008

"Iron Biochemistry and Mechanisms of Microbial Iron Acquisition"

Iron is an essential nutrient for virtually every living organism due to its involvement in small molecule storage (e.g. O₂), electron transport, and catalysis; however, in excess iron causes iron overload, which can be fatal. In addition, despite being the second most abundant metal on the earth's surface, iron is poorly bioavailable due to its low aqueous solubility. Thus, the transport, storage, and activity of iron in biological systems must be strictly regulated via coordination chemistry in order to maintain a healthy level of bioavailable iron. Here we will discuss the application of modern chemical techniques to the study of natural and synthetic iron containing molecules in order to understand the processes involved in the transport, storage and activity of iron in biological systems. Additionally, we will explore mechanisms for microbial iron acquisition which is controlled by iron specific chelators called siderophores.

* A junior professorship is awarded at the Assistant or Associate Professor level. The award recognizes and encourages a faculty member who displays significant promise of future outstanding performance in scholarship and teaching.



Meredith Center for Women in
Science and Mathematics

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