

**Department of Chemistry & Biomolecular Sciences
Seminar
Semester 2, 2008
Macquarie University, Sydney, Australia**

**Thursday
9 October,
12 Noon**

F7B Room 322

Mitchell Guss
School of Molecular and Microbial Biosciences
Biochemistry and Microbiology Building - G08
University of Sydney
NSW 2006

"Interesting chemistry in a metalloenzyme"

Abstract

All organisms contain enzymes to enable them to oxidize biogenic amines to the corresponding aldehydes. Such reactions are used by bacteria to source food and by mammals to dispose of unwanted toxic substances and to control levels of neurotransmitters. Amine oxidation is also a necessary step in the cross-linking of collagen and elastin. These enzymes may be grouped into two major families. One of these depends on the presence of a copper ion to form a quinone cofactor from one of its own amino acids. This quinone subsequently becomes the site of the enzymatic oxidation reaction. We have studied the structures of these enzymes for a number of years with a view to understanding their cofactor biogenesis, enzyme mechanism and substrate specificities. We have identified novel inhibitors that may provide leads for drug design.

To meet the speaker, please contact

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