Department of

Chemical and Environmental Engineering

2014—2015 Seminar Series

Friday, October 31, 2014

10:00—11:00 AM

Watkins 1000

Yinsheng Wang

Professor

Chemistry Department

UC Riverside

Chemistry and Biology of DNA Repair

Endogenous metabolites and environmental agents can both give rise to DNA damage in human cells. DNA damage also constitutes a major mechanism of action of a number of mainstream cancer chemotherapeutic agents. Thus, understanding how various types of DNA lesions are repaired is important for identifying novel approaches for the prevention of human diseases and for developing better strategies for cancer chemotherapy. In this presentation, I will discuss our utilization of a multi-pronged approach, encompassing mass spectrometry-based bioanalytical chemistry, synthetic organic chemistry, and molecular biology for exploring how oxidatively induced bulky DNA lesions are repaired in mammalian cells and tissues. I will also discuss how DNA repair process can be modulated by exposure to arsenite, a widespread environmental contaminant.