College of Biological SCIENCE

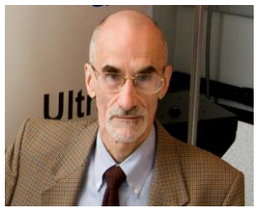
2015 ANN OAKS LECTURE IN THE BIOLOGICAL SCIENCES

Presents

"Metabolite damage and its repair or pre-emption"

DR. ANDREW HANSON

Professor
CV Griffin, Sr Eminent Scholar
University of Florida



It is increasingly evident that metabolites suffer various kinds of damage, that such damage happens in all organisms, and that cells have dedicated systems for damage repair and containment. Firstly, chemical biology is demonstrating that diverse metabolites are damaged by side-reactions of 'promiscuous' enzymes or by spontaneous chemical reactions, that the products are useless or toxic, and that the unchecked buildup of these products can be devastating. Secondly, genetic and genomic evidence from pro- and eukaryotes is implicating a network of novel, conserved enzymes that repair damaged metabolites or somehow pre-empt damage. Metabolite (i.e. small molecule) repair is analogous to macromolecule (DNA and protein) repair and appears from comparative genomic evidence to be equally widespread. Comparative genomics also implies that metabolite repair could be the function of many conserved protein families lacking known activities. How – and how well – cells deal with metabolite damage impacts fields ranging from medical genetics to metabolic engineering.

MONDAY, MAY 4TH, 2015
3:00-4:00PM
OVC LEARNING CENTRE – ROOM 1714

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A reception will be held at 2:30pm – hallway outside OVC 1714

EVERYONE WELCOME

FOR FURTHER INFORMATION, CONTACT
TONI PELLIZZARI, CBS DEAN'S OFFICE – EXT. 53343