

OCCI Lecture

Speaker: Professor Edward J. Merino,
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Title: Understanding and targeting of
cancer cells' addiction to reactive oxygen

Date: Monday, March 7, 2016

Time: 10 am

Place: TB202



Cancer cells show diverse phenotypes with some tumors having excessive reactive oxygen species (ROS). The ROS drives signaling cascades involved in growth and leads to drug resistance by genetic/epigenetic alterations. My lab has two goals. First, we examine the biological mechanism that some cancers elevate ROS and determine DNA damage in these cells. Second, we are working to turn high ROS states into an exploitable liability for these cancers. Initially, we designed agents that are non-functional until ROS alters the agent and converts it into a lethal mode. I will also show some of our newer, on-going designs that can be used to limit drug action until high ROS is present. This chemical biology research has produced positive results in a difficult-to-treat cancer called Acute Myeloid Leukemia.

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