



THE UNIVERSITY OF ARIZONA
COLLEGE OF MEDICINE TUCSON

Pharmacology

Seminar Series

Presents

“The Adaptable Antioxidant Milieu of Tumor Cells”



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Abstract The role of oxidants and their scavengers in cancer biology is complex. While oxidative stress contributes to carcinogenesis, it is now well established that tumor cells conversely adapt to overcome intrinsic and extracellular oxidant surges during tumor progression. Moreover, cancer cells evolve to utilize redox signaling to their advantage. To better understand the complex role of redox biology in cancer, our laboratory has focused on elucidating the role and regulation of the adaptable antioxidant landscape of tumor cells. We have specific interests in understanding these mechanisms in ovarian cancer. Late stage ovarian cancer is marked by poor patient survival and significant metastatic spread throughout the peritoneal cavity. During this transcoelomic spread cells must adapt to survive anchorage-independence and to cope with stress associated with matrix detachment and the new tumor environment of the ascites and peritoneal organs. Our recent findings on the role and regulation of two antioxidant enzymes, the extracellular glutathione peroxidase GPX3 and the mitochondrial superoxide dismutase Sod2, which have distinct functions in aiding metastatic progression of ovarian cancer will be discussed.

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11:00 am – 12:00 pm

Arizona Health Sciences Center, Rm 8403