

GEORGE MASON UNIVERSITY
COLLEGE OF SCIENCE
BIOLOGY DEPARTMENT SEMINAR
Fall 2014

Geraldine Grant, George Mason University, Department of Biology

“Idiopathic Pulmonary Fibrosis: Is curcumin a cure?”

Idiopathic Pulmonary Fibrosis (IPF) is a fatal interstitial lung disease (ILD) which affects over 5 million people worldwide and claims over 40,000 lives in the US annually, more than die from breast cancer. IPF is believed to result from a dysregulated wound repair response driven by an overpopulation of activated fibroblasts. These hyper-activated fibroblasts lay down excess amounts of scar tissue or extracellular matrix (ECM). This ECM ultimately distorts the architecture of the lung leading to pulmonary epithelial cell death and organ failure, usually within 5 years. Given the key role of the fibroblast in IPF pathogenesis it is imperative that we have a clear understanding of this culprit cell population and its weaknesses in order to facilitate development of therapeutics.

To this end we have developed a novel *in vitro* fibroblasts model system for the study of IPF. Using this model we have investigated the pathogenesis of IPF and explored the anti-fibrotic capabilities of compounds such as curcumin, a polyphenolic derivative of turmeric, which has been used in traditional Ayurvedic medicine to inhibit scar tissue formation for centuries.

TUESDAY September 30, 2014

3:00-4:15 PM

Johnson Center Room 334 Meeting Room E

Sponsored by the Biology Department