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May 3, 2018

3:30 PM; 109 Rhodes Annex

**“What’s Eating You?”: Quantifying Proteolytic Activity in Health and Disease *to Predict Disease Potential***

Patient-to-patient variability in disease progression continues to complicate clinical decisions in diagnosis and treatment. We focused on individual variability in production of cysteine cathepsins, powerful proteases that are the most potent mammalian collagenases and elastases and are upregulated during tissue-destructive disease progression. We study them in the context of tissue remodeling during cancer and cardiovascular disease. During this seminar, Dr. Platt will discuss his studies of this family of powerful proteases with particular attention to cardiovascular remodeling found in children with sickle cell disease leading to strokes, HIV-mediated cardiovascular disease, and breast cancer prognosis and metastatic potential.  We will discuss our applications of these technologies and potential use as both diagnostic and prognostic indicators useful for patient specific predictions of disease severity and variability, while identifying new targets for pharmacological targeting.