

1125-VH-2362      **Brittany Bannish\*** (bbannish@uco.edu). *Modeling the role of inhibitors in blood clot degradation.*

Fibrinolysis is the enzymatic degradation of blood clots. Understanding how blood clots degrade is important from both physiological and clinical standpoints. We will discuss our stochastic multiscale model of fibrinolysis, and how the presence of fibrinolytic inhibitors affects the progression of degradation. Specifically, we study the direct inhibitor  $\alpha_2$ -antiplasmin and the indirect inhibitor thrombin-activatable fibrinolysis inhibitor (TAFI). We show that the presence of these inhibitors affects the amount of plasmin (the main fibrinolytic enzyme) produced and how this reduction in plasmin slows the effective diffusion of other important enzymes through the clot. Results of this work have implications for stroke drug development. (Received September 20, 2016)