

1075-76-79

**Sarah D Olson\*** (sdolson@wpi.edu) and **Lisa J Fauci**. *Hydrodynamic Interactions of Hyperactivated Sperm.*

Hyperactivated sperm motility is correlated to an increase in calcium concentration within the flagellum and is characterized by highly asymmetrical waveforms and circular trajectories. Previous computational studies of flagellum with symmetrical waveforms have shown that multiple sperm swimming with waveforms that are out of phase will eventually phase lock due to hydrodynamic interactions. The focus of this research is to study the hydrodynamic interactions of hyperactivated sperm swimming in proximity in both an unbounded fluid domain and near a wall. (Received August 22, 2011)