1144-92-160 **Azmy S. Ackleh*** (ackleh@louisiana.edu), Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504, **MD Istiaq Hossain** (mhh9786@louisiana.edu), Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504, and **Amy Veprauskas** (aveprauskas@louisiana.edu), Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504. *The effect of toxicant resistance evolution in the prey population on the dynamics of a predator-prey system.* Preliminary report.

Long term exposure to an environmental disturbance such as a toxicant has the potential to result in rapid evolution of toxicant resistance in many short-lived species. In this talk, we present an evolutionary discrete-time predator-prey model in which the prey species evolves to resist a toxicant, but the predator does not. Such a scenario may occur if, for instance, the lifespan of the predator is long relative to the lifespan of the prey. Through stability analysis of this model, we study how such prey evolution of toxicant resistance may impact the population dynamics of both species. (Received August 22, 2018)