1077-VE-2947   **Mehdi Razzaghi*** (`razzaghi@bloomu.edu`), Dept of Mathematics, Bloomsburg University, Bloomsburg, PA 17815. *Using Mixed Distributions to Model Count Data with Application.*

Mixed distributions have for a long time been used in statistics for modeling. Here, we consider some of these distributions that have particular applications in toxicology. Specifically, we discuss the applications of the Poisson-Gamma, Poisson-Lindley, and Poisson-negative binomial distributions. We show how they can be applied to model count processes in developmental toxicology. We will comapre and contrast the models. (Received September 23, 2011)