

1145-G5-1620 **Timothy D Comar*** (tcomar@ben.edu), Department of Mathematics, Be, 5700 College RD,
Lisle, IL 60532. *Undergraduate Research in Mathematical Biology Using Impulsive Models.*

We present an avenue for undergraduate research in mathematical biology using impulsive differential equations. Impulsive differential equations provides a structure in which certain events occur at discrete instances in time. Often, these instances can be periodic. We show examples of student projects modeling integrated pest management systems and epidemic models with period vaccination strategies. We also show how students can be prepared with the basic mathematics, the ability to do basic programming, and the ability to read journal articles needed to pursue this research through either a second semester biocalculus or a differential equations course. (Received September 23, 2018)