

1056-34-1456

Bonita A Lawrence* (lawrence@marshall.edu), Marshall University, One John Marshall Drive, Huntington, WV 25755, and **Anna Mummert** (mummerta@marshall.edu), Marshall University, One John Marshall Drive, Huntington, WV 25755. *Model for Antibiotic Resistant Bacteria in a River*. Preliminary report.

Antibiotic resistance is a growing threat to the state of modern medicine. Better understanding of the transfer of the antibiotic resistant gene between microorganisms is crucial for the safety and prosperity of humankind. We propose a deterministic dynamical model, that is, a system of ordinary differential equations, for antibiotic resistant bacteria in rivers. We consider both the indigenous river bacteria and the bacteria entering the river from the shore. (Received September 22, 2009)