

Selection Effects on the Molecular and Abiotic Evolution of Antibiotic Resistance

Authors : Abishek Rajkumar

Abstract : Antibiotic resistance can occur naturally given the selective pressure placed on antibiotics. Within a large population of bacteria, there is a significant chance that some of those bacteria can develop resistance via mutations or genetic recombination. However, a growing public health concern has arisen over the fact that antibiotic resistance has increased significantly over the past few decades. This is because humans have been over-consuming and producing antibiotics, which has ultimately accelerated the antibiotic resistance seen in these bacteria. The product of all of this is an ongoing race between scientists and the bacteria as bacteria continue to develop resistance, which creates even more demand for an antibiotic that can still terminate the newly resistant strain of bacteria. This paper will focus on a myriad of aspects of antibiotic resistance in bacteria starting with how it occurs on a molecular level and then focusing on the antibiotic concentrations and how they affect the resistance and fitness seen in bacteria.

Keywords : antibiotic, molecular, mutation, resistance

Conference Title : ICABCM 2017 : International Conference on Antibiotics, Bioactive Compounds and Medicine

Conference Location : New York, United States

Conference Dates : October 05-06, 2017