Special Issue

Impact of Antibiotic Residues in Wastewater

Message from the Guest Editor

The value of antibiotics to control infectious diseases caused by bacteria is undeniable, not only in humans but also in animals, particularly livestock and farm animals. Unfortunately, the abuse use of antibiotics has led to the emergence of super-resistant bacteria. In some cases, no antibiotic to eliminate these bacteria is available, resulting in human fatality. Many of these antibiotics, when administered to animals or humans, are eliminated through urine or feces without any modification, ending up in the drainage system. Places with higher discharges of these drugs include pharmaceutical industries, hospitals, farms, and urban waters. The antibiotics contained in wastewater can culminate in treatment plants or directly in rivers or lakes. The presence of these antibiotics in the environment can eliminate beneficial bacteria used for wastewater treatment or nitrogen-fixing bacteria; on the other hand, sublethal concentrations of these antibiotics an lead to new resistant bacteria. If these bacteria infect humans or animals, the outcome can be fatal. This necessitates the search for methods and technologies to eliminate antibiotics and consequently avoid problems.

Guest Editor

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Message from the Editor-in-Chief

There are very few fields that attract as much attention as scientific endeavor related to antibiotic discovery, use and preservation. The public, patients, scientists, clinicians, policy-makers, NGOs, governments, and supra-governmental organizations are all focusing intensively on it: all are concerned that we use our existing agents more effectively, and develop and evaluate new interventions in time to face emerging challenges for the benefit of present and future generations. We need every discipline to contribute and collaborate: molecular, microbiological, clinical, epidemiological, geographic, economic, social scientific and policy disciples are all key. *Antibiotics* is a nimble, inclusive and rigorous indexed journal as an enabling platform for all who can contribute to solving the greatest broad concerns of the modern world.

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