## International Conference on Food Safety & Regulatory

3<sup>rd</sup> International Conference on

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## Water Microbiology, Water Sustainability and Reuse Technologies

December 03-04, 2018 | Chicago, USA

## Bacterial antibiotic resistance profiles as a possible indicator of bacterial pollution sources: Lake Sevan basin's rivers in Armenia

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**Statement of the Problem:** Lake Sevan having significant role in the economy of Armenia is not the only main freshwater lake in Armenia, the largest lake in Trans-Caucasus and the largest drinking water reservoir to the South Caucasus, but it is also one of the largest freshwater lakes in Eurasia. Taking into account the importance of the Lake Sevan basin's Rivers for economy and healthcare of Armenia in whole, the main aim of these investigations was to characterize the bacteriological water quality of Lake Sevan basin's rivers in Armenia in November 2016 and in April 2017, and to identify the relationship between the waters and populations living closed to the rivers.

**Methodology:** The relationship between the rivers and people living closed to rivers were shown through the evaluation of tetracycline resistance (TR) bacteria.

**Findings:** Despite of the rivers considered being bacteriologically clean, the waters carried high numbers of resistant bacteria and might be serving as reservoirs of antibiotic resistance genes in environment. The TR patterns of *Escherichia coli* isolates from the waters and populations from the same locations indicated about the relationship between the waters and living closed to waters people. Preliminary studies evidenced about the relationship between fishes from water and water from the River Argichi.

**Conclusion & Significance:** This is the first investigation to describe the bacterial pollution of rivers through the evaluation of bacterial antibiotic resistance patterns of waters. Probably, the detailed investigations of bacterial plasmid profiles in rivers and possible pollution sources can be more informative during the determination of key human activities responsible for clearness of the waters.

## Biography

Zaven S Pepoyan is a member of the International Association for Human and Animals Health Improvement since 2008. He is actively engaged on ecological investigations. He is the author of three scientific publications. Skills and Expertise: Society and Environment

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