

# MICROBIOLOGY

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## Effect of toxicity of monocyclic aromatic hydrocarbons, BTX in insolated strains of Laguna Mecoacan, Paraiso, Tabasco, Mexico

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The monocyclic aromatic hydrocarbons are unsaturated organic compounds formed by one or more planes of covalently bonded carbon, which possess the properties of benzene ring and comprise 30% of fuels like gasoline and diesel rings. In addition, compounds are considered high risk to be carcinogenic in high concentrations and prolonged exposure times. Mecoacan lagoon is an aquifer site of great importance for economic and social development of the municipality of Paraiso, Tabasco in Mexico. This lagoon has been affected since the 70's by the oil industry because of its proximity to the Maritime Terminal "Dos Bocas" which is dedicated to the exploration and production of crude hydrocarbon. The loss of the ecological balance of the lagoon Mecoacan is due to increased industrial activity and the existence of emission sources by incomplete combustion of gasoline and diesel, releasing various concentrations of monocyclic aromatic hydrocarbons to the environment. For this reason, we want to find bacteria that tolerate high concentrations of compounds BTX, exceeding harmful concentrations recorded, in order to be usable in the future as bioremediation strategy, so that an analysis of bacterial tolerance was performed by test agar diffusion. Our results show tolerant strains 22 monocyclic aromatic hydrocarbons; their phenotypic identification shows seven different species belonging to the genera of *Burkholderia*, *Pseudomonas*, *Sphingomonas*, *Rhizobium* and *Vibrio*. These species are of great biotechnological and medical interest because they relate to the presence of xenobiotic compounds, organic matter and are opportunistic pathogens that cause respiratory disease.

### Biography

Sthefany Woolrich-Zavaleta is a Biologist studied at the Autonomous University of Puebla, Mexico.

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