

MICROBIAL TRANSPORT DYNAMICS IN RIVERS: IMPLICATIONS FOR WATERBORNE DISEASE TRANSMISSION AND COVID-19 SURVEILLANCE

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Hydrodynamic processes regulate the transmission dynamics of a wide range of microorganisms in rivers, including waterborne pathogens. Suspended microorganisms are transported from the water column into benthic biofilms and the underlying hyporheic sediments, leading to long-term storage and increased opportunity for inactivation. I will illustrate the significance of these processes to both zoonotic waterborne disease transmission in agricultural landscapes and recent efforts to monitor SARS-CoV-2 RNA in wastewater for surveillance of COVID-19.