



Camerino lunedì 10 giugno 2024 ora 11:00-13:00
Aula "Franco Ugo Rollo", Polo di Bioscienze, via Gentile III da Varano 1



Introduzione

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The Secret Life of Bivalve Molluscs: Suspension-feeding interactions with microbes and microplastics

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Bivalves are complex living organisms with extraordinary capabilities for the control of particle feeding. Examining the interactions between bivalves and their environment provides important data and insight on processes ranging from the individual to ecosystem levels. Research in my laboratory focuses on environmental physiology and includes studies on suspension-feeding bivalves and their microbial symbionts. These studies encompass: 1) Examining the feeding processes that govern capture, rejection, and ingestion of microplastics; 2) Determining the effects of microplastics on gut microbiota; and 3) Quantifying the type and concentration of microbes in the inhalant and exhalant water to determine preferential capture. In this presentation I will provide an overview of our research program and provide a summary of salient findings. Some of these results include: bivalves selectively reject and egest microplastics making them poor bioindicators for these anthropogenic particles; the gut microbiota are not affected by low concentrations of nylon microfibers; and some groups of bacteria evade the capture process whereas others are preferentially captured by the bivalve gill.