



Seminari di Paleontologia  
Lunedì 7 Ottobre, Ore 14:00  
Aula: 401

## Benthic foraminifera and pollution: field study, laboratory experiment and eDNA metabarcoding

Increasing human activity has deeply impacted marine and estuarine ecosystems, affected living organisms and degraded the quality of the environment. Because of their bioaccumulative, persistence and toxicity natures, trace elements also known as heavy metals (i.e., Hg, Cd, Cr and Pb), may pose a serious threat to organisms. Benthic foraminifera, single-celled organisms, are particularly sensitive to ecological and environmental changes and have been widely applied as pollution bioindicators in a variety of marine and transitional-marine settings. Here the impact of different heavy metals and nanoparticles on benthic foraminifera assemblages (mesocosm) and on a selected species (*Ammonia parkinsoniana*) has been evaluated by using morphological (Rose Bengal staining and CellTracker Green (CTG) labelling) techniques, molecular analyses of foraminifera, (metabarcoding) and a set of techniques of microscopy (TEM, SEM, CLSM). All these experiments coupled with field based observations support the reliability of benthic foraminifera as proxies for environmental biomonitoring.

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