



NACIONALNI INŠTITUT ZA BIOLOGIJO

Večna pot 111, SI-1000 Ljubljana

National Institute of Biology kindly invites you to attend the lecture:

"An insight into bacterial community structure and function in the dynamic coastal marine ecosystem (the Gulf of Trieste, N Adriatic)",

by dr. Tinkara Tinta, National Institute of Biology, Marine Biology Station.

**The lecture will take place on Friday, the 9th January 2015,
at 9:00 a.m. at Marine Biology Station in the Lecture Room in 2nd floor,
Fornače 41, Piran.**

Abstract:

Variable supply regimes of different inorganic and organic matter affect the function and diversity of the bacterial communities in marine ecosystems. The interactions among marine microbes and organic matter affect cycling of elements (carbon, phosphorous, nitrogen ect.) and therefore the biogeochemical status of oceans and world climate. The results of previous studies investigating changes of bacterial abundance, productivity and community structure due to fluctuating physical and chemical environmental parameters (temperature, salinity, oxygen as well as inorganic and organic nutrients) and biological parameters (such as chlorophyll *a* concentration, occurrence of different phytoplankton species and massive gelatinous zooplankton aggregations) in the pelagial of the Gulf of Trieste, will be presented. As an example of applicability of such research, the study of diversity and activity of deoxyribonucleoside kinases (dNKs) in marine bacteria will be presented. dNKs enzymes, which are involved in the biosynthesis of nucleotides, are currently investigated as suicidal genes for anti-cancer therapy and employed in the enzymatic synthesis of nucleic acid precursors. However, the interactions among marine microbes and organic matter at the micro scale are only beginning to be understood and therefore need to be further addressed in order to better understand and predict the marine ecosystem response to natural and anthropogenic perturbations. The preliminary results of the current studies investigating interactions among selected marine microbes and different type of organic matter at micro scale, at the single cell level, will be shown. These studies are based on the outcomes of previous research, and as such represent their continuation, as well as the next step towards better understanding of the role that microbes play in the coastal marine ecosystems functioning.

The lecture will be held in Slovene.

Kindly invited!