

MICROBIOME ANALYSIS LABORATORY

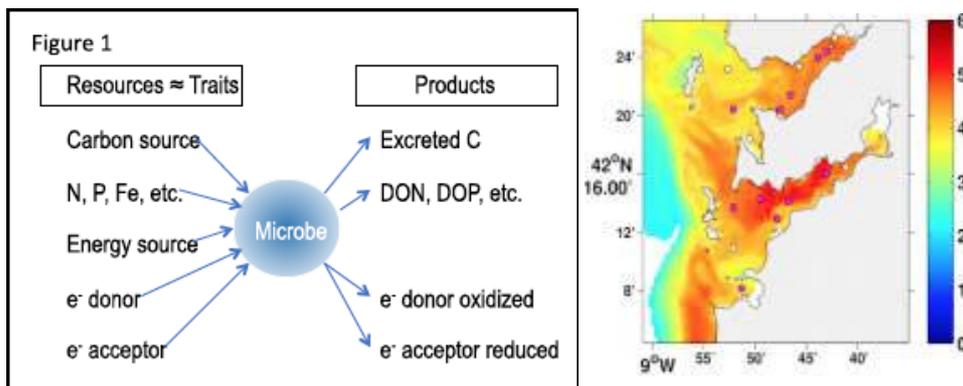
Predocctoral fellowship in microbial community ecology

The “Microbiome Analysis laboratory” (<http://microbiomecnb.com/>) at the National Center of Biotechnology (CNB-CSIC) offers a four-year predoctoral fellowship within the project:

PID2019-110011RB-C31

TRAITS: Studying the structure of guilds beyond the species rank. Development of methods for the fast analysis of microbiomes

Project TRAITS will analyze the role of guilds in the assemblage of marine microbial communities. The central idea is that microorganisms need a series of resources: source of energy, carbon electron donors, electron acceptors and basic inorganic nutrients. Each one of these resources we consider a trait. And each microorganism can fulfill each trait in a particular manner. For example, nitrogen can be acquired by fixing atmospheric nitrogen gas or by taking up ammonia among other possibilities. All the microorganisms that use one of these resources in the same way make up a guild. Members of a guild are presumed to compete among them but the guild is supposed to provide stability to the function carried out by the guild, that is, functional redundancy. In project TRAITS we will identify several guilds and analyze their composition and changes in time and space. The results will partially clarify the way in which microbial communities are built.



Left: Traits used to analyse the ecology of microbes. Right: Chlorophyll concentration in Ría de Vigo, one of the environments studied

The CNB is a “Severo Ochoa” center of excellence with a large number of researchers in microbiology, molecular biology of plants, immunology and systems biology (www.cnb.csic.es). The group offers a welcoming and stimulating environment in which to develop ecological and bioinformatics skills. Our research lines and publications can be seen in: <http://microbiomecnb.com/>

Requirements

- Masters degree in some biological area, with emphasis on microbiology, ecology, molecular biology or bioinformatics.
- Strong motivation for research.

Other useful skills

- Familiarity with the use of Linux, R and other programming languages
- Proficiency in English.

Contact: Send CV and academic record to

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