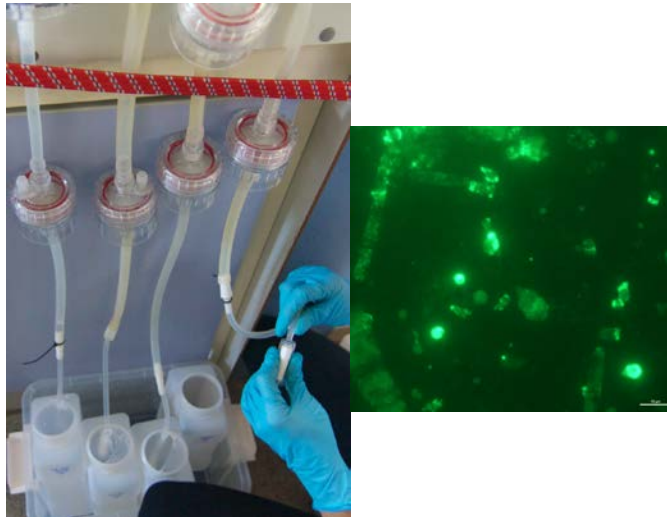


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**PhD project: Structure, diversity and function of pico- and nanoplankton in the coastal waters in front of the Ría the Vigo in the global change context**

Supervisor: Dr. Eva Teira Gonzalez (University of Vigo)

**Summary:** Because of the importance of microorganisms in all ecosystems for their abundance, diversity and relative biomass and activity, their are one of the main mediators in the biogeochemical cycles of the elements. In this thesis we propose the study of microbial diversity using new molecular tools based on DNA (metagenomics). The objectives are:

- Describe the temporal variability of the structure and diversity of microbial plankton by NGS Illumina.
- Studying the seasonal patterns of most abundant taxa in the smaller phytoplankton by CARD-FISH
- Investigate the relationship between diversity, environmental variables and different metabolic rates by multivariate analysis.
- Develop specific protocols for the detection and quantification of taxa relevant for monitoring quantitative PCR.