

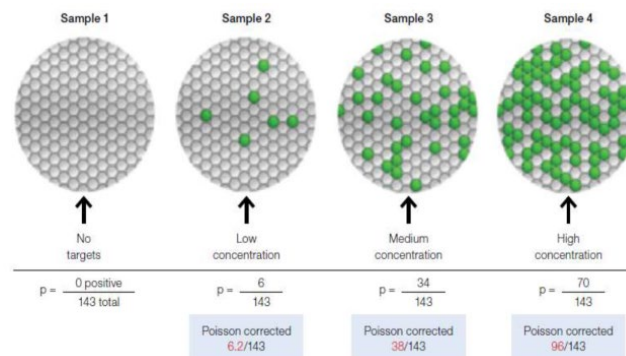
**Intervento finanziato con risorse FSC 2014-2020 – Piano Stralcio «Ricerca e Innovazione 2015-2017» – Programma Nazionale Infrastrutture di Ricerca (PNIR), linea d'azione 1. Cofinanziamento Infrastrutture di Ricerca (IR)» – Progetto CRIMAC**

**PRoDiA:** Droplet digital PCR to assess the occurrence and infer the ROle of prostaglandin in natural Diatom Assemblage in the Ionian coastal waters

From October 2021 to September 2024

The project **PRoDiA** aims at studying diatom population present in coastal areas of Ionian Sea near the SZ Amendolara with a focus on their capability to express the Prostaglandin (PG) pathway. In addition, to address the possible ecological role of PGs in natural environments, we will compare PG expression between Ionian populations (Amendolara based) with those of the Gulf of Naples.

The project will take advantage of an innovative molecular biology approach, the digital droplet PCR (ddPCR), a technique poorly applied to study gene expression in natural phytoplankton assemblages. This technique has the advantage to be more sensitive than other techniques and to skip normalization with house-keeping genes needed in gene expression experiments, simplifying the study of complex samples collected at sea.



**Droplet Digital PCR.** Digital PCR builds on traditional PCR amplification and fluorescent-probe-based detection methods to provide highly sensitive absolute quantification of nucleic acids without the need for standard curves nor reference genes.