

## Poster Session 01: Ciguatera and Benthic HABs

P-047

### ***Ostreopsis* spp. and benthic diatom interactions in contrasting sites: NW Mediterranean and El Hierro (Canary Islands)**

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*Ostreopsis* becomes noticeable during blooms, when it can produce high levels of toxins and smother the benthos with polysaccharide. Considerable efforts have been made to identify the abiotic factors associated with blooms, to allow prediction of their occurrence. Locally, blooms are often associated with particular temperature regimes and hydrodynamics. However, the sea conditions associated with blooms are not consistent across the geographical range (e.g. Totti et al. 2010, Berdalet et al. 2017). Overall, abiotic factors may be better regarded as permissive 'scene-setters', allowing rapid growth of *Ostreopsis* if other undefined conditions are met. Biotic interactions may be important (e.g. Ternon et al. 2018). However, interactions with other microbenthos have been little studied, partly through lack of practical means of identification. In the ECOS project we take advantage of the new possibilities opened by DNA metabarcoding, combined with established microscopical methods, to determine the influence of microeukaryotes on the yearly cycle of *Ostreopsis* at three contrasting sites: one in the Mediterranean (Llavaneres) and two in Canary Islands (El Hierro). Here we present results for the first annual cycle. In each site we have sampled the most abundant substrata (red and brown macroalgae and mixed turfs) at least monthly and characterized the microeukaryotic benthic community by microscopy (diatoms) and DNA metabarcoding using general (V4 18S rDNA) and targeted (rbcL) markers. Preliminary results show an extremely diverse community of photosynthetic microeukaryotes and an interesting, inverse relationship between blooms of *Ostreopsis* and the centric diatom *Actinocyclus*, but different *Actinocyclus* species in the two regions.

**Keywords:** *Ostreopsis*, diatoms, metabarcoding

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