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Introduction

Information on benthic dinoflagellates from the coasts of Baja California is scarce mostly because they do not create “blooms” in the conventional sense (i.e., visible water discoloration), but they can form dense aggregations, referred to as benthic HABs (bHABs).



Why care?

- They cause several human intoxications through the consumption of seafood
- Health and economic consequences have not yet been comprehensively investigated
- Many of their toxins are still not well chemically nor toxicologically characterized

What about their microbiome?

We don't know

- How much microbiome affects growth and toxin production
- How changes in their natural environment and under laboratory conditions affect these relationships

Methods

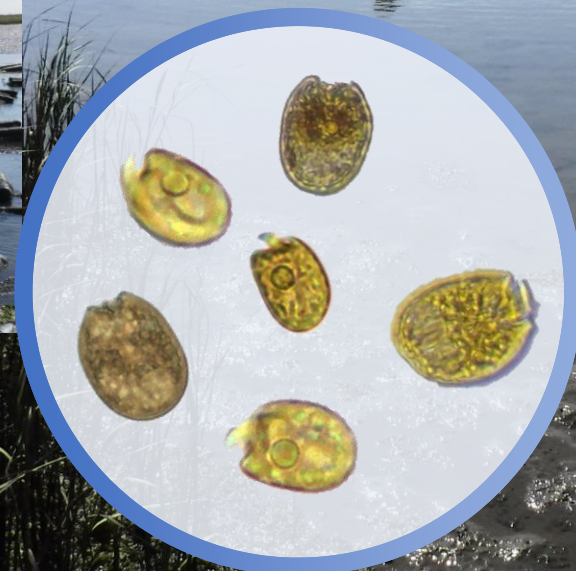
Sampling: northern coasts of Baja California

- Monoclonal cultures
- Species identification
 - Morphology
 - Molecular analysis

Toxin production: LC-MS/MS

16S rRNA libraries for their associated bacteria

- Metabarcoding from wild and cultured dinoflagellates
- Sequences compared by bioinformatics analysis



Results

An exciting diversity of potential toxin-producing benthic dinoflagellates has been observed. Diverse species of the genera *Prorocentrum* and *Amphidinium* were collected and isolated, and genomic analysis is on its way