

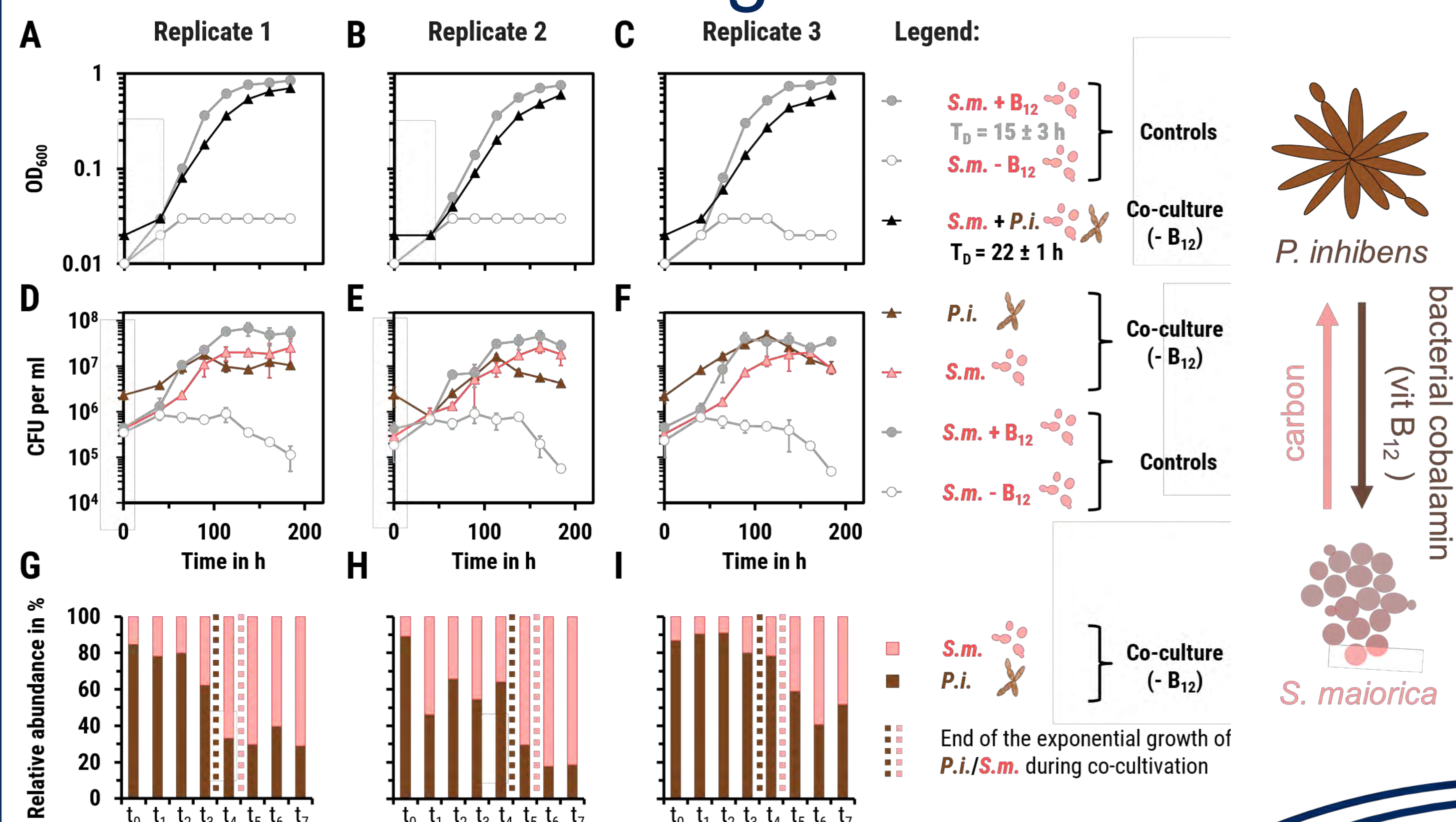
How to cohabit with algae: Adaptive traits of *Planctomycetota* to thrive on algal surfaces

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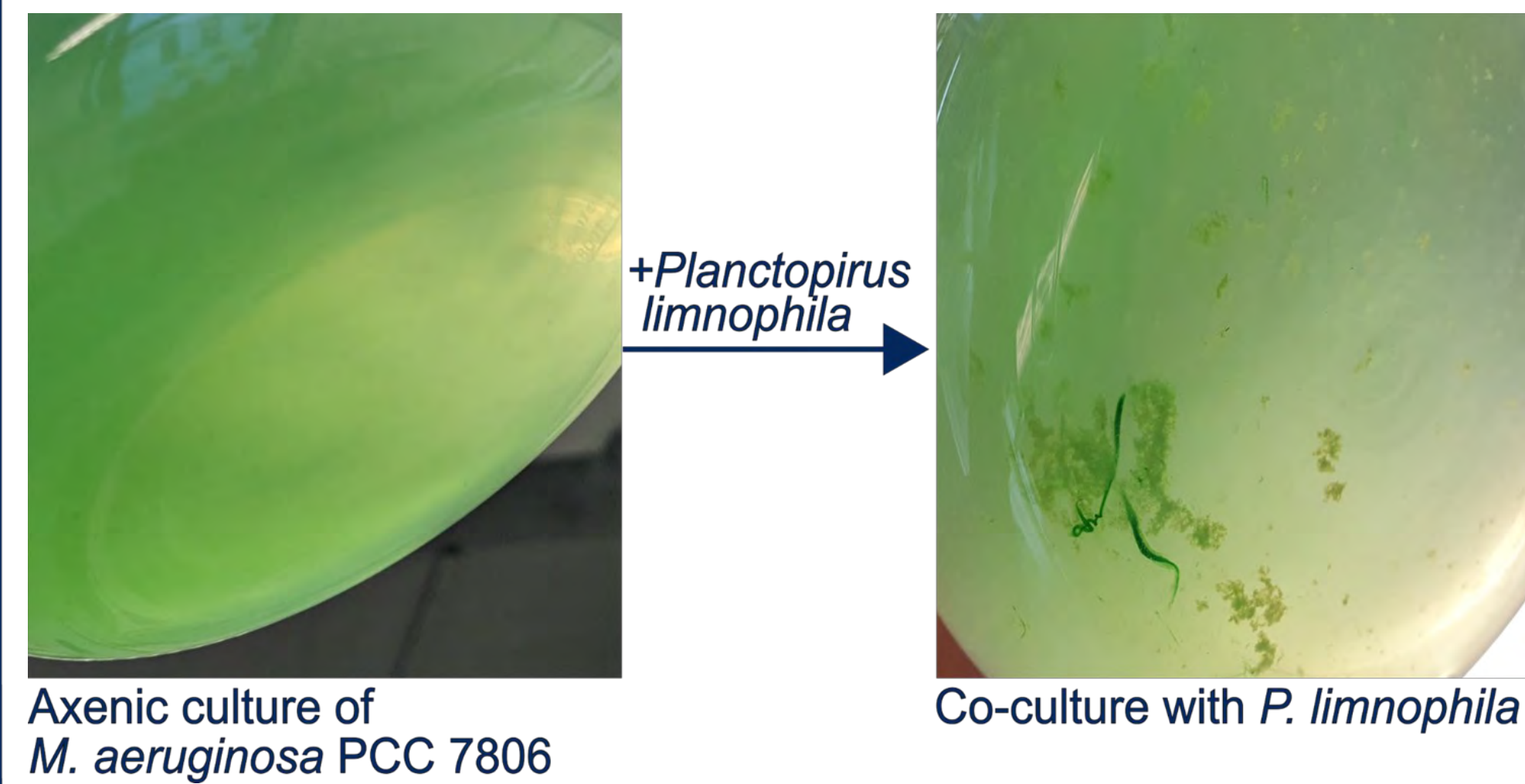


Enter beneficial interactions with cohabiting bacteria

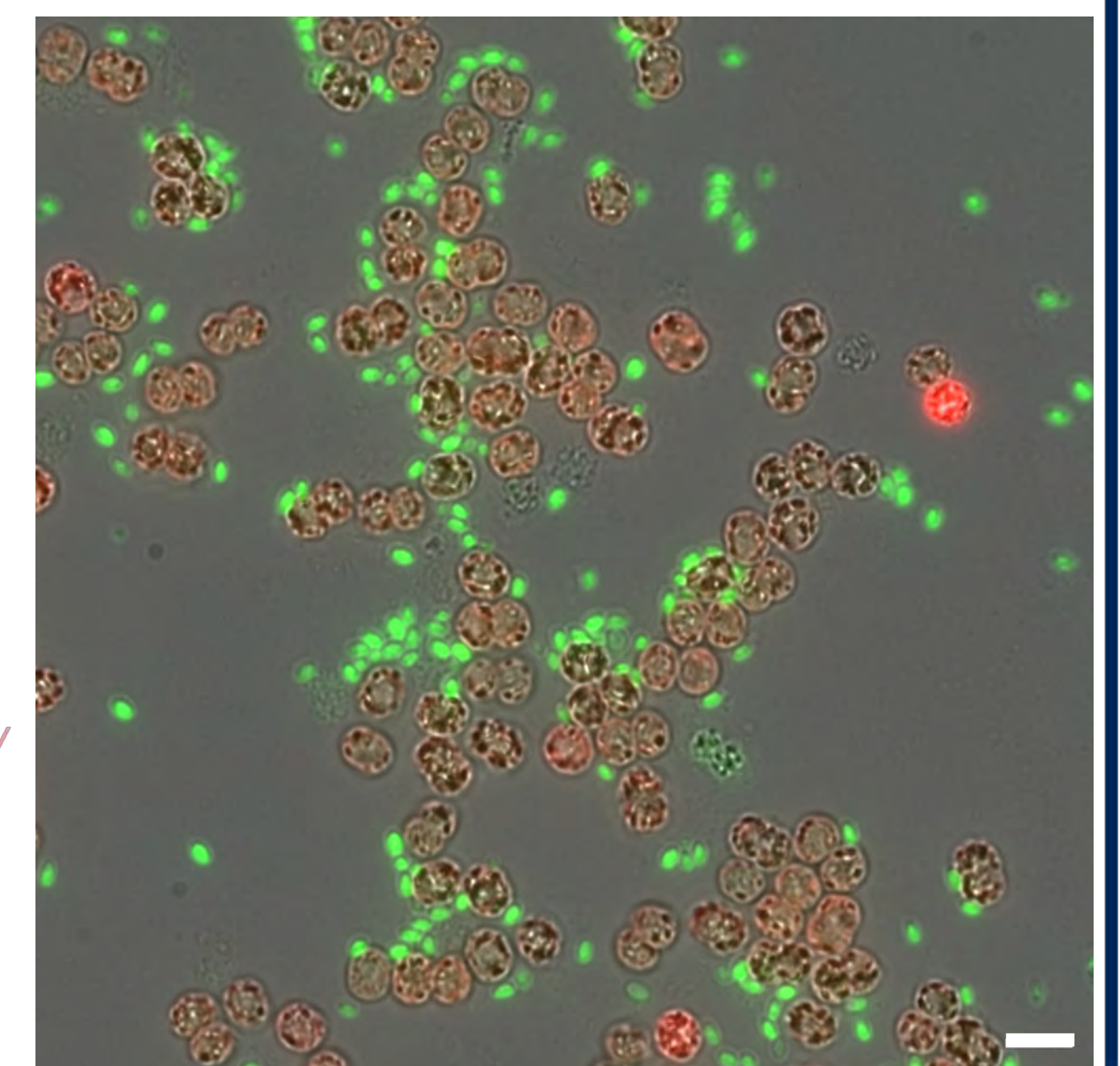
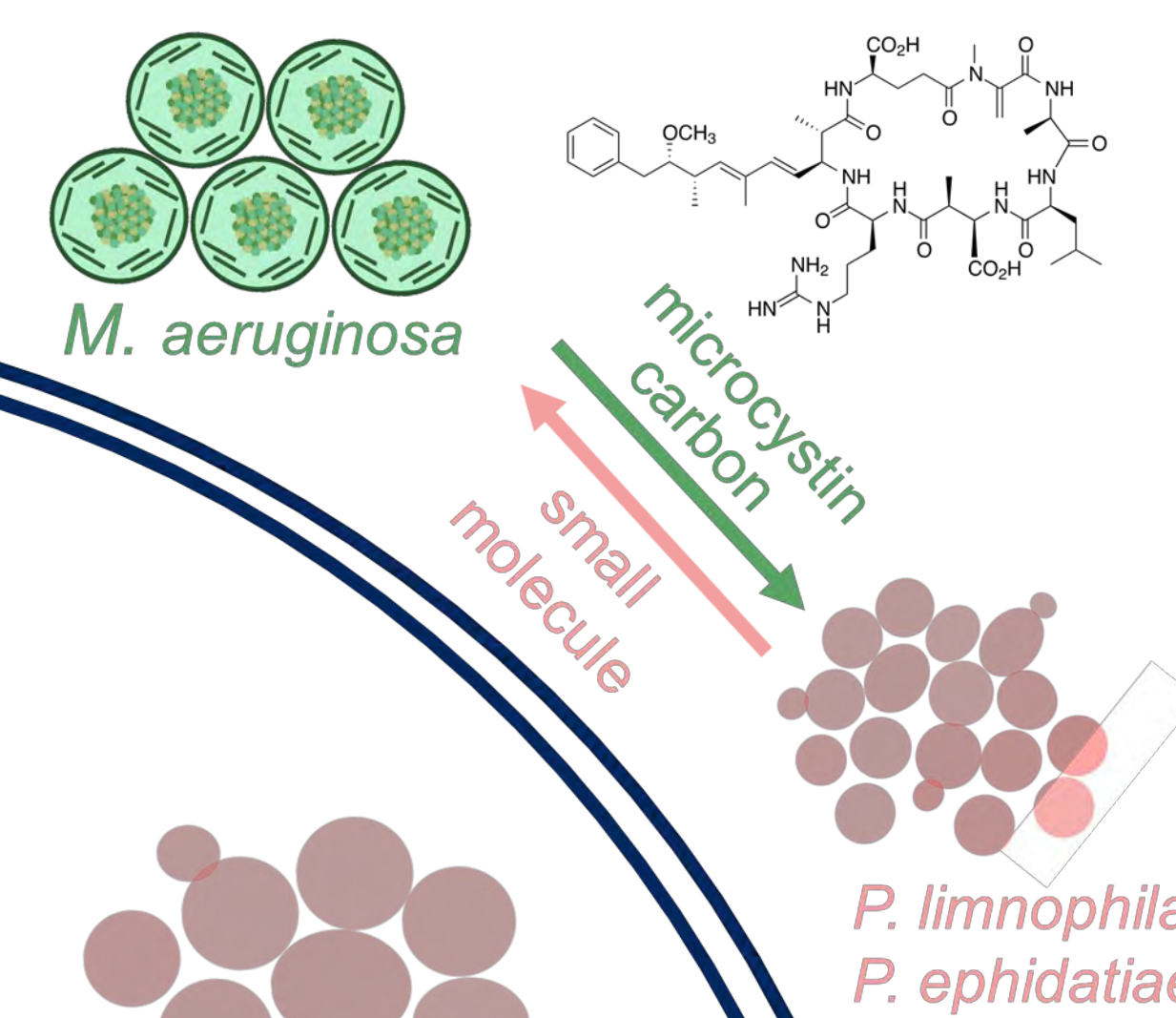


Be abundant in limnic *Microcystis* post-bloom events

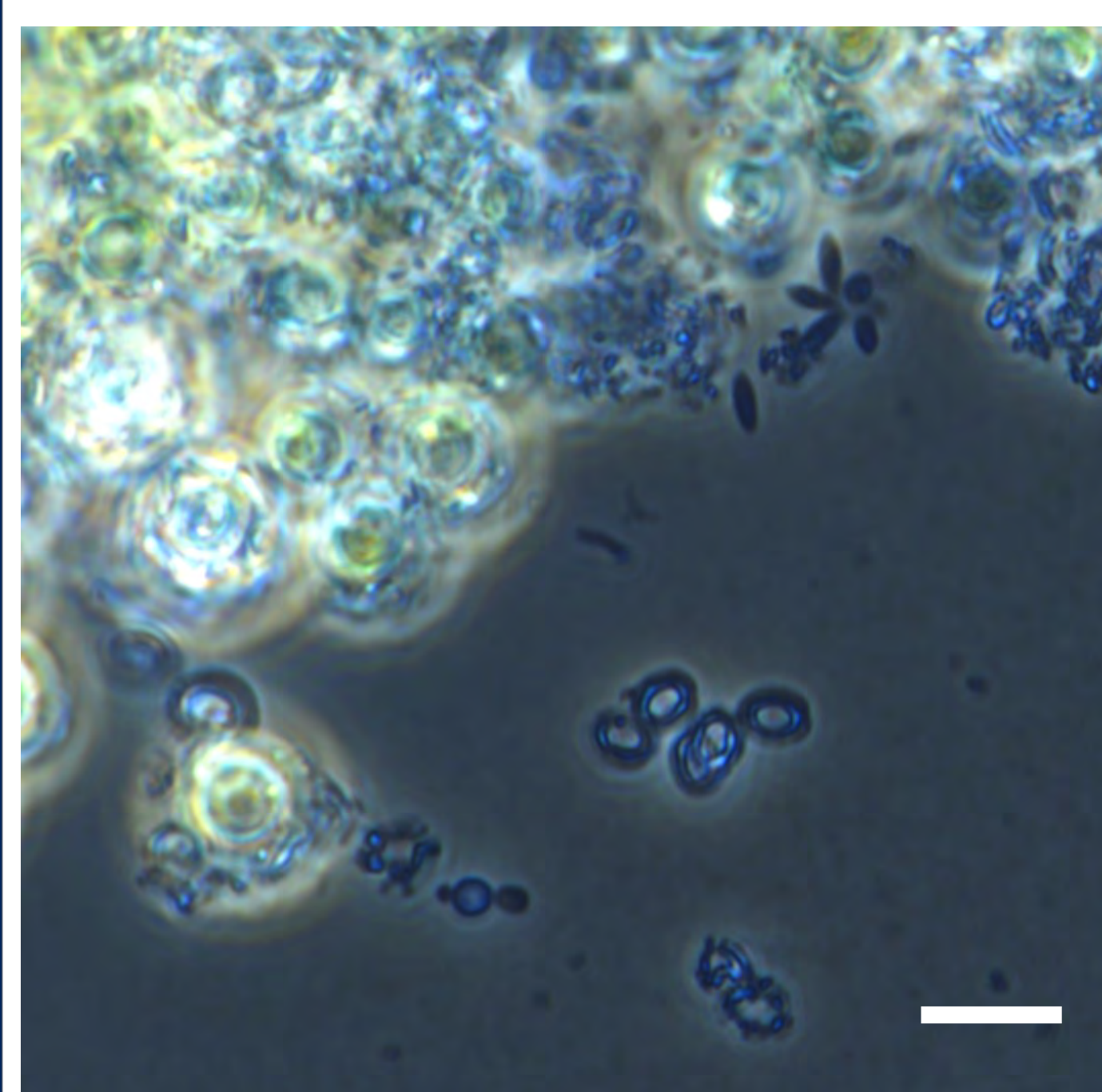
Morphological changes in *M. aeruginosa*



Limnic *Planctomycetota* initiate filamentation of *M. aeruginosa* maybe upon small molecule production induced by the presence of the toxin microcystin.

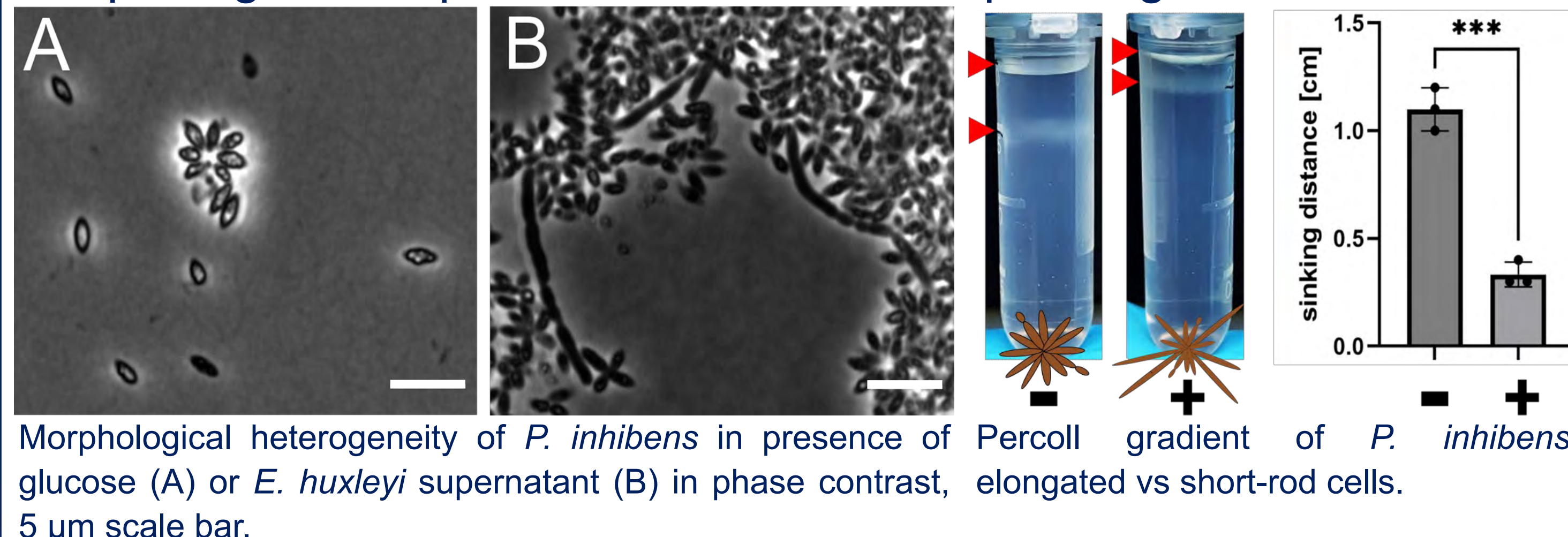


Stay in nutrient-rich zone upon algal decline



Microscopic view on tripartite interaction of *P. inhibens*, *S. maiorica* and *E. huxleyi*, 5 µm scale bar.

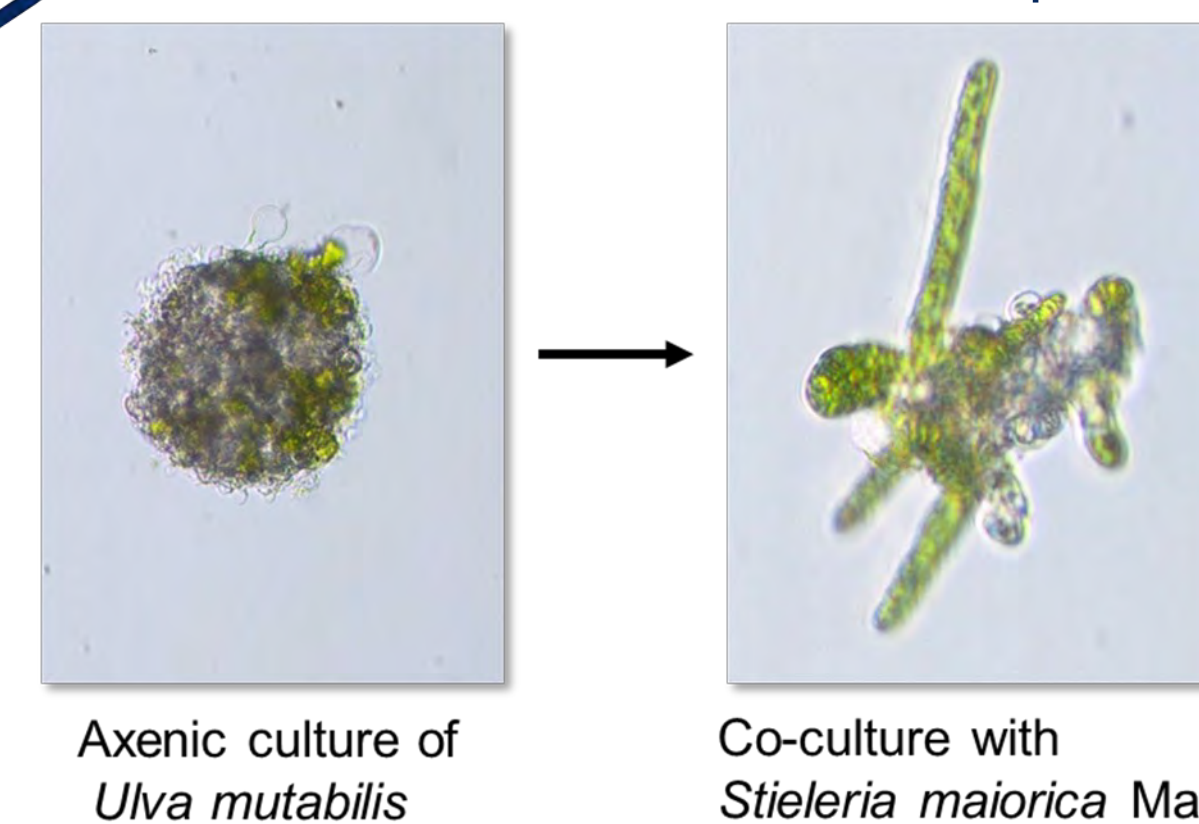
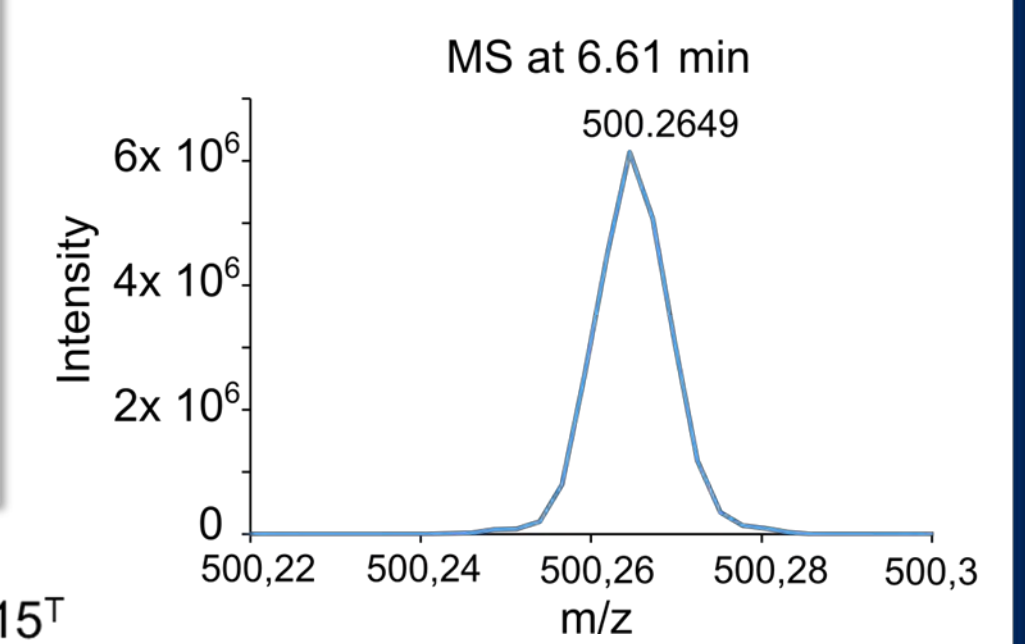
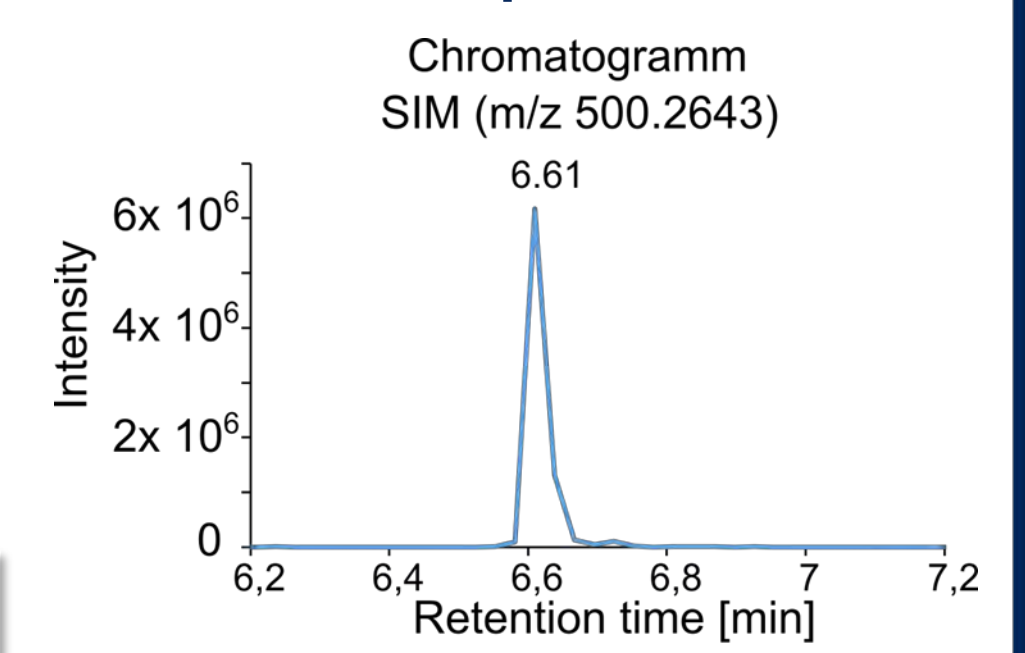
Morphological adaptation of *P. inhibens* depending on carbon status



Promote growth of host tissue

Planctomycetal thallusin production

All tested marine *Planctomycetota* produce the morphogen thallusin, which promotes growth of *Ulva mutabilis*, except *Ca. Uabimicrobium amorphum*.



Isolation of novel species from surface of *Ulva* sp. from Helgoland

Isolate	16S-Percent. Identity	Closest Relative
UH1	96.83%	<i>Maribacter</i> sp.
UH5	100.00%	<i>Rhodopirellula islandica</i>
UH6	99.48%	<i>Neorhodopirellula lusitana</i>
UH7	92.68%	<i>Kriegella</i> sp.

