

Testing agar as substrate for growing *Gambierdiscus* spp. Preliminary results.

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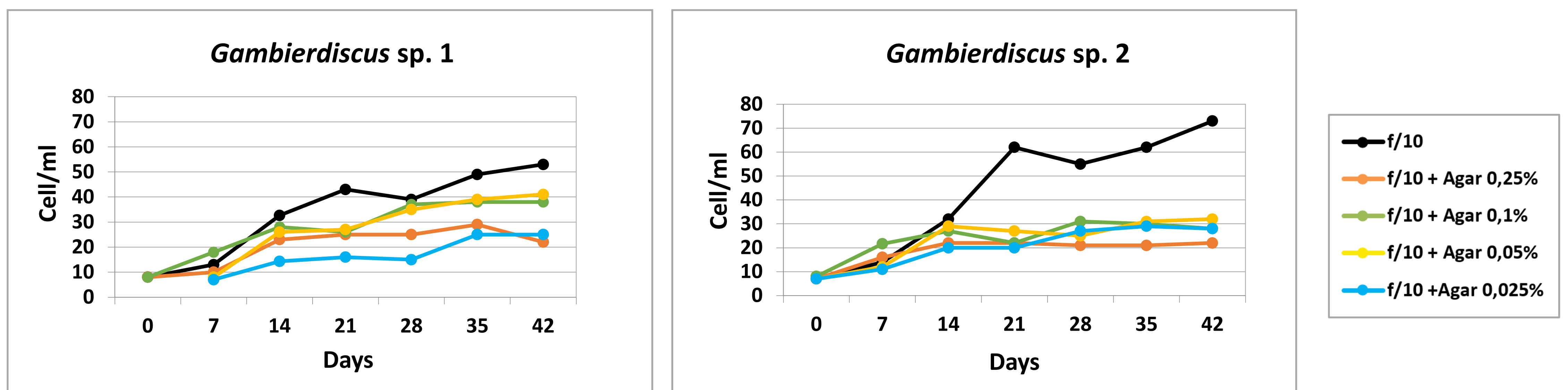
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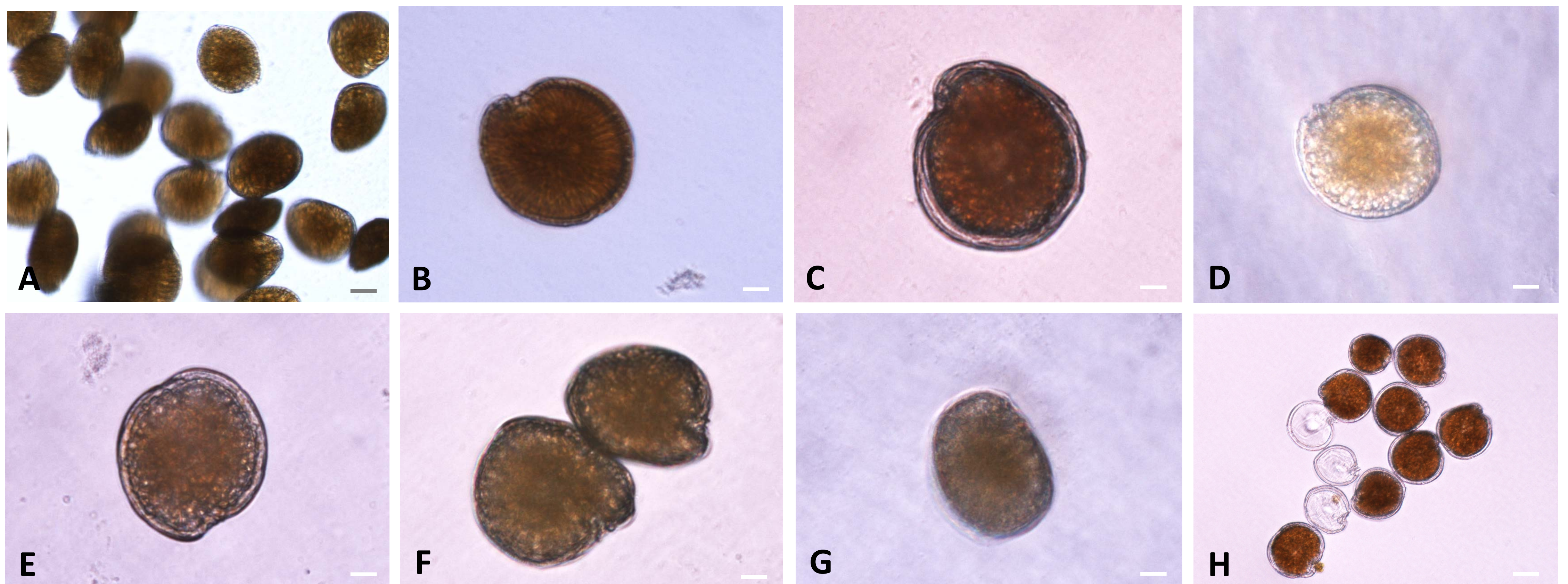
Different culture medium are used for growing *Gambierdiscus* strains, such as K, f/2 and L1 medium with variation of strength and including (ex: selenio) or excluding (ex: Tris and Copper) specific reagents. Agar formula is $C_{14}H_{24}O_9$, and can be an organic carbon source for cells nutrition or physical support for its growth.

The aim of this work was to test the effect of agar added to f/10 medium (without copper) as a substrate to support the growth of *Gambierdiscus* cells. For this matter, four concentrations of agar (0.25, 0.1, 0.05 and 0.01%) were tested to evaluate *Gambierdiscus* growth of two species.

Gambierdiscus cells were able to grow in medium with agar but cell number was not higher than the control. Cells in agar medium had a higher motility rate and were mobile until the end of the experiment (42 days), whereas cells from the control (without agar) stopped moving after at day 28. Cells grown in medium with agar produced cells with a lighter color than the control. In conclusion, *Gambierdiscus* cells were able to grow in medium with agar but the expected benefit of this component to increase *Gambierdiscus* cell number was not observed.



Average counts of cells of each assay during 42 days. Experiments were conducted in triplicate in Corning® Costar® TC-Treated 24-Well Plates, with f/10 medium (Chinain *et al.* Toxicon, 2010, 56: 739-750) as a base. *Gambierdiscus* species identification is pending on molecular taxonomy confirmation.



Microscopic observations representative of the experiment conducted (only species 1 is shown). Original *Gambierdiscus* sp. culture from where clones were taken (7-8 clones/replicate) to performed the all assay (A). Control, just f/10 medium at day 7 (B); control, just f/10 medium (C), f/10 + 0,25% agar (D), f/10 + 0,1% agar (E), f/10 + 0,05% agar (F), f/10 + 0,01% agar (G), at day 42. Group of *Gambierdiscus* sp. cells at day 52, 10 days after the experiment had finished (H). Bar: 10 µm.

ACKNOWLEDGEMENT

This work is part of the MIMAR Project: "Monitoring, control and mitigation of proliferation of marine organisms associated with human disturbances and climate change in the Macaronesian Region". MAC/4.6d/066 (2017-2019). We thank to Macarena González, Antonio Suárez, Emilio Rosario, and José Avello for their technical and administrative assistance.

All *Gambierdiscus* strains have been provided by the Spanish Bank of Algae (BEA), one of the partners of MIMAR project, Isolator: Emilio Soler Onis.