

**Supplementary table 1.** Probes used and their purpose for fluorescence *in situ* hybridisation (FISH) in the field sample treatments (A, B, C and D) and for the *Marinobacter algicola* control sample (treatment E).

Treatment	Hybridization and probe selection	Replicates	Purpose
A	MRB625+Cy3; HAL625c	3	Experimental sample
B	MRB625+Cy3; HAL625c; enriched with fixed <i>M. algicola</i>	3	Positive control
C	NON338+Cy3	3	Nonspecific binding quantification
D	probe absent	3	Autofluorescence quantification
E	<i>M. algicola</i> PFA-fixed culture MRB625+Cy3; HAL625c	1	Validation of MRB625 probe