**INTRODUCTION**

- The eastern oyster (*Crassostrea virginica*) is important for the economy and ecosystem function.
- Therefore, it is important to investigate factors behind the oyster’s population decline and how they interact.
- One threat is the parasite boring sponge *Cliona*, an organism that grows on and bores holes into oyster shells.
- The pores on the oyster shells potentially increase the oyster’s vulnerability to ocean acidification by affecting its calcification site chemistry and because the oyster must expend energy repairing its shell.

How do ocean acidification and boring sponge infection affect gene expression of *Crassostrea virginica*?

**METHODS**


**RESULTS (CONT)**

Conclusions:
- Parasite-host interaction alters oyster response to ocean acidification in a few DEGs
- Oysters infected with boring sponge and in high pCO2 show higher plasticity
- DEGs implicated in metabolic processes, cell growth, and structure
- Modules correlated with infection status, pCO2 levels and calcification rate were identified, suggesting that sponge infection and acidification appear to induce stress responses in oysters.
- These results highlight the need for oyster conservation and population monitoring.

**REFERENCES**


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