

# **Ocean acidification threats to our edible oyster larval aquaculture: a proteomics perspective**

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Oysters are one of the commercially exploited shellfishes around the world for seafood. Due to rising CO<sub>2</sub> and subsequent decrease in carbonate ion, their survival and shell forming processes are threatened globally, which has triggered us to closely study their response to rising atmospheric CO<sub>2</sub> (ocean acidification) at physiological and proteomic levels. I have been testing the response of our edible, commercial and native oyster species by exposing their larvae to present and projected high-CO<sub>2</sub> scenarios. Our study shows that oyster larvae succumb to chronic exposure level by showing delayed growth and consequently impair their ability to successfully metamorphose into healthy juveniles.

My future goal is to understand mechanisms responsible for such slow growth response to high-CO<sub>2</sub> with the use of modern proteomic tools. This will pave way to better manage our shellfish resources under dramatically changing climate.

## **Research Interests**

- **Do rising CO<sub>2</sub> affects our edible oyster larval aquaculture?**
- **identify global changes in the proteome across the treatments using 2D gel electrophoresis**
- **quantitate diferentially expressed proteins using iTRAQ**