Title:

Impacts of elevated pCO2 conditions on the *Ruditapes philippinarum* larval transcriptome

Abstract:

Changing ocean conditions as a result of anthropogenic carbon dioxide emissions is a concern for the health of shellfish populations. Evaluating the molecular process altered by changes in dissolved carbon dioxide levels can provide insight in to the mechanisms affected by ocean acidification and potentially reveal processes vital for adaptation and survival. A major hurdle in evaluating these processes is limited genomic resource for shellfish, however developments in sequencing technologies and analyses are facilitating such studies. In this study, the transcriptome of the commercially important bivalve species *Ruditapes philippinarum*, is characterized in two different pCO2 environments. Data from this study provides valuable information about the molecular processes in shellfish larvae that are affected by ocean acidification, as well as providing a foundation for future transcriptomic analysis of shellfish larvae.