



Kirti Ramesh - Early Stage Researcher No.9

Intracellular formation of amorphous calcium carbonate (ACC) and interactions with intracellular pH homeostasis

My project is titled 'Intracellular formation of amorphous calcium carbonate and its interactions with intracellular pH homeostasis' which in simpler terms, means I will be studying how mussels and oysters make their shells. Mussels and oysters produce shells consisting mainly of calcium carbonate and when this calcium carbonate is first formed within a cell, it is unstable and called amorphous.

The main aims of my project will be to provide information on whether the formation of this amorphous calcium carbonate occurs within cells in the developmental stages of these organisms and how this process is different in adults.

Once I can provide information on how amorphous calcium carbonate is formed in cells, I will then look at how this process will be impaired by pH stress to try and gain an understanding of how future scenarios of low pH due to ocean acidification will affect shell formation in these animals.

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