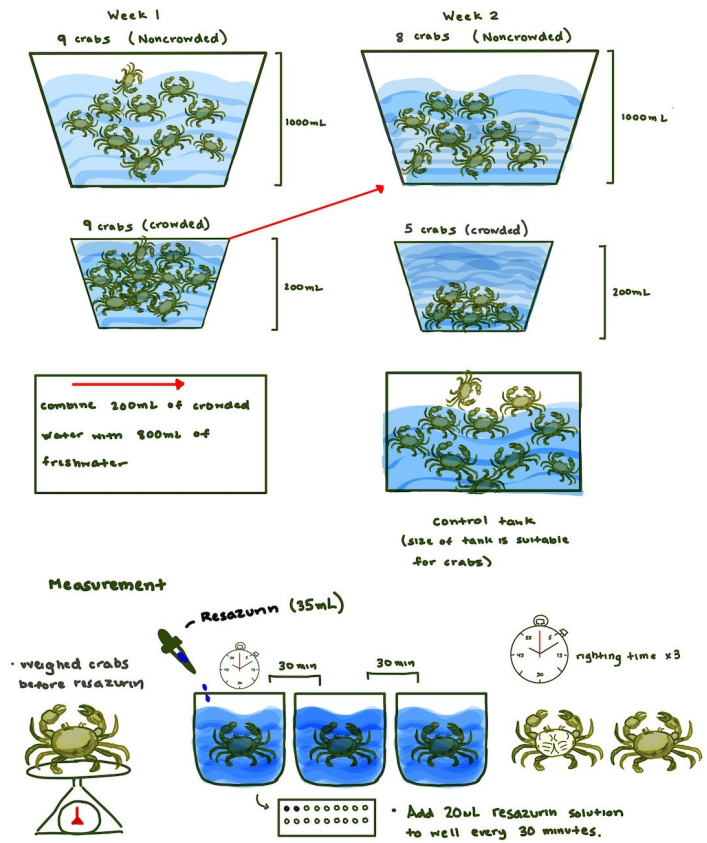
The Effects of Physical Crowding and Crowding-Induced Chemical Cues on the Metabolic Activity of *Hemigrapsus oregonensis*

Research Question:

How does crowding affect the metabolic activity of *H. oregonensis*?

How do crowding-induced chemical cues affect the metabolic activity of *H. oregonensis*?



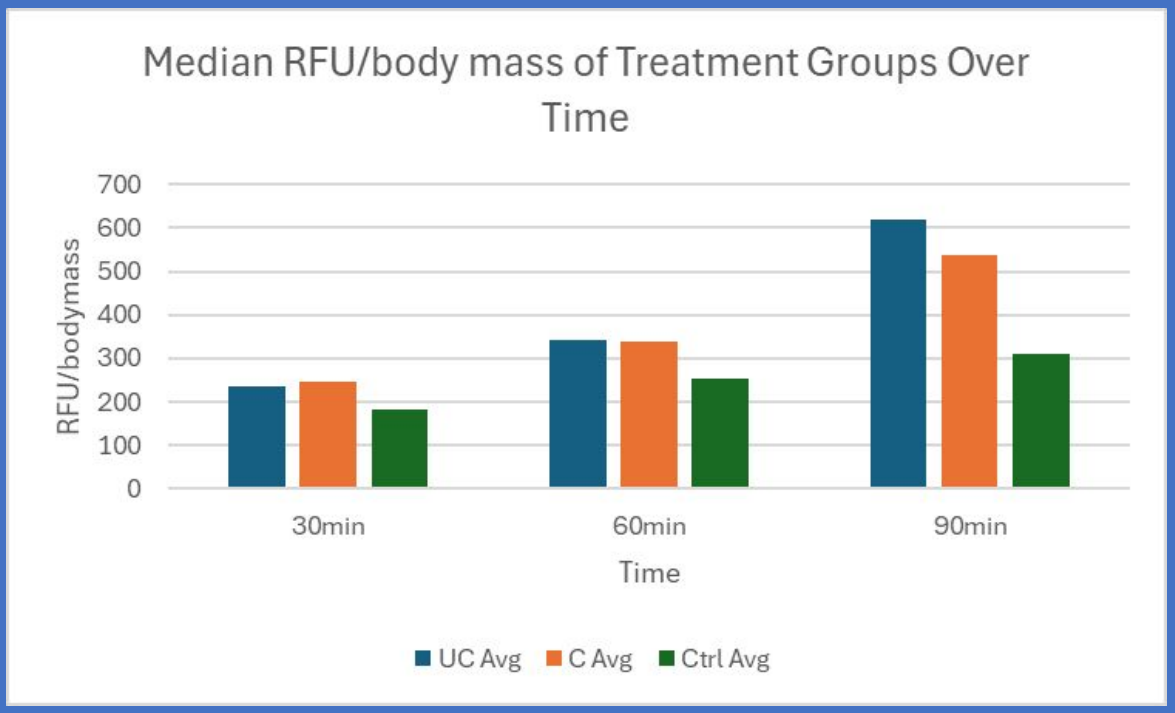
Summary Methods:

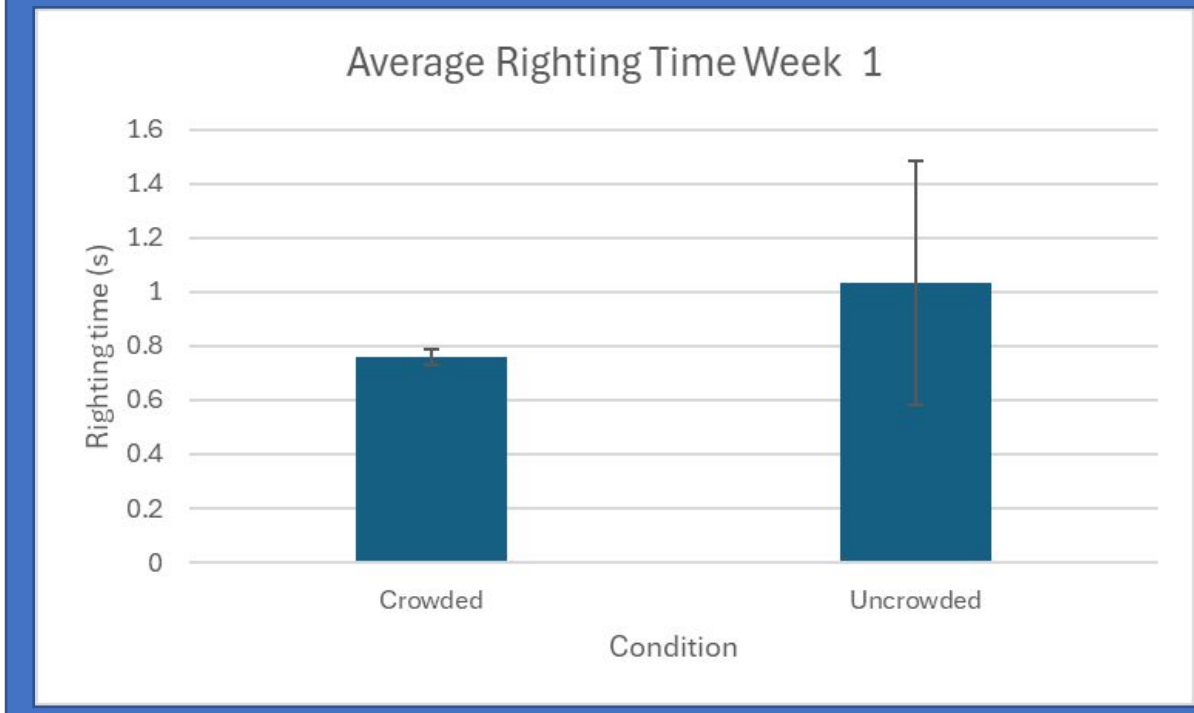
Exp 1:

- 9 Crabs to small and large container; waited a week
- Righting time on 3 random crabs/treatment (crowded + uncrowded)
- Dry weight of 3 random crabs/treatment
- Placed weighed crabs in 35 mL resazurin (1/container)
- Sampled 20 µl resazurin into separate wells after 30, 60, 90 min
- Resazurin RFU for O2 consumption

Exp 2:

- Mix 200L crowded water + 800L clean saltwater in uncrowded container; 1000L fresh in crowded; added crabs evenly to each; waited a week
- Righting time for one crab/treatment (non crowded w/ crowded water + crowded)
- Dry weight of different 3 crabs/treatment
- Placed weighed crabs in 35 mL resazurin (1/container)
- Sampled 20 µl resazurin into separate wells after 30, 60, 90 min
- Resazurin RFU for O2 consumption





Summary strategy:

- Data was normalized by dividing RFU (at 30, 60, and 90 mins) by weight of each crab (g)
- Median RFU was calculated for each treatment and visualized by bar chart
- This strategy will be repeated once we get 2nd resazurin results and error will be calculated
- Might omit from UC3 was because the RFU was unusually lower than UC1 and UC1

Summary strategy:

- Average righting time per treatment (crowded, non-crowded, non-crowded with crowded water) will be visualized for trial 2