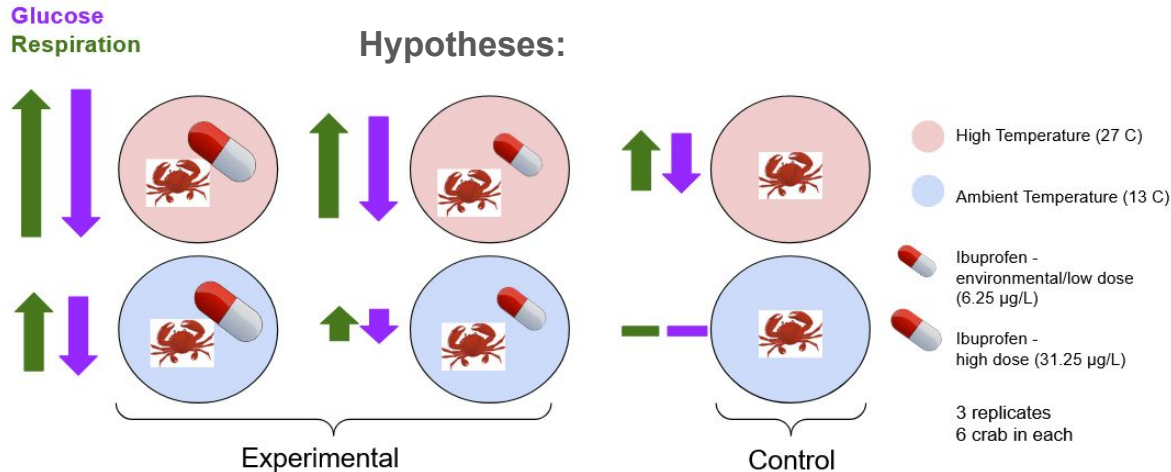


The Ecophysiological Effects of Water Temperature and Ibuprofen on *Hemigrapsus oregonensis*

Research Question:

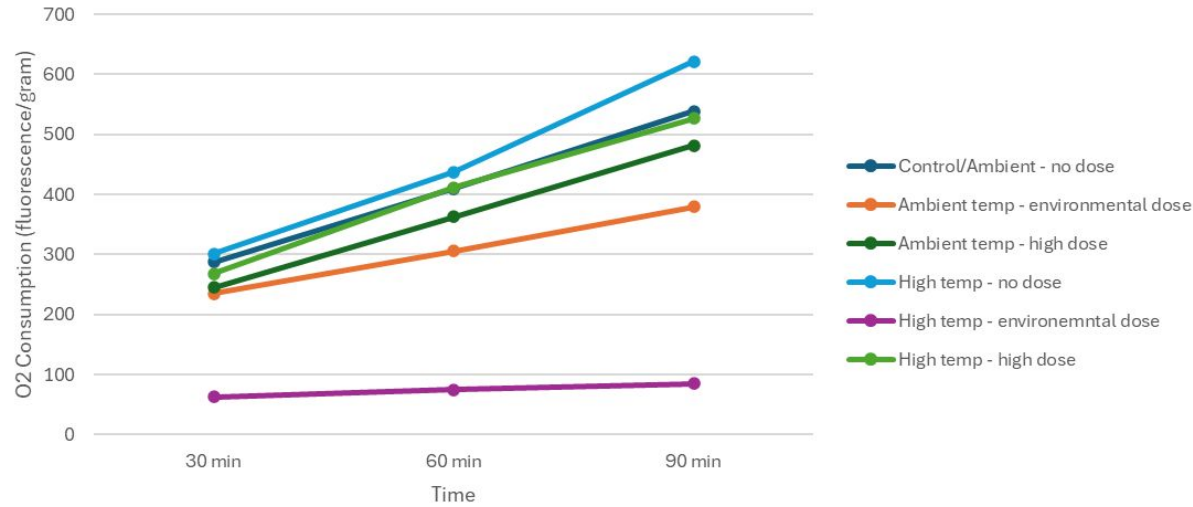
1. How will increasing concentrations of ibuprofen affect **glucose** and **respiration** rates in *H. oregonensis*?
2. How will an increase in temperature affect **glucose** and **respiration** rates in *H. oregonensis*?
3. How will the combined effects of ibuprofen concentrations and increased temperature affect **glucose** and **respiration** rates in *H. oregonensis*?



Methods:

- Oxygen consumption → resazurin each week
 - 30 min
 - 60 min
 - 90 min
- Glucose levels → hemolymph extraction last day
- Tank cleaning each week
 - Re-dosed tanks after cleaning

Resazurin Measurements of Crabs in Ibuprofen Treatments Over Time



Data analysis:

- Resazurin: averages (once we get 2nd results), visualization
- Glucose/Lactate: average across all 3 crabs, visualization

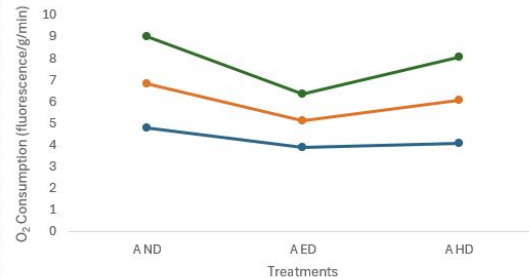
Results:

- Lowest O₂ consumption - high temp & environmental dose
- Highest O₂ consumption - High temp & no dose
- Prediction:
 - Stress is ignored when influenced by Ibuprofen
 - Drug threshold

Mortality:

- 2 male deaths
 - Ambient temp & high dose
 - High temp & no dose

Ambient Temperature Treatments (13 C)



High Temperature Treatments (27 C)

