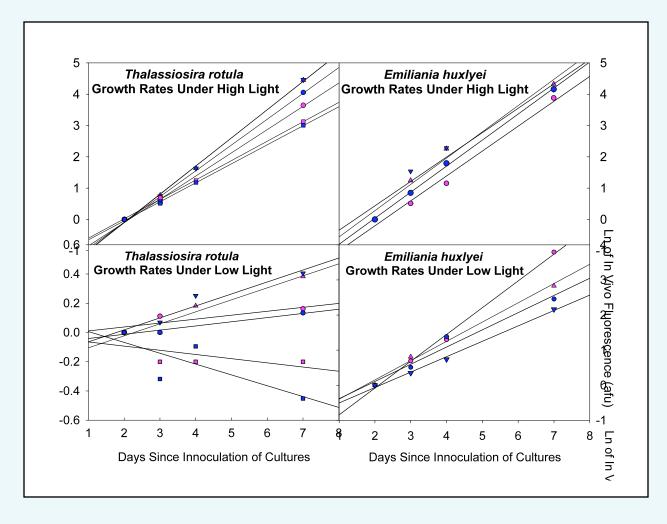
## Phytoplankton Response to Increased Atmospheric CO<sub>2</sub>

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- CO<sub>2</sub> levels are predicted to nearly double by the end of the 21<sup>st</sup> century (IPCC, 2007)
- This is likely to cause a 4°C increase in sea surface temperature (IPCC, 2007)
- Phytoplankton are responsible for ~50% of the global biological uptake of carbon dioxide (Field et al., 1998)
  - High CO<sub>2</sub> (Low Temperature, High Nitrate)
  - ▼ Low CO<sub>2</sub> (Low Temperature, High Nitrate)
  - High CO<sub>2</sub> (High Temperature, High Nitrate)
  - Low CO<sub>2</sub> (High Temperature, High Nitrate)
  - High CO<sub>2</sub> (Low Temperature, Low Nitrate)
  - Low CO<sub>2</sub> (Low Temperature, Low Nitrate)