

Sustainable production of Biologically Active Molecules of Marine Based Origin

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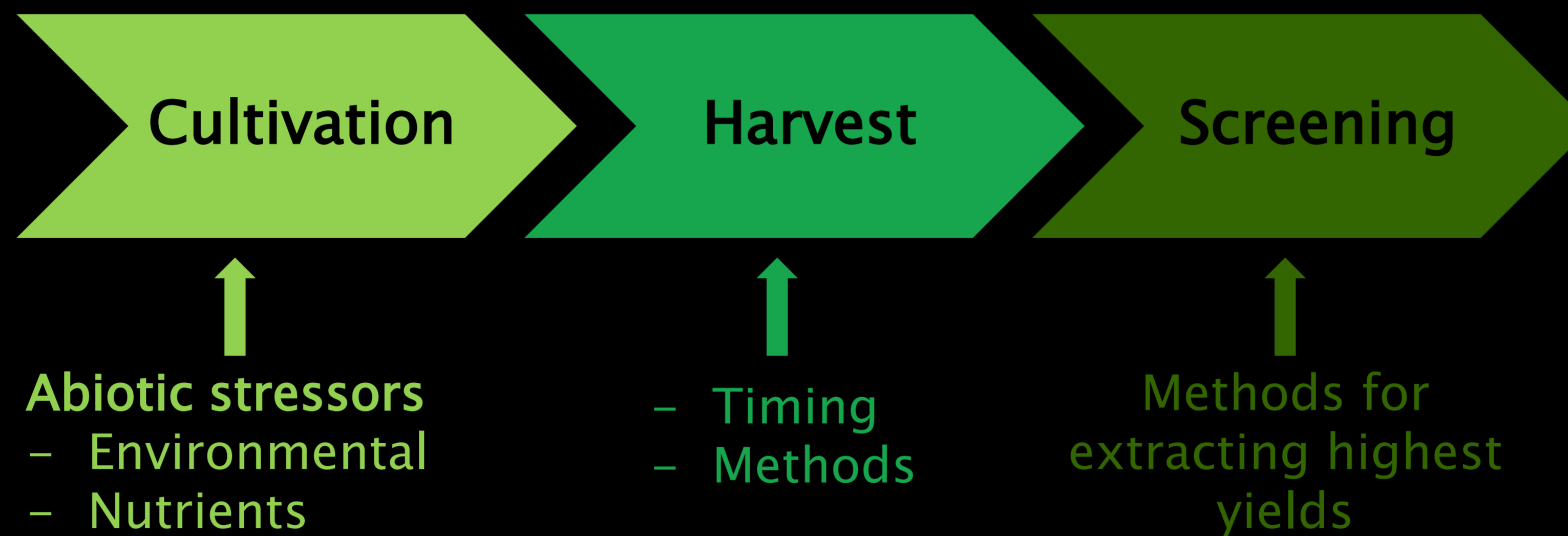
BAMMBO objectives

Provide innovative solutions to overcome existing bottlenecks associated with culturing marine organisms (algae, sponges, bacteria and fungi)

For sustainable production of high yields of value-added products for pharmaceutical, cosmetic and industrial sectors.

Ghent University objectives: MICROALGAE

Optimalisation of :



Highest productivity of high value-added products of interest

How?

Abiotic stressors
 - Environmental
 - Nutrients

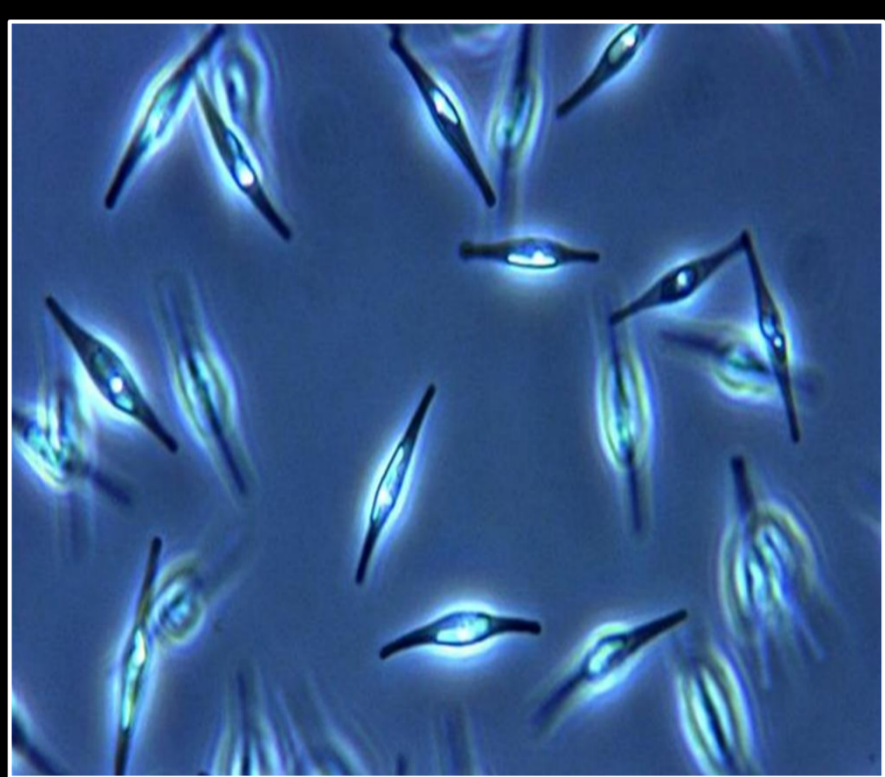
- Timing
 - Methods

Methods for extracting highest yields

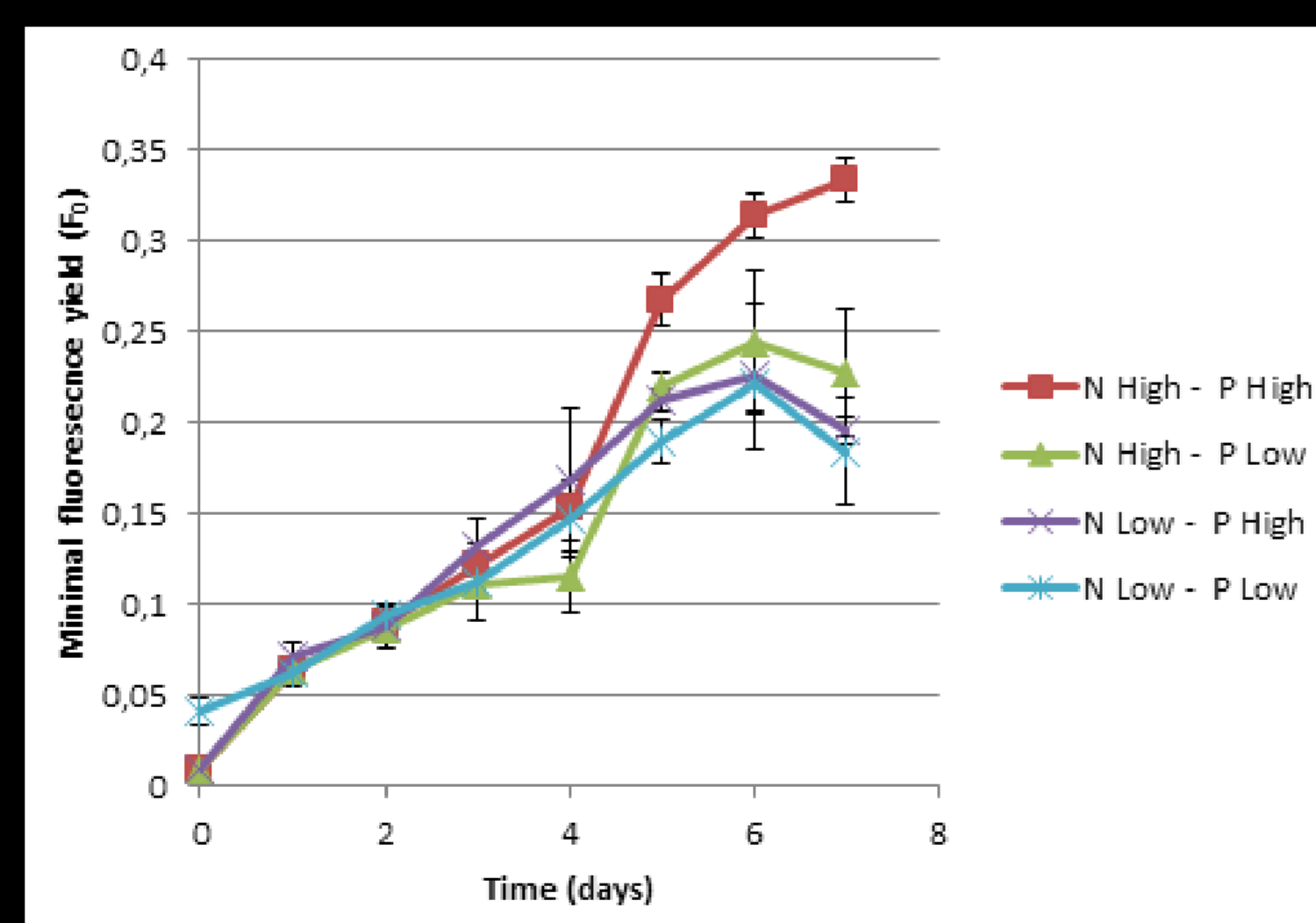
Case studies:

1. *Phaeodactylum tricornutum*

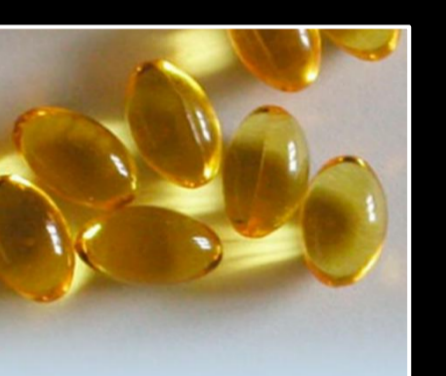
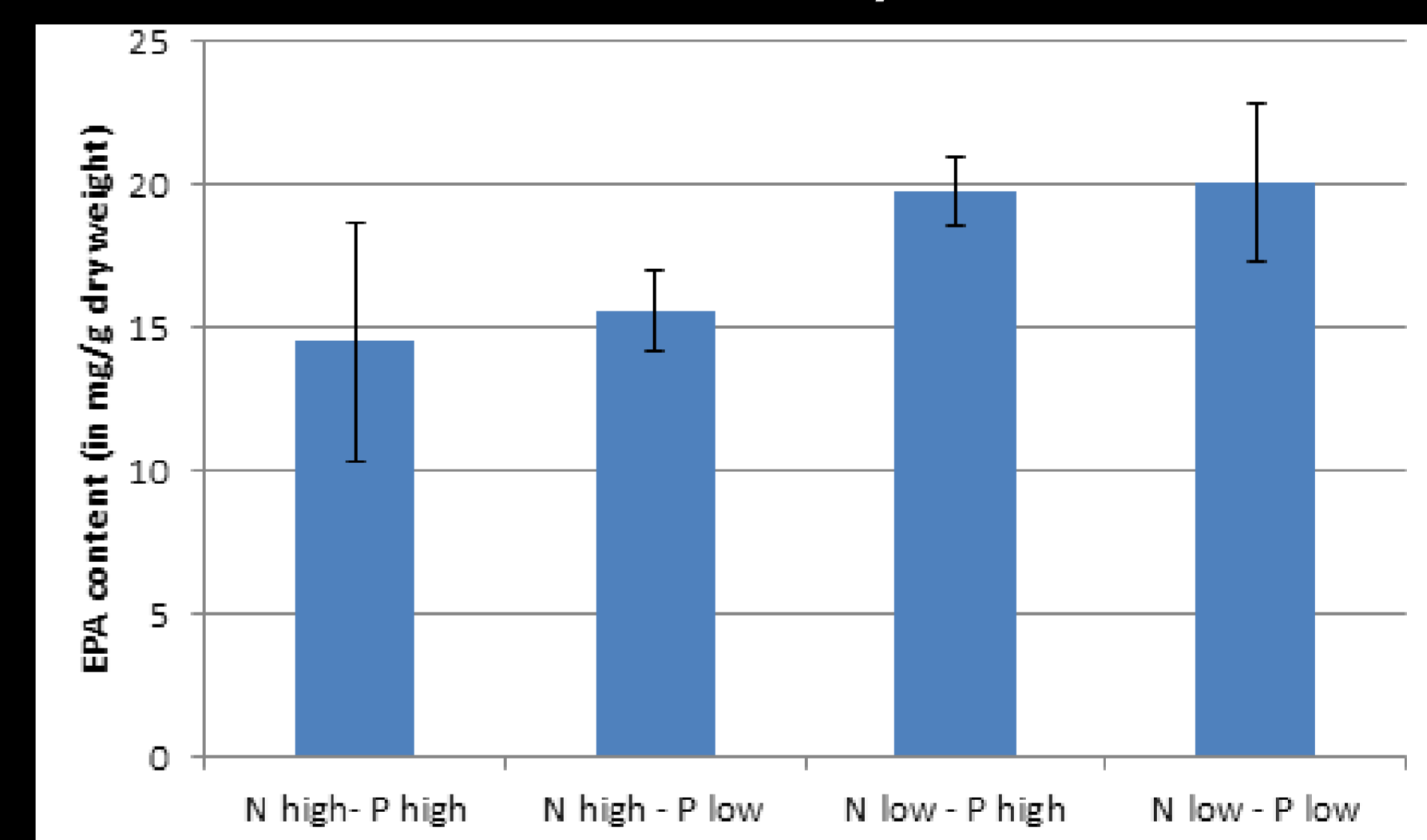
Effect of nitrate and phosphate



Growth:



EPA production:



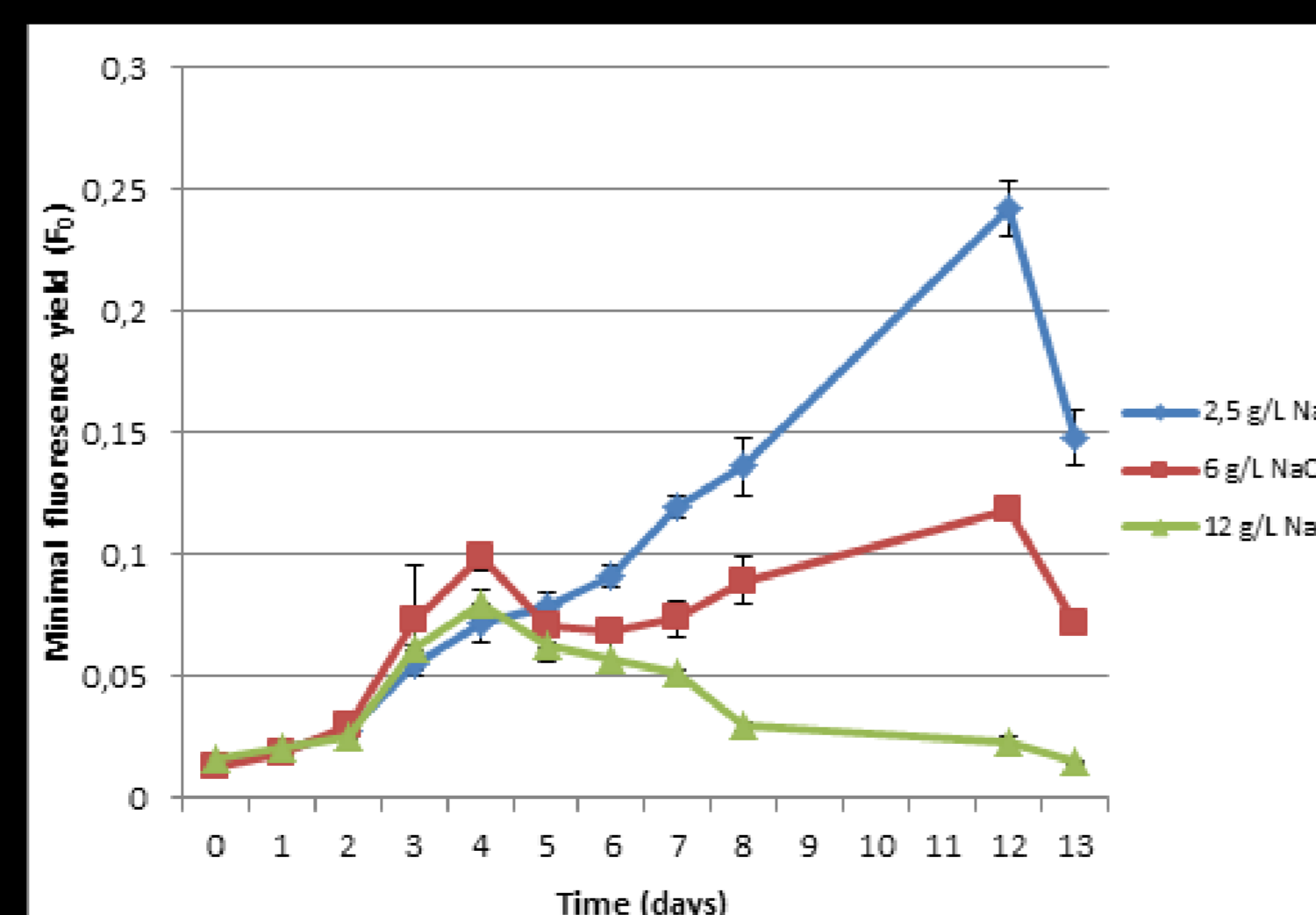
ω3 FA, health

2. *Haematococcus pluvialis*

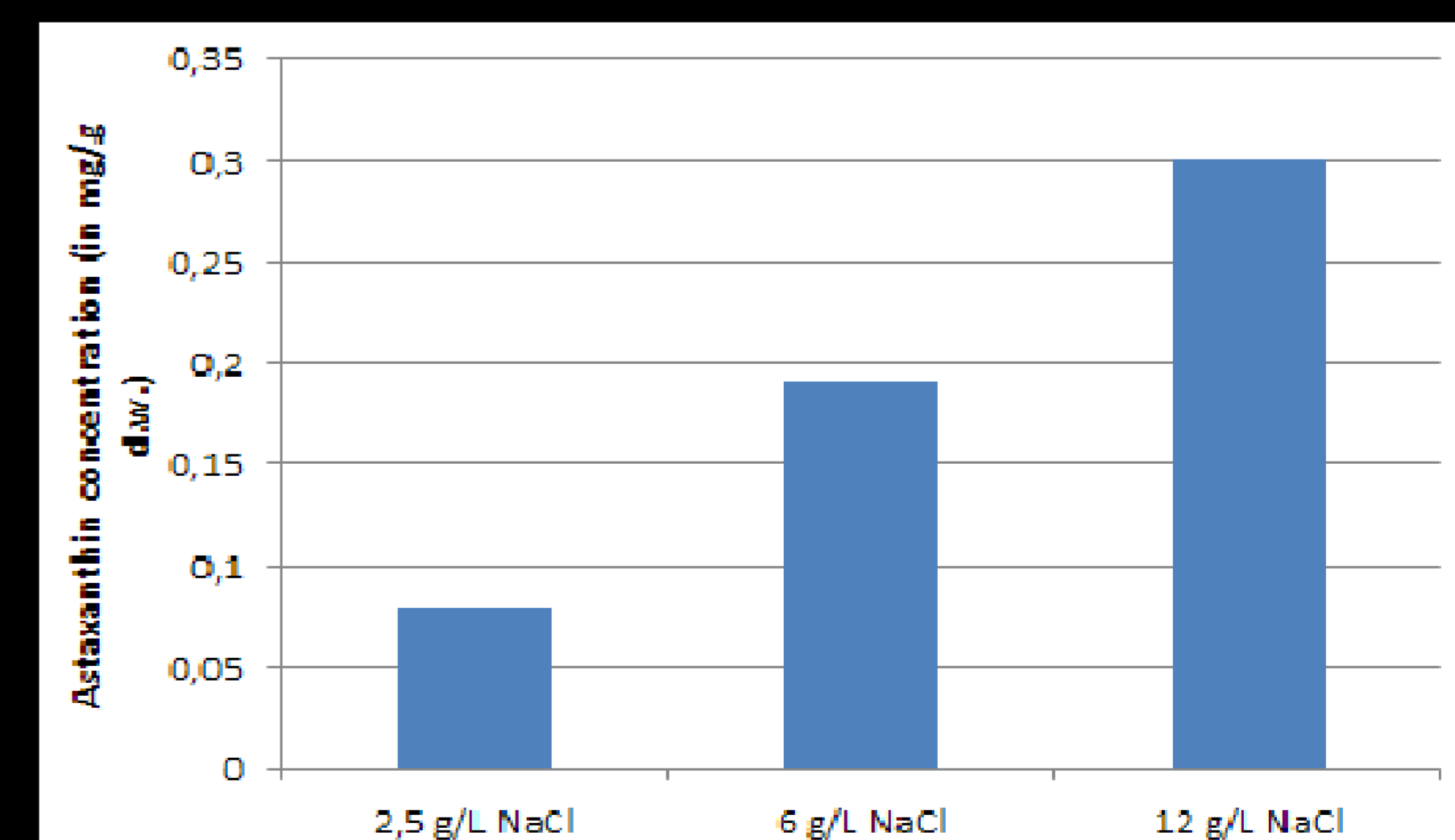
Effect of salinity



Growth:



Astaxanthin production:



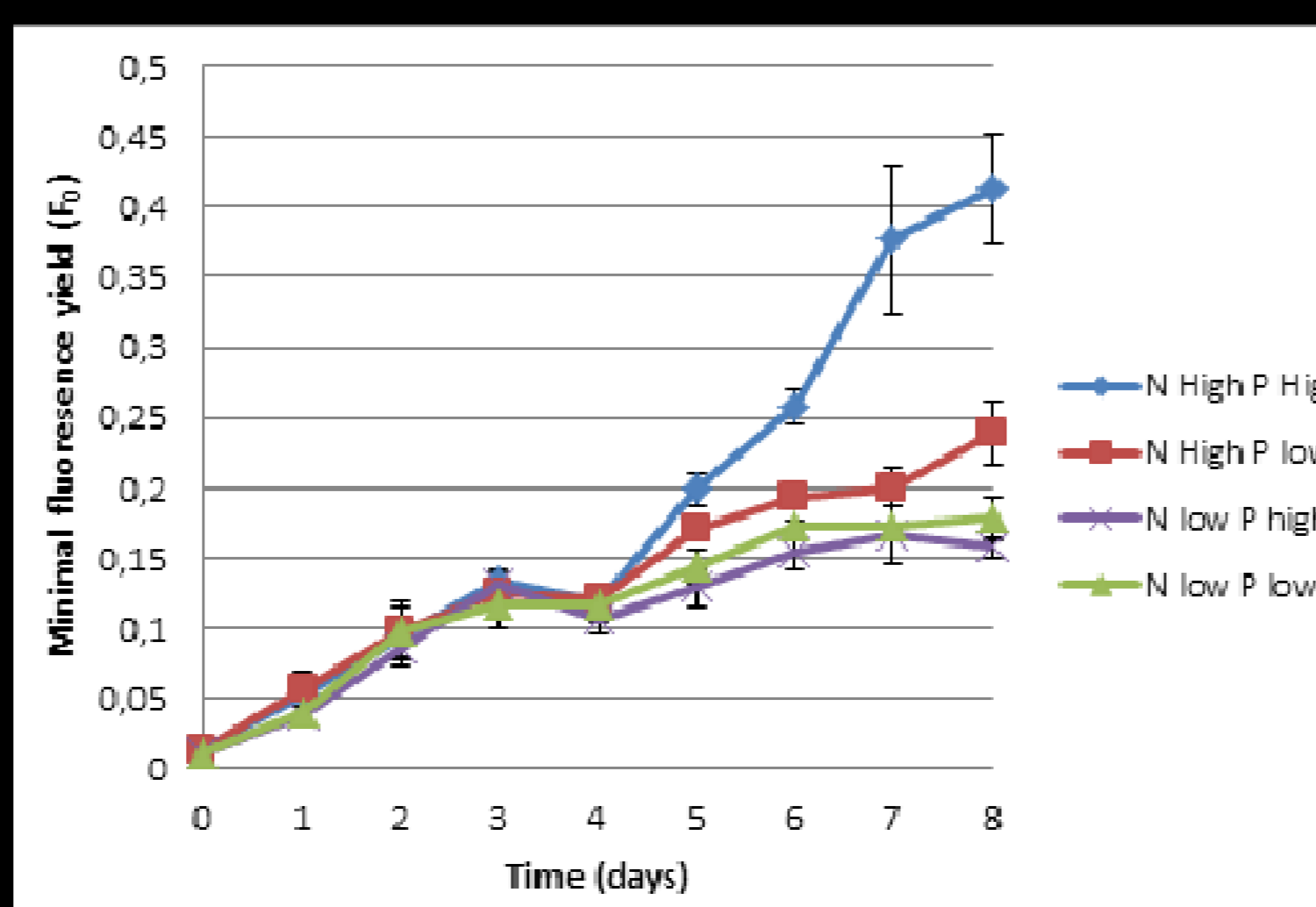
Antioxidant
 Natural pigment

3. *Cylindrotheca closterium*

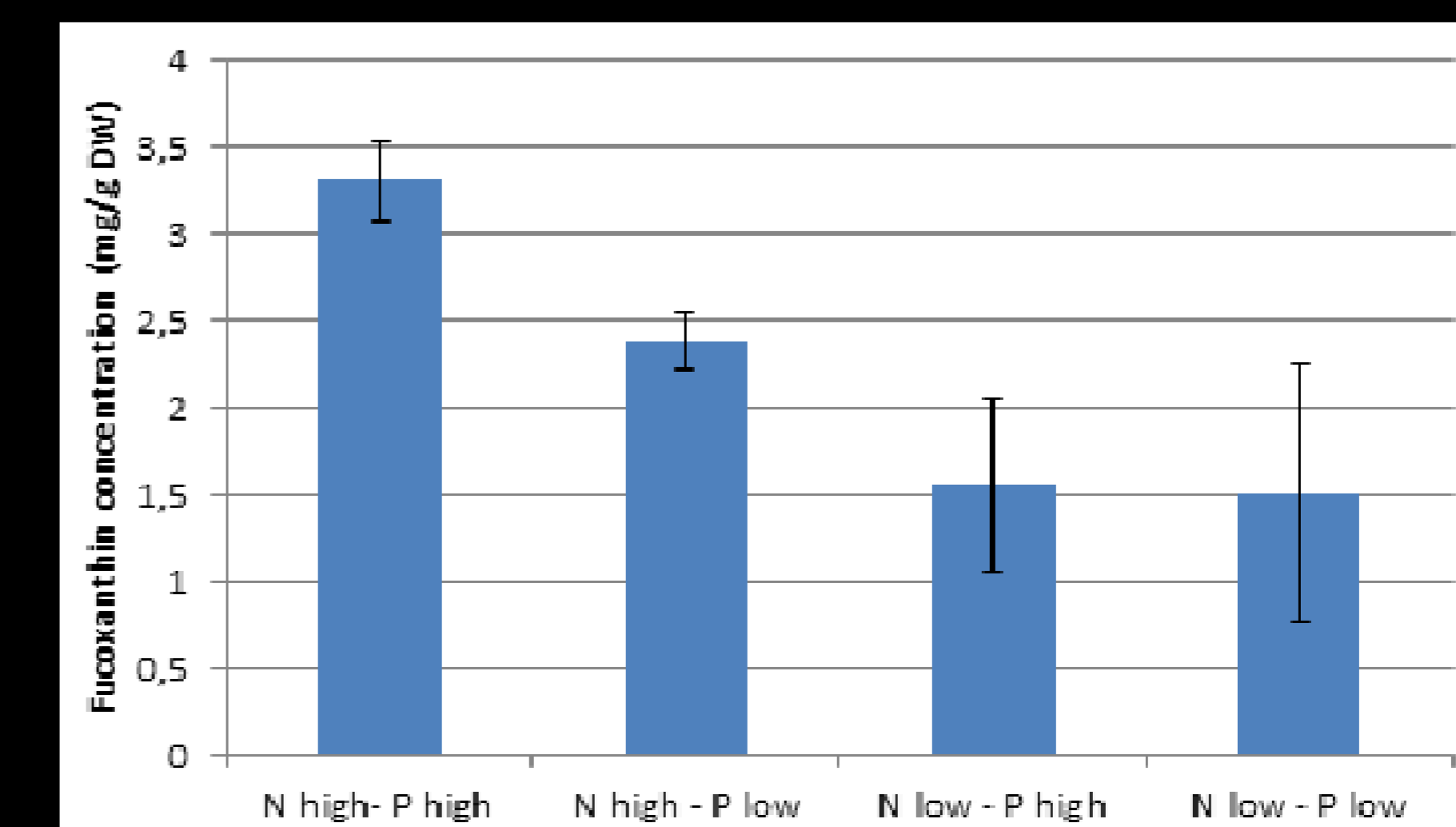
Effect of nitrate and phosphate



Growth:



Fucoaxanthin production:



Anti-obesity
 Anti-diabetic
 Natural pigment