# A Method for Vitamin D Production

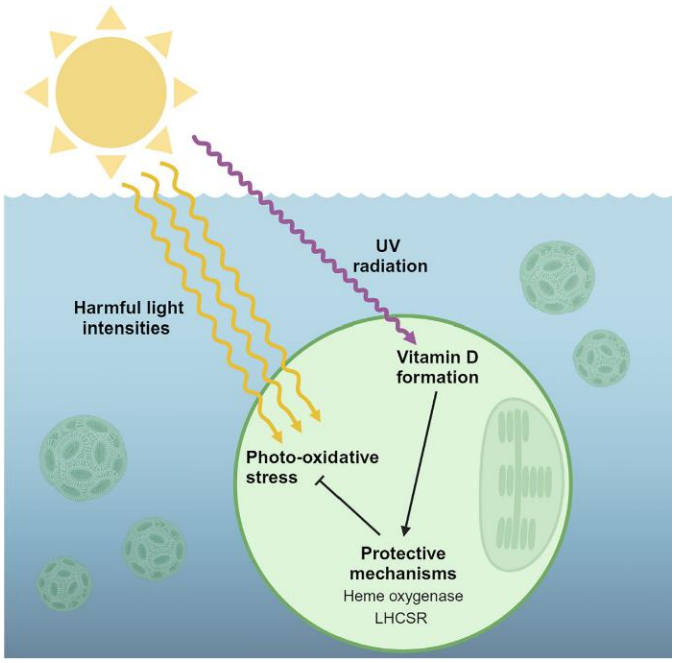
AgroTech & FoodTech

Reference Number: **2086** \ Principal Investigators: **Prof. Einat Segev** \ Patent Status: **US20240083843A1**

A sustainable method to produce vegan Vitamin D using the microalga *Emiliania huxleyi*.

This approach enables efficient production of both Vitamin D2 and Vitamin D3, along with additional nutritional values, in a dry biomass form suitable for nutritional supplements.

By optimizing cultivation conditions and utilizing a two-phase cultivating system with bacteria, this method offers an eco-friendly, animal-free alternative to traditional Vitamin D sources.




## APPLICATIONS

- Nutritional Supplements: Provides a plant-based, vegan-friendly source of Vitamin D2 and D3 and additional nutritional benefits (e.g., calcium and other sterols) for humans and animals.
- Food Fortification: Enables fortification of foods with Vitamin D and calcium derived from a sustainable and natural source

## STAGE OF DEVELOPMENT

The biological pathways and optimal cultivation conditions for Vitamin D production in E. huxleyi were identified, with further studies planned to validate the method for commercial use and investigate additional applications.

## ADVANTAGES

Vegan and Sustainable: Provides Vitamin D3 from a non-animal source, ideal for vegan consumers and sustainability-conscious markets.

Enhanced Production Efficiency: The two-phase cultivation system maximizes Vitamin D yields through optimized interaction with bacteria without compromising purity.

## REFERENCES


- Eliason et al., 2023