






NATURAL BIOTECH
SKIN CARE
ADVANCED FORMULA
with algae extract
50 ml e 1.7 fl. oz.



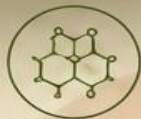
NATURAL
INGREDIENTS



BIOTECHNOLOGY



SUSTAINABLE
BEAUTY



ADVANCED
FORMULA

The project aims to build a biorefinery for the production of microalgae.



MICROALGAE IS AN INNOVATION IN AGRICULTURE

- ✓ CHLORELLA
- ✓ HAEMATOCOCCUS PLUVIALIS
- ✓ CRYPTHECODINIUM COHNII
- ✓ SPIRULINA
- ✓ MICROALGAE



FOR A GREENER AND MORE SUSTAINABLE FUTURE

The photobioreactor production facilities that will be developed are intended to cultivate the following microalgae species:

- ✓ **CHLORELLA**
- ✓ **HAEMATOCOCCUS PLUVIALIS**
- ✓ **CRYPTHECODINIUM COHNII**
- ✓ **SPIRULINA**









For a Greener and More Sustainable Future

The production facilities that will be developed are intended to cultivate the following microalgae species:

- ✓ **Chlorella**
- ✓ **Haematococcus pluvialis**
- ✓ **Cryptocodinium cohnii**
- ✓ **Spirulina**





FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA,
FDIA - REPRESENTAÇÃO PERMANENTE



An innovative enterprise focused on the cultivation and processing of microalgae.

The project consists of a start-up initiative aimed at building a biorefinery dedicated to the production of microalgae and other high value-added products.

The organization is founded by highly qualified partners who will devote their expertise and professional skills to the development and growth of the business.

Production activities will be distributed across three separate geographic areas.

Two facilities will include modern glass-and-steel greenhouses dedicated to microalgae cultivation and the processing of all related by-products, covering a total area of approximately 75 hectares.

A third site will be developed on an area of around 30 hectares.

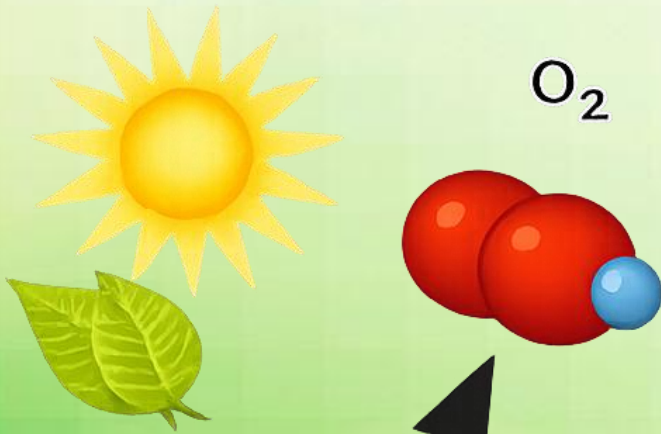
All products are manufactured within the national territory.



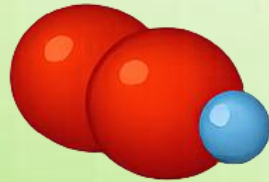
Microalgae are considered one of the most promising resources for tomorrow's green economy in healthcare sector.



CO₂, nutrients, and suniight



O₂



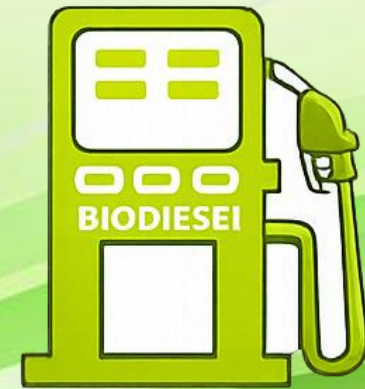
fatty acids
form in algae



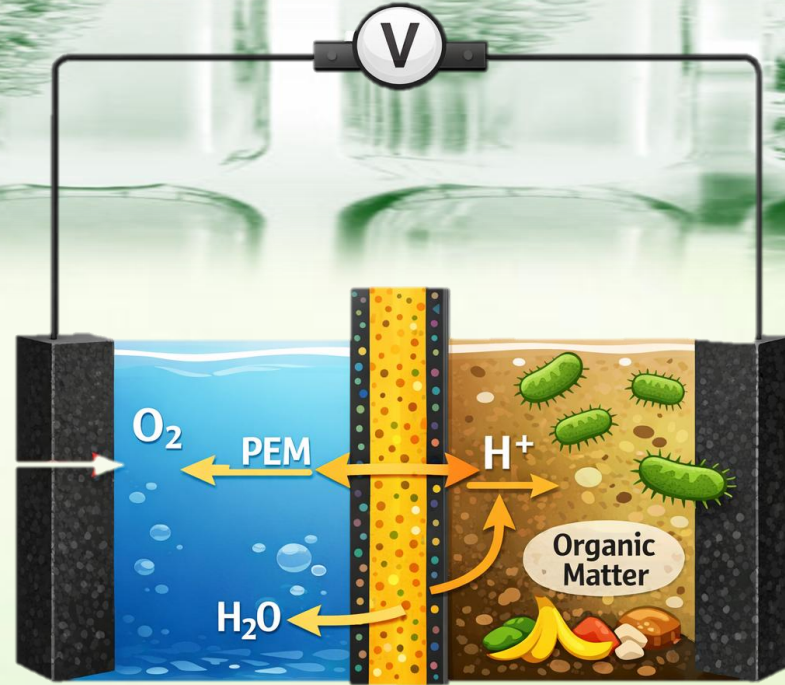
extraction of oil
from algae



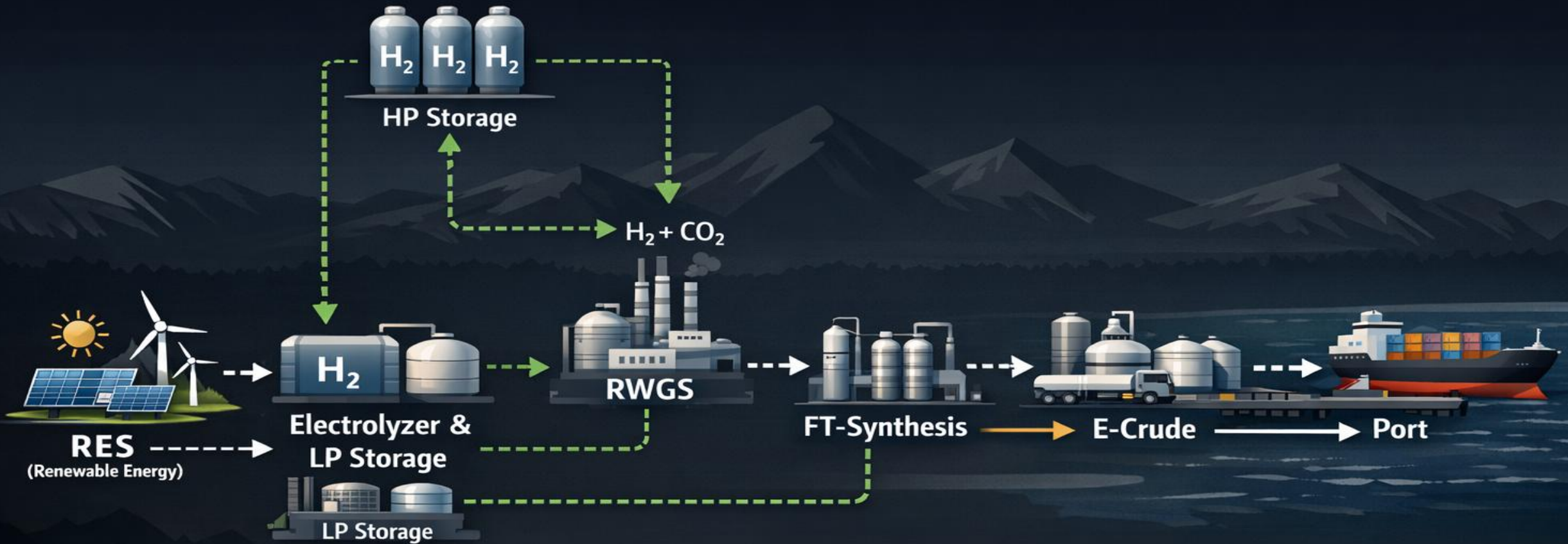
conversion
to biodiesel



distribution of
biodiesel to the market

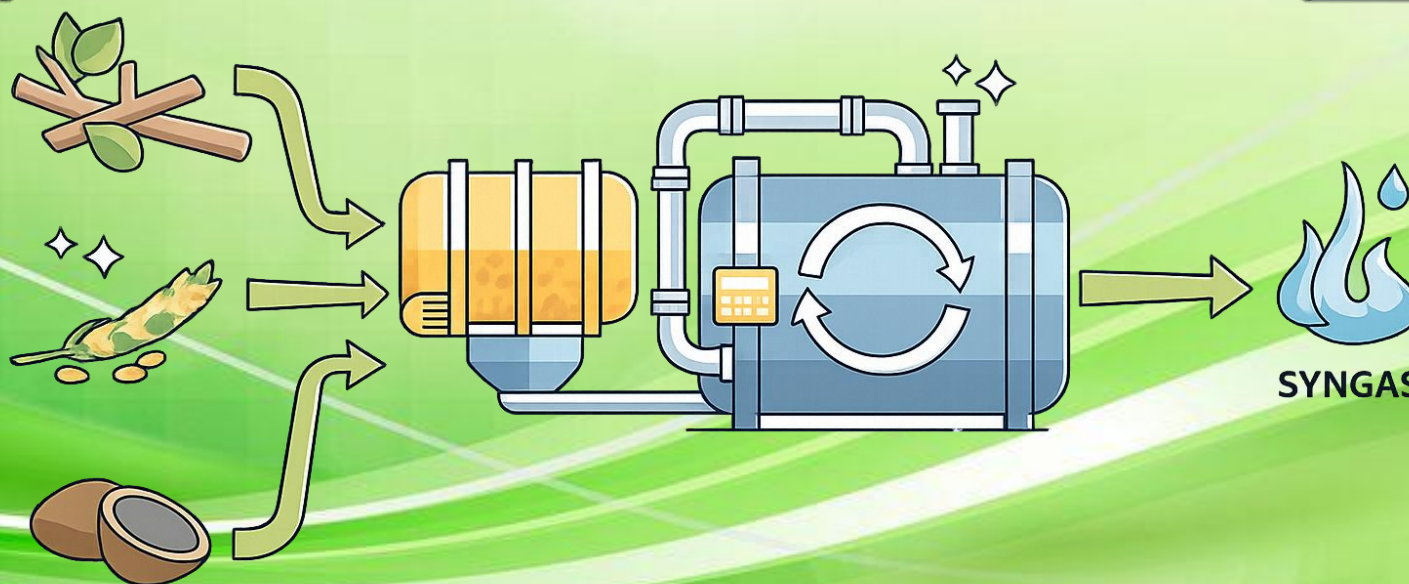
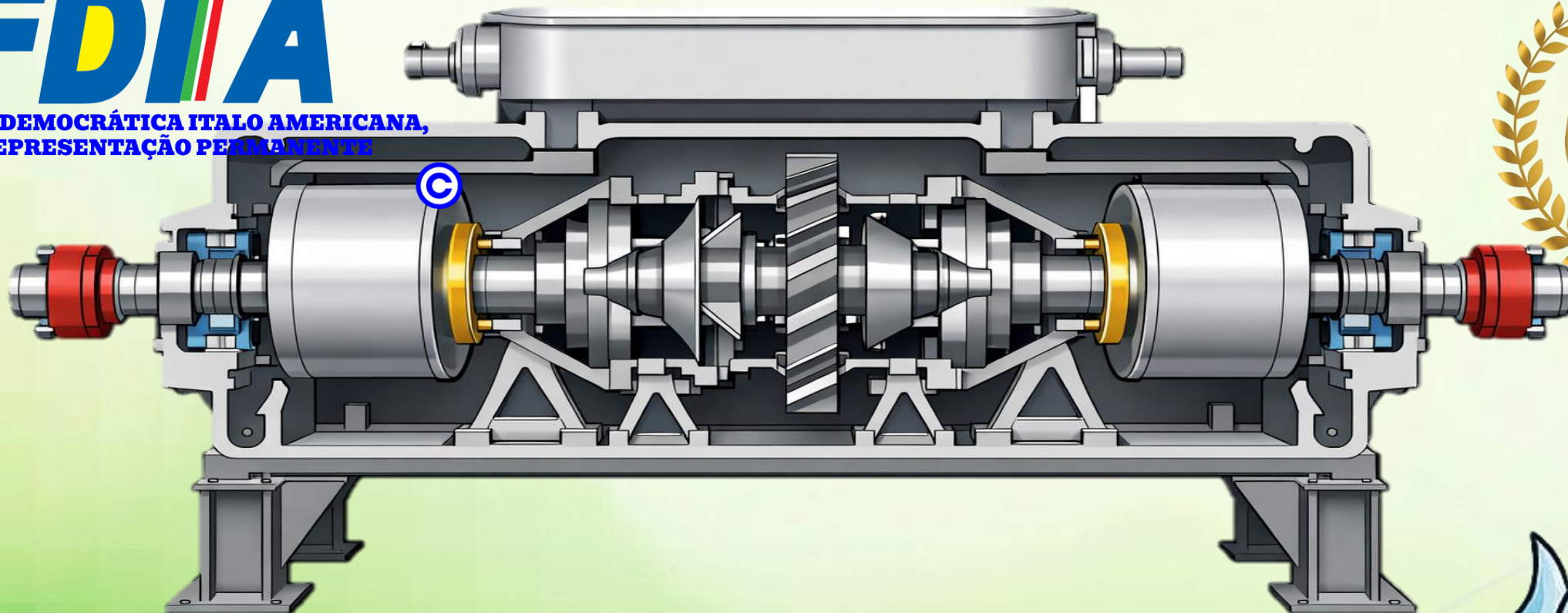


Project structure



FDIA

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SYNGAS

SYNGAS

FDIA

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“Energy from Waste”

This ultra-high temperature hydrolysis technology ($C + H_2O$), referred to as Ultra High Temperature Hydrolysis (UHTH), has been developed to provide an environmentally responsible, cost-effective, and safe solution for treating the organic fraction of waste—namely materials based on carbon chemical chains.

Waste management represents a major challenge due to risks associated with handling, transportation, storage, and disposal, as well as high operational costs. However, waste also offers significant potential as an energy resource.

The C.C.C. process is a patented system capable of recovering up to 99.5% of the energy content contained in the input material.



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The Technology

The ultra-high temperature gasification system is unique and patented, designed to process nearly all types of waste safely. It maximizes profitability by converting the entire organic fraction of waste into high-quality synthesis gas (syngas). The UHTH hydrolysis technology complies with the most stringent international environmental standards. Thanks to its straightforward operation, high efficiency, and flexibility, this thermal conversion “Energy from Waste” plant is attractive to both operators and investors. It is a modular facility with no chimneys, engineered to operate continuously (24/7) even under demanding conditions, handling mixed hazardous and non-hazardous waste streams.

Infeed

- Biomass / Waste
- Moisture Controlled
- Sized Material

Purge

- Oxygen Removal
- Neutral Environment

Reactor

- High Temperature (~1100°C)
- Thermochemical Conversion

Syngas

Outfeed

- Solid Byproducts
- Metals, Glass, Ash

Scrubber

- Gas Cleaning
- Impurity Removal

Gas Use

- Clean Syngas
- Energy Applications
- Storage or Utilization





Investing in microalgae production has proven to be highly profitable, as demonstrated by in-depth market analysis and discussions with industry professionals.

Supported by the technical expertise of the founding members and through partnerships with leading international players in the sector, the decision was made to launch this ambitious initiative.

Microalgae represent a concrete opportunity for a more sustainable and innovative agricultural future.



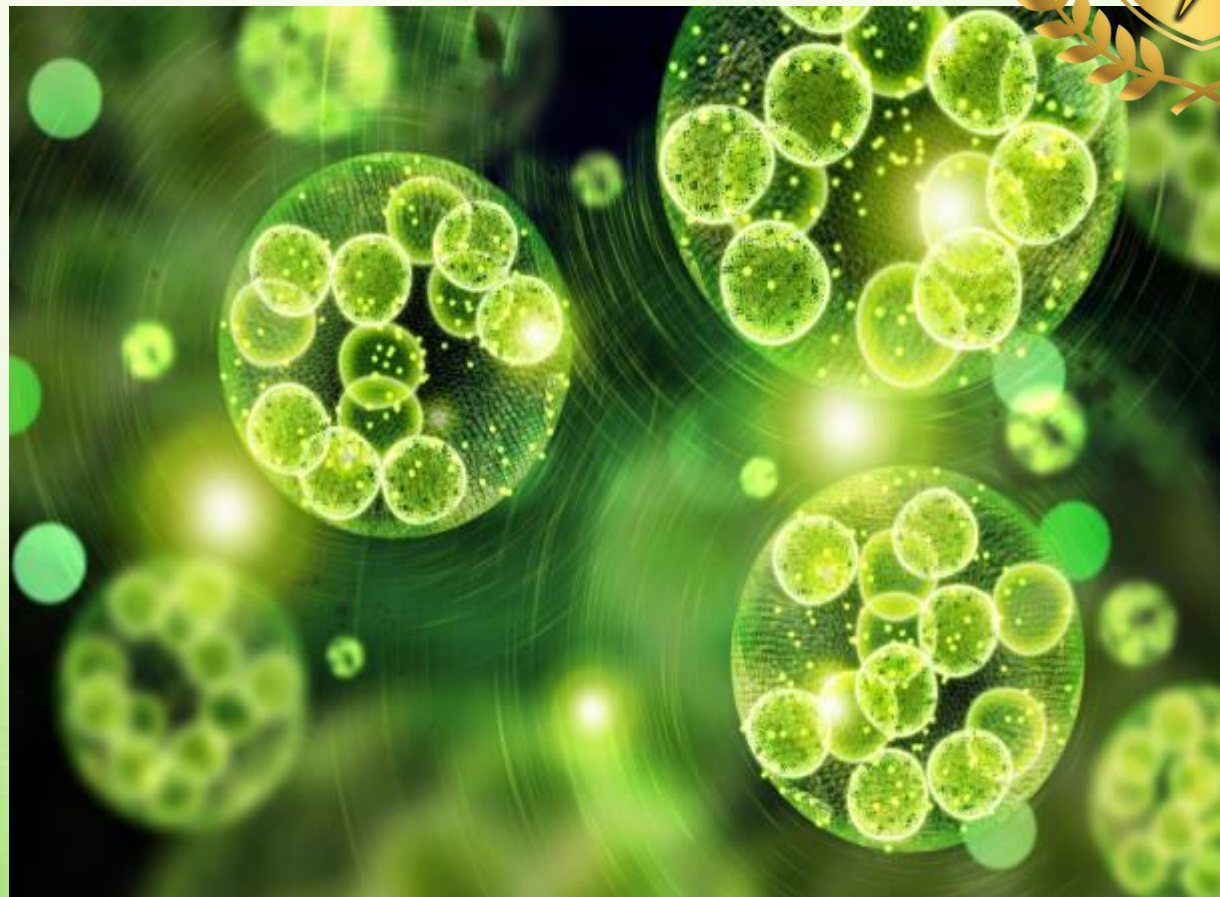
Products Derived from Microalgae

1. Biofuels

Vegetable oils derived from microalgae are being studied as alternative fuels to traditional fossil diesel.

This third-generation vegetable oil is characterized by extremely high productivity (over 2,000 times higher than first-generation oils) and does not compete with agricultural land intended for food production.

These characteristics make it possible to meet the rapidly growing global demand for renewable fuels.



Algae biomass

Value Added Products

Acidi grassi e steroli

- EPA, DHA, ALA, GLA, DPA
- Ac. Linoleico, Oleico, Palmitico

Carotenoidi

- Beta-carotene, Astaxantina, Luteina, Fucoxantina, Zeaxantina

Proteine e Pigmenti

SCP, Ficocianina, Ficoeritrina

Vitamine e Minerali

Anti-aging, UV, Polisaccaridi, Enzimi Antiossidanti

Bio Petroleum Products (Biocarburanti)

- Biodiesel
- Bioetanolo
- Biobutanolo
- Biometano
- Bioidrogeno
- Cella a combustibile algali
- Biogas

Phycoremediation (Fitorisanamento)

Rimozione Metalli Pesanti

Detossificazione POPs

Sequestro di CO₂

Depurazione Nutrienti e Contaminanti

Algal Engineering (Ingegneria Algae)

Miglioramento dei Ceppi

Autoflocculazione

Ceppi Secernenti Lipidi

Lipidi "Designer"

Ceppi Resistenti allo Stress

CO₂ (da aria)

Ossigeno (O₂)

Acqua Trattata

Biomassa Algale

Coltivazione Algae

Bio-petrolio

Proteine (Mangime)

Prodotti a Valore Aggiunto

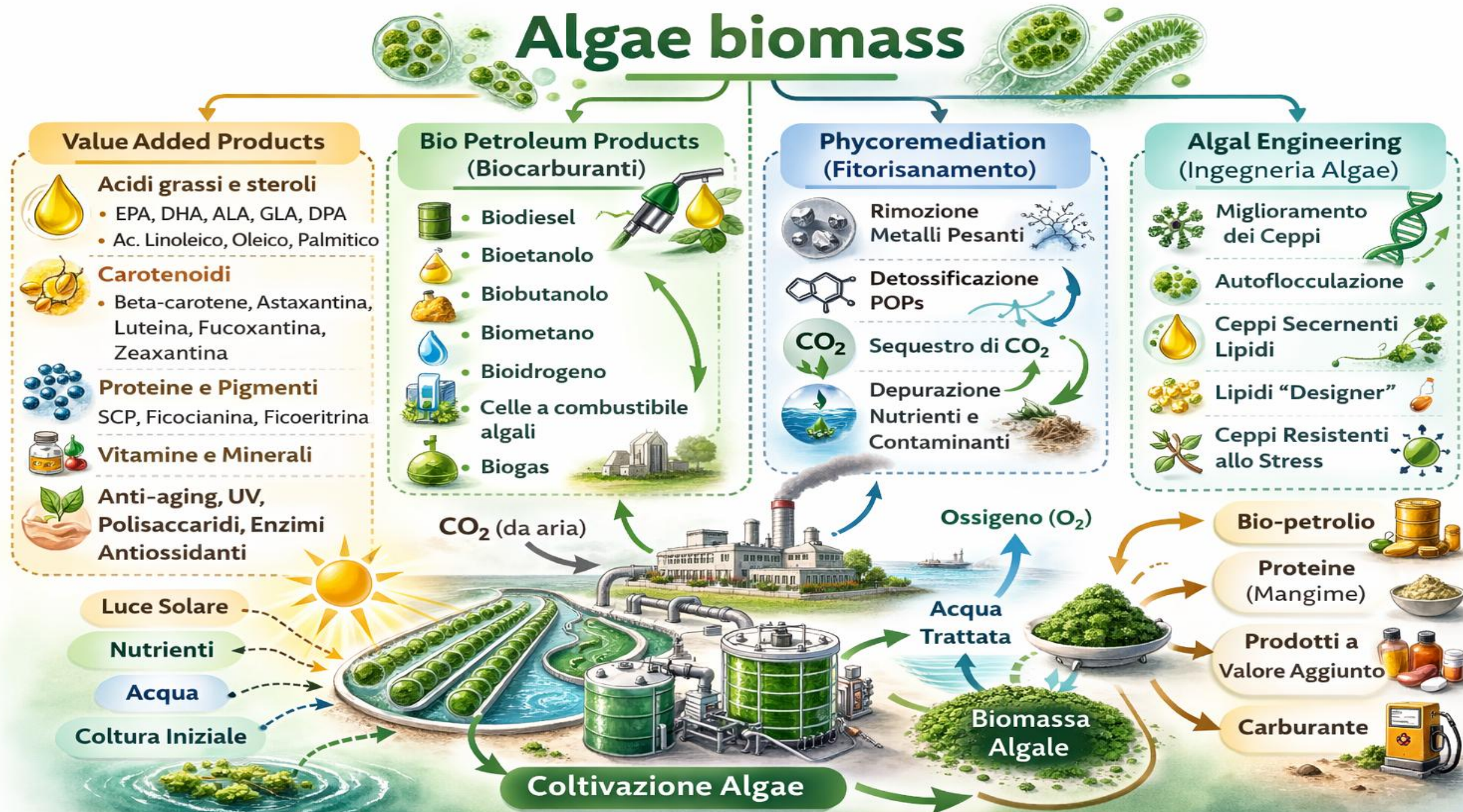
Carburante

Luce Solare

Nutrienti

Acqua

Coltura Iniziale



PROJECT DEVELOPER

<https://www.pharma1humanitas.com/password.html>



Website: www.fdiangopermanente.pt/index.html

Projects & videos: www.fdiangopermanente.pt/download.html

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