Dr. Walt Rakitsky is senior VP of emerging business at Corbion, formerly TerraVia.

TerraVia was founded as Solazyme in 2003, producing microalgae for use in fuels and chemicals before refocusing on human and animal nutrition and personal care products. The company is based in South San Francisco, California.

In September, Dutch food ingredients manufacturer Corbion acquired TerraVia.

AlgaPrime™ DHA aquaculture feed ingredient is the recipient of GAA’s 2017 Global Aquaculture Innovation Award, sponsored by Preferred Freezer Services.
DELIVERING ON THE PROMISE:
A NEW SOURCE OF ALGAE OMEGA-3s
OMEGA-3's ARE IMPORTANT AT ALL STAGES OF LIFE
LARGE SEGMENTS OF THE POPULATION FAIL TO MEET GOED RECOMMENDATION

Population-Weighted EPA & DHA Intakes by Country

Source: Micha et al. BMJ. 2014 Apr 15;348:g2272.
The majority of health organizations recommend a minimum of 200 mg of marine omega-3s each day for healthy adults.

With a growing population of seven billion people – demand for marine omega-3s is at an all time high.

Global annual production of fish oil is limited to 1mmMTa with ~25% rich in marine omega-3s.

A deficit of marine omega-3 rich fish oil exists. We need new sources to bridge the gap.
WORLD’S LARGEST TRADER OF TRIGLYCERIDE OILS...
- Leading agribusiness
  - protein, carbohydrates & oils
- $50B+ net sales; ~400 facilities
- 32,000 employees
- Largest vegetable oil business worldwide
- Global reach (40+ countries)

... MEETS THE WORLD’S LEADING ALGAE PLATFORM
- Microalgae bio-based ingredients innovator
- Market leader in lactic acid and lactic acid derivatives, oils, proteins & polysaccharides from fermentation
- > $1B revenues and >1,500 employees

2014 Presidential Green Chemistry Challenge Award Winner

George Washington Carver Award for Innovative Industrial Biotechnology

TO FORM A DISRUPTIVE JOINT VENTURE
- Purpose built commercial plant > $150 Million investment
- Five 625m³ fermenters; ability to produce oils/biomass products
- Non genetically modified sugarcane feedstock
- Best in class environmental footprint & cost structure
- Currently producing AlgaPrime DHA at scale
POWERED BY RENEWABLE ENERGY

Located on the site of Bunge’s Moema sugar mill; about 500km from Sao Paulo
PRODUCTION PROCESS

SUSTAINABLE PLANT SUGARS
- Sugar Beets
- Corn
- Sugar Cane
- Cellulosic

FERMENTATION TANK

DRYING

Oil and protein producing microalgae

AlgaPrime DHA
The original source of DHA:
Whole algae ingredient from non GM algae, Schizochytrium

High levels of DHA (~30%): Provides flexibility to formulators

Quality:
Clean source of algal oil rich in DHA

Stable powder form:
Easily incorporated in feed

Available today:
Fully formulated in salmon feeds

Typical Nutritional Profile:
- C16:0 (Palmitic) 18%
- C22:5 n6 (DPA) 9%
- C22:6 n3 (DHA) 29%
- Total Carbohydrates 21%
- Other Fatty Acids e.g. C18:0 4%
- Moisture 2%
- Ash 6%
- Protein 9%
- Fiber (crude) 2%
A STRATEGIC PARTNERSHIP IN AQUACULTURE

BioMar is one of the top 3 players in the salmon industry

BioMar provides AlgaPrime DHA global reach in salmon farming

Feeds one of every four farm raised salmon globally

BioMar provides salmon feeds containing AlgaPrime DHA at scale today
MARKET LEADERS

Lerøy Seafood Announces Use of AlgaPrime™ DHA in Feed to Enhance Sustainability and Omega-3 Profile of Salmon

Lerøy Seafood Group is the leading exporter of seafood from Norway and the world’s second largest producer of Atlantic Salmon

AlgaPrime™ DHA is now being used by a leading Chilean salmon farmer, Ventisaueros. S.A., to produce Silverside™ Premium Pacific salmon at scale with unprecedented sustainability benefits
GLOBAL SALMON CONSUMER STUDY

Harris Poll received 11,000 responses from 4,700 consumers across 6 countries.

Consistently across consumers in all six countries, the following resonated the most:

- **#1**: “Responsibly Farmed Salmon”
  - Brazil: 39%
  - US: 24%

- **#2**: “Meets Heart Healthy Claim”
  - Brazil: 32%
  - Germany: 10%

- **#3**: “Highest in Good Fat”
  - Brazil: 27%
  - Germany: 9%

Source: 2017 Harris Poll commissioned by TerraVia Holdings, Inc., among 2,129 participants in the US, 1,061 participants in the UK, 1,111 participants in France, 1,074 participants in Germany, 1,012 participants in Brazil, and 1,240 participants in Japan. Participants are aged 18 and older. Respondents selected up to 3 out of 20 statements across 6 categories: Sustainability, Health, Traceability, Non-GMO, and Feed.
RESPONDING TO INDUSTRY NEEDS

New clean source of algae omega-3 to enable industry growth

Improve feed sustainability metrics (FIFO / FFDRfo)

Create new food choices targeting specific health benefits – brain food

Responsibly increase total marine omega-3 levels
RESPONDING TO INDUSTRY NEEDS

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