



IMMEDIATE RELEASE

October 26th, 2023

OCEAN ACTIVES® Fucoidan - preliminary results from marine bioactive show exciting potential to support gut and heart health

Sourced from regenerative farms in the cold, clean waters of the North Atlantic and processed with water-based green chemistry, OCEANIUM is extracting maximum value from sustainably farmed seaweed to develop robust, marine bioactives for nutraceuticals and cosmeceuticals.

OCEANIUM is on a journey to provide efficacious, functional, and clean label ingredients with excellent traceability and provenance, whilst contributing to people health and ocean health.

Exciting preliminary results

OCEANIUM has conducted a small scale, pre-clinical, *ex vivo* preliminary study with ProDigest and the results highlight the exciting potential of OCEAN ACTIVES® Fucoidan to deliver gut health benefits by increasing the bacterial biomass and species richness of microbiome which can be associated with an improved immune system, supporting heart health¹, achieving a healthy weight, and preventing and managing diabetes.²

OCEAN ACTIVES® Fucoidan also increased levels of carnitine which has been known to help reduce obesity and hypertension.³ Additionally, results showed significantly higher levels of propionate and butyrate which could help to reduce cholesterol and fatty acid synthesis in the liver⁴ as well as inducing cell differentiation which is related to cancer prevention.⁵

The *ex vivo* preliminary study involved three concentrations of OCEAN ACTIVES® Fucoidan, which were tested on 5 donor isolates over a 48-hour period and compared to basal control and inulin positive control.

Further clinical testing

These exciting and encouraging preliminary results lay the groundwork for further clinical testing to gather additional evidence to support health claims.

OCEANIUM has secured GRAS approval in the US for fucoidan from *Saccharina latissima* and samples are now available for mission-aligned brands seeking to integrate highly efficacious and sustainable ingredients into their formulations.

OCEANIUM is also conducting *in vitro* and *in vivo* studies to validate the efficacy of OCEAN ACTIVES® Fucoidan in skincare formulations.

¹ Astudillo AA, Mayrovitz HN. The Gut Microbiome and Cardiovascular Disease. *Cureus*. 2021 Apr 16;13(4):e14519. doi: 10.7759/cureus.14519. PMID: 34007770; PMCID: PMC8121206.

² Lau WL, Tran T, Rhee CM, Kalantar-Zadeh K, Vaziri ND. Diabetes and the Gut Microbiome. *Semin Nephrol*. 2021 Mar;41(2):104-113. doi: 10.1016/j.semnephrol.2021.03.005. PMID: 34140089.

³ Kanitsoraphan, C., Rattanawong, P., Charoensri, S. et al. Trimethylamine N-Oxide and Risk of Cardiovascular Disease and Mortality. *Curr Nutr Rep* 7, 207–213 (2018).

⁴ Haghikia A, et al. Propionate attenuates atherosclerosis by immune-dependent regulation of intestinal cholesterol metabolism. *Eur Heart J*. 2022 Feb 10;43(6):518-533. doi: 10.1093/eurheartj/ehab644. PMID: 34597388; PMCID: PMC9097250.

⁵ Kaźmierczak-Siedlecka K, et al. Sodium butyrate in both prevention and supportive treatment of colorectal cancer. *Front Cell Infect Microbiol*. 2022 Oct 26;12:1023806. doi: 10.3389/fcimb.2022.1023806. PMID: 36389140; PMCID: PMC9643746.

Comments

Dr. Charles Bavington (PhD), CTO and Co-founder at OCEANIUM

“It was a privilege to work with the expert team at ProDigest on this trending and innovative marine ingredient. Whilst we acknowledge this is a preliminary study, we’re thrilled to reveal promising health benefits of OCEAN ACTIVES® Fucoidan and look forward to ongoing research to validate these claims. This is a very exciting step for OCEANIUM as we’re on a mission to develop and produce high-quality, marine-based health and wellness ingredients for brands seeking efficacy coupled with excellent provenance.”

About OCEAN ACTIVES® Fucoidan

Fucoidan, a family of polysaccharides found in brown seaweeds has a rich history of nutraceutical use with research literature showing potential benefits across multiple areas of health and wellness including gut health, immune modulation and cardiometabolic health.⁶

Backed by expert R&D, extensive independent scientific research and developing scientific claims, OCEAN ACTIVES® Fucoidan is a high purity (75%), robust bioactive in the form of a water-soluble powder, making it an excellent ingredient to integrate into food, beverages, and supplements.

Offering excellent provenance and green processing

Sustainably farmed seaweed provides jobs along rural coastal regions, benefits ocean health by absorbing nitrogen and phosphorous, increases biodiversity by protecting nursery grounds and seabeds. Seaweed farms do not need cleared land, fresh water, pesticide, or fertilizer.

Farmed seaweed provides a regenerative source of marine bioactives and ensures the ability to provide high quality ingredients at scale without disrupting natural ecosystems including kelp forests and coastal habitats.

OCEANIUM’s water-based, green processing methods extract OCEAN ACTIVES® Fucoidan from a species of brown seaweed (*Saccharina latissima*) sustainably sourced from regenerative seaweed farms in the North Atlantic.

⁶ Wang K, *et al* Application of fucoidan as treatment for cardiovascular and cerebrovascular diseases. Ther Adv Chronic Dis. 2022 Apr 12;13:20406223221076891. doi: 10.1177/20406223221076891. PMID: 35432845; PMCID: PMC9008857.

About OCEANIUM

Co-founded by Karen Scofield Seal (CEO) and Dr. Charlie Bavington, (CTO), OCEANIUM's mission is to enable and support the sustainable seaweed farming industry. OCEANIUM's highly technical biorefinery process extracts maximum value from the seaweed, producing food ingredients – OCEAN HEALTH® Fiber and OCEAN HEALTH® Protein, natural bioactive ingredients for health and cosmetics – OCEAN ACTIVES® Fucoidan and OCEAN ACTIVES® Beta-glucan Plus, and innovative materials including a fully biodegradable, seaweed and water-based ink – OCEAN INK™ for luxury packaging and textiles.

OCEANIUM sells B2B to enable companies to incorporate sustainably sourced, traceable high-quality ingredients/components into their products to meet their SDG targets and consumer demand. OCEANIUM's technological developments allow it to purchase and process seaweed efficiently, working with sustainable farmers to stimulate both supply and demand, unlocking a pinch point in the emerging seaweed farming industry with a strong business model whilst contributing to six of the UN's Sustainable Development Goals.

OCEANIUM is working towards a zero waste biorefinery process and operations, targeting carbon neutrality by 2030, proving that technological solutions can contribute to a net zero economy.

<https://oceanium.world/>

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