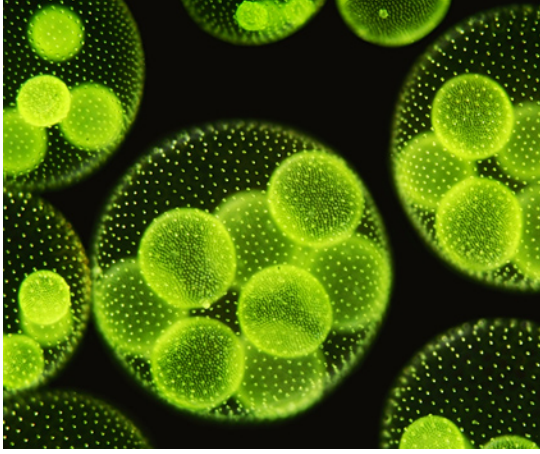
UK-NORWAY
Partnering for a sustainable future



PRODUCING HIGH VALUE
COSMETIC INGREDIENTS FROM MICROALGAE

Pilot scale production and pre-market evaluation of a cosmetic ingredient produced from microalgae

THE NEED

Cosmeceuticals are cosmetic products containing active ingredients that are thought to have beneficial effects such as anti-aging and antioxidant. The market for cosmeceuticals was estimated to be worth over $30Bn in 2011 and continues to grow.*

As a small technology development company Glycomar did not have access to all of the capabilities needed to get its microalgal polysaccharide product to market, but through this collaboration they were able to use MicroA's patented photobioreactor technology as a scale-up platform.

THE PARTNERSHIP

GlycoMar Limited, a biotechnology company based in Scotland, and MicroA AS, a microalgae and photobioreactor technology company based in Norway, were introduced by the Knowledge Transfer Network (KTN) and Innovation Norway (IN).

They submitted a successful project proposal to an Innovate UK and IN funded competition for industrial biotechnology in 2011.

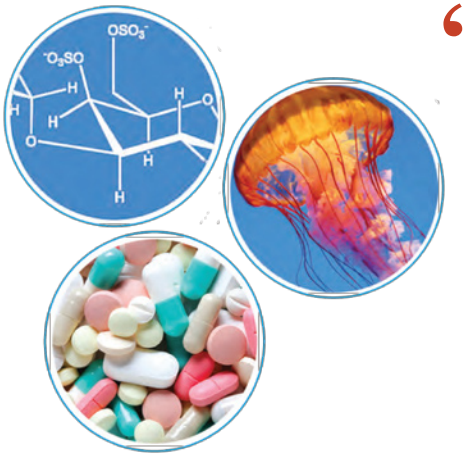
*Source
http://www.cogent-ssc.com/Publications/KADA_Research_Report_-_Cosmeceutical_and_Nutraceutical_Markets.pdf

THE RESULTS

The pilot study created a scaled down version of a full production line for producing bioactive poly-saccharides synthesized by microalgae, and explored opportunities for sustainable, high quality, and high volume production.

A techno-economic assessment of the trial data was very encouraging, and the partners are now moving towards commercialisation of a high value skincare ingredient derived from a marine microalga.

The partners went on to obtain EuroStars funding for a demonstration scale study and in 2014, a grant from the Scottish Industrial Biotechnology Innovation Centre (IBiOIC).



> **"Glycomar developed background product IP but didn't have a production capability, so it was an obvious fit to work with MicroA who have production IP relevant to our product. The collaboration was made easier by accessing grant support from Technology Strategy Board and from Eurostars."**

Charlie Bavington
MD, Glycomar Ltd

GlycoMar

UK-NORWAY: DRIVING THE BIO-BASED ECONOMY

Innovate UK
Technology Strategy Board

Industrial Biotech Network-Norway

Knowledge Transfer Network

INNOVASJON NORGE

PROJECT OUTCOMES

This collaboration resulted in a new product, a high value natural skin care ingredient:

- **Estimated market potential: £5-20m**
- **Target markets: Worldwide**
- **Anticipated product launch: 2-3 years**

The project also helped the partners improve their production processes and tested MicroA's photobioreactor.

Glycomar expect to file 2 new patent applications as a result of this project.

> **"The collaboration was well-balanced and knowledge was transferred between the companies and the country borders. The project has also been an important test arena for MicroA's patented photobioreactor."**

Svein Dahl
CEO, MicroA AS

UK-NORWAY COLLABORATIONS

The business funding agencies in the UK & Norway signed the Memorandum of Understanding in 2011 to enhance collaboration between the two nations in the area of industrial biotechnology & biorefining. The KTN & IBNN are the delivery team, ensuring opportunities for networking are in place and strategic. This project resulted from such activities.

If you are interested in finding a UK or Norwegian partner, or want to know more about the MoU or opportunities to network, visit the Norway-UK Group on _connect or email:

biosciences@ktn-uk.org
ernst@indbiotech.no

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Industrial Biotech Network-Norway
Knowledge Transfer Network
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