



Health supplements from antioxidant-rich seaweed

Seaweed could become an important source of disease-fighting antioxidants, if EU scientists succeed in proving its benefits.

06 September 2013 - By SEBASTIAN MOFFETT

East Asians have long enjoyed marine vegetables, adding them to soup, as an ingredient for sushi, or making salads with a variety known as sea grapes. However, Europeans generally don't like seaweed, despite the nutrients it absorbs from the sea.

Traditionally, those eating seaweed-based diets have shown fewer instances of obesity, diabetes, Alzheimer's disease and other disorders. Now, two EU-funded projects are trying to prove that seaweed can indeed boost health.

If the projects are successful, seaweed could be used as the basis for disease-fighting dietary supplements, even if people choose not to put it on their plates.

Europe's share of global seaweed production stands at just 1.3 %, according to market data provided by one of the projects, SWAFAX. By contrast, China is the biggest source of seaweed, generating 64 % of the world's supply.

However, the idea in Europe of seaweed as a health promoter is not new. At the start of the 20th century, people would head to the Atlantic coast for seaweed baths, and the practice is undergoing a resurgence as people seek to treat conditions ranging from arthritis to eczema.

SWAFAX is studying chemicals found in seaweed called polyphenols, in particular a type called phlorotannins which are found specifically in brown-coloured plants. 'Phlorotannins are unique to certain seaweeds,' said SWAFAX project leader, Ian Rowland.

SWAFAX has developed a polyphenol-based seaweed extract that can be used as a food supplement, as well as extracts based on different types of seaweed. Later this year it will have the results of tests on humans to see if the supplements have antioxidant and anti-inflammatory properties.

Alzheimer's and Parkinson's

Researchers at SWAFAX suspect that seaweed could be a good source of antioxidants, which are thought to have potential in the treatment of neurodegenerative diseases such as Alzheimer's and Parkinson's.

The idea behind SWAFAX is to give small companies the chance to commercialise anything interesting it finds, and it is working alongside three small companies: Scotland-based Hebridean Seaweed Company, which turns seaweed into animal feed; Irish firm Marigot Ltd, a food supplement firm, and Mesosystem S.L, a Spanish cosmetics company.

Another, connected EU project, HYFFI, is examining whether seaweed fibre has prebiotic properties, meaning it could aid digestive health by helping to stimulate the growth of friendly bacteria in the human gut. HYFFI observed a number of compounds that seemed to work, and now the project is running tests to see if they have any effect when introduced into people's diets.

Biofuels, insulation and food packaging

Seaweed is not just being used to promote health, it can also be used to make food packaging, as insulation for homes, and could even be turned into methane-based fuel.

The EU-funded project PLANTPACK, which runs until late 2014, is working out how to use seaweed combined with starch to replace oil-derived coating for paper and cardboard food containers. As well as cutting down on the use of oil in food packaging, the technique would mean that food packets degrade more easily.

SEAWEED AD, an EU-backed project which finishes at the end of August 2013, is looking at ways to ferment seaweed and produce methane for fuel, while researchers at the Fraunhofer Institute for Chemical Technology in Pfinztal, Germany, have found a way to turn seaweed into insulation for houses.

For more information on PLANTPACK, visit: <http://www.plantpack.eu/>

To find out more about SEAWEED AD, visit: http://cordis.europa.eu/projects/rcn/99329_en.html

More info

[SWAFAX](#)

[HYFFI](#)