Seaweed could treat Parkinson's disease: scientists

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SAINT JOHN • The Bay of Fundy might provide a key to treating Parkinson's disease, according to research published last month.

A group of nine scientists including Thierry Chopin, PhD, a marine biologist at the University of New Brunswick in Saint John, conclude in a paper in the journal Neuroscience Letters that an extract from *Alaria esculenta,* an edible winged kelp, inhibits the brain protein alpha synuclein from folding, or not folding properly.

Research has linked faulty folding of alpha synuclein to Parkinson's disease, the second most common neurodegenerative disorder, impairing balance and causing rigidity, tremors and slowness, the paper states.

"... and, to date, there are no drugs that slow its course," the paper states.

"What we found is an extract from these brown seaweeds prevents these proteins from folding," Chopin said in an interview on Friday.

More research remains before medical doctors can start prescribing kelp extract for Parkinson's disease, Chopin agreed.

How many steps will it take and how long? "I don't know," he said.

Research is "very vital," Parkinson Canada spokeswoman Kelly Mills said in an interview from Toronto on Friday.

She had not heard of this particular project in which Chopin took part but, "We're really pleased that there's research going on ... alpha synuclein is a really promising area."

"We're always encouraged to see people researching into Parkinson's, and this is a very promising area," she said.

The nine listed authors – James C. Giffin and K. Vanya Ewart from Dalhousie University; Robert C. Richards, Cheryl Craft, Nusrat Jahan, Cindy Leggiadro and Shawna L. MacKinnon at National Research Council locations in Nova Scotia; Michael Szemerda with Cooke Aquaculture in Blacks Harbour; and Chopin at UNBSJ – did their research "over the last five years," Chopin said.

"We have different roles. I am growing the seaweed in the Bay of Fundy," he said.

"I've been working on seaweed at UNB for 28 years," said the native of France who moved here in 1999.

For the past 16 years he has focussed on "integrated multi-trophic aquaculture," growing seaweed and invertebrate creatures such as mussels, scallops, oysters, sea cucumbers and sea urchins close to salmon farms.

In IMTA, waste from salmon farms feeds the kelp which one can harvest and sell for food, medicinal and cosmetic products, turning pollution from excess nutrients into a valuable resource.

"For me, I am growing seaweed in the Bay of Fundy and I want to find applications for it," Chopin said.

Seaweed extract keeps the pulp in orange juice from settling and prevents toothpaste from turning to liquid, he said.

Seaweed provides the jelling agent in

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many foods that New Brunswickers eat daily but very little of it comes from here despite the local potential to grow it, Chopin said.

The Bay of Fundy contributes "a few tonnes but really nothing" to the world's annual production of 27.3 million metric tonnes of seaweed, fetching US$5.6-billion, Chopin said.

More than 95 per cent of this come from six countries in Asia: China, Korea, Indonesia, the Philippines, Japan and Malaysia, he said.

Local people treat visitors to Dark Harbour dulse from Grand Manan, available at the Saint John City Market and elsewhere across southern New Brunswick, but the western world has yet to develop a real taste for seaweed on anything close to the scale of Asia, he said.

Canadian food safety laws do not cover seaweed, Chopin said. "Seaweeds are nowhere . . . in terms of regulations there is nothing," he said. Other areas of the world do not have the same "cold temperate North Atlantic" species of kelp that these nine scientists used in their research, Chopin said. Nobody can say that eating seaweed will prevent Parkinson's disease or anything else but this should not stop people, in Chopin's view.

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PHOTO: COURTESY OF THIERRY CHOPIN

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