



NEWS RELEASE

For immediate release

Development of an innovative product for the fishing industry - conditioning shrimp oil

December 11, 2008. The Coastal Zones Research Institute (CZRI), in partnership with the Island Fisherman Cooperative Association (IFCA) and Ocean NutraSciences, is involved in the production of an oil from northern shrimp that is rich in astaxanthin, a natural pigment with antioxidant and anti-inflammatory properties, as well as omega-3. This innovative product, which has already solicited a great deal of interest on the part of our business partners, is not yet on the market.

In 2007, Ocean NutraSciences' preliminary attempts to conditioning crude shrimp oil led to very promising results. Ocean NutraSciences develops, manufactures and commercializes nutraceutical ingredients and finished products derived from cold water marine biomasses. Initial efforts demonstrated that the concentrations of astaxanthin and fatty acids in purified shrimp oil remained sufficiently high for the product to be potentially marketable.

Work is currently underway to improve the profitability of the process and the quality of this new product. A large quantity of crude marine oil from ACPI was recently sent to a pilot plant specializing in the processing and conditioning of plant and marine oils. Bringing the oil up to standard will enable us to move to the laboratory pilot stage and then industrial-scale production. Ocean NutraSciences NB, who recently set up office on the premises of the CZRI, brings his expertise in regulatory affairs, process development and commercialization.

Shrimp oil was discovered in 2005 in the context of a project led by Nadia Tchoukanova of the CZRI in collaboration with the Fisherman Cooperative Association, and was recognized as having the potential to become a high value-added product. In 2006, the Fisherman Cooperative Association, with the scientific and technical support of the CZRI, developed an economically and environmentally viable process for extracting shrimp oil.

This new product may constitute a very beneficial food additive for aquaculture feed, particularly when given to salmonids, for example, salmon and trout, because it has certain properties that give a pink coloration to the feed of the fish. The popularity of marine oils in the food and food supplements sector is mainly attributable to the benefits of omega-3 fatty acids. What distinguishes shrimp oil from marine oils currently on the market lies in its rich content of astaxanthin. In addition, the benefits of omega-3 supplements for cardiovascular and brain health, visual acuity, as well as normal growth and development, have been clearly demonstrated scientifically – a very lucrative market requiring very high regulatory standards.

It goes without saying that these extracts could be very important in terms of both the market and the environment. The readily available and relatively inexpensive primary resource represents an important and growing interest for food and nutraceutical industries. The extraction of bioactive molecules (omega-3 and natural pigment) not only allows for creating a new industry, but could

also have a significant impact on the protection of coastal zones. In addition, this industry will provide for adding more value to shrimp residue.

The field of biochemical and biotechnological transformation of residual marine biomasses is not yet well developed in New Brunswick. The development of researchers and businesses active in this sector could help to create significant regional expertise in marine biotechnology, a field that is expected to develop rapidly around the world. In addition, this project will provide for more complete use of available natural resources, which is in keeping with a sustainable development strategy.

This promising pilot project for the fisheries industry received significant support from the New Brunswick Department of Fisheries, and is being carried out today in partnership with the Fisherman Cooperative Association in Lamèque, the Canadian Centre for Fisheries Innovation, the *Industrial Research Assistance Program* of the National Research Council, Ocean NutraSciences NB and the Coastal Zones Research Institute.

The initiative is consistent with the province's fisheries renewal plan involving the bioeconomy in which partnerships between the industry and research centres provide for reducing the costs and the risks associated with innovation and the development of new products.

This research at the CZRI is headed up by Jacques Gagnon, Ph.D, Scientific Director, Fishery and Marine Products; Martin Poirier, Director of R&D for Ocean NutraSciences NB; and Nadia Tchoukanova, Director of Laboratories and Analysis Services at the CZRI.

This scientific initiative is being carried out in the context of a major project initiated by the Coastal Zones Research Institute involving numerous partners working together on the valorization and commercialization of marine coproducts.

Photo with barrels of shrimp oil in inventory at the CZRI in the background, the research team in the first row, and the partners in the second row.

From left to right, first row:

Pierre Rioux, Senior Advisor, Innovation and Bioeconomy, N.B. Department of Fisheries.

G rard Beno t, Project Leader, Island Fisherman Cooperative Association

Jacques Gagnon, Scientific Director, CZRI

Paul-Orel Chiasson, Director General, Island Fisherman Cooperative Association

Second row:

Gastien Godin, Director General, CZRI

Martin Poirier, Director of R&D, Ocean NutraSciences NB

Marcel Duguay, Production Director, Island Fisherman Cooperative Association

Andr  Rancourt, Director General, Ocean NutraSciences NB, located at the CZRI

Nadia Tchoukanova, Director of Laboratories at the CZRI

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