



**FOR IMMEDIATE RELEASE**

## **MariCal, Inc. and Havbruksinstituttet Salmon AS Form Broad Strategic Alliance to Bring SuperSmolt™ Technology and New Research Efforts to the Norwegian Salmon Industry**

**Bergen, Norway** – January 7, 2003 – MariCal, a privately-held U.S. aquatic life sciences company, and Havbruksinstituttet Salmon AS, a private research and service company providing expertise and support to the Norwegian salmon industry, today announced the formation of a broad Strategic Alliance. Under this new Alliance—

- Havbruksinstituttet will serve as the exclusive representative for MariCal's patented SuperSmolt™ technology in Norway and the Faroe Islands
- MariCal and Havbruksinstituttet will engage in cooperative research in the field of salmon smoltification, feeding, and growth
- MariCal will make available to some of Havbruksinstituttet's shareholders direct access to its proprietary research materials for use in their own independent research in Bergen
- MariCal Director Helge Hellebust of Ferd Venture will join the Havbruksinstituttet Board of Directors and Havbruksinstituttet's shareholder Professor Sigurd Stefansson will join the MariCal Scientific Advisory Board

"We are delighted to have this outstanding group of people as our exclusive representatives here in Norway," said David E. Hughes, MariCal's President. "Norwegian salmon producers have already shown a great interest in our SuperSmolt™ technology, and we now have top people here to deliver the level of expertise, product support, and customer service that we are committed to providing." In addition, H. William Harris M.D., PhD., MariCal's co-founder and Chief Executive Officer, remarked that "the extensive industry knowledge, scientific leadership, and excellent relationships which Havbruksinstituttet and its shareholders bring with them will add tremendous value to MariCal and to its customers."

"The SuperSmolt™ process is a very advanced technology developed using cutting edge molecular biology techniques. However, implementation and deployment of the product is incredibly simple and requires no capital investment. This is very good news for producers who want improved control over their production cycle," said Bjørn Guldberg, General Manager of Havbruksinstituttet. The SuperSmolt™ process uses MariCal's proprietary technology and advanced biological knowledge to create the ideal aquatic environment and nutritional conditions to activate the adaptive process that

allows salmon to move from freshwater to saltwater. SuperSmolt™ gives producers greater control over smolt production, and the flexibility to transfer smolt to seawater at any time that suits their production schedule.

Dr. Sigurd Handeland, a Principal of Havbruksinstituttet, has concluded that SuperSmolt™ technology is ready for mainstream applications in Norway and the Faroes Islands. “The field trials at Northwest coast of Norway show top seawater tolerance (based on Na+K+ATPase activity) at the same levels as successfully naturally smolted salmon. The SuperSmolt™ technology made this tolerance within 4 weeks, which is much faster than the usual method using photoperiodic control” said Handeland.

The research collaboration provided by this Alliance may be its most remarkable feature. “I am looking forward to continuing our years of focused research into the phenomenon of salmon smoltification with new partners who have already made a significant breakthrough in the field of salmon seawater adaptation,” said Professor Sigurd Stefansson. “Collaborating with Dr. Harris and his colleagues at MariCal, and having access to MariCal’s research materials, presents us with some exciting new opportunities to advance our understanding of salmonid physiology and behavior.”

The SuperSmolt™ process has undergone extensive commercial-scale testing by independent parties in field trials in Norway, Chile, Iceland, and on the East and West Coasts of North America. MariCal has worked with recognized producers, as well as respected, industry-sponsored research centers, subjecting the SuperSmolt™ process to rigorous scrutiny using standard matched-control techniques.

SuperSmolt™ was used commercially to produce millions of superior smolt in 2002 in Norway, Scotland and Chile.

## **About MariCal**

Founded in 1996, MariCal develops and licenses innovative proprietary solutions that address critical problems facing the world’s aquaculture industry. Major investors in MariCal include two Norwegian investment firms—Teknoinvest and Ferd Venture. The Company’s first product, SuperSmolt™, is a unique, patented process for producing superior salmon smolt. Through its breakthrough discoveries of a class of extracellular ion receptor proteins, called Calcium Receptors (CaR’s), the Company has isolated the biological “thermostat,” or “master switch” that enables fish and other aquatic organisms to sense and respond to salinity and nutrients in their aquatic environment. Natural and environmentally friendly, the specific applications developed from these discoveries – ***which use neither genetic alteration nor the introduction of drugs or hormones*** – overcome barriers that have limited world aquaculture operations. (*Request our SuperSmolt™ and Calcium Receptor (CaR) Fact sheets, or see our web site for more detail.*)

MariCal is headquartered in Portland, Maine USA. For more information visit [www.MariCal.no](http://www.MariCal.no) or [www.MariCal.biz](http://www.MariCal.biz).

## **About Havbruksinstituttet Salmon AS**

Founded in 2000, Havbruksinstituttet Salmon serves the fish farming industry with products and services to improve fish quality, quality control and effectiveness of the production. The company is a direct offspring from the scientific community at Bergen High Technology Center and continues to develop its products and services in close cooperation with scientists at the Center. The Company's strategy is to transfer new knowledge and technology from the research frontier into beneficial products and services for the fish farming industry. The main product so far has been the Na+K+ATPase test, which allows salmon smolt producers to follow the smoltification process and verify when the smolt is ready for sea transfer. This product has been a success in Norway and was used by about 35-40% of the Norwegian smolt producers in 2002. The company looks forward to introducing the new Supersmolt™ technology to the market in the Faroe Islands and Norway.

Havbruksinstituttet Salmon AS is headquartered in Bergen Norway  
For more information visit [www.hi.no](http://www.hi.no)

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