

FOR IMMEDIATE RELEASE

## **RPC Develops Innovative ISAV and SAV Assays in Support of Aquaculture Industry: Innovation receives RPC 2009 Merit Award**

Fredericton, July 24, 2009 - RPC scientists have developed an innovative real-time PCR method for detection of Infectious Salmon Anaemia Virus (ISAV) and Salmon Alphavirus (SAV). RPC is the first in the Maritimes to offer both diagnostic services. The new diagnostic methods allow better and faster detection of these two important fish health pathogens and are already being employed to help manage the threat of ISAV and SAV in the aquaculture industry.

ISA is a viral disease of Atlantic Salmon that affects fish farms in Canada, Norway, Scotland and Chile, causing severe losses to infected farms. The disease first appeared in New Brunswick in the mid-1990s, and was first correctly identified by RPC scientists over a decade ago. SAV is the causative agent of sleeping disease, or pancreas disease, an important health concern of farmed salmon seen in most salmon growing regions in the world. It has not yet been found in Atlantic Canada, but our assay allows proactive surveillance for the pathogen.

These innovative new assays use real-time amplification technology to determine the quantity of ISAV or SAV particles in a sample. Real-time RT-PCR (or PCR) assays do not simply detect the presence of a pathogen, but provide information on the quantity of pathogen present. Real-time assays are also more sensitive than conventional PCR-based methods (10-100x more sensitive in our validation work) allowing more effective surveillance of subclinical infections, wild stocks or putative carrier populations. Real-time assays have become the industry standard for nucleic acid based diagnostics, and in Scotland, Norway, and Chile they have replaced conventional PCR-based assays. Previously, test results indicated only a presence or absence. In this assay, samples are run in duplicate alongside a standard curve containing known concentrations of synthetic ISAV allowing determination of the absolute concentration of ISAV in a sample. The assay can detect as few as 1-10 particles of ISAV in a sample.

This more effective diagnostic capability will help the aquaculture industry with the early detection and management of ISAV and SAV protecting the investment and important contribution of aquaculture to the New Brunswick economy. New Brunswick is second only to British Columbia in aquaculture production in Canada with greater than \$250 million of production value.

RPC collaborated with the local aquaculture industry and partnered with the FRS Marine Laboratory in Aberdeen, Scotland for this advancement in fish health. The research was funded, in part, with assistance from the New Brunswick Department of Aquaculture. The project was recognized with RPC's 2009 Merit Award and was celebrated at a recent ceremony.



*RPC Merit Award recipients awarded for their work in the development of innovative ISAV and SAV assays.*

*Back: Eric Johnsen, Janice Comeau, Dr. Tony Manning  
Front: Rebecca Liston, Dr. Rachael Ritchie, Lenora Fanjoy, Dr. Ben Forward.*

**About RPC**

RPC is New Brunswick's provincial research organization (PRO), an independent contract research and development and technical services organization located in Fredericton, NB. RPC's complement of 100 scientists, engineers and technologists are supported by a 13,000 sq. meter facility housing world-class analytical chemistry and material-testing laboratories, comprehensive life science capabilities, an internationally recognized fish health lab, extensive prototype design, manufacturing and testing services, and a wide variety of pilot facilities for the development and improvement of industrial and environmental processes and products.

RPC is accredited by various organizations including the Standards Council of Canada (SCC) and is ISO 9001:2008 certified. Further information about RPC's services is available from [www.rpc.ca](http://www.rpc.ca).

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