



PRESS RELEASE - For Immediate Release

EMBARGOED UNTIL 07:00 PST, MARCH 9, 2013

Salmon health: past, present and future

Vancouver, BC – Genome British Columbia, the Pacific Salmon Foundation and Fisheries and Oceans Canada are embarking on a remarkable partnership to discover the microbes present in salmon in BC that may be undermining the productivity of BC's Pacific salmon. The project will conduct epidemiological assessments to explore the transmission dynamics and historical presence of detected microbes, with key focus on microbes that are suspected globally to be causing disease in salmon. Researchers will apply genomic technology to identify and verify which microbes are presently carried by BC's wild and cultured fish.

The project is being managed in four sequential Phases with Phase 1 valued at \$930,000. The first phase is taking place over 12 months, concluding mid-2013, and comprises the collection phase of both cultured and wild salmon. While later phases are subject to final funding, Phase 2 involves rigorous analysis of the tissue samples collected in Phase 1 and in previous research. Using molecular and genomic tools, the research team will attempt to determine when and where microbes may have been transmitted. The research results will begin to rank microbes by their *potential* to cause disease in BC salmon based on relationships with microbes associated with disease in other parts of the world and histological evidence from salmon in BC. Phase 3 will focus in on the microbes identified in Phase 2, with an emphasis on microbes that have not been extensively researched and that are thought to be of pathological significance in salmon. Phase 4 will include reporting of research and presentations to management agencies on the potential utility of methods developed and the application of outcomes to future monitoring.

More than 90 per cent of juvenile salmon migrating from freshwater into the ocean will die before returning to freshwater to spawn. The scientific community believes that mortality is highest during the first few months in the marine environment and that disease may be a significant factor in this mortality, but not enough is known about what pathogens or diseases might be involved.

What is already known comes almost exclusively from observations of cultured fish (both in hatcheries and in aquaculture). Consequently, there is a fair understanding of pathogens and diseases that impact salmon in freshwater hatcheries and sea-water net pens, but a much poorer understanding of pathogens affecting Pacific salmon in the ocean.

Uncertainty about pathogens and diseases was highlighted in the final report of the Cohen Commission Inquiry into the Decline of Fraser River Sockeye Salmon. In this report, Justice Bruce Cohen noted that more research is needed to make accurate assessments about the range of possible impacts on wild fish stocks. The research conducted by the Pacific Salmon Foundation and Fisheries and Oceans Canada, and funded in part by Genome BC, will address specific recommendations from the Cohen Commission report and build on the body of research referenced by the Commission.

Phase I is being led by Dr. Brian Riddell of the Pacific Salmon Foundation and co-led by Dr. Kristi Miller of Fisheries and Oceans Canada.

“This project is about developing effective monitoring tools to assess the microbes in BC’s salmon, assessing the risk of these microbes to Pacific salmon, and establishing public confidence that people are watching over the health of our wild salmon populations,” said Dr. Brian Riddell, president and CEO of the Pacific Salmon Foundation. “The uniqueness of the project is its comprehensiveness. We are bringing a strong team of scientists together to assess the risk of disease to all species of wild salmon, including salmon produced in our hatcheries and salmon from aquaculture. We will also engage the full range of stakeholders, including government, industry, communities and conservation groups that have an interest in this research.”

From the outset of the project, the development of a stakeholder consultation process that enhances understanding and dialogue about the health of our Pacific salmon is paramount. The stakeholder group will provide input to information needs, public engagement and communications and on ways to integrate research on microbes and disease on BC salmon. This group of stakeholders will encompass a wide cross-section of BC citizens with an interest in British Columbia’s salmon (including wild, hatchery, and farm raised salmon), including regulators, managers, harvesters, environmental non-governmental organizations (ENGOS) and farmers.

“This is a unique and collaborative approach to an issue that affects a diverse group of stakeholders,” said Dr. Alan Winter, President and CEO of Genome British Columbia. “It is gratifying to see part of Genome BC’s \$37.5 million investment in salmonid research being used as a foundation for this significant project.”

-30-

About Genome British Columbia:

Genome British Columbia is a catalyst for the life sciences cluster on Canada’s West Coast, and manages a cumulative portfolio of over \$550M in research projects and science and technology platforms. Working with governments, academia and industry across sectors such as forestry, fisheries, agriculture, environment, bioenergy, mining and human health, the goal of the organization is to generate social and economic benefits for British Columbia and Canada. www.genomebc.ca

About the Pacific Salmon Foundation:

The Pacific Salmon Foundation was created in 1987 as an independent, non-government, charitable organization to protect, conserve and rebuild Pacific Salmon populations in British Columbia and the Yukon. The Foundation's mission is to be the trusted voice for conservation and restoration of wild Pacific salmon and their ecosystems and works to bring salmon back stream by stream through the strategic use of resources and mobilization of local communities. www.psf.ca

Contact:

Sally Greenwood
Vice President, Communications and Education
Genome BC
Phone: 604-637-4374
Email: sgreenwood@genomebc.ca

Michael Meneer
Vice President - Development, Communications and Marketing
Pacific Salmon Foundation
Phone: 604-664-7664, extension 127
Email: mmeneer@psf.ca