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## **SALMON and CHIPS - Commercial Application of Genomics to Maximize Genetic Improvement of Farmed Atlantic Salmon on the East Coast of Canada**

<b>Status:</b>	Active
<b>Category:</b>	Translation
<b>Competition:</b>	Genomic Applications Partnership Program
<b>Sector:</b>	Fisheries
<b>Lead Genome Centre:</b>	Genome Atlantic
<b>Co-Lead Genome Centre:</b>	Ontario Genomics Institute
<b>Academic Leader:</b>	Elizabeth G. Boulding
<b>Academic Leader Institution:</b>	University of Guelph
<b>User Leader:</b>	Dr. Keng Pee Ang
<b>User Leader Organization:</b>	Cooke Aquaculture Inc. /Kelly Cove Salmon Ltd.
<b>Fiscal year funded:</b>	2013-14

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### **Project Description:**

Aquaculture companies are increasingly incorporating genomics technology into their breeding programs to develop desirable stock traits for improved growth and disease resistance.

To retain its ability to compete internationally, Cooke Aquaculture/Kelly Cove Salmon will partner with Dr. Elizabeth Boulding and her academic group from the University of Guelph to incorporate genomics marker technology into Kelly Cove Salmon's current breeding program. This will allow the company to improve the effectiveness of its breeding program and increase the resistance of its salmon to diseases and parasites.

The company aims to implement an advanced genomics technology known as SNP-chips, which when blended with conventional animal breeding techniques, can yield significant increases in the survival rates of eggs and juvenile stages, as well as improved saltwater performance.

The implementation of this genomics technology is expected to increase the quality and sales of Kelly Cove's salmon, and improve profitability by reducing expenditures on vaccines and medication. Strengthening Kelly Cove Salmon and its parent company, Cooke Aquaculture, will be good news for the more than 1,700 current employees in Atlantic Canada, and will lead to increased employment in rural and coastal communities.