

**2018 Large-Scale Applied Research Project Competition: Genomics Solutions for Agriculture, Agri-food, Fisheries and Aquaculture
Successful Pre-Applications**

Administrative Genome Centre	Co-Lead Genome Centre(s)	Project Leader	Co-Project Leader(s)	Lead Organization	Title
Genome British Columbia		Inac Birol		BC Cancer Agency	PeptAid – Antimicrobial Peptides To Replace Antibiotics in Farm Veterinary Practice
Genome British Columbia		Stephen Cross	Timothy Green	University of Victoria	Applied Genomics and Integrated Multi-Trophic Aquaculture Production as a Comprehensive Adaptive Strategy to Coastal Climate Change
Genome British Columbia		Michael Dossett	Hamid Ashrafi, Sumeet Gulati	University of the Fraser Valley	Integrated genomics strategies supporting the development of raspberry cultivars with improved quality attributes and economic value
Genome British Columbia	Genome Alberta	Jonathan Moore	Sean Rogers	Simon Fraser University	Developing, Democratizing, and Applying Genomic Tools Towards Securing Sustainable Pacific Salmon Production Systems
Genome British Columbia		Loren Rieseberg	Marco Todesco	University of British Columbia	Genomics of Resistance to Filamentous Pathogens in Wild and Cultivated Sunflowers
Genome Alberta	Ontario Genomics Génome Québec, Genome British Columbia	Christine Baes	Paul Stothard, Marc-André Sirad, Ronaldo Cerri	University of Guelph	Integrating genomic approaches to improve dairy cattle resilience: A comprehensive goal to enhance Canadian dairy industry sustainability
Genome Alberta	Ontario Genomics	Daniel Barreda	Brian Dixon	University of Alberta	DGRI: D ynamic G enomic-based approaches for the R egulation of fish I mmunity
Genome Alberta	Genome Prairie	Michael Dyck	John Harding, Bob Kemp	University of Alberta	PIG-OMICS: Precision selection and management of pigs for improved health outcomes
Genome Alberta		Graham Plastow	Eileen Wall	University of Alberta	The “omics” of grazing: A path forward to cattle productivity, ecosystem goods and services and long term sustainability.
Genome Alberta	Ontario Genomics, Génome Quebec	Ed Topp	Ben Willing, Martine Boulianne	University of Alberta	Antimicrobial Resistance: Management of Risks in food production (ARMoR)

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Genome Prairie		Kirstin Bett	Albert Vandenberg	University of Saskatchewan	Enhancing the Value of Lentil Variation for Ecosystem Survival (EVOLVES)
Genome Prairie	Ontario Genomics	Carl Gutwin	Isobel Parkin	University of Saskatchewan	Crop Adaptation and Polyploid Evolution (CAPE): New genomics tools to realise the impact of genome duplication
Genome Prairie	Ontario Genomics	Curtis Pozniak	Sylvie Cloutier	University of Saskatchewan	4D Wheat: Diversity, Domestication, Discovery, Delivery
Genome Prairie		Andrew Sharpe	Dwayne Hegedus	University of Saskatchewan	Enabling Protein Optimization for the Canola Harvest (EPOCH)
Genome Prairie	Genome Alberta	Cheryl Waldner	Simon Otto	University of Saskatchewan	Genomic ASSETS (Antimicrobial Stewardship Systems from Evidence-based Treatment Strategies) for Livestock
Ontario Genomics		Ming Fan	Emma Master	University of Guelph	Functional Genomics of Gut Alkaline Phosphatases in Pigs ("FuncAP")
Ontario Genomics		Vojislava Grbic	Moidrag Grbic, Marc Saner	Western University	Precision agriculture – pest xenogenomics for development of novel tools for crop protection
Ontario Genomics	Genome Prairie	Daniel Heath	Margaret Docker, Steven Cooke	University of Windsor	Environmental DNA ("eDNA"), meta-barcoding and transcriptional profiling to improve sustainability of freshwater fisheries and fish culture.
Ontario Genomics	Génome Québec	Lewis Lukens	Nicholas Tinker, Jaswinder Singh	University of Guelph	Targeted and Useful Genomics for Barley and Oat (Tugboat)
Ontario Genomics		John Parkinson	Shayan Sharif	The Hospital for Sick Children	Microbiome manipulations to enhance poultry production
Ontario Genomics	Genome British Columbia	Amro Zayed	Leonard Foster	York University	BeeCSI: 'Omic tools for assessing bee health

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Génome Québec		François Belzile	Richard Bélanger	Université Laval	SoyABio: Applying genomics to develop soybean varieties with increased resistance to abiotic and biotic stresses to realize soybean's full potential in Canada
Génome Québec	Ontario Genomics	Louis Bernatchez	Jean-Sébastien Moore, Dylan Fraser, Stephan Schott	Université Laval	FISHES: Fostering Indigenous Small-scale fisheries for Health, Economy, and food Security
Génome Québec		Vincent Martin		Concordia University	Bioprocess development for cheese whey valorisation
Génome Québec	Genome Atlantic	Martina Strömvik	Helen Tai	McGill University	Revolutionizing Potato Variety Development for Climate Smart Agriculture
Genome Atlantic	Ontario Genomics	Stefanie Columbo	Elizabeth Boulding	Dalhousie University	Farmed salmon with enhanced tolerance to plant-based diets
Genome Atlantic		Matthew Rise	Richard Taylor	Memorial University of Newfoundland	Development of an omics-based platform for the high-throughput evaluation of Canadian sourced feed ingredients