McGill University
Research Expertise
Faculty of Agricultural and Environmental Sciences
21 111 Lakeshore Road
Sainte-Anne-de-Bellevue, QC, Canada, H9X 3V9

research.macdonald@mcgill.ca
Tel: 514-398-8716
www.mcgill.ca/macdonald
(October 2018)

Name	Theme	Research Expertise	Email address
Adamchuk, Viacheslav	Bioresource Engineering and Environment	Development and evaluation of sensor systems for on-the-go determination of soil and crop attributes, investigation of geospatial data acquisition, processing and interpretation techniques, and implementation of information technologies to improve value, quality and environmental safety of crop production.	viacheslav.adamchuk@mcgill.ca
Adamowski, Jan William Dawson Scholar Liliane and David M. Stewart Scholar in Water Resources	Bioresource Engineering and Environment	Adaptive, collaborative and integrated water resources management; modeling and forecasting of non-linear and non-stationary hydro-meteorological time series.	jan.adamowski@mcgill.ca
Akbarzadeh Shafaroudi, Abdolhamid	Bioresource Engineering	Design and multiscale multiphysics simulation of advanced, smart, biological, and porous composite materials and structures for energy harvesting, renewable energy, and structural health monitoring applications.	hamid.akbarzadeh@mcgill.ca
Agellon, Luis	Food and Nutrition	Nutrigenomics and nutrigenetics, lipid and bile acid metabolism, gene expression, nuclear receptors, transgenic and gene-disrupted mouse models of human diseases.	luis.agellon@mcgill.ca
Basu, Niladri Canada Research Chair in Environmental Health Sciences	Health and Environment	Exposure of humans and wildlife to toxic environmental chemicals, such as mercury; development, validation, and application of new approaches to rapidly test chemicals/samples for toxicity; global health focused on extractive sector activities (e-waste, artisanal and small-scale gold mining)	niladri.basu@mcgill.ca
Bayen, Stéphane	Food and Health	Analysis of trace chemical contaminants in food and environmental matrices; chemical risks in the food and feed chain; contaminant-food matrix interactions; bioavailability; human health risk assessment. Aquatic chemistry.	stephane.bayen@mcgill.ca
Bede, Jacqueline	Environment and Biosciences	Plant-insect interactions. Regulation of plant defense responses to caterpillar herbivory. Plant secondary metabolism. Peptide regulation of caterpillar digestive processes. Identification of pesticide synergists. Insect detoxification mechanisms	jacqueline.bede@mcgill.ca
Beech, Robin N	Health	Molecular biology and evolution of neurotransmitter receptors, mechanisms, development and spread of resistance to antiparasitic drugs and population genetics of parasitic nematodes.	robin.beech@mcgill.ca
Begg, Caroline	Environment	Soil-plant management in ecological agriculture. Food security in suburban environments.. Teaches ecosystem management and management of nutrients in agricultural systems.	caroline.begg@mcgill.ca
Bennett, Elena	Environment	Sustainable use and management of ecosystem services; multi-functional landscapes; human impacts on biogeochemical cycles; management of tradeoffs among ecosystem services, especially agricultural production and water quality; global food security, agriculture and the SDGs, land use change and water quality; urban ecology; communicating science; scenarios	elena.bennett@mcgill.ca
Bordignon, Vilceu	Health and Biosciences	Reproductive biology. In vitro fertilization. Embryo culture. Somatic cell nuclear transfer. Nuclear reprogramming. Animal cloning. Animal biotechnology.	vilceu.bordignon@mcgill.ca
Brazeau, Anne-Sophie	Human Nutrition	Glucose management during physical activity; Management of nocturnal hypoglycemia; Adolescence and young adulthood period; Social support for adoption and modification of health behaviors; Shared behaviors among family members; New technologies in disease management	anne-sophie.brazeau@mcgill.ca
Brown, Peter G.	Environment	Practical uses of philosophy to think critically about the goals of society; deterioration of Earth's life support capacity and the thought systems that facilitate and legitimate this decline; economics for the anthropocene	peter.g.brown@mcgill.ca
Buddle, Christopher	Environment	Ecology, biodiversity and natural history of insects and spiders, in forest, Arctic and agro-ecosystems	chris.buddle@mcgill.ca
Burgos, Sergio	Nutrition, Health and Biosciences	Molecular regulation of mammary nutrient metabolism and milk synthesis; role of dairy products in metabolic and musculoskeletal health in humans; environmental impact of dairy production.	sergio.burgos@mcgill.ca
Cardille, Jeffrey	Environment	Global land cover, Satellite remote sensing, Landscape ecology, Land use and climate change, Ecosystem and regional-scale hydrologic modeling, Geographic information science.	jeffrey.cardille@mcgill.ca
Cestari, Igor	Parasitology	Signal transduction and transcriptional control mechanisms that govern antigenic variation and life stage development in trypanosomes.	igor.cestari@mcgill.ca
Charron, Jean-Benoit	Biosciences	Chromatin regulatory mechanisms of stress tolerance in cereals, epigenetics, genomics, molecular biology, *Brachypodium dystachyon* , barley, wheat.	jean-benoit.charron@mcgill.ca
Cherestes, Alice	Freshman	Active learning, with greater emphasis on developing student skills.	alice.cherestes@mcgill.ca

McGill			McGill University Research Expertise Faculty of Agricultural and Environmental Sciences 21 111 Lakeshore Road Sainte-Anne-de-Bellevue, QC, Canada, H9X 3V9		research.macdonald@mcgill.ca Tel: 514-398-8716 www.mcgill.ca/macdonald (October 2018)
Name	**Theme**		**Research Expertise**		**Email address**
Chevalier, Stéphanie	Human Nutrition		Human nutrition, protein metabolism, aging, muscle health and function (sarcopenia), insulin resistance, clinical trials, stable isotopes, body composition.		stephanie.chevalier@mcgill.ca
Clark, Grant	Bioresource Engineering		Ecological engineering, Scientific computing, Modeling and simulation, Microbiological systems, Agricultural systems, Complex adaptive systems.		grant.clark@mcgill.ca
Côté, Benôit	Environment		Eco-physiology of woody plant species. Relationships between soil fertility and hardwood forest species composition. Nutritional standards for hardwoods. Agroforestry.		benoit.cote@mcgill.ca
Cue, Roger I	Biosciences		Quantitative genetics. Dairy cattle, beef cattle a swine genetics. Estimation of genetic parameters from large-scale milk and beef recording data for production and reproduction traits. Mixed model methodologies.		roger.cue@mcgill.ca
de Blois, Sylvie	Environment		Landscape ecology and management. Plant ecology. Conservation within and outside reserves. Biodiversity and agriculture.		sylvie.deblois@mcgill.ca
Delormier, Treena Wasonti:io	Human Nutrition		Public health nutrition of Indigenous population and address health inequities by addressing the social determinants of health using participatory research approaches		treena.delormier@mcgill.ca
Donnelly, Danielle J	Biosciences		Plant tissue culture micropropagation, acclimatization, and screening for salinity tolerance. Raspberry, strawberry and potato.		danielle.donnelly@mcgill.ca
Driscoll, Brian T	Microbiology		Molecular genetics and biochemical studies of bacterial gene expression, focusing on genes of carbon metabolism in *Sinorhizobium meliloti*, the nitrogen-fixing symbiont of alfalfa.		brian.driscoll@mcgill.ca
Duggavathi, Raj	Health and Biosciences		Study of molecular mechanisms controlling ovarian functions toward female reproductive health and sustainable dairy production		raj.duggavathi@mcgill.ca
Duhamel, Paul-Guy	Human Nutrition		Foodservice stages for Dietetic students. Valorisation of McGill's Food and Nutrition Laboratories to companies of the agrifood sector		paul-guy.duhamel@mcgill.ca
Dumont, Marie-Josée	Biosciences		Bio-based polymers from proteins, starch, vegetable oils, cellulosic feedstock; platform chemicals; hydrogels, aerogels, cryogels, polyesters, foams, plastic sheets and elastomers; Physical properties; Characterization		marie-josee.dumont@mcgill.ca
Dunphy, Gary Brian	Biosciences		Virulence mechanisms of the bacterium *Xenorhabdus* in insects; insect immunity.		gary.dunphy@mcgill.ca
Dutilleul, Pierre R L	Biosciences		Applied statistics, biometrics, environmetrics, phytometrics, and spatio-temporal statistics in general. Fractal analysis of natural structures from computed tomography scanning data, multi-scale spatial analyses of plant-soil correlations, and periodicity analysis of dendrochronological and seismological series in particular.		pierre.dutilleul@mcgill.ca
Elliott, Kyle Canada Research Chair in Arctic Ecology	Environment		Arctic ecology, evolutionary ecology of senescence, ornithology, marine biology, wildlife conservation, ecophysiology, foraging behaviour.		kyle.elliott@mcgill.ca
Enright, Peter	FMT		Soil tillage. Conservation of soil and water. Farm building development.		peter.enright@mcgill.ca
Faucher, Sebastien	Environment		Water-borne pathogens and the regulation of virulence factors and genes involved in stress response		sebastien.faucher2@mcgill.ca
Fyles, James W George and Francis Tomlinson Chair in Forest Ecology	Environment		Forest bio-geochemistry. Relationships between plant nutrition, plant litter quality, litter decomposition and nutrient release, and soil nutrient dynamics. Management of forest soil fertility.		james.fyles@mcgill.ca
Geary, Timothy Canada Research Chair in Parasite Biotechnology	Health		Molecular identification of drug targets through functional genomic analysis. Recombinant systems for high-throughput screening for new antiparasitic leads. Chemotherapy of parasitic infections. Proteomics and transcriptomics of the host-parasite interface. Drug resistance in parasites.		timothy.g.geary@mcgill.ca
Geitmann, Anja Dean, FAES; Canada Research Chair in Biomechanics of Plant Development	Biosciences		Cellular plant development, Cell morphogenesis, Cytoskeleton-mediated intracellular transport , Cell biology, Live imaging, Electron microscopy		anja.geitmann@mcgill.ca
George, Saji	Food Safety		Developing sustainable nanotechnology applications for food and agriculture. Developing guidelines for safe use, tools for regulatory oversight, and safety assured nanotechnology for food safety and security.		saji. george@mcgill.ca

McGill			McGill University Research Expertise Faculty of Agricultural and Environmental Sciences 21 111 Lakeshore Road Sainte-Anne-de-Bellevue, QC, Canada, H9X 3V9		research.macdonald@mcgill.ca Tel: 514-398-8716 www.mcgill.ca/macdonald (October 2018)
Name	**Theme**		**Research Expertise**		**Email address**
Georges, Elias CP Chair in Biotechnology	Nutrition and Health		Multidrug resistance in human cancer cells and *Plasmodium falciparum*. Antibody engineering for immunotherapeutic treatment.		elias.georges@mcgill.ca
Goodridge, Lawrence Ian and Jayne Munro Chair in Food Safety	Food and Nutrition		Food safety: foodborne and waterborne pathogens with an emphasis on *Escherichia coli* O157:H7, *Salmonella* spp, and *Listeria monocytogenes*, foodborne viruses, and foodborne toxins.		lawrence.goodridge@mcgill.ca
Gravel, Valerie	Biosciences		Nutrient availability and plant uptake in organic cropping systems, plant growth regulation in sustainable production systems, microbial interactions within the soil-plant-environment continuum, and biological control of diseases and pests in sustainable fruit, vegetable and ornamental crops.		valerie.gravel@mcgill.ca
Harou, Aurélie	Environment, Nutrition		Improvement of household food security to reduce poverty and malnutrition in sustainable ways; measuring how economic, political and climatic shocks affect human welfare, nutrition and household consumption and production decisions.		aurelie.harou@mcgill.ca
Hayes, John F	Food (safety & quality)		Dairy cattle quantitative and population genetics. Estimation of genetic parameters and associations of production traits with DNA and protein polymorphisms.		john.f.hayes@mcgill.ca
Head, Jessica	Environment		Genetic and epigenetic factors underlying responses to environmental contaminants in birds and other wildlife.		jessica.head@mcgill.ca
Hendrickson, Mary	Human Nutrition		Sustainable eating patterns , competency-based dietetic education, medical simulation for dietetics students, disordered eating, clinical nutrition		mary.hendrickson-nelson@mcgill.ca
Hickey, Gordon William Dawson Scholar	Environment		Sustainable natural resource management, policy and governance; environmental monitoring and assessment; community-based development; participatory approaches; innovation systems; food security.		gordon.hickey@mcgill.ca
Humphries, Murray McGill Northern Research Chair	Environment		Mammalogy. Mammal energetics, behaviour, and ecology, especially in relation to hibernation, food and fat storage, and life histories.		murray.humphries@mcgill.ca
Ismail, Ashraf A	Food and Health		The study of food and biological systems by Fourier transform infrared spectroscopy. Development of new methods for bacteria identification.		ashraf.ismail@mcgill.ca
Jabaji, Suha	Biosciences		Molecular plant pathology; transcriptome, metabolome and gene expression of fungi. Biological control of plant pathogens. Molecular diagnostics of soil-borne pathogens. Fungal biology. Soil microbiology.		suha.jabaji@mcgill.ca
Jardim, Armando	Health		Characterization of *Leishmania* glycosome biogenesis and protein import machinery as potential drug target; Pore formation by *E. coli* type III secretion system; and identification of immunomodulatory molecules released by helminths.		armando.jardim@mcgill.ca
Johns, Timothy A	Food, Nutrition and Health		Biodiversity and dietary diversification; ecohealth; food and nutrition security; food systems; patterns of indigenous food use dependent on plant secondary chemistry; evolution of diet and medicine; ethnobotany.		tim.johns@mcgill.ca
Kallenbach, Cynthia	Environment		Identifying and explaining the fundamental ecological and biogeochemical processes that characterize soil carbon and nutrient cycling, especially under managed ecosystems		cynthia.kallenbach@mcgill.ca
Karboune, Salwa	Food, Bioprocessing		Innovative green bioprocesses for the synthesis of novel food ingredients and nutraceuticals; Discovery and biochemical characterization of carbohydrate-active enzymes for the synthesis of tailored prebiotic oligosaccharides and functional polysaccharides from abundant simple sugars; Enzyme technology solutions towards efficient biomass conversion into highly valuable bioactive products.		salwa.karboune@mcgill.ca
Kimmins, Sarah Canada Research Chair in Epigenetics, Reproduction and Development	Biosciences		How paternal health in particular diet and exposure to toxicants effects the development and health of offspring in populations in Canada and South Africa (in indigenous and vulnerable populations as well as Canadian men in Ontario) with a particular focus is on understanding how environmental is transmitted via heritable information in the sperm known as the epigenome.		sarah.kimmins@mcgill.ca
Koski, Kristine G	Nutrition and Health		Maternal and child nutrition; nutrient composition of amniotic fluid, perinatal growth and fetal development; impact of diet/exercise on pregnancy and lactation; biochemical development of the fetus and neonate; interactions among malnutrition, parasite infections and immunity.		kristine.koski@mcgill.ca
Kosoy, Nicolas	Environment		Markets for ecosystem services from an institutional economics perspective, critical analyses of commodification of nature, Ecological economic.		nicolas.kosoy@mcgill.ca

McGill			McGill University Research Expertise Faculty of Agricultural and Environmental Sciences 21 111 Lakeshore Road Sainte-Anne-de-Bellevue, QC, Canada, H9X 3V9		research.macdonald@mcgill.ca Tel: 514-398-8716 www.mcgill.ca/macdonald (October 2018)
Name	**Theme**		**Research Expertise**		**Email address**
Kubow, Stan	Food, Nutrition and Health		Oxidative stress; inflammation; nutraceuticals; simulated human gut digestion model; bioavailability; bioaccessibility; tissue and cell culture; tumor cell biology; functional foods; phytonutrient metabolism; bioactives, chemoprevention; toxicology; environmental pollutants; phytochemicals; antioxidants.		stan.kubow@mcgill.ca
Kushalappa, Ajjamada	Biosciences		Plant biotic stress resistance gene discovery through metabolomics, proteomics, RNA sequencing and gene silencing. Development of cisgenic crops resistant to biotic stress through genome editing.		ajjamada.kushalappa@mcgill.ca
Lopes, Fernando	Parasitology		The role of helminth components in modulating the immunometabolism of immune cells to promote inflammation resolution in inflammatory conditions.		fernando.lopes@mcgill.ca
Lefsrud, Mark William Dawson Scholar	Bioresource Engineering and Environment		Biomass production, controlled environments, secondary compounds and proteomics..		mark.lefsrud@mcgill.ca
Madramootoo, Chandra A James McGill Professor	Environment		Development of new technologies to conserve water, reduce water pollution, and mitigate greenhouse gas emissions in agriculture. Led large multi-million dollar water and food security research and development projects in Quebec, and other parts of the world, including the Caribbean, Central Asia, Egypt, Pakistan, India, Sri Lanka, and Sub Saharan Africa.		chandra.madramootoo@mcgill.ca
Marquis, Grace S	Food, Nutrition and Health		Maternal, infant, and child nutrition; global nutrition; breastfeeding and complementary feeding of infants and young children; community-based integrated interventions to improve rural nutrition		grace.marquis@mcgill.ca
McCourt, George	Environment		Markets for ecosystem services from an institutional economics perspective, critical analyses of commodification of nature, Ecological economic. Student Centered Research and Learning methodologies; Sustainable urban systems related to water, waste and energy flows; Geosystems and past and present climate change.		george.mccourt@mcill.ca
McKinney, Melissa	Environment		Advanced chemical tracer approaches in marine mammals, as sentinels of ecosystem change, to evaluate fundamental questions about habitat use and feeding habits. how ecological changes interact with other anthropogenic stressors facing biota, particularly pollutants, pathogens, and parasites, and the cumulative effects of these stressors on individual and population health.		melissa.mckinney@mcgill.ca
Melgar-Quiñonez, Hugo Ramiro Margaret Gilliam Scholar	Food, Health and Nutrition		Global Food Security; Causes and consequences of food insecurity for health and nutritional status; Validation and application of food security measurement tools; Impact evaluation of interventions and programs to fight food insecurity and undernutrition		hugo.melgar-quinonez@mcgill.ca
Molgat, Christian	FMT		Livestock management: Nutrition. Genetic progress. Herd management. Animal welfare.		chris.molgat@mcgill.ca
Monardes, Humberto	Biosciences		Dairy cattle population genetics. Dairy herd recording operations. Genetic parameters from large-scale milk recording data for conformation traits, mastitis/somatic cell count, milk proteins, lifetime performance. Identification of genetic markers for resistance to mastitis. Social impacts of animal source foods in less developed countries.		humberto.monardes@mcgill.ca
Mustafa, Arif	Biosciences		Dairy cattle nutrition. Ruminant carbohydrate and protein metabolism. Nutritional evaluation of new forages for dairy cows. Optimizing the feeding value of agricultural by-products for ruminant and monogastric animals.		arif.mustafa@mcgill.ca
Nielsen, Daiva	Human Nutrition		Applying genomics to nutrition and lifestyle modification		daiva.nielsen@mcgill.ca
Ngadi, Michael James McGill Professor	Food, Bioprocessing, Engineering		Food process engineering (food quality and safety); food properties; heat and mass transfer processes; deep-fat frying; hyperspectral imaging; non-thermal technologies (pulsed electric fields, ultraviolet, ozone, etc.) conversion of food processing waste		michael.ngadi@mcgill.ca
Orsat, Valérie	Bioprocesses and/or Bioresource Engineering		Impact of food processing on product quality and functionality; Extraction methods and by-product recovery; Engineered systems for functional ingredient production; Improved nutritional quality of foods for long term health.		valerie.orsat@mcgill.ca
Phillips, Sandy	Human Nutrition		Professional practice, accreditation standards, food intake patterns, nutritional analysis, and competency-based education.		sandy.phillips@mcgill.ca
Plourdes, Hugues	Human Nutrition		Exploring determinants associated with healthy behaviours, nutritional intake or needs and consumer's preferences.		hugues.plourde@mcgill.ca

McGill			McGill University Research Expertise Faculty of Agricultural and Environmental Sciences 21 111 Lakeshore Road Sainte-Anne-de-Bellevue, QC, Canada, H9X 3V9		research.macdonald@mcgill.ca Tel: 514-398-8716 www.mcgill.ca/macdonald (October 2018)
Name	**Theme**		**Research Expertise**		**Email address**
Prasher, Shiv Distinguished James McGill Professor	Biosciences, Bioresource Engineering		Best/Beneficial Management Practices (BMPs) for reducing non-point source agricultural pollution from tile-drained rural watersheds under changing climatic conditions. Safe and effective use of wastewater in agriculture. Innovative green technologies for untreated or partially treated wastewaters.		shiv.prasher@mcgill.ca
Prichard, Roger K James McGill Professor	Biosciences and Health		Parasite control, mechanisms of action of anthelmintics and the genetics of drug resistance in parasitic nematodes of humans and animals.		roger.prichard@mcgill.ca
Qi, Zhiming	Environment		Water quality, hydrological, environmental and crop modeling, irrigation and drainage engineering, climate change impacts on bioresources		zhiming.qi@mcgill.ca
Raghavan, G S Vijaya James McGill Professor	Bioprocesses and/or Bioresource Engineering		Postharvest technologies for food security and food safety. Electrotechnologies for drying and thermal processing of crops and produce, extraction of value compounds from agriculture residues, and disinfestation of grains. Enhancement of heat/mass transfer using particulate medium in spouted and fluid beds. Methods to extend storability and increase nutritive content of fresh produce in storage. International projects on post-harvest engineering to reduce food losses and drudgery.		vijaya.raghavan@mcgill.ca
Ramaswamy, Hosahalli	Food, Bioprocessing		Food processing. Thermal processing of foods and related process calculations. Overpressure processing of foods in thin profile packages. Continuous aseptic processing of low acid liquid and particulate foods. Food sterilization in rotational autoclaves. Microwave processing. Ultra high pressure processing.		hosahalli.ramaswamy@mcgill.ca
Rohrbach, Petra	Biosciences		Parasitology; molecular and cellular biology of malaria parasites; investigating mechanisms of drug resistance and ion homeostasis in Plasmodium falciparum using live cell imaging techniques.		petra.rohrbach@mcgill.ca
Ronholm, Jennifer	Food		Next-generation sequencing techniques to study the microbiome of food-producing animals; focus on understanding intestinal microbiome of humans, and correlations between intestinal microbial populations and various health outcomes have been observed.		
Rose, Maureen	Human Nutrition		The acceptance and impact of food assistance activities. The effects of on-site/off/site work schedules on eating behavior and perceived nutritional health. The impact of nutrition education for children, adults, and seniors on nutrition knowledge and acceptance of a greater variety and more healthy foods. Methods of deriving accurate nutrient analysis of menu items.		maureen.rose@mcgill.ca
Routhier, Joane	Human Nutrition		Advancement and marketing of the profession, interviewing and counseling, media and public relations		joane.routhier@mcgill.ca
Roy, Denis	Environment		Ecology and evolution of fish and wildlife in relation to their use and sustainability as natural resources – adaptive divergence, population genetics/genomics and the use, refinement and development of bioinformatics protocols and techniques. Adaptive dynamics of mostly marine and freshwater fish in both natural and increasingly disturbed ecosystems. Arctic marine fish ecology and evolution.		denis.roy5@mcgill.ca
Salavati, Reza	Biosciences		Drug discovery, genomics, and gene regulation in three related trypanosomatid pathogens, together known as the Tritryps.		reza.salavati@mcgill.ca
Scott, Marilyn Elizabeth	Biosciences		Host-parasite population dynamics. Epidemiology and community control of parasites. Experimental epidemiology in free-running arenas. Impact of malnutrition on immunity in infected laboratory models and human populations. Evolutionary ecology of guppy ectoparasites.		marilyn.scott@mcgill.ca
Seguin, Philippe	Biosciences		Management, physiology, and ecology of forage crops. New crops, new crop uses. Sustainable agricultural practices.		philippe.seguin@mcgill.ca
Simpson, Benjamin K	Food, Nutrition		Speciality enzymes from marine animals: their use in the transformation of foodstuffs and by-products of agricultural harvesting and processing into value-added products of commercial relevance (e.g., collagen, gelatin, natural pigments, bioactive peptides, antioxidants, etc.).		benjamin.simpson@mcgill.ca
Singh, Jaswinder	Biosciences		Functional genomics in small grain cereals using transposons and other reverse genetics tools; Exploring novel genes from wild and cultivated plant species including gene modification (editing) suitable for the breeding of next generation of crop plants.		jaswinder.singh@mcgill.ca
Smith, Donald L James McGill Professor	Food, Nutrition and Health		Crop physiology, crop ecology, crop production and crop quality. Legume nitrogen fixation. Plant nitrogen metabolism.		donald.smith@mcgill.ca

McGill			McGill University Research Expertise Faculty of Agricultural and Environmental Sciences 21 111 Lakeshore Road Sainte-Anne-de-Bellevue, QC, Canada, H9X 3V9		research.macdonald@mcgill.ca Tel: 514-398-8716 www.mcgill.ca/macdonald (October 2018)
Name	**Theme**		**Research Expertise**		**Email address**
Strachan, Ian	Environment		The controls on trace gas exchange (e.g. CO2) between ecosystems and the atmosphere – especially those ecosystems that have been modified or are managed through human activity.		ian.strachan@mcgill.ca
Stromvik, Martina	Biosciences		Bioinformatics and genomics research on plant promoters, gene expression and functional anatomy**.**		martina.stromvik@mcgill.ca
Thériault, Pascal	FMT		Agricultural economics. Farm business management. Agri-food marketing. Entrepreneurship. International trade. Food waste. Value chain management. Information Management.		pascal.theriault@mcgill.ca
Thomassin, Paul	Environment		Environmental and resource economics; economic-ecological macroeconomic modeling, non-market valuation of environmental goods, natural capital and wealth accounts, input-output modelling, climate change and its impact on agriculture, carbon trading, carbon offset markets, pollution abatement and agriculture, behavioural risk factors and the social determinants of health for non-communicable diseases, alternative energy, and life cycle analysis.		paul.thomassin@mcgill.ca
Titley-Péloquin, David			Numerical linear algebra; optimization; uncertainty quantification; data assimilation and forecasting problems; mathematics and science education.		david.titley-peloquin@mcgill.ca
Vasseur, Elsa Chairholder of the NSERC/Novalait/Dairy Farmers of Canada/Valacta Industrial Research Chair in Sustainable Life of Dairy Cattle	Biosciences		Cow comfort and management; Cow longevity; Environment and Society		elsa.vasseur@mcgill.ca
Wade, Kevin	Biosciences		Information systems in dairy cattle breeding and milk recording. Artificial intelligence in the development of on-farm decision-support systems. Quantitative genetics in dairy cattle.		kevin.wade@mcgill.ca
Wang, Yixiang	Food and Biosciences		Development of natural polymer based materials - nano/micro particles, nano/micro fibers, composite films, and hydrogels; understanding of relationship between molecular structure and functional properties.		yixiang.wang@mcgill.ca
Watson, Alan K	Biosciences		Weed biology and control using indigenous fungal pathogens as bioherbicides in agriculture, forestry and the urban environment.		alan.watson@mcgill.ca
Wees, David	Environment		Horticulture production. Sweet potatoes. Urban agriculture. greenhouses.		david.wees@mcgill.ca
Weiler, Hope Canada Research Chair in Nutrition and Health Across the Lifespan	Nutrition and Health		Fetal and early life origins of bone health and disease as dictated by nutrition and growth. Physiological response of bone metabolism and mass to nutrients such as vitamin D and polyunsaturated fatty acids.		hope.weiler@mcgill.ca
Whalen, Joann William Dawson Scholar	Environment		Soil fertility and on-farm nutrient management planning. Soil organic matter dynamics, carbon sequestration and greenhouse gases in agricultural systems. soil microorganisms and earthworms, their interactions and contributions to nutrient cycling and plant growth in agro-ecosystems.		joann.whalen@mcgill.ca
Whyte, Lyle	Microbiology		Polar microbial ecology and biodiversity, cold-adapted microorganisms, low temperature biodegradation and bioremediation. Molecular microbial ecology, environmental genomics.		lyle.whyte@mcgill.ca
Wilkins, Olivia	Environment		Abiotic stress in plants, stress response, stress tolerance, regulatory networks that govern the response of cereal crops and forest trees to environmental change		olivia.wilkins@mcgill.ca
Wykes, Linda J	Nutrition and Health		Protein and amino acid metabolism in humans (neonates to adults) and in piglet models studied with stable isotopes. Glutathione and plasma protein metabolism; enteral versus parenteral nutrition; malnutrition and response to stress; inflammatory bowel disease; nutrition support in surgical patients to promote protein synthesis.		linda.wykes@mcgill.ca
Xia, Jianguo (Jeff) Canada Research Chair in Bioinformatics and Big Data Analytics	Health and Biosciences		Bioinformatics and statistics for high-throughput omics data; host-parasite-gut microbiome interactions; environmental genomics and nutrigenomics, big data analytics and systems biology.		jeff.xia@mcgill.ca
Yaylayan, Varoujan	Food and Nutrition		Interaction of reducing sugars with amino acids and proteins. Chemistry of thermal generation of flavours and toxicants through the Maillard reaction and development of analytical methods for the detection of intermediates formed by this interaction. Microwave Assisted Processing.		varoujan.yaylayan@mcgill.ca
Zadworny, David	Biosciences		DNA markers associated with milk production traits in dairy cattle. Prolactin-mediated regulation of polyamine metabolism. Molecular cloning and expression of avian and bovine genes associated with reproduction and production traits.		david.zadworny@mcgill.ca

McGill			McGill University Research Expertise Faculty of Agricultural and Environmental Sciences 21 111 Lakeshore Road Sainte-Anne-de-Bellevue, QC, Canada, H9X 3V9		research.macdonald@mcgill.ca Tel: 514-398-8716 www.mcgill.ca/macdonald (October 2018)
Name	**Theme**		**Research Expertise**		**Email address**
Zhao, Xin James McGill Professor	Biosciences		Dairy cattle biochemistry and physiology. Mastitis. Vaccine development. Alternatives to antibiotics as growth promoters, Antibiotic resistance. ent.		xin.zhao@mcgill.ca