

University of Prince Edward Island

Overview

University of Prince Edward Island (UPEI) welcomed its first students in 1969. Faculty in all disciplines produce research and scholarly works of national and international caliber, while continuing to give priority to UPEI's well-earned reputation for high-quality teaching characterized by individual attention. Three Oaks Innovations Inc bridges industry with researchers at the University of Prince Edward Island.

Research Capabilities

AQUATIC HEALTH SCIENCES

- Health, distribution, conservation, and aquaculture of natural resources in aquatic ecosystems
- Health of animal populations, including food safety and public health.
- Examples:
 - clinical pathology
 - epidemiology
 - molecular biology
 - parasitology
 - pharmacology
- Aquatic Virology Collaborating Centre
 - Consolidate work on aquatic viruses

COGNITIVE SCIENCE/NEUROSCIENCE

- Pharmacotherapy of neurodegenerative disease
- The molecular basis of stroke induced brain dysfunction
- Pharmacological and nutritional neuroprotective strategies in stroke
- Central regulation of autonomic function, vision research, behavioural studies of learning, memory and cognition, assessment of cognitive function in dementia, and the neural processing of musical grammar and multimedia.
- Contributes to local and worldwide efforts to understand and correct neurodegenerative disease, neurotrauma, and mental disorders and links researchers' work in the philosophy of mental health.

COMPARATIVE BIOMEDICAL SCIENCE

- Atlantic Centre for Bioactive Valuation

- Cardiovascular
 - In vivo - Hemodynamic measurements (blood pressure, heart rate, renal sympathetic nerve activity); Hypercholesterolemia (hamster model for determining distribution of cholesterol using dual stable isotope tracing)
 - Validation of Dual Isotope Methodology for Measuring Cholesterol in Hamsters
- Neurodegeneration/Neuroinflammation
 - In vitro - Oxygen-glucose deprivation (OGD) with or without reperfusion as a medium throughput secondary screen; Glutamate excitotoxicity
 - In vivo - Stroke - permanent middle cerebral artery occlusion (pMCAO) and transient MCAO(tMCAO) in an acute (non-survival) rodent model
 - Neuroprotection: Secondary Screens
- Research for:
 - Understanding of human health issues such as cancer, diabetes, stroke, Alzheimer's, and cardiovascular disease
 - Understanding of broad range of health issues affecting food and companion animals locally and abroad.

ENVIRONMENTAL SCIENCES

- Anthropogenic effects related to land use practices (habitat fragmentation, agricultural use of pesticides, sediment run off) on biotic communities within watersheds and on the quality of potable ground water
- The health of humans, domestic animals and wildlife (such as resource based aquatic species and traditional Innu-harvested animals) as affected by environmental contaminants and infectious agents
- Chemical and biological detection of pesticide and metal contaminants in aquatic environments; and early biological warning systems for environmental stress.
- Development of environmentally sustainable practices, conservation, biodiversity and management as they relate to an emerging life sciences economy based on innovative uses of bioresources
- Climate Lab
 - Climate baseline studies
 - Climate Futures
 - Measuring your carbon footprint
 - Specialized Island Database Products
 - Installation of climate stations
 - Teaching and Training

HUMAN DEVELOPMENT AND HEALTH

- Centre for Health & Biotech Management Research
 - Biocluster research

- Breast cancer screening study
- Data harmonization
- Patient oriented research
- Health , health policy, children’s health and learning based decision making
- Promotion of children’s
- Youth’s healthy living
- High risk behaviours
- Literacy and social health
- Conceptualizations of mental health
- Effects of aging on memory
- Cognitive stimulation as health factor in aging
- Nutrition and quality of life issues in all ages.

ISLAND STUDIES

- Island Studies involves the deliberate reference to and critical examination of “islandness” as a feature that informs island life and how it unfolds in a multitude of disciplinary or policy areas.
- Research foci include the political economy of North
- Atlantic islands, with an emphasis on the creative use of jurisdictional capacity
- The literature of small islands
- Island ecosystems with an emphasis on environmental issues and sustainability
- Migration
- Small islands societies
- Human health
- Innovation and technology
- Tourism Research Centre
 - Economic Impact Studies
 - Consumer Experience Studies
 - Visitor Profiling
 - Tourism Indicators and Trends

MOLECULAR AND MATERIALS SCIENCE

- Supermolecular chemistry
- Biomaterials
- Mathematical models of molecules
- Materials and surfaces
- Synthesis and characterization of new molecules and functional materials including biodegradable polymers, catalysts, sensors and electronic and ionic conductors

- Application in the areas of health, environment and sustainability

POPULATION HEALTH

- Centre for Veterinary Epidemiology Research (used for other population health research)
- Epidemiologic methods
- Infectious and non-infectious diseases of cattle, horses, fish, shellfish and birds; animal welfare
- Wildlife biology
- Public health including zoonotic diseases
- Nutritional risk factors and determinants of human health
- Population health through the School of Nursing
- Understanding of the dynamics, disease treatment and health management promotion of populations of people and of domesticated and wild animals

Institutes, Centres and Groups

- Centre for Christianity and Culture
- Centre for Education Research
- Centre for Veterinary Epidemiological Research (CVER)
- The Centre for Bioactive Valuation (ACBV)
- Tourism Research Centre
- Aquatic Virology Collaborating Centre
- Centre for Health and Biotechnology Management Research
- Canadian Cooperative Wildlife Health Centre
- Animal Movement and Resource Selection (aMaRS) Research Group
- Children's Health & Applied Research Team
- Climate Research Lab
- CMTC Research Group (CMTC: Interdisciplinary Research in Culture, Multimedia, Technology & Cognition)
- Neurscience Research Group
- School Health Research Team

Contact

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