

FOOD TECHNOLOGY CENTRE

Innovation for the Food & Bioresource Industries

Prince Edward Island, CANADA

NEWSLETTER

June 2011

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FTC is working summer hours (8:00 a.m. to 4:00 p.m.) until September 30, 2011.

Free Preliminary Consultation

FTC provides free preliminary consultation services and will help you source appropriate funding for your projects.

We love to help our clients succeed! A few of their success stories are available on FTC's website. See [Success Stories](#).

Funding Programs

Links to information about programs available from our funding partners are available on FTC's website. See [Funding Programs](#).

The **PEI Product Development Fund** is available to Prince Edward Island companies to access the professional, technical assistance services of the Food Technology Centre. This assistance can be applied to the development and testing of new and improved products and processes, and other technical development-related activities. The fund will contribute 50% of project costs to a maximum of \$50,000.

Congratulations Dr. Budu-Amoako!

Congratulations to Ebo Budu-Amoako! FTC's Senior Microbiologist/Lab Manager has recently completed his PhD on zoonotic pathogens and food safety. A summary of his work follows.



Zoonoses are infectious diseases that can be transmitted from animals to man. Many of the most recent outbreaks of international public health concern have been of animal origin. The single most important mechanism for dissemination of zoonotic pathogens is via consumption of contaminated food directly via animal-derived products or indirectly via contaminated plant products or water. *Cryptosporidium* and *Giardia*, two parasites recognized as a common cause of diarrhea in humans worldwide, are common in domestic livestock, particularly cattle, where young animals can have a high prevalence of infection, shedding large numbers of the parasites with their feces. While waterborne outbreaks caused by *Cryptosporidium* and *Giardia* are well documented, the tremendous burden that results from zoonotic foodborne diarrheal diseases has not been given the necessary priority. However, the transmission of *Cryptosporidium* and *Giardia* by foodborne routes is increasingly recognized, and contaminated foods have included fresh produce, raw or undercooked shellfish and some processed foods.

Ebo's PhD research compared the occurrence and the genotypes and species of *Giardia duodenalis* and *Cryptosporidium* species in beef, dairy cattle and pigs from farms on PEI and the water bodies associated with the farms in an effort to determine the potential for zoonotic transmission and capacity to contaminate source water from these animals. It was found that the overall farm prevalence was very high for both *Giardia* and *Cryptosporidium*.

The prevention of foodborne cryptosporidiosis and giardiasis from domestic livestock sources can be achieved by identifying and controlling key points, from the farm to the fork, at which contamination can either occur or be eliminated. The results of this work provide useful information needed to increase the understanding of the transmission dynamics accounting for human exposure (through contaminated food and water) and infections with zoonotic *Cryptosporidium* and *Giardia* on PEI. This information will be of strategic importance in pollution intervention strategies from farm animal sources, which should include reducing the burden of the parasites on-farm as well as implementing measures aimed at decreasing the contamination of watersheds with these parasites.

For more information please contact Ebo Budu-Amoako at (902) 368-5769 or ebamoako@foodtechnologycentre.ca

FTC will exhibit at the **Institute of Food Technologists (IFT) Food Expo 2011** in New Orleans from June 11-14, 2011. This is the biggest trade expo for the food science industry in North America. We will be promoting our Bioscience Technology services: 1) solvent extraction; 2) fermentation; and 3) downstream processing, including membrane filtration and further purification methods.

Microbiology Laboratory Services

- [Sample Submission forms](#)
- [Requirements for the collection and shipping of samples](#)
- [Specific instructions for the collection and shipping of shellfish samples](#)

Preparations are required prior to receipt of samples; therefore, please call 24 hours prior to dropping off samples or results will be delayed. Micro lab receiving hours: Monday to Thursday, 8:00 a.m. to 3:30 p.m., unless previous arrangements have been made. (Following September 30th, receiving hours will return to 8:30 to 3:30 p.m.)

To obtain swabbing supplies and sterile bottles, or for further information about our laboratory services, please call our microbiology laboratory at (902) 368-5937.

Food Safety Workshops

Course outlines of all our Food Safety Workshops are available on the [Training page](#) of the FTC website. For further information on these, or if you would like a course held in your area, please contact Jim Landrigan at (902) 368-5772 or by email at ijklandri@gov.pe.ca

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Microbial Challenge Testing

By Eva Hale, Microbiology Technologist

The ability of *Listeria monocytogenes* to survive and sometimes grow in a chilled environment makes it significantly demanding to provide safe refrigerated ready-to-eat (RTE) foods.

The interest of the food industry in retailing food products in chilled display cases is growing in response to consumer preferences for refrigerated (fresh) foods rather than frozen foods. Microbial challenge testing is used to determine the spoilage potential of a food or to validate a process that is intended to destroy a target organism.

Knowledge and documentation of the growth potential for *Listeria monocytogenes* in a food product is needed and must be taken into account when the producer sets the safe life for the product. This can be achieved through a *Listeria monocytogenes* challenge study on the product. During a challenge study, the food product is inoculated with a known level of the bacterium and monitored periodically. When the bacteria growth reaches levels considered unsafe for consumption, this is considered the end of the safe life (shelf life) of the product.

For refrigerated RTE foods that are not formulated to prevent the growth of *Listeria monocytogenes* (ie. proper pH, water activity) intended for shelf life greater than five days, it is the responsibility of the food processor/importer to demonstrate that there is limited growth of *Listeria monocytogenes* over the period of the shelf life so the food remains safe (see [Health Canada Policy](#) on *Listeria monocytogenes* in Ready-to-Eat Foods ID # FD-FSNP 0071). FTC can help by conducting *Listeria monocytogenes* challenge testing on your product.

Innovation PEI Pilot and Discovery Fund

Call for applications: Through the Island Prosperity Strategy, Innovation PEI is now accepting applications from the Pilot and Discovery Fund, a program designed to support early stage proof-of-concept projects that will lead to the development of new products, services or processes in the strategic sectors. Deadline for applications is June 22, 2011.

More information of this program can be found on the Island Prosperity (www.islandprosperity.ca) and Innovation PEI (www.innovationpei.ca) websites. Detailed inquiries can be directed to: Cody Clinton, IPS Programs, Innovation PEI, tel: (902) 620-3441, e-mail: ceclinton@gov.pe.ca

Business Start-Up Boot Camp



A note to let you know that the ProfitLearn Business Start-Up Boot Camp registration process is in full swing for June 17 - 19 at the Rodd Royalty, Charlottetown.

For anyone in the early stages of building a new business in PEI, this jam-packed program is a great way to move your business dream into reality. Bill Martin, a skilled business leader will facilitate the session.

To register and for further information, please contact Marg Weeks, ProfitLearn PEI: tel: 1-800-270-4795; e-mail: marweeks@upe.ca