



Institute of Technology

Ciência sem Fronteiras / Science Without Borders

Postgraduate Project Template

Institution:	Institute of Technology Sligo
Title of Postgraduate Opportunity: (include level of study)	"An investigation of the activity of Mycosinate (a patented antimicrobial honey derived technology) in the treatment of campylobacter infections in poultry as a means of improving public health" MSc / PhD.
PI Name & Contact Details:	Dr. James Brennan, Head of Dept, Life Sciences, I.T. Sligo. e-mail: brennan.james@itsligo.ie Phone: (086)1733499
Department/School:	Life Sciences / Science
Research Centre /Group:	Biomolecular and Environmental Public Health
Research Centre/Group website:	www.itsligo.ie
<p>Brief Summary of PI research / research group /centre activity</p> <p>The PI has been involved in the development of an extremely potent broad spectrum antimicrobial technology based on honey. The technology has been successfully patented in a number of countries and a second patent on an extension of the technology is very close to grant. The non-veterinary applications of the technology have been licensed to an American corporation but the College still retains all the veterinary applications. This project would represent an initial development of the veterinary field.</p> <p>The Centre for Biomolecular Environmental and Public Health Research is a multidisciplinary research and education centre, committed to leadership in the field of biomolecular environmental health research. Based at the Institute of Technology, Sligo, and founded in 2007, the centre collaborates with researchers, scientists and stakeholders across various disciplines to advance knowledge on environmental health research for the 21st century both in Ireland and internationally.</p> <p>The priorities of the Centre are to:</p> <ul style="list-style-type: none"> • Demonstrate and develop sustainable advanced, quality biomolecular research in 	

- strategically emerging important areas of environment and public health;
- Engage in collaborative research with other scientists at home and abroad;
 - Educate students, staff and external learners both in theory and practice;
 - Involve state agencies and other relevant bodies;
 - Inform stakeholders in cogent terms on regional, national and international research issues;
 - Establish partnerships with environmental and health agencies, as well as business concerns and thus provide an applied endpoint to the Centre's research activities;
 - Develop and evaluate strategies to provide the highest quality education on public health;
 - Assess national and internationally available scientific funding and resources;
 - Promote developments in research via workshops, literature and media;

Brief Description of Masters or PhD Project

The project will focus on the development of appropriate formulations for the delivery of Mycosinate, a patented broad spectrum antimicrobial technology, which the research group has previously developed, to poultry and subsequent investigation of the reduction in bio burden (campylobacter infection) in faeces. This infection is responsible for a very large number of food poisoning cases each year and a reduction in the level of infection in poultry faeces could have a very important effect on public health.

Key Attributes of Project for Brazilian Postgraduate Students

This project will focus on the development of veterinary formulations which it is intended to license to industry and as such, the student will gain very valuable experience in applied research and industrial contacts which could be very valuable on return home. The technology is a platform technology with many potential applications and it is entirely probable that successful completion of this project will result in the veterinary aspect being licensed by industry.

Name and contact details for project queries, if different from PI named above:

Same as above.

Please indicate graduate disciplines which are eligible for application:

Microbiology, Pharmaceutical Science, Biomedical Science, Pharmacy

Alignment with Science Without Borders Priority Areas:

Engineering and other technological areas	
Pure and Natural Sciences (e.g. mathematics, physics, chemistry)	
Health and Biomedical Sciences	
Information and Communication Technologies (ICTs)	
Aerospace	
Pharmaceuticals	✓
Sustainable Agricultural Production	
Green Chemistry	
Oil, Gas and Coal	
Renewable Energy	
Minerals	
Biotechnology	
Nanotechnology and New Materials	
Climate Change	
Biodiversity and Bioprospection	
Marine Sciences	
Productive Inclusion and Social Technologies	
Housing and Sanitation	