GMIT
GALWAY–MAYO INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA NA GAILLIMHE–MAIGH EO

Date: 13th June, 2007

Ph.D. Research Opportunity in Shellfisheries Research Centre

Ref:	SHELLTEC 1
Project Title:	'Disease and Parasite Diagnosis and Control in Re-circulating Shellfish Holding Systems'
Funding Agency:	Enterprise Ireland, Applied Research Enhancement & GMIT
Collaborators:	Centre for Environment, Fisheries and Aquaculture Science (CEFAS), U.K.

Description: The main objective of the Shellfisheries Research Centre (SHELLTEC) is to develop methodologies and innovative technologies to optimise the delivery of high quality live shellfish (crustaceans and bivalves) products from the Ireland to European and world markets. This will provide for significant additional economic return for companies through greater control of the marketing chain. The utility of recirculation seawater holding systems in the pre-conditioning of animals before transport by the shellfish industry is being assessed. Initial use of such systems by the research group and industry has indicated that diseases and parasites may cause significant mortalities during storage. It has become apparent that due to the long duration of storage there is potential for pathogens to be a major contributor to losses and subsequent failure to operate systems in a cost-effective manner. Effective treatment of stock relies on the early detection and identification of pathogens, but currently there is no knowledge-base relating to disease/parasite management in storage systems.

Specialists from the pathology laboratories at the Centre for Environment, Fisheries and Aquaculture Science (CEFAS), U.K. are collaborating closely with the SHELLTEC team to maximise the benefits for the fishing industry in Ireland and the U.K. The successful candidate will benefit from the expertise and resources of both Centres during this studentship and will be expected to compliment this Anglo-Irish collaboration. They will develop expertise in the detection, identification and management of pathogens relevant to long-term storage and transport, and relate these to industry in the form of biosecurity recommendations. A number of commercial species (crabs, lobsters, crawfish) will be screened for parasite and disease infection post-capture and subsequently under various storage conditions. Microbiological and histological preparations will be used to identify key pathogens in system water and in moribund/dead individuals. If possible, products and procedures for testing that can be utilised by industry will be developed and marketed. The use of ultraviolet and chemical treatments will be assessed in relation to their impact on pathogens, host and system stability. Particular attention will be paid to pathogens that impact on product quality as these could influence consumer confidence, and those that could persist in transport conditions and be introduced to wild stocks in novel areas.

Research Environment: The student will be based primarily at the state-of-the-art Research Centre at GMIT (Ireland), but will also be expected to work with industry at their premises around the Irish and U.K. coasts. Training will be provided and this will include a placement at the specialist pathology laboratories of CEFAS in Weymouth (U.K.). GMIT and CEFAS staff will co-supervise the studentship. Candidates should posses a strong desire to conduct an applied research project that has real application in an industrial context.

Requirements/Background: Candidates should posses a minimum of a 2:1 primary degree (Hons) in a relevant discipline. Experience in microbiology, histology or parasitology would be an advantage. The successful candidate will join a multidisciplinary research centre and must be capable of operating as part of a dynamic team.

Project Start-Date: August/September 2007

Project Duration: 3 years

Conditions: €1,000 per month. Postgraduate fees for E.U. students and any travel costs incurred during the project will also be covered.
(Candidates from beyond the E.U. are eligible to apply, but will be expected to provide evidence of sources of additional funds to cover excesses associated with **Non-EU fees that could amount to €6,000 per year**)

Further information available from: Martin Robinson at Martin.Robinson@gmit.ie

Application Form (which must be forwarded by post) is available at:
http://www.gmit.ie/research/vacancies.html or by phone: +353 (0)91 742759
(Please note that applications forwarded by email **will not** be accepted)

Completed Application Form to be returned to:
Research Recruitment,
Development Office,
Galway-Mayo Institute of Technology,
Dublin Road, Galway, Ireland.

Closing Date for receipt of Application Forms: **12.00 noon, Friday 29th June 2007**