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**Beaufort Undergraduate Scholarship Programme 2008  
Project Template**

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**Name of Principal Investigator:** Prof. Dermot Diamond

**Project Title:** Development of novel methods for the determination of microbiological contamination of water

**Duration of Project:**                      **From:**                      **To:**

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**Project Description (300 words approx):**

Microbial contamination of public water resources represents serious health risk. Monitoring of microbial water quality rely on culture growth methods and require at least 18-24 hours for analysis. This is not acceptable in cases where immediate action has to be taken. This project evaluates several strategies for utilising surrogate measurements of water quality, such as turbidity, particle size and video sensing, as early warning systems for microbiological contamination, using parallel cell-based measurements for reference purpose. The main goal of this work is to bring together the achievements of other projects of Beaufort Award Research in order to develop a microfluidic system that can provide a more specific determination of bacteriological contamination and will be capable of remote sampling and analysis over extended periods of time.

**Key Words (4-5):**

**Background Expertise Required:**

**Any other relevant information:**