CLIENT:
IBC Associates

CATEGORY:
Access to Facilities and Equipment

Innovative Research Solutions with Industry
Health and Biotechnology

Putting Bacteria to Work

IOTI
Institutes of Technology Ireland

IBC Associates is a start-up company based in the **Enterprise and Research Incubation Centre** at the **Institute of Technology, Carlow (IT Carlow)**. The company develops systems aimed at improving the bio-degradation of fats, oils and grease during wastewater disposal.

EnviroCORE is a strategic research centre based at IT Carlow. EnviroCORE carries out research in microbial technologies for waste treatment. It also opens up its laboratory facilities to partner companies and provides technical support and mentoring in microbiology.

Fats, oils and grease (FOGs) are a large component of wastewater from the food and restaurant industries. High concentrations of FOGs in wastewater can impede sewage treatment. If removed prior to wastewater treatment, the efficiency and safety of the waste treatment process is significantly improved. FOGs can be removed by pre-treating the wastewater with bacteria which biodegrade the fats into components that are more easily broken down during the subsequent sewage treatment. However, the bacteria used in this pre-treatment become less effective over time and this can limit the efficient breakdown of FOGs.

IBC Associates planned to develop a system that will improve the viability of bacteria that biodegrade FOGs during the pre-treatment of wastewater. Although the company had extensive experience in microbiology, it required the use of laboratory facilities to carry out microbiological analysis. Using the laboratory facilities and equipment available at EnviroCORE and leveraging EnviroCORE's scientific expertise, IBC Associates

Dr. Guiomar Garcia Cabellos, Research Director, IBC Associates

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developed a novel gel-based matrix that promotes bacterial viability during the pre-treatment of FOGs. The product has been demonstrated to keep the bacteria alive indefinitely and is currently undergoing tests to confirm its efficacy within sewage treatment systems. The innovative product has potential benefits in waste water treatment systems, waste disposal in restaurants and in septic tanks. It is anticipated that it will be brought to market in the near future. ■

TESTIMONIALS

Dr. Guiomar Garcia Cabellos

Research Director, IBC Associates

I personally don't think that I could have brought my business to where it is today without the help of the Institute of Technology, Carlow. Thanks to all of this support my idea has become a product which people now want to buy.

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