



Research Opportunity



Institute for Microbial Biotechnology and Metagenomics University of the Western Cape

The Institute for Microbial Biotechnology and Metagenomics (IMBM) is one of the leading research units at the UWC. The Institute focuses on recent advances in (meta)genomics and bioinformatics for the identification of genes or biosynthetic pathways and their heterologous expression to produce natural and novel high-value biochemicals.

The IMBM has a two-year research opportunity in the project “Improving the Antibiofilm Activity of a Proprietary Biocide by Co-formulating with Inhouse Produced Biosurfactants”. The project aims to improve the antibiofilm activity of an eco-biocide by co-formulating the biocide with our patented biosurfactant. The start date is negotiable, but not later than 1 November.

PROJECT DESCRIPTION

The project will entail i) the production and purification of the biosurfactant using a well-developed and optimized method for this project and to provide to the industry partner for pilot-scale assessment; ii) co-formulation of the biocide and biosurfactant; iii) evaluating the antibiofilm properties of the biocide/biosurfactant co-formulations in continuous flow systems using industrial wastewater; iv) metagenomic analysis of the treated biofilms.

MINIMUM CRITERIA

Applicants must have completed a MSc or PhD degree in Microbiology, Biochemistry or Biotechnology and must be proficient in all the steps involved in heterologous expression, protein purification and bioinformatic analysis of metagenomic DNA. Experience in biofilm work will be considered as an advantage. Applicants should have strong trouble-shooting and writing skills, be able to drive a project of this nature and work as part of a multi-disciplinary team.

APPLICATION SUBMISSION

The candidate will be under the supervision of Dr Elzaan Booysen and Prof. Marla Trindade. Applicants are to submit

their CV and covering letter to Dr Booysen, 4282777@myuwc.ac.za.

Application Deadline: 30 August 2024



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