

**Aquitaine –Karnataka collaboration
Scientific Project for Pre-PhD student exchange**

Scientific Proposal

Project Title	Bioremediation of Pharmaceutical Effluent using bacteria-An Optimization Study	
Scientific domain	Bioprocess Engineering	
Summary (ca. 10 lines)	Thousands of tons of pharmaceuticals are used every year, in both human and veterinary medicine, and are released to the environment through metabolic excretion and improper disposal techniques. Even though various physical and biological processes occurring in aquatic ecosystem may cause reduction of many pharmaceutical compounds, trace concentrations of human and veterinary pharmaceutical compounds have been detected in different water bodies. Therefore, a novel approach has been thought to use bacteria isolated from ginger in this lab for the bioremediation of pharmaceuticals of different types. Since the endophytic bacteria living in ginger is already acclimatized to harsh environmental condition like different types of natural pharmacologicals found in the ginger, it is thought that this bacteria will be useful for the bioremediation of pharmaceuticals. Optimization of bioremediation of known pharmaceutical will be undertaken using various parameters by applying response surface methodology (RSM) and OFAT (one factor at a time) analysis approach.	
Student profile wished	Chemical Engineering or Biotechnology background	
Supervisor Name	Dr. Ujwal P	
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Institute/laboratory/industry (full address)	NMAM Institute of Technology Dept. of Biotechnology Engineering Nitte-574110 (Udupi Dist.) Karnataka State	
Director Name Institute/laboratory/industry	Dr. C. Vaman Rao	
Director Institute/laboratory/industry @ & phone	vamanrao@nitte.edu.in	919880675650
Timing & duration for project (give approximate ranges)	Around 6 months at any time	
Representative References		

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