

## Screening the Red Sea metagenomics data base for antibacterial and cytotoxic products

The Biocatalysis group of the Department of Bioprocess engineering at TU Berlin is offering a master project position for a highly motivated student who is interested in the bioinformatic analysis of metagenome data. The Project is in collaboration with American University in Cairo (AUC, <https://www.aucegypt.edu>) and most of the practical work is performed at TU Berlin. The stay at TU Berlin will be funded by Erasmus (6 – 9 months).

### **Background:**

Several extreme environments remain unexplored and are a potential mine for bioactive compounds, such as Red Sea brine pools. Atlantis II (ATII) Deep is the largest of the 25 Red Sea brine pools. The lowest brine-sea water interface layer is the Lower Convective Layer (LCL), and is characterized by extreme salinity, temperature and high concentration of toxic heavy metals. Our objective was screening metagenomic DNA from ATII LCL for antibacterial activity and annotation of the genes responsible for the activity.

### **Aim:**

The aim of the project is to screen metagenomics databases derived from seven brine pools from the Red sea to identify novel bioactive products.

### **Duration:**

6-9 months

### **Requirements:**

Interest in environmental microbiology  
Interest in biochemical characterization of novel compounds  
Molecular and cell biology laboratory experience

If you are interested or for further details, please contact: Mariam El Attar  
[biology@aucegypt.edu](mailto:biology@aucegypt.edu)

