Thesis title: “Investigation into the developmental expression of genes during the intracellular growth of a mycobacteriophage, using proteome analysis tools”.

My area of research was on Mycobacteriophages which infect Mycobacterium tuberculosis (the TB pathogen). An important aspect of Microbiological research is studying the molecular biology of bacteriophages.

The specific issues taken up were:

1. Investigating basic aspects of host pathogen interactions such as timing of phage release, host viability, protein synthesis profile etc.
2. Proteomic analysis of the events taking place during phage infection and a bioinformatics approach to address issues raised through the proteomics approach.
3. Cloning and expression of a key regulatory protein the phage repressor and studying it’s DNA binding activities.

Research Interest:

To study the role of microbes in heavy metal metal detoxification. To establish the role of microbes in making the plants tolerant towards heavy metals thereby establishing their role in environmental cleanup.

Publications:

Shreyasi Chatterjee, Mahashweta Mitra, Sujoy kumar Dasgupta (2000). A high yielding mutant of MycobacteriophageL1 and it’s application as a diagnostic tool. FEMS Microbiology Letters 188, 47-53
