Dr. Gouriprasanna Roy, Assistant Professor, Department of Chemistry receives Extra Mural Research Funding (Individual Centric) from DST.

Dr. Gouriprasanna Roy, Assistant Professor, Department of Chemistry receives Extra Mural Research Funding (Individual Centric) from Science and Engineering Research Board (SRRB), Department of Science and Technology (DST). He has been awarded the grant for research work on "Detoxification of Organomercury Compounds: Enzyme Mimetic Studies to Understand the C-Hg Bond Activation by Organomercurial Lyase"

Methylmercury ($MeHg^+$) is one of the most poisonous environmental pollutants poses a serious health risk as it is preferentially accumulated in the central nervous system (CNS). Mercury contamination in water, in India, is verging on alarming situation due to discharge of industrial effluents as per WHO and Indian standards. At a time when most countries are phasing out mercury, India has doubled the import of elemental mercury over the past seven years. A large quantity of mercury is being released in the environment through mining, fossil-fuel burning, and chloroalkali industries and is washed into aquatic systems, where it is biologically converted into $MeHg^+$ and accumulates in aquatic organisms. Thus, detoxification of $MeHg^+$ is of critical importance and, in nature, this is achieved by the combined action of two mercury resistance bacterial enzymes, organomercurial lyase (MerB) and the mercuric ion reductase (MerA).

Talking about the objectives of his project, Dr Roy said, "Our goal in this project is to understand the mechanism of detoxification of organomercury compounds by bacterial organomercurial lyase (MerB), and mercuric ion reductase (MerA), which will lead to the development of an alternative and suitable method for detoxification of organomercury compounds. Long term goal in this project is to design and synthesize molecules that will eventually catalyze the detoxification of these toxic organomercury compounds."

For more information please his website:
http://www.snu.edu.in/naturalsciences/gouriprasanna_roy_profile.aspx