Justification for SUN PHARMA RESEARCH AWARD

She was engaged in leprosy research for the last 19 years, but her achievements in last five years was devoted to the research on emerging antimicrobial resistance in leprosy. In the context of the current scenario of elimination of leprosy the matter of drug resistance in leprosy has become pertinent in view of its public health importance.Drug resistance in leprosy especially to the bactericidal drug, rifampicin, is an issue of major concern.. Drug resistance has been reported earlier as well but need arose to look into it in more details about factors responsible for causing drug resistance in leprosy and to identify the way forward towards its better management during the elimination phase of the disease. During this elimination phase it is of utmost importance to diagnose secondary drug resistance and their treatment with alternative regimen as early as possible so that there is no chance of transmission of secondary *M.leprae* drug resistant strain to a naive individual which might emerge as primary drug resistance in leprosy. Her research work, especially on emerging anti-microbial drug resistance in leprosy has been recognized by the Global Leprosy Programme, WHO, Indian Council of Medical Research and later on by the National Leprosy Eradication Programme of Govt. of India.

It was the first report from her publications which showed the occurrence of both primary and secondary rifampicin resistance as well as multidrug resistance cases in leprosy. Data generated by her studies played an important role in influencing the Leprosy Division of Ministry of Health, Govt of India to formulate policies pertaining to public health interventions in prevention and spread of leprosy in poor society as well as prevention of drug resistance. Her work has already created an awareness for establishment of network for surveillance of detection of drug resistance to anti-leprosy drugs. Government has initiated a mechanism for surveillance of *M. leprae* drug resistance at country level, so that the drug resistance in leprosy should not become an issue in the future and the patients can be treated more effectively. She was one of the members in the NLEP expert committee on Antimicrobial Resistance in Leprosy. She drafted the SOPs for all the national referral laboratories along with Dr. Utpal Sengupta,

As rifampicin is the backbone of MDT treatment for leprosy, it is important to know that if patient is resistant to rifampicin then which alternative regimen will be effective for them. Therefore, she further conducted research on the alternative regimen especially for rifampicin resistant cases.
She has written chapter on Drug resistance in "Ridley Jopling Textbook of Leprosy for Medical students".

She also worked to detect as well as for drug susceptibility testing of leprosy bacillus obtained from Brain, and that provided a new source for clinicians for diagnosing leprosy involving Central Nervous System. After proper diagnosis and proper treatment, cases showed resolution of brainstem lesions and cord lesions.
Her research work on the development of tools for early diagnosis of leprosy made an impact on the social life of leprosy patients by diagnosing patients early and including them on treatment. Early diagnosis followed by adequate proper treatment allowed patients to lead a life with dignity without any disability in the society and help bringing them back in the mainstream of life. While working in leprosy, she contributed in science by publishing 59 research papers on leprosy in peer-reviewed journals, writing several chapters and articles in text books, which have been appreciated by leprosy experts and included under the National Leprosy Program. Considering her

prolonged contribution in leprosy and science in general and her passion towards scientific research, I am nominating her to apply for this award.