

Dr. Rama Mukherjee

Dr Rama Mukherjee Ph.D. from AIIMS has devoted thirty five years of her career in carrying out research in understanding molecular pathology and in developing products for the treatment of human diseases. Her research and development focus has been in the field of leprosy, tuberculosis and cancer where there is unmet need. She has shown leadership quality in leading multidisciplinary group and delivered results.

She has significantly contributed to the understanding of molecular pathology of nerve damage in leprosy. She developed in vitro model of nerve damage in leprosy consisting of partially myelinated dorsal root ganglion, murine and human Schwann cell cultures and demonstrated for the first time that nerves can be infected in vitro with *M. leprae*. She demonstrated for the first time that the interaction of *M. leprae* with Schwann cell at the membrane level is very specific and that there is a ten fold multiplication of *M. leprae* within Schwann cells in vitro.

At the National Institute of Immunology she was instrumental first as co investigator and coordinator and subsequently as Principle Investigator in designing and conducting of the Phase II and Phase III clinical trial of Mw vaccine and then in technology transfer and commercialization of the vaccine. Her group demonstrated therapeutic as well as prophylactic effect of this vaccine against tuberculosis for the first time. She also coordinated the Immunodiagnosics project of the Institute. She played a significant role in the basic research on Non A and Non B hepatitis virus. Simultaneously, she carried out research on the role of neuropeptides in cancer and came up with a combination of peptides called MuJ-7 (the idea was conceived in 1989) for the treatment of colon cancer, the technology was transferred to the industry. It was a non cytotoxic targeted and mechanism based approach which is the focus of international cancer research today.

At Dabur Research Foundation (DRF) as President – R&D for Dabur Pharma, she led a team of around 300 scientists in developing generic and novel anticancer drugs, diagnostics and biotherapeutics for the treatment of cancer. She has developed a pipeline of generic and novel molecules in parallel, which meet the global regulatory and quality requirements. The products being developed at the DRF consists of small organic molecules, peptides and proteins as injections, capsules and tablets. She also directly supervised the new drug delivery system consisting of nanoparticle, liposome and micro sphere technologies. **Nanoxel** – a Paclitaxel nano-particle delivery system developed by her group was commercialized in 2006.

DRF has filed over 400 patents. DRF has filed thirty drug registration dossiers in US, Europe, Canada and Australia for registration of anticancer drugs and a larger number in the rest of the world. Most significant achievement has been successful commercialization of nanotechnology based Paclitaxel delivery system developed by her group.

She has been successful in setting up research and development facility at DRF, which follows the GLP-GMP norms and the products developed have been approved by FDA and European and Canadian regulatory agencies

Dabur Pharma has since been sold to Fresenius Kabi at a value of Rs 1200 crore which included R&D products pipe line.

She has developed large networking with research Institutes, Universities and Hospitals in India and regulatory and patent attorneys in Europe and US.

She is in the Drugs and Pharma committee of CII and FICCI and number of committees of DBT and DST.

She is still actively filing patents and publishing in peer-reviewed journals with over 48 patents and 125 research publications to her credit. She has also supervised number of PhD and MD students and at present is supervising three doctoral students.

She has widely traveled earlier as an expert member of leprosy and mycobacterial immunology of WHO. She has delivered numerous guest lectures and keynote addresses in many national and international forums and is widely respected as pharma biotech R&D leader in India.

She is also in the board of ARA Healthcare Pvt. Ltd., ARA Research Foundation and is a trustee of Ayurved Research Foundation.

Currently she is the Managing Director of ARA Healthcare Pvt. Ltd. a drug, diagnostic, and healthcare R&D Company. Focus of the company is in the development of new class of targeted biotherapeutics and humanized or human antibodies. And provide diagnostic services,