RESEARCH PROJECTS UNDERTAKEN BY FACULTY MEMBERS (COMPLETED & ONGOING)

PI: Prof. Yasha Hasija

- Genetic analysis of dermatological disorders (2017-2020; DBT, Govt. of India; Rs 44 Lakhs)
- Tuberculosis: Genetic susceptibility and pharmacogenomics databases (2012-2015; CSIR-OSDD; Rs. 12.82 Lakhs)
- Role of human genetic variations in age-related disorders (2012-2015; SERB under OYS Scheme; Rs. 15 Lakhs)

PI: Prof. Jai Gopal Sharma

- Investigations on micro-nanoplastics (MNPs) fingerprinting in cruciferous truck crops with special reference to *Brassica oleracea* spp. (2023-2025; DBT, Govt. of India; Rs. 22.3 Lakhs; In collaboration with Department of Botany MLSU Udaipur Rajasthan; **Ongoing**)
- Evaluation of effect of macrophytes based on the growth, gut physiology, expression of specific genes involved in the biosynthesis of DHA & EPA and production of quality freshwater fishes (2021-2024; DBT, Govt. of India; Rs. 20.77 Lakhs; **Ongoing**)
- Integrated farming of *Lates calcarifer* and *Macrobrachium rosenbergii* in aquaponic system: a sustainable water utilization approach (2020-2024; DST, Govt. of India; Rs. 21.93 Lakhs; **Ongoing**)
- Dissemination and demonstration of fish culture technology among women self help groups in NCR region of Delhi as a self-employment activity (2018-2021; DBT, Govt. of India; Rs. 58 Lakhs)
- Toxicity assessment and treatment of pharmaceutical waste water by novel nano catalyst based advanced oxidation method (2017-2019; SERB, DST, Govt. of India; Rs. 19.2 Lakhs)
- Development of alternative sustainable fish feeds to promote human health using novel non-conventional indigenous ingredients (2016-2019; Multicounty Project-BBSRC, UK and DBT, Govt. of India; Rs. 75 Lakhs)
- Nanoenabled biosensor for detection of *Neisseria gonorrhoeae* (2016-2019; DBT, Govt. of India; In collaboration with AIIMS; Rs. 50 Lakhs; With Prof. B.D. Malhotra)
- Development of pelleted diet for *Catla catla* and *Clarias batrachus* using Achyranthes aspera and evaluation of its immunostimulatory properties in pond culture system (2015-2018; DBT, Govt. of India; Rs. 26 Lakhs)
- Simultaneous degradation of organochlorine pesticides by microbes (2013-2018; UGC; Rs. 35 Lakhs; With Dr. Rajkumar Bidlan)
- Engineering of acting filament for the development of next generation diagnostic nanodevices (2013-2016; SERB DST; Rs. 30 Lakhs; With Dr. Saroj Kumar)

PI: Prof. Pravir Kumar

- Functional role of heat shock proteins and ubiquitin E3 ligase under hypoxic stress condition (2009-2012; LSRB-DRDO; Rs. 15 Lakhs)

- Identification and characterization of anti-cancerous and anti-angiogenic biomolecules for colon cancer (2013-2016; DST-SERB; Rs. 23.35 Lakhs; With Dr. Rashmi K. Ambasta)
- Screening and investigation of biomolecules for therapy of diabetes via cell culture method (2016-2019; CSIR-Scientific Pool Scheme; Rs. 20 Lakhs; With Dr. Rashmi K. Ambasta)

PI: Prof. B.D. Malhotra

- Development and manufacture of cost effective glucose biosensor for clinical use (2012-2015; ICMR; Rs. 1.45 Crore)
- Nanoenabled biosensor for detection of *Neisseria gonorrhoeae* (2016-2019; DBT, Govt. of India; In collaboration with AIIMS; Rs. 50 Lakhs; With Prof. Jai Gopal Sharma)
- Development of nanomaterials based highly efficient biofuel cells (2016-2019; UGC; Rs. 23 Lakhs; With Ms. Sharda)
- Nanomaterials based bioelectronics devices (2019; SERB Distinguished Fellowship; Rs. 84.6 Lakhs)

PI: Dr. Asmita Das

- Tumor cell induced NK cell receptor modulation (2013-2016; DST, Fast Track Scheme for Young Scientist; Rs; 23 Lakhs)
- Preparation of tumor targeting monoclonal antibody and crocin nanoparticle conjugate for drug delivery system (2019-2021; DTU; Rs. 3 Lakhs)
- Studies on elucidating silver nanoparticle as potent inhibitor of hyphal morphogenesis and drug resistance in opportunistic fungal pathogen, *Candida* and potential host cell toxicity (2014-2019; JNU-UPE; Rs; 11 Lakhs; As Co-PI; PI: Dr. Tulika Prasad, JNU)

PI: Dr. Smita Rastogi Verma

- Isolation of ligninolytic microorganisms and their biochemical and molecular characterization (2009-2012; UP-CST; Non-DTU; Rs. 6.96 lakhs)

PI: Dr. Saurabh Chandra Saxena

- Elucidating the functional and regulatory aspects of inositol monophosphatase like proteins (IMPL1 and IMPL2) from drought tolerant legume chickpea (*Cicer arietinum*) (2016-2019; SERB-DST; Rs. 10 Lakhs)

PI: Dr. Rashmi Kataria

- Implementation of stubble waste to industrially important enzymes and bioplastic production (2020-2023; SERB; Rs. 53 Lakhs)