

DEPARTMENT OF PHARMACEUTICS

The Department of Pharmaceutics is a place where an unwavering commitment to excellence in research, instruction and service is demonstrated through the extraordinary productivity and success of our faculty, staff and students. The department covers 8,000 sq. ft. with 8 research laboratories with sophisticated processing and analytical equipments such Malvern (Mastersizer), cascade impactor, rheometer, high pressure homogenizer, microfluidizer, ultrasonicator, freeze drier, extrusion spheronizer, fluid bed processor, coater, electrospinning, HPLC, DSC and TGA. The department has highly experienced and qualified faculty consisting of 2 professors, 2 associate professor and 6 assistant professors.

The department lays emphasis on integrated research approach on modern, herbal and phyto formulations. The planned programme of product development in the area of novel drug delivery systems with emphasis on nanomedicine. The faculty are engaged in research and working on various research projects funded by UGC, DST, DBT, ICMR, DRDO, AICTE and pharmaceutical industries. The department has received research grant of more than Rs 2 crores.

The staff members and research scholars participated and presented research papers at National and International conferences held in India and abroad. The department is working in collaboration with institutions like NCL, NCCS, CMET, BARC, CBRTI, industries like Lupin research Lab, Emcure Pvt Ltd, Serum Institute of India Pvt. Ltd, Tata Chemicals, Reliance India Ltd, Abbott Laboratory and foreign university like University of Bradford UK and University of Eastern Finland. These research activities have resulted in 29 patent and 422 publications.

The department research activities focus on formulation science and drug delivery with particular emphasis in the following areas:

- Molecular and fundamental Pharmaceutics
- Pharmaceutical Engineering
- Novel drug delivery systems such as sustained and controlled release formulation
- Solubility and oral bioavailability enhancement using polymer and lipid based approaches
- Nanopharmaceutics based drug delivery eg. gold nanoparticles, nanocomposites, nanomicellar system, nanovesicular, polymeric nonoparticles and solid lipid nanoparticles etc.
- Site specific delivery and targeted nanoparticles of therapeutic drugs for the treatment of cancer
- Application of Quality by Design (QbD) in drug development
- Nutraceutical and Cosmeceutical research
- Novel phytoformulations