



DEPARTMENT OF PHARMACEUTICAL SCIENCES & TECHNOLOGY



PROFESSOR SHREERANG V. JOSHI

Professor of Pharmaceutical Chemistry

B. Sc., B.Sc.(Tech.), Ph.D., D.I.M.

VISION:

To be a globally recognized premier educational and research centre with world class facilities, adopting international best practices, focused on the integration of science and technology in the areas of Drug Discovery, Drug Delivery, Organic Process Research and Herbal Healthcare Products

MISSION:

To achieve the best in pedagogy and research, through creation of a dedicated team of faculty and state of art research facility, to develop skilled manpower and innovative cost effective technology to support national healthcare programmes.

MAJOR RESEARCH AREAS:

• **Pharmaceutics and Formulation:**

Design of Drug delivery systems for oral, parenteral, transdermal, nasal, buccal and sublingual, ocular and vaginal drug delivery including Nano Drug Delivery systems.

• **Pharmaceutical Chemistry:**

Drug design and discovery, Computer Aided Drug Discovery, Design & Synthesis of drugs drug intermediates and NCE's, Process optimization and synthesis of intermediates used in APIs, Green Chemistry and Technology, Dental APIs

• **Medicinal Natural Products including pharmacology and pharmacognosy:**

Evaluation of indigenous plants for various pharmacological activities(In-Vitro/In-Vivo), Enzyme mediated assays, Drug metabolism and Pharmacokinetic studies including bio distribution, optimisation of protocols for Pharmacodynamic activities with appropriate biomarkers, Extraction and isolation of phytoconstituents, Standardization and stability of herbal drug products, Modification of herbal constituents for synthesis of useful compounds

• **Biotechnology:**

Bioanalytical method development, Nanotechnology in drug delivery, Protein and nucleic acid delivery, pharmaceutical biotechnology.

MAJOR INSTRUMENTAL / PROCESSING FACILITIES:

- 400 MHz NMR, GC-MS, LC-MS, FT-IRs, HPTLC, several HPLCs, GC, UV, DSC, Fluorimeter, Polarimeter, Parallel Plate Synthesizer and other chemistry related instruments, CADD lab with sophisticated hardware and software for docking, homology modelling,

3D-QSAR and other modules, hydrogenator.

- Particle size analyzers, Zeta Sizer, Film coater, Extrusion spheroniser unit, Transdermal permeation apparatus, Freeze driers, High Pressure Homogenizers, Tablet machines, Dissolution apparatus, Sonicators, Fluidised bed coater cum processors, Dryers, Multipurpose processors for solid and liquid formulations, Facilities for wet and dry granulations, Facilities for bioadhesion testing, facilities for size reduction, Liquid filling machines, Facilities for processing of semi-solid dosage forms, ICH stability testing facilities,
- BIOPAC, Elisa readers, Aggregometer, Non-invasive blood pressure measuring instrument, microbiology facility and cell culture facility, incubator shaker, CO2 incubator, inverted microscope, fluorescence microscope, high speed cold centrifuges, freezers, and other basic equipments and instruments.

COURSES OFFERED

Name of the course	Intake
B. Pharm	30
B. Tech (Pharmaceutical Technology)	18

M. Pharm (Pharmaceutics, Pharmaceutical Chemistry, Medicinal Natural Products)	18
M. Tech (Pharmaceutical Technology)	8
M. Tech (Pharmaceutical Biotechnology)	10
Ph.D. (Tech) and Ph.D. (Sci.)	Variable

*We also support M. Tech (Bioprocess Technology), M. Tech (Perfumery) and M.Tech (Green Technology)

Major Grants

TEQIP, DST-FIST, DBT, AICTE, DAE, UGC-CAS, CCRH, DST, ICMR, CSIR, AYUSH and various industry sponsored projects

Research Output:

New Laboratories:

Two laboratories are for UG and one for PG were totally renewal.

UG laboratory was renewal with donation from Dr. A. V. Rama Rao, CMD & AVRA laboratories

Department received major infrastructure research grant			
Heads	Name of Agency	Scheme	Amount
Buidling	Government of India, Ministry of Human Resource and Development, Department of Higher education	PMMNMTT	1.66 crore
Equipment	Government of India, Ministry of Human Resource and Development, Department of Higher education	PMMNMTT	48 lakhs
	University Grants Commission	UGC – CAS II	2.25 crore
	Department of Biotechnology	M. Tech Pharmaceutical Biotechnology Program	50 lakh
Books	University Grants Commission	UGC – CAS II	1.25 lakh
	Department of Biotechnology	M. Tech Pharmaceutical	4.5 lakh
Supplies and materials	Government of India, Ministry of Human Resource and Development, Department of Higher education	PMMNMTT	5 lakh
	University Grants Commission	UGC – CAS II	25 lakh
	Department of Biotechnology	M. Tech Pharmaceutical Biotechnology Program	23.5 lakh
Computing and networking	Government of India, Ministry of Human Resource and Development, Department of Higher education	PMMNMTT	5 lakh
	University Grants Commission	UGC – CAS II	6.5 lakh
	Department of Biotechnology	M. Tech Pharmaceutical Biotechnology Program	12.7 lakh
Facilities	University Grants Commission	UGC – CAS II	5 lakh
	Department of Biotechnology	M. Tech Pharmaceutical Biotechnology Program	6 lakh



PROFESSOR SHREERANG V. JOSHI

B. Sc., B.Sc.(Tech.), Ph.D., D.I.M.

Professor of Pharmaceutical Chemistry

Head of Department

RESEARCH INTEREST:

- Process Development of Phospholipids
- Process Development of Artificial Sweeteners
- Synthesis of Natural Products of Biological Importance
- New methodologies in Organic Synthesis
- Process Development of API Intermediates
- Synthesis of Drug- Polymer Conjugates

FELLOWSHIPS/ MEMBERSHIPS OF PROFESSIONAL BODIES: UAA

HIGHLIGHTS OF RESEARCH WORK DONE AND ITS IMPACT:

- Green Chemistry for Pharmaceutically important compound
- QbD in Biogenic Chemistry
- Peptide synthesis

PUBLICATIONS (PEER REVIEWED)

SO FAR : 6

PATENTS: 31

MASTERS AWARDED AS SINGLE/ CO-GUIDE : 2

SUBJECTS TAUGHT:

Pharmaceutical Organic Chemistry, Pharmaceutical Organic Chemistry & Coordination chemistry

Retrosynthesis and Catalytic Process, Chemistry of Natural Products & Spectroscopy

RESEARCH STUDENTS:

Ph.D. (Tech.): 1

M. Tech.-5

RESEARCH PUBLICATIONS:

International :05

National:1

PATENTS:

International: 10

Indian: 21

PROFESSIONAL ACTIVITIES:

Think Tank Committee for APIS of GOI



PROFESSOR (MRS.) PURNIMA DHANARAJ AMIN

B. Pharm., M. Pharm., Ph.D. Tech

Professor in Pharmacy

RESEARCH INTEREST AND EXPERTISE :

- Developing Novel drug delivery systems using Hot Melt Extrusion (HME) and spray drying techniques.
- Developing Novel nutraceutical

and Personal care dosage forms

- Solubility enhancement of poorly soluble drug using several excipients by solid dispersion techniques.

- Exploring newer applications for excipients

- Developing R & D models of pharmaceutical machinery.

FELLOWSHIPS OF NATIONAL AND INTERNATIONAL ACADEMIES OF SCIENCE OR ENGINEERING

- Fellow of Maharashtra Academy of science.

- Referee, Indian Journal of Pharmaceutical Science, and Drug Dev Industrial Pharmacy
- Referee, Journal of Nanotechnology
- Referee, Journal of Controlled Release
- Referee, Journal of Pharmaceutical Sciences

FELLOWSHIPS/ MEMBERSHIPS OF PROFESSIONAL BODIES

- Life Member, Indian Pharmaceutical Association, Maharashtra State Branch.
- Life Member, I.C.T. Alumni Association
- Member, Controlled Release Society, Indian Local Chapter
- Life member APTI

PUBLICATIONS (PEER REVIEWED)

SO FAR : 99

PATENTS : 12

CONFERENCE PROCEEDINGS/ PAPERS : 96

SEMINARS/LECTURES/ORATIONS DELIVERED : 10

Ph.D.S AWARDED AS SINGLE/ CO-GUIDE : 25

MASTERS AWARDED AS SINGLE/ CO-GUIDE : 75

POST-DOCTORAL FELLOWS

SUPERVISED : 01

H-INDEX : 17

CITATIONS : 769

HIGHLIGHTS OF RESEARCH WORK DONE AND IMPACT:

- The research laboratory focuses primarily on developing formulations using HME technology.
- Granulation Technology for high dose drugs was explored using several meltable binders using HME. To understand advantages and limitations, of various granulation techniques, comparative study was performed using RMG, roller compactor, and MADG.
- Orally Dispersible Films (ODF) were also prepared using solvent free method using HME.
- NLC were prepared using high speed homogenizer which were further added to a topical base, prepared using HME.
- Soft capsules for vaginal delivery were developed using HME.

- Antidiabetic, SR tablets, of low dose drug was developed as a part of industry project.

SUBJECTS TAUGHT :

Lectures: Pharmaceutics, Pharmaceutical Technology, Dispensing Pharmacy, Hospital Pharmacy, Advanced Pharmaceutics

Practical: Biochemistry, Pharmaceutics-II, Dispensing Pharmacy

RESEARCH STUDENTS:

P.D.F. - 01

Ph.D (Tech.) - 08,

M. Tech. - 02,

M. Pharm – 02

Undergraduate Summer Fellow- 05

RESEARCH PUBLICATIONS:

International - 06,

Peer- reviewed - 04,

Conference proceeding - 01

PATENTS:

Indian - 03

SPONSORED PROJECTS:

Private - 05

SPECIAL AWARDS/HONOURS / ACCOLADES :

- Fellow of Maharashtra Academy of Science.



DR. GANESH U. CHATURBHUJ

B.Pharm, M.Pharm Sc., PhD (Tech), Post. Doc.

Associate Professor

RESEARCH INTERESTS:

Organic synthesis, Catalysis and synthesis

FELLOWSHIPS/ MEMBERSHIPS OF PROFESSIONAL BODIES :

- APTI
- ICSB
- UAA ICT

HIGHLIGHTS OF RESEARCH WORK

DONE AND ITS IMPACT:

Medicinal chemistry:

Our research group is involved in three major fields of medicinal chemistry for the development of new chemical entities for treating type-2 diabetes

mellitus, cancer and inflammation/pain; herein we are using currently trending and updated computer aided drug design software for high throughput screening in search of novel scaffold; which includes site mapping, homology modeling, 2D/3D-QSAR study, pharmacophore development and molecular docking. Best predictive candidates are chosen for the synthesis using advanced synthetic methodologies. Biological evaluation of series of synthesized molecules performed using in-vitro and in-vivo models for their corresponding activities.

Process chemistry of drugs and drug intermediates:

Our research team involved in the development of novel synthetic routes of various active pharmaceutical ingredients and their intermediates using various industrially applicable

and beneficial parameters; majorly safer/less hazardous chemicals, cost and labor efficient, environment friendly, green and reproducible, among other considerations.

We are working for scale up of pharmaceutically important reactions from milligram to kilogram scale with kinetic study using pilot size vessels with the intention of maintaining similar characteristics to industry reactors.

Quality assurance of active pharmaceutical ingredients:

Our research team is involved in synthesis, purification, characterization of impurity standards, Metabolites and degradation products of API's. We are also involved in the analytical method development and method validation of various drugs / API's.

PUBLICATIONS (PEER REVIEWED) SO FAR : 11

SEMINARS/LECTURES/ORATIONS DELIVERED : 05

MASTERS AWARDED AS SINGLE GUIDE/ Co-Guide : 01

RESEARCH STUDENTS:

Ph.D (Tech.) - 07,
Ph.D. (Sci.)- 01
M. Pharm- 02,
M. Tech.-01

RESEARCH PUBLICATIONS:

International - 11

PATENTS:

Indian - 01

SPONSORED PROJECTS:

Government - 02

PROFESSIONAL ACTIVITIES:

- APTI
- ICSB
- UAA ICT



PROF. MARIAM S. DEGANI

B.Pharm, M.Pharm., Ph.D. (Tech)

Professor in Pharmaceutical Chemistry

RESEARCH INTERESTS:

Drug design and molecular modeling, for drug discovery and formulations. Synthesis of focused libraries of potential bioactive molecules for infectious diseases, cancer and Alzheimer's diseases, based on rational drug design, using modern techniques including parallel synthesis and microwave assisted synthesis. Exploration of natural products as therapeutic leads, Fluorine chemistry, Deuterium chemistry, process development of drug and drug intermediates, green chemistry using ionic liquids and newer catalytic system development.

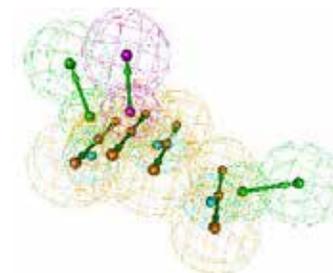
Fellowships/ Memberships of Professional Bodies :

- Fellow of Maharashtra Academy of Sciences
- Life member of Indian Pharmaceutical Association.
- Life member of Indian Women Scientists Association (AWSA)
- Member of Third World Organization of Women's Association in Science.
- Life member of APTI.
- Life member UDCT alumni association.
- Member of American Chemical Society

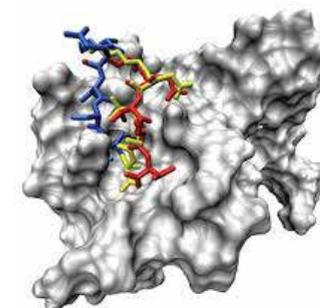
HIGHLIGHTS OF RESEARCH WORK DONE AND ITS IMPACT :

1. Drug Discovery Chemistry

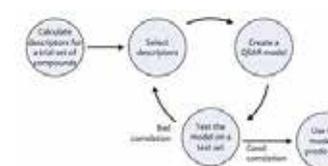
- Rational drug design including computer assisted design of potential anti-infective and other agents. (Techniques used include Homology modeling, molecular Docking, Pharmacophore mapping, QSAR, Molecular dynamics).



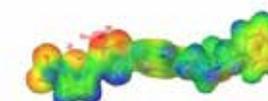
Pharmacophore development



Molecular Docking



QSAR



DFT calculations

- Synthesis of small focused, compound libraries using classical and novel reactions and catalysts, multi-component reactions for hit and lead generation and optimization and their in vitro evaluation including enzyme based and whole cell based activity and toxicity.
- Our library of synthetic molecules (more than 600) is being screened by collaborators both in India and abroad for various biological activities including anti-infective (Tuberculosis, Filaria, Leishmaniasis), some CNS diseases and cancer targets.
- Exploration of plant based products including derivatised molecules for biological activity including anticancer, anti-infective and cytoprotective activities has been initiated in our laboratory.
- Isotopic Replacement of hydrogen by deuterium, at appropriate carbons, is being



DR. HEMCHANDRA K. CHAUDHARI

M.Pharm Sci, PhD(Tech) in Pharmaceutical Chemistry

Assistant Professor in Pharmacy

RESEARCH INTERESTS :

Design using computer aided drug design approach, synthesis by conventional or novel methods and synthesized molecules evaluate against suitable activity.

PUBLICATIONS (PEER REVIEWED) SO FAR : 08

SUBJECTS TAUGHT:

- Pharmaceutical and Medicinal chemistry-I, Pharmaceutical and Medicinal chemistry-I, Pharmaceutical and Medicinal chemistry-III, Medicinal Chemistry-I

RESEARCH PUBLICATIONS:

Ph.D. (Tech.) - 1
M.Tech. - 2
M.Pharm - 1

RESEARCH PUBLICATIONS:

International - 02

SPONSORED PROJECTS:

Government - 01

SPECIAL AWARDS/HONOURS:

Best Teacher Award (S.Y. B.Pharm)

initiated, to improve metabolic stability of therapeutically useful molecules.

2. Process chemistry research

- Fluorine chemistry: This includes design of novel fluorinating agents which are economic, safe, stable and easy to handle, development of fluorination methods for Selective fluorination and catalysis and synthesis of ¹⁸F labeled ligands for PET scanning
- Use of Ionic Liquids (ILs) in synthesis and separation technologies: This includes design of ILs using computational approach and synthesis of library of tailored ILs. The applications include extraction of natural products, as catalysts & solvents in synthesis and for CO₂ capture in industrial processes.

Development of innovative processes for pharmaceuticals including drugs, intermediates and metabolites, using techniques such as Microwave assisted

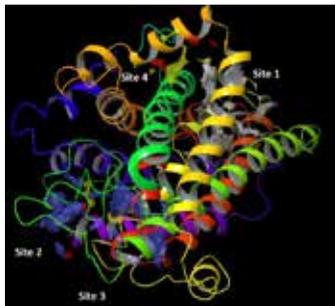
- organic synthesis, continuous reactions (Flow chemistry), sonochemistry, parallel synthesis, newer catalysts and biocatalytic reactions.

1. Use of computational methods for formulation development

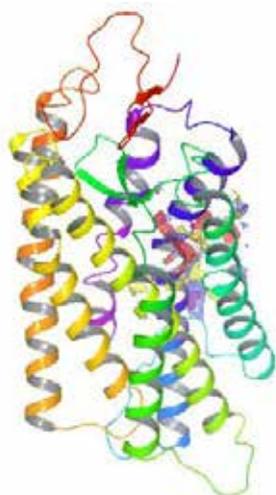
Several biological and formulation related aspects are being studied by computational modeling. Examples are:

a) Studies on absorption of organoferrous compounds using in silico methods:

b) Taste masking of drugs:



A. Binding sites on the human divalent metal transporter and binding of ferrous gluconate on receptor



B. The human taste receptor was modelled and the binding of various bitter drugs to the receptor was studied in detail.

PUBLICATIONS (PEER REVIEWED)

SO FAR : 79

PATENTS : 08

CONFERENCE PROCEEDINGS/
PAPERS : 78

SEMINARS/LECTURES/ORATIONS
DELIVERED : 25

Ph.D.S AWARDED AS SINGLE/ CO-
GUIDE : 17

MASTERS AWARDED AS SINGLE/
CO-GUIDE : 48

H-INDEX : 19

CITATIONS : 726

SUBJECTS TAUGHT:

Pharmaceutical and Medicinal Chemistry IV and V, Advanced Medicinal Chemistry I and II, Drug discovery process and Drug design, Pharmaceutical and Medicinal Chemistry Laboratory-II, Advanced Medicinal Chemistry Laboratory-I

RESEARCH STUDENTS

RA - 1

Ph.D. (Tech.) – 6

Ph.D. (Sc) - 2

M.Tech. - 5

M.Pharm - 2

RESEARCH PUBLICATIONS:

International Peer-reviewed - 7

Conference Proceedings - 3

SPONSORED PROJECTS:

Government - 4

Private - 2

PROFESSIONAL ACTIVITIES :

- Head of department, DPST Aug 2015-Nov 2018
- Co-ordinator of PMMMNMTT upto Feb 2019
- Member, UG-PC committee, Academic Council



PROFESSOR DR. (MRS.) PADMA V DEVARAJAN, FMS

B. Pharm, M.Pharm, PhD(Tech.)

Institute TEQIP Coordinator, Coordinator -
M.Tech Pharmaceutical Biotechnology,
Professor in Pharmacy

RESEARCH INTERESTS:

- Controlled Release and Bioenhanced Drug Delivery Systems (NDA and ANDA)
- Engineering of nanoparticulate (polymer/lipid/gold) drug delivery systems for targeted delivery in cancer and infectious diseases (tuberculosis) including scale up and commercialization, and screening for new targeting ligands
- Hepatic targeting, Brain targeting and Pulmonary targeting
- Nano Diagnostics
- Non-invasive (nasal and sublingual) delivery systems for peptides, proteins and nucleic acids
- Vaccines
- Veterinary Drug delivery Systems and Diagnostics

FELLOWSHIPS/MEMBERSHIPS OF PROFESSIONAL BODIES:

- Nominated Fellow Maharashtra Academy of Sciences
- Ex- Chair- Scientific Programs- Society for Pharmaceutical Dissolution Science (SPDS)
- President and Life member, Board of Governors UDCT Alumni Association (UAA)
- Ex-Treasurer, Ex-Secretary and Patron Member Controlled Release Society- Indian Chapter

- Life Member Indian Pharmaceutical Association
- Life Member Indian Women Scientists Association
- Member Indian Society of Surface Scientists and Technologists
- Member Third World Organization of Women in Science
- Registered Pharmacist, Maharashtra Pharmacy Council

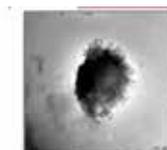
HIGHLIGHTS OF RESEARCH WORK DONE AND ITS IMPACT:

Innovations in Nanomedicine are in nationally relevant areas of healthcare, namely infectious diseases (Tuberculosis, AIDS, veterinary infections), cancer and diabetes with a focus on the design of practical and relevant interventions, to enable translation of nanomedicine from bench to clinic. Innovative oral DDS is yet another major area of research. Important contributions are highlighted below:

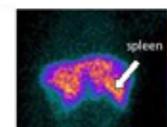
LIPOMER - Nanoparticle Shape and Drug Targeting

LIPOMER an innovative nanocarrier for veterinary infections, is the first ever application of nanomedicine in veterinary infections. We have for the first time reported the role of nanoparticles of irregular geometry in targeting drug loaded nanoparticles to the spleen (Journal of Biomedical Nanotechnology, 2008, 4(3), 359-

369); J Pharm Sci.; 99(6):2576-81, 2010). This paper was cited in the US based magazine The Scientist April 2010 pg 69, under cutting edge research in Nanoparticles in drug development. Clinical success in E.Canis infection in dogs is demonstrated. More importantly, the scalability of this Lipomer has been successfully demonstrated (Am. J. PharmTech Res. 2013; 3(4)).



Irregular shaped LIPOMER

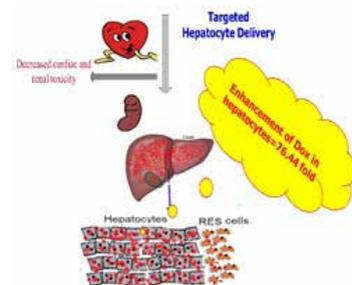


Splenic accumulation of irregular LIPOMER in dog

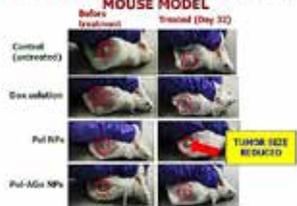
HepaTarg Dox for Hepatic Targeting

We have successfully developed Dox nanoparticles anchored with the carbohydrate ligands (Hepa Targ), for improved therapy of hepatic cancer. High hepatocyte accumulation was confirmed in the rat model. Good efficacy with decreased toxicity was observed in the PLC/PRF/5 Liver Tumor mouse model. Suggesting great promise of HepaTarg Dox in the therapy of hepatic cancer.

(Drug Delivery, 2016, DOI: 10.3109/10717544.2015.1135488, Drug Delivery, 24:1, 20-29, DOI: 10.1080/10717544.2016.1225856)

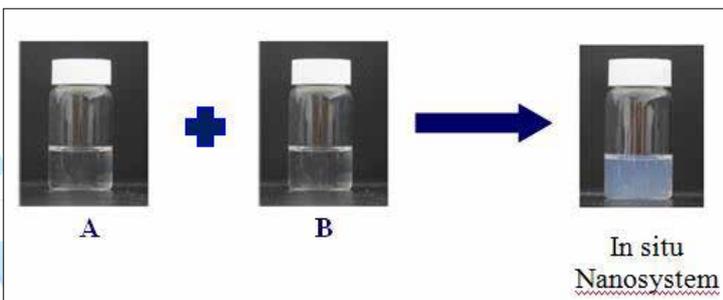


EFFICACY STUDY IN LIVER XENOGRFT MOUSE MODEL



Self Nanoprecipitating Preconcentrates (SNP)

A simple idea which completely overcomes the technology gap in the development of nano drug delivery systems. SNP involves generation of a mixed nanosystem, comprising lipid/polymeric nanoparticles and micelles, IN SITU by the patient or doctor by simply mixing two liquids (A & B) prior to administration. It has been successfully developed for anticancer drugs (doxorubicin, tamoxifen) and Anti HIV (Nevirapine), the technology appears too simple to be true! (Int J Pharm 2012, 429(1-2):104-12, 3053/MUM/2010)



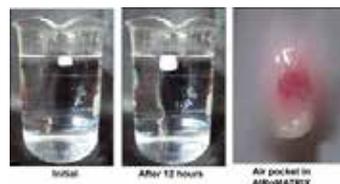
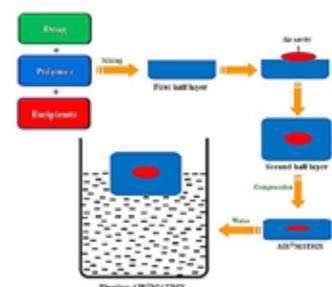
Sublingual Nano Delivery System of insulin

We have a granted Indian Patent based on microemulsion compositions for sublingual administration of insulin. This non injectable insulin delivery system exhibits great potential. This system can be readily scaled up for commercialization. (Granted Indian Patent 233413, Drug Delivery 2015, 23 (2), pp429-436, Drug Delivery & Translational Research 2014, Vol-4, pp 429-438)

Gastroretentive Floating Drug Delivery Systems

Air-Matrix Technology

Air-Matrix technology is an innovative approach wherein matrix tablets are compressed with a central air cavity by a compression coating process. When dropped in an aqueous medium expansion of tablet due to the entrapped air enabled floatation. This Air-Matrix tablets remained floating for >12h and presents an innovative gastro retentive DDS.

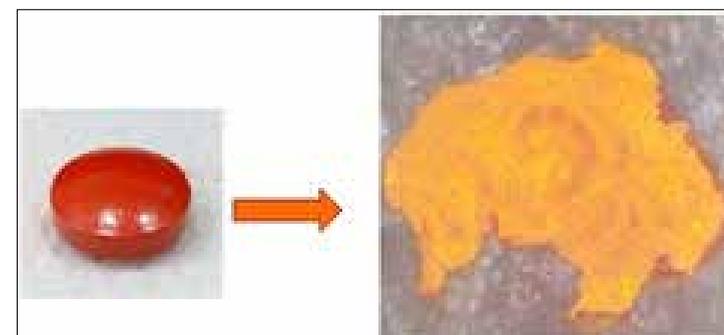
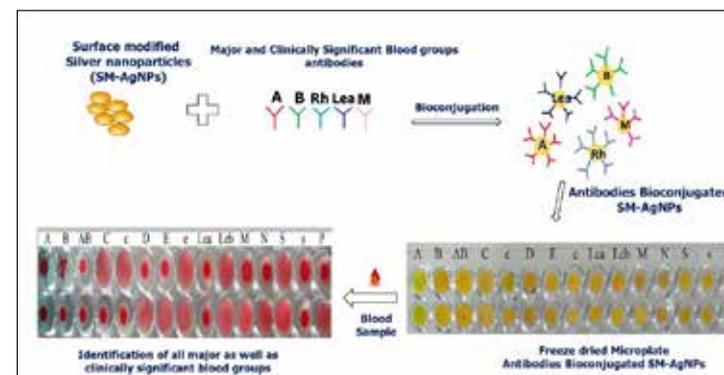
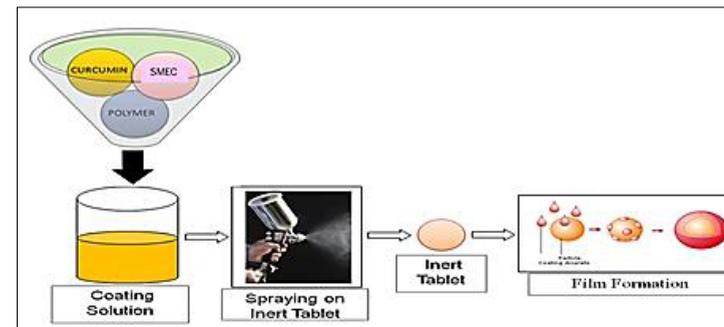


Floating multiparticulates by Hot Melt Extrusion (HME)

HME a densification technology was successfully exploited for design of low density floating multiparticulates of metoprolol succinate. Floating was achieved by an intelligent combination of polymers and effervescent agent. A controlled release formulation with floating lag time of <3 min and total floating time of >12h with controlled release upto 12h was optimized. (International Journal of Pharmaceutics, 2015, 491(1-2): 345-351)[Received the Eudragit Award 2015, awarded by Evonik India Pvt. Ltd., on 21st September 2016]

Curcumin SMEC Solid Dispersion for Arthritis

Bioenhanced increased surface area Curcumin SMEC solid dispersions as films, were developed by a simple technology as depicted below. High drug loading and high stability were important hallmarks. Approximately 400% bioenhancement and good anti-arthritis efficacy compared to indomethacin in the Complete Freund's Adjuvant (CFA) arthritis model in rats prove the great potential of this new DDS for therapy of rheumatoid arthritis (Pharm Res. 2016 Aug;33(8):1972-87)



PUBLICATIONS (PEER REVIEWED) SO FAR : 79

PATENTS (FILED/ GRANTED) : 25/7

CONFERENCE PROCEEDINGS/ PAPERS : 253

SEMINARS/LECTURES/ORATIONS DELIVERED : 64

PhD AWARDED AS SINGALE/ CO-GUIDE : 41

MASTERS AWARDED AS SINGALE/ CO-GUIDE : 74

MASTERS AWARDED AS CO-GUIDE: 01

H-INDEX: 22

CITATIONS : 1688

SUBJECTS TAUGHT :

Targeted Drug Delivery, Drug Delivery Systems I, Drug Delivery Systems II, Pharmaceutics IV, Pharmaceutics V, Pharmaceutical Formulation Technology II, Pharmaceutical Formulation Technology II Laboratory, Pharmaceutics Laboratory IV

RESEARCH STUDENTS:

Ph.D. (Tech.) -16,
M. Pharm-2,
M. Tech. (Pharma)- 3
Undergraduate Summer Fellows-02
Postgraduate Summer Fellow: 1

RESEARCH PUBLICATIONS:

International- 02
Peer-reviewed-02
Conference proceeding- 13
Book chapters- 01,
Book- 01

PATENTS:

International- 01,
Indian- 01

SPONSORED PROJECTS :

Government- 03
Private-04

PROFESSIONAL ACTIVITIES:

- DBT Nanobiotechnology Task Force Member
- Expert committee member for Women Scientist Scheme WOS A
- First Woman President, UDCT Alumni Association, 2017-2019
- Member, Research Recognition Committee, S.N.D.T. University
- Referee for International J. Pharmaceutics, Journal of Pharmaceutical Sciences, AAPS Pharma Sci Tech, Journal of Pharmaceutical and Biomedical Analysis, Indian Journal of Pharmaceutical Sciences, J. of Nanomedicine, J. Biomedical Nanotechnology
- Editorial Board Member, the Asian Journal of Pharmaceutical Sciences an Elsevier Publication. European Journal of Drug Metabolism and Pharmacokinetics, a Springer Publication. Indian Drugs (IDMA publication), Indian Journal of Pharmaceutical Sciences (IPA publication)
- Advisory Committee member, SVKM's Dr. Bhanuben Navavati College of Pharmacy, Mumbai
- Member Board of Studies, Shobhaben Pratapbhai Patel School of Pharmacy & Technology Management, SVKM's Narsee Monjee Institute of Management

Studies (NMIMS).

- Chair of the Outstanding Paper Award Committee of the Drug Development and Translational Research 2015&2016, the Controlled Release Society Inc., USA.
- Ex- Chairperson Scientific Programme Committee - Society for Pharmaceutical Dissolution Science (SPDS) (2015-2018)
- Programme Chair for 'A Professional Development Certification Course Series arranged in five modules' entitled 'Pharmaceutical drug development process- Role of Dissolution Testing' by ICT and Society for Pharmaceutical Dissolution Science
- Inducted as Member of the Editorial Board of European Journal of Drug Metabolism and Pharmacokinetics, a Springer Publication.

SPECIAL AWARDS/HONOURS:

RESEARCH AWARDS

- OPPI SCIENTIST AWARD 2018, for contribution to research in Veterinary and human healthcare in infectious diseases & cancer, awarded by Organisation of Pharmaceutical Producers of India (OPPI), at OPPI's Annual day celebration on October 11, 2018 in the Ballroom of Hotel Taj Lands End, Bandra, Mumbai.

AWARDS FOR SUPERVISED RESEARCH

- Awarded 1st Prize amongst 10 best nano innovations selected all over India, in Nano SparX competition-2018 to Shweta Chawla (PhD Tech student), under guidance of Prof. Padma V. Devarajan, for a Nano Innovation titled, "Nano Blood Group Detection Kit for Point of Care Detection of all major as well as Clinically Significant Blood Groups", in 9th Bengaluru India Nano event, organized by Karnataka Science & Technology Promotion Society (KSTePS), DST-Nano Mission in association with Jawaharlal Nehru Centre for Advanced Scientific Research Centre (JNCASR) Bangalore, on 7th December 2018, at The Lalit Ashok, Bangalore, India.
- YOUTH INSPIRATOR AWARD 2018 in category of Science, Technology & Engineering awarded to Amit S. Lokhande* (PhD Tech Student) for the research work under the supervision of Prof. Padma V. Devarajan, from Young Inspirators Network (YIN) in association with Sakal Media group, Delivering Change foundation, Saam TV, Nilaya Education trust Pune & Hashtag Menwear, at YIN Summer Youth Summit 2018, organized at KBP Modern College, Vashi, Navi Mumbai.

- Priyanka Jahagirdar (PhD Tech student) and Prof. Padma Devarajan's research story titled as "Nanocurcumin: A point of care formulation to treat Tuberculosis" Selected amongst hundred BEST popular science stories under PhD category in Augmenting Writing Skills for Articulating Research (AWSAR) a new initiative conceptualized & supported by National Council for Science & Technology Communication (NCSTC) Division, Department of Science and Technology (DST), India.

RESEARCH PRESENTATIONS

- 1st Best Poster Prize for the poster titled "Rapid Point of care Blood Group Detection Kit for Multiple Blood Group Detection", presented by Shweta Chawla*, Padma V. Devarajan, at Institute of Chemical Technology, Mumbai on "Innovation Idea Competition" on 10th May, 2019
- 3rd Best Poster Prize for the poster titled "Bone Targeted Delivery of Salmon Calcitonin Nanoparticles for Sublingual Osteoporosis Therapy (SLOT)", presented by Darsheen J.Kotak*, Padma V. Devarajan, at Institute of Chemical Technology, Mumbai on "Innovation Idea Competition" on 10th May, 2019



PROFESSOR (MRS.) ARCHANA R. JUVEKAR

B.Pharm, M.Pharm, Ph.D. (Tech)

Professor in Pharmacology and Physiology

RESEARCH INTERESTS:

- Drug discovery and development from natural products and traditional medicines. Presently active in the areas of inflammation (TNF- α , IL-1 β), life style diseases (obesity, hyperlipidemia and diabetes), anxiety, depression, Alzheimer's and Parkinson's disease.
- Screening of plant extracts and their isolates (using bioassay-directed fractionation) for inflammation, diabetics, Alzheimer's disease, cancer, anxiety and depression activity which may be helpful as the leads for development of safer drugs with minimum side effects
- Standardization of herbal drugs and formulations.
- Bioassay-guided isolation and structure elucidation of biologically active compounds from medicinal plants in therapeutic areas of cancer, Alzheimer's disease and diabetes.
 - » Evaluation of Pharmacological Interventions Targeting Pathophysiological Cascades (Oxidative stress, ER stress, Inflammation, apoptosis) involved in depression, anxiety, Diabetes, Diabetic Complications (neuropathy, encephalopathy & cardiomyopathy), Cognitive

impairment (associated with Parkinson's and Alzheimer's disease).

- Elucidation of Pharmacological Potential of NCEs in Disease Models for Efficacy Studies
- Safety Pharmacological Studies of NCEs.
- Regulatory Toxicity
- Evaluation of acute, repeated dose toxicity testing as per different regulatory guidelines.
- Evaluation of genotoxicity (CA, MN, COMET) for different NCEs as per regulatory requirement.
- Execution of principles of Good Laboratory Practices (GLPs) for regulatory compliance.

FELLOWSHIPS/ MEMBERSHIPS OF PROFESSIONAL BODIES :

- Member of Board of Studies in Pharmacy under the faculty of pharmaceutical Sciences, Bharati Vidyapeeth Deemed University, Pune (India).
- Life member of Indian Pharmaceutical Association
- Life member of Indian Pharmacological Society
- Member of Gesellschaft für Arzneipflanzenforschung (GA) Society for Medicinal Plant Research, Germany
- Member of the Editorial Board of Indian Practitioner

- Member of Radiopharmaceuticals committee (RPC) under Board of Radiation and Isotope Technology

HIGHLIGHTS OF RESEARCH WORK DONE AND ITS IMPACT:

Study of cardiovascular and allied activities of indigenous plants, neuropharmacological evaluation of indigenous plants, pure drug and phytoconstituents, study of antioxidant and anti-stress activity of indigenous plants, study of hepatoprotective activity of indigenous plants, immunopharmacological evaluation of indigenous plants, antidiabetic and its complication evaluation of indigenous plants, anti-inflammatory and cytotoxic activity indigenous plants, pharmacokinetic study.

PUBLICATIONS (PEER REVIEWED) SO FAR : 88

CONFERENCE PROCEEDINGS/ PAPERS : 100

Ph.D.S AWARDED AS SINGLE/ CO-GUIDE : 16

MASTERS AWARDED AS SINGLE/ CO-GUIDE: 61

H-INDEX :14

CITATIONS : 697

SUBJECT TAUGHT:

Subjects taught during: Pharmacology II, Pharmacology III, Toxicology and Therapeutics, Models for Drug delivery system

RESEARCH STUDENTS:

Ph.D (Tech.)-03
M. Pharm- 03

RESEARCH PUBLICATIONS:

International – 8
Conference proceeding- 1

PROFESSIONAL ACTIVITIES:

- Member of Radiopharmaceuticals committee (RPC) under Board of Radiation and Isotope Technology
- Member of Research and Recognition Committee in the faculty of admission of Ph. D. of North Maharashtra University, Jalgaon

- Appointed as PhD examiner for Bharati Vidyapeeth University, Pune and Sundarnar University, TN.
- Appointed as PhD examiner for JNTU, Hyderabad
- Appointed as PhD examiner for Mumbai University

to the extensive number of TB-afflicted patients worldwide and the fact that India bears the highest TB burden in the world. This work has recently featured on the coverpage of Journals of Materials Chemistry B as it was well received by the reviewers and the editorial office. However although many of the commercial polymers are effective for drug delivery, they exhibit long-term toxicological implications. Further most of the common processes employed for nanoparticle synthesis involve the use of organic solvents, which reduce the commercial feasibility of the processes and result in solvent-associated toxicity. Thus as an independent researcher at ICT, my research group focuses on use of biopolymers and green processes for generating nanocarriers for therapeutic and diagnostic applications.

We focus on development of nanocarriers of derivatives of chitosan for delivering siRNA to alleviate TB. Apart from its suitable characteristics like water-solubility, biodegradability and non-toxic and non-allergenic nature, all of which are desirable for developing a safe and effective nanomedicine, we hypothesize this cationic polymer to chelate the metal ions in the inner mycobacterial envelope leading to increased cell fluidity and bacterial death. This hypothesis was tested in virulent strain of mycobacteria (H37Rv), wherein the polymer was found to completely inhibit the infectious agent. This was confirmed to be due to the chelating action of polymer for the metal ions present in the inner envelope of mycobacterial cell wall. COS nanoparticles were prepared by ionotropic gelation method using a crosslinking agent. This is a 'green' technique based on electrostatic interaction between

the cationic polymer and anionic crosslinker. When mycobacterial inhibition assay was conducted using the nanoparticles, they were found to inhibit the bacteria at a much lower concentration than polymer, which may be due to better cellular interaction of nanocarriers owing to their small size.

Cellular assays proved safety of the nanoparticles and their potential for enhanced uptake by macropinocytosis.

The biological efficacy of the nanoparticles was confirmed by evaluating their ability to deliver siRNA against model gene, where the nanoparticles were found to almost completely silence this protein. Further cellular studies to silence protein relevant for intra-macrophage survival of mycobacteria are currently in progress. Success in these studies may provide an effective and specific therapy for one of the deadliest diseases affecting humans.

An additional area of focus of our research group is green synthesis of chitosan derivatives that has been explored in development of nanomedicines. We are focusing on green catalysts for synthesizing low molecular weight polymers which are water soluble. With success in preliminary studies, further investigations are in progress to optimize reaction parameters using a combination of both the catalysts and microwave energy. A comparison will be made between both the catalysts with regards to the efficiency and economy of the process. The ultimate goal is to establish a set of parameters enabling synthesis of range of COS, with varying molecular weights, for application in nanomedicines and other biomedical applications. Apart from spherical nanocarriers, our

group has also initiated fabrication of therapeutic nanofibers of biopolymers, using the commercially feasible electrospinning method, for wound healing applications. We are fabricating nanofibers based on combination of biopolymers and anti-bacterial inorganic nanocarriers for healing applications. Our group also focuses on the employment of these inorganic nanocarriers for development of non-enzymatic biosensors to measure glucose levels in various biological fluids like saliva, urine, blood etc with high sensitivity.

Thus overall, my research efforts are directed towards development of safe, effective nanocarriers, which may be translated to the society to alleviate grave disease conditions affecting the Indian and global population

PUBLICATIONS (PEER REVIEWED) SO FAR : 51

PATENTS : 08

CONFERENCE PROCEEDINGS/PAPERS : 117

SEMINARS/LECTURES/ORATIONS DELIVERED : 3

Ph.D.S AWARDED AS SINGLE/ CO-GUIDE : 3

MASTERS AWARDED AS SINGLE/ CO-GUIDE : 17

H-INDEX : 15

CITATIONS : 755

SUBJECTS TAUGHT:

- BSP 1203 Microbiology and Biotechnology Laboratory
- PHT 1118 Forensic Pharmacy and Drug Store Management
- GTT 2006 Green Biotechnology
- PHT 1602 Pharmaceutical Biotechnology
- PHT 1063 Pharmaceutical Biotechnology-BT
- PBT 2101 Pharmaceutical Biotechnology I



DR. PRAJAKTA DANDEKAR JAIN

Ph. D. (Tech.) in Bioprocess Technology
UGC Assistant Professor in Engineering Sciences

RESEARCH INTERESTS :

Nanocarriers for delivery of therapeutic nucleic acids and proteins, 2D and 3D cell cultures for preclinical investigations, tissue engineering, processing biopolymers for biomedical applications.

FELLOWSHIPS/ MEMBERSHIPS OF PROFESSIONAL BODIES:

- Young Associate of Maharashtra Academy of Sciences
- Fellow of European Respiratory Society
- Member, Standing Evaluation Committee for the review of proposals, European Respiratory Society, Switzerland
- Member, European Respiratory Society, Switzerland
- Member, Volunteer Recruitment Committee, Controlled Release Society, USA
- Mentor, Mentor-Protégé Program, Member, Controlled Release Society, USA

- Executive Committee Member, Controlled Release Society- Indian Chapter
- Member, Controlled Release Society- USA and Indian Chapter
- Member, Outreach Committee, American College of Clinical Pharmacology, USA
- Member, UDCT Alumni Association

HIGHLIGHTS OF RESEARCH WORK DONE AND ITS IMPACT :

The larger goal of my research has been development of safe and efficacious nanomedicines for alleviating cancer and infectious diseases. To achieve this goal I have integrated various principles of Pharmaceutical Sciences, Bioprocess Technology and Molecular biology as I progressed through a decade of my advanced studies. My early research was focused on development of polymeric nanoparticles of herbal anti-cancer agents like curcumin and ellagic

acid using commercially available and established polymers. When encapsulated within the nanoparticle systems, these agents exhibited better efficacy and bioavailability in animal models of inflammatory disorders like ulcerative colitis and infectious diseases like malaria. During my postdoctoral tenure, I explored potential of newer polymers like hydrophobic derivative of starch for delivering synthetic anticancer agent, docetaxel. Again, the drug-loaded nanoparticles exhibited better efficacy than the un-encapsulated drug by the virtue of their enhanced cellular uptake and retention within the cells. During the same time, I also explored the potential of cationic cyclodextrin based polymer-polyrotaxane for intracellular delivery of nucleic acid (siRNA) against a protein important for intra-macrophage survival of mycobacteria responsible for tuberculosis (TB). This application bears significance especially due

- PBL 2002 Microbiology and Molecular Biology Laboratory

RESEARCH STUDENTS:

RA - 1
Ph.D. (Tech.) - 10
Ph.D.(Sc) - 3
M.Tech. -8

RESEARCH PUBLICATIONS:

International - 11
Conference proceeding - 28

PATENTS :

Indian - 7

SPONSORED PROJECTS :

Government - 8
Private - 1

PROFESSIONAL ACTIVITIES:

- Member, Editorial Board, Asian Journal of Pharmaceutical

Sciences (AJPS, ISSN 1818-0876)

- Invited Member, Executive Committee, Controlled Release Society-Indian Chapter
- Member, Standing Evaluation Committee for the review of proposals, European Respiratory Society, Switzerland
- Member, European Respiratory Society, Switzerland
- Member, 'Chapter Engagement Task Force', Controlled Release Society, USA
- Mentor, Mentor-Protégé Program, Member, Controlled Release Society, USA
- Member, Outreach Committee,

American College of Clinical Pharmacology, USA

- Member, Controlled Release Society- USA and Indian Chapter
- Member, Indian Pharmaceutical Association (IPA)

SPECIAL AWARDS/HONOURS:

- M.V. Deshpande Young Scientist Award at the 11th Asia Pacific Chitin and Chitosan Symposium, 2016
- Galenus-Privatstiftung Award, Austria, 2016 to attend the 43rd Annual Meeting and Exposition of the Controlled Release Society, Seattle, USA, July 2016

laboratory,
Advanced pharmaceuticals, Targeted drug delivery systems

RESEARCH STUDENTS:

P.D.F.- 1,
Ph.D (Tech.)-19,
Ph.D.(Sci.)- 01,
M. Pharm-02,
M. Tech- 01

RESEARCH PUBLICATIONS:

International -

Research articles: 03
Review articles: 01
Research articles: 03
Review articles: 01
Conference proceeding- 9,
Books and Book chapter- 11

PATENS:

International – 1
Indian- 1

SPONSORED PROJECTS:

Government - 03
Private - 03

PROFESSIONAL ACTIVITIES:

- Expert member, DSIR
- Fellow, Maharashtra Academy of sciences, In.Jia

- Vice President, Controlled Release Society, Indian Chapter
- Convener, Association of Pharmaceutical Teachers of India- Women Forum
- Life Member, Association of Pharmaceutical Teachers of India
- Life Member, Indian Cosmetics Technologist Association
- Member, Indian society for Surface Science and Technology
- Life Member, Indian Pharmaceutical Association, Maharashtra State Branch
- Life Member, Indian Women Scientists Association
- Life Member, U.D.C.T. Alumni Association

SPECIAL AWARDS/HONOURS:

- Prof. Indira Parikh 50 women in education leaders award by 7th World Education Congress (2018)

Awards received by students

- Best oral presentation award at SELECTBIO 2019 on 'Novel Formulation Strategies 2019' in

session 'Academic Innovation Oral Presentations' for presentation on topic 'Cupposomes: Next generation nanoassembled lipidic drug delivery system' at Hyderabad, India 2019 (Dhoble S.)

- Second prize for presentation entitled "Development of novel nanotechnology based intranasal anti-Alzheimer's formulations" in the "Research Innovation Pitch Your Idea Competition" conducted by UDCT Alumni Association (UAA) at Institute of Chemical Technology, Mumbai, India 2019 (Naik S.)
- Best poster presentation awards at CRS-IC national seminar on "Excipients – Key challenges in formulation success" for poster entitled "Surface modified nanocarriers for treatment of cerebral malaria" and "Porous PLGA microscaffolds: A platform for 3D cell culture" at Pune, India 2018 (Dhage S., Pawar R.)



PROFESSOR (MRS.) VANDANA B. PATRAVALE

B.Pharm, M.Pharm, PhD (Tech)
Professor of Pharmaceutics

RESEARCH INTERESTS:

- Nanotechnology based drug and gene delivery systems (lipid, polymeric, micelle nanocarriers, nanosuspensions, micro/nanoemulsions and self-micro/nano emulsifying systems)
- Vaccines and adjuvants
- Nanodiagnosics
- Tissue engineering and scaffolds
- Medical devices viz. coronary stents, intrauterine devices etc.
- Novel carriers for solubilization and formulation development thereof

- Cosmeceuticals
- New polymer and lipid conjugates, surfactant synthesis
- Exploring potential of indigenous excipients
- Modified release dosage forms for all routes of administration

HIGHLIGHTS OF RESEARCH WORK DONE AND ITS IMPACT:

PUBLICATIONS (PEER REVIEWED) SO FAR: 194

PATENTS :

Granted – 11,
Applied - 29

CONFERENCE PROCEEDINGS/

PAPERS : 338

SEMINARS/LECTURES/ORATIONS DELIVERED : 123

Ph.D.S AWARDED AS SINGLE/ CO-GUIDE : 22

MASTERS AWARDED AS SINGLE/ CO-GUIDE : 64

H-INDEX : 41

CITATIONS : 6297

SUBJECT TAUGHT:

Pharmaceutics, Cosmeticology, Pharmaceutics laboratory – I, Pharmaceutics laboratory – II, Pharmaceutical Formulation Technology Lab I, Cosmeticology



PROFESSOR SADHANA SATHAYE

B.Pharm, M.Pharm, PhD (Tech)
Professor of Pharmacy

FELLOWSHIPS/ MEMBERSHIPS OF PROFESSIONAL BODIES :

- Fellow Maharashtra Academy of Sciences
- Registered pharmacist with Maharashtra State Pharmacy

- Council
- Chairperson, Institutional Animal Ethics Committee, ICT
- Nominee of CPCSEA
- Expert pharmacist at The Advertising Standards Council

- of India
- Consultant, Pharmaceutical Industry in India for API selection and evaluation of drug delivery systems
- Life Member of various

international/national scientific committees and bodies

- Member independent ethics committee for conduct of clinical studies
- Member of editorial board of few reputed journals

HIGHLIGHTS OF RESEARCH WORK DONE AND ITS IMPACT:

- Research is focused on role of inflammation in pathogenesis of neurological/neurodegenerative disorders like epilepsy, Parkinson's disease and Alzheimer's disease.
- Advanced glycation end (AGEs) products and related inflammation in Diabetes mellitus leading to diabetic complications is important focus as well.
- Herbal extracts, isolated phytoconstituents are studied extensively as a promising therapy of disorders as discussed above.
- The objective is to prevent the disorders and/or relieve the symptoms to provide good quality life to the patients.

- The studied molecules can be translated into probable therapeutics or nutraceuticals with specific activity and reduced side effects. This will have a social impact as well as important research contribution.

PUBLICATIONS (PEER REVIEWED) SO FAR : 73

PATENTS : 1 (APPLIED)

CONFERENCE PROCEEDINGS/PAPERS: 03

Ph.D.S AWARDED AS SINGLE/ CO-GUIDE : 01

MASTERS AWARDED AS SINGLE/ CO-GUIDE : 05

H-INDEX : 15

CITATIONS : 1026

SUBJECTS TAUGHT :

Anatomy, Physiology, Pathophysiology, (Theory/Practicals) Pharmacology (Theory/Practicals), Models for Drug Delivery system (Theory), Pharmacology (Theory/Practicals), Toxicology & Therapeutics (Theory), Physiopharmacology (Theory).

RESEARCH STUDENTS:

Ph.D. (Tech.) – 05

M.Tech/ M. Pharm- 08

PATENTS:

Indian- 01 (applied)

SPONSORED PROJECTS:

Government - 02

Private - 04

PROFESSIONAL ACTIVITIES:

- Chairperson, Institutional Animal Ethics Committee, ICT.
- Nominee of CPCSEA
- Expert pharmacologist at The Advertising Standards Council of India.
- Consultant, Pharmaceutical Industry in India for API selection and evaluation of drug delivery systems.
- Life Member of various international and national committees and societies

SPECIAL AWARDS/HONOURS:

- Vaibavi Peshattiwar won Best poster award at 4th Neurological Disorders Summit entitled "Evaluation of neuroprotective effect of Ursolic acid in Rotenone induced Parkinson's disease in rats", held on July 23 - 25, 2018 at Los Angeles, CA, USA.



PROF. V. N. TELVEKAR

B. Sc, B. Sc (Tech.); M. Sc (Tech); Ph D. (Tech.)

Professor in Pharmaceutical Chemistry

RESEARCH INTEREST:

- Invention of New Reaction and Reaction System.
- Design of Novel Bioactive Molecules Using Computed Aided Drug Design.
- Total synthesis Bioactive Natural Products.
- Process Development.

HIGHLIGHTS OF RESEARCH WORK DONE AND ITS IMPACT:

Invention of New Reactions and Reaction System:

The principles of green chemistry also motivate me to create new synthetic methods. Here I have been focusing on the employment of novel application of exiting reagents as well as novel reagent system developed for chemical transformations.

Design and Synthesis of Novel Bioactive Molecules using Computer Aided Drug Design:

I am exploring my knowledge in the area of medicinal chemistry. Currently I am working on novel bioactive molecules which are designed by technique like pharmacophore and structure based drug design using various software. These designed molecules are synthesized and evaluated.

Total Synthesis of Bioactive Natural Products:

The unifying thesis behind all of our

methodological and mechanistic studies is that the chemistry to emerge from such studies should be applicable to real synthetic problems. I view target synthesis as the best proof of this concept.

Process Development:

In our globally-linked economy, process development capabilities are the basis for successful competition. Successful process development requires fundamentally improved approaches to reducing waste, innovation, scale-up, technology transfer and optimization of manufacturing processes. My interest is to accomplishment of these objectives.

PUBLICATIONS (PEER REVIEWED) SO FAR : 59

PATENTS: 09

CONFERENCE PROCEEDINGS/PAPERS: 30

SEMINARS/LECTURES/ORATIONS DELIVERED : 02

Ph.D.s AWARDED AS SINGLE/ CO-GUIDE : 10

MASTERS AWARDED AS SINGLE/ CO-GUIDE: 40

H-INDEX :12

CITATIONS : 549

SUBJECTS TAUGHT :

Advanced Pharmaceutical Chemistry (M. Pharm & M. Tech.)

RESEARCH STUDENTS:

Ph.D. (Tech.) – 09

M.Tech. - 01

M.Pharm – 01

RESEARCH PUBLICATIONS:

International - 03



PROFESSOR P. R. VAVIA

B. Pharm., M.Pharm., Ph.D. (Tech), FIPA, FMASc
Dean (AP), Professor of Pharmaceutics

RESEARCH INTERESTS:

- Cyclodextrins based drug delivery systems
- Nanosponge based drug delivery system
- Transdermal drug delivery systems
- Nanosuspension, Bioencapsulation, Multiparticulate drug delivery system
- Lipid based colloidal formulations
- Modified release films
- Polymer synthesis for drug delivery
- Melt Extrusion Technology
- Oral liquid dosage forms
- Techniques in solubilization
- Liposome based Drug Delivery Systems
- Protein and peptide drug delivery systems

FELLOWSHIPS/ MEMBERSHIPS OF PROFESSIONAL BODIES :

Memberships & Honorary positions:

- Life member, Indian Pharmaceutical Association
- President, Indian Pharmaceutical Association (2002-2004) (Maharashtra State Branch)
- Member, Association of Pharmacy Teachers of India (APTI)

- Member, Royal Pharmaceutical Society of Great Britain (Hon. Membership)
- Inspector appointed by Pharmacy Council of India for Inspection of Institutions
- Inspector appointed by AICTE for Inspection of Institution
- Member, Editorial board of Indian Journal of Pharmaceutical sciences.
- Editorial Board of Pharma Times
- Expert Member, DSIR for inspection of industrial R & D facility
- Nominee of Vice-chancellor for appointment of teachers of Mumbai University
- Academic Dean, Institute of Chemical Technology, (2012 to till date)
- Member, International Advisory board, Asian Oceanic Cyclodextrin League
- Scientific Convener, Indian Pharmaceutical Congress Association, 2006-2009.
- Member of Italian Cyclodextrin League.
- Convener, 5th Young Innovative Choice Competition (YICC) and Young Research Competition (YRC), 2010-2011
- IDMA Technical Sub-Committee

- Governing Body Bombay college of pharmacy
- Western Region Subcommittee of AICTE

Reviewer of

- AAPS Pharm Sci-Tech
- International Journal of Pharmaceutics
- Nanomedicine: Nanotechnology, Biology, and Medicine
- Indian Journal Pharmaceutical Sciences
- Pharmaceutical research
- Journal of pharmacy and Pharmacology
- AIChE Journal
- Journal of Controlled Release

HIGHLIGHTS OF RESEARCH WORK DONE AND ITS IMPACT :

single-spaced pages with figures/ diagrams etc.:

Going with the pace of growing pharmaceutical sector, Prof. P.R. Vavia and his research group is involved in fundamental as well as industrial research allied to interdisciplinary areas of pharmaceutical science. The principal objective of research is always set to surmount constraints for efficient delivery of potential drug candidates and fabrication of value added non-infringing drug formulations. Research work based on cyclodextrin and their

derivatives, nanosponge based drug delivery systems, transdermal drug delivery systems, synthesis and development of nanocarriers and polymer conjugates for active tumor targeting, techniques in solubilization of poorly water soluble drugs, hot melt extrusion, nanoemulsion, microemulsion, nanosuspensions, Bioencapsulation of poorly soluble actives, modified release multiparticulate drug delivery systems, application of particle engineering strategies, protein and peptide based drug delivery systems, synthesis and application of novel polymers and excipients is going on with expected outcomes of industrial applicability and scalability.

To the date more than 25 technologies are successfully commercialized. To name a few, Fentanyl Transdermal Patch (FENSTUD), Rusan Pvt Ltd, Self microemulsifying drug delivery system of Cyclosporin (PROMUNER) by Mega Lifesciences, Cyclodextrin based formulations of poorly water soluble drugs like Nimesulide and Rofecoxib (ROFF-BCD-50) by Unichem Pvt Ltd, Novel tablet formulation of Itraconazole (ESZOLE) by Kusum Healthcare Ltd, Extended release matrix, bilayer, film coated tablet of Furosemide (ROSEMIDE) by Kusum Healthcare Ltd, Combination drug product of Metformine Acarbose Tablet (GLUCOBAY M 25 & GLUCOBAY M 50) by Bayer Pvt Ltd, etc.

Manpower Development in formulation technology, validation of analytical methods, In-vivo studies of developed formulations and preparation of Common Technical Document (CTD) as per regulatory requirements of international markets has given equal importance to meet the international standards.

PUBLICATIONS (PEER REVIEWED) SO FAR : 149

PATENTS : 11 (3 PCT and 8 Indian)

CONFERENCE PROCEEDINGS/ PAPERS : 42

SEMINARS/LECTURES/ORATIONS DELIVERED : 252

Ph.D'S AWARDED AS SINGLE/ CO-GUIDE : 43 (Single)

MASTERS AWARDED AS SINGLE/ CO-GUIDE : 57 (Single)

H-INDEX : 29

CITATIONS : >3060

SUBJECTS TAUGHT:

M. Tech. (Pharma), (Pharmaceutics), Drug Delivery System I & II, Advanced Pharmaceutics, Biopharmaceutics

RESEARCH STUDENTS :

Ph.D. (Tech.) - 13

M. Pharm. – 2

RESEARCH PUBLICATIONS:

International - 128

National - 21

Peer-reviewed - 149

Conference proceeding - 250

PATENTS:

International – 3 (Published)

Indian – 8 (Granted) and > 30 (Complete specification)

SPONSORED PROJECTS:

Government - 1

Private - 2 (ongoing)

SPECIAL AWARDS/HONOURS:

- Research Fellow of Human Resources Development
- Junior Research Fellow of Department of Atomic Energy
- Senior Research Fellow of Department of Atomic Energy
- Fellow, Indian Pharmaceutical Association, 2003 awarded at Indian Pharmaceutical Congress, Chennai, Dec. 21st -23rd, 2003
- Johnson and Johnson, USA, Research Award (US\$ 20,000), 2001.
- U.P. Government National Award for an outstanding work done

in the area of interaction with Industries, 2005.

- Maharashtra Fellow for Medical Sciences, 2006.
- Best Teacher's Award, University Institute of Chemical Technology at undergraduate level, 2007.
- Distinguish Teacher Award, Maharashtra Pharmacy Association, 2009.
- "Incentives to Meritorious Teachers", Dr. K. H. Gharda Reward, Board of Governors, Institute of Chemical Technology, 2009.
- Best Teacher's Award, University Institute of Chemical Technology at undergraduate level, 2010.
- Best Teacher's Award, Institute of Chemical Technology at undergraduate level, 2012.
- Best Teacher's Award, Institute of Chemical Technology at undergraduate level, 2014.
- Prof. P. R. Vavia awarded VASVIK Award in the category of Biological Sciences & Technology, for developing the Novel Drug Delivery Systems, Synthesis and application of novel polymers and excipients and targeted drug delivery in cancer treatment, January 2015.
- Best Teacher's Award, Institute of Chemical Technology at undergraduate level, 2016.
- Best Teacher's Award, Institute of Chemical Technology at undergraduate level, 2018.
- Awarded with Global RESOMER Award 2017 (third position) for developing the "Novel bilayer dissolving microneedle arrays with concentrated PLGA nano-microparticles to targeted intradermal delivery: Proof of concept".

SUPPORTING STAFF



Dr. Ravindra V. Sawant
Technical Assistant



Mrs. Anita Bankar
Lab Assistant



Mrs. Mithila M. Sardar
Lab Assistant



Mr. Mahendra T. Kudekar
Animal House Assistant



Mr. Sunil N. Jadhav
Lab Assistant



Mr. Hemanta Kumar G. Sahoo
Lab Assistant



Mr. Santosh D. Chile
Lab Attendant



Mr. Kiran T. Chaudhari
Lab Attendant



Mr. Krishna B. Dhengale
Lab Attendant



Ms. Rekha Khatal
Lab Attendant



Mr. Rajendra Kambale
Lab Attendant

UNDER GRADUATE STUDENT SEMINAR /PROJECT

Final Year B. Tech. Project 2018-19

Roll No	Student Name	Project Topic	Guide
13PHT1011	Hersh Bendale	Butylated hydroxy toluene	Prof. G. D. Yadav
14PHT1016	Shubham Kumawat	Design a plant to manufacture 2-amino pyrimidine (key intermediate for sulphadiazine)	Prof. Shreerang V. Joshi
15PHT1001	Utkarsh Gupta	Optimization of synthesis of Bifonazole - an imidazole antifungal drug	Prof. A. V. Patwardhan
15PHT1003	Anay Navandar	Studies of value added products from Rosemary essential oil and its applications	Dr. Chandu S. Madankar
15PHT1004	Trisha Saxena	Pickering Emulsions in Personal Care Products	Prof. P.D. Amin
15PHT1005	Ameya Chaudhari	Microencapsulation techniques for Vitamins, Volatile Oils and Flavour	Prof. P.D. Amin
15PHT1006	Parth Naik	Process development for Tranexamic acid	Prof. Vikas N Telvekar
15PHT1009	Mayur Pujara	Assessment of gains accruing from Integration of indigenous potassium sulphate process with Mannheim process	Prof. Anand Patwardhan
15PHT1010	Tanmay Parekh	Development of Functional Wheat Bread with Fermented Legume Flour	Dr. Snehasis Chakraborty
15PHT1012	Shweta Jogi	Pickering Emulsions in Personal Care Products	Prof. P.D. Amin
15PHT1015	Anishka Umathe	Studies of value added products from Rosemary essential oil and its applications	Dr. Chandu S. Madankar
15PHT1016	Yashomangalam Bhutada	Development of Functional Wheat Bread with Fermented Legume Flour	Dr. Snehasis Chakraborty
15PHT1017	Suyash Patil	Process development for Oxindoles	Prof. Vikas N Telvekar
15PHT1018	Omkar Parkhi	Process development for Oxindoles	Prof. Vikas N Telvekar
15PHT1019	Ashish Nikam	Assessment of comparative merits of liquid bromine and bromide-bromate intermediate of air blowing process in commercially important bromination reactions.	Prof. Anand Patwardhan
15PHT1020	Prabhas Jagdale	MTBE synthesis from Methanol and t butanol	Prof. G. D. Yadav
15PHT1021	Sachin Binnar	Optimization of synthesis of Bifonazole - an imidazole antifungal drug	Prof. A. V. Patwardhan
15PHT1022	Amruta Dandekar	Microencapsulation techniques for Vitamins, Volatile Oils and Flavour	Prof. P.D. Amin

UNDER GRADUATE STUDENT SEMINAR/ PROJECT		
Final Year B. Tech. Seminar 2018-19		
Roll Number	Student Name	Project topic
Prof. S. V. Joshi		
15PHT1015	Anishka Umathe	Synthesis of Dabigatran, an anticoagulant
15PHT1006	Parth Naik	Synthesis of Apixaban
Prof. Mariam S. Degani		
13PHT1011	Hersh Bendale	Deuteration of Functional Groups
Prof. P. D. Amin		
15PHT1004	Trisha Saxena	Lipid formulations
15PHT1012	Shweta Jogi	Pickering emulsions for personal care products
Dr. G. U. Chaturbhuj		
15PHT1019	Ashish Satish Nikam	Synthesis of Cancer Therapeutics Intermediates and Antifungal Intermediates
Dr. H. K. Chaudhari		
15PHT1003	Anay Navandar	Recent advances in drug discovery via design of dual inhibitors.
15PHT1021	Binnar Sachin	Route's of synthesis of Crizotinib (Anticancer Drug)
Prof .P. V. Devarajan		
15PHT1017	Suyash Mahesh Patil	Advances in Gastroretentive Drug Delivery System
Dr. P. D. Jain		
15PHT1010	Tanmay Parekh	3D Bioprinting of human skin
Prof. K.S. Laddha		
15PHT1016	Yashomangalam Bhutada	Microfine Neem Powder formulation and biopesticide formulation
15PHT1018	Omkar Parkhi	Formulating Energy Substitutes
Prof. V. B. Patravale		
15PHT1005	Ameya Chaudhari	Erythrocytes inspired Drug Delivery Carriers
15PHT1022	Amruta Dandekar	Bicontinuos cubic phases for drug delivery
Prof. S. Sathaye		
15PHT1009	Mayur Pujara	Biomarkers of functional neuron
Prof. V. N. Telvekar		
14PHT1016	Shubham Kumawat	Synthesis of any compound in aqueous solvent
Prof. P. R. Vavia		
15PHT1020	Prabhas Jagdale	Breast Cancer and Biologics

FINAL YEAR B. PHARM HOME PAPER 2018-19		
Prof. S. V.Joshi		
Roll Number	Student Name	Project topic
15PHA1014	Pratik Gite	Synthesis of Bromhexine HCL
15PHA1015	Sushil Lahurao Chavan	Synthesis Of Bifonazole
15PHA1007	Omkar Deshpande	Synthesis of olmutinib and pitolsant hydrochloride
Prof. Mariam S. Degani		
15PHA1013	Ketaki Dhurve	Peptidomimetics as ACE Inhibitors for Hypertension
15PHA1020	Tejal Rajaram Varekar	Anticoagulants
Prof. A. R. Juvekar		
15PHA1030	Aishwarya Bhasi	Unfolding the rare: Livedoid vasculopathy
15PHA1002	Akhil Shah	Multiple Sclerosis - Stem cell therapy: Special emphasis on human embryonic stem cells
Prof. P. D. Amin		
15PHA1025	Shweta Sabu	Nano silver formulation for wound healing
15PHA1029	Tanvi Sanjay Patil	Formulation for treatment of dry mouth
Prof. G. U. Chaturbhuj		
15PHA1019	Priyanka Yashwant Bare	Synthesis of brivaracetam and opicapone
Dr. H. K. Chaudhari		
15PHA1004	Ragini Pillay	Synthesis of Binimetinib
15PHA1017	Viraj Modak	Synthesis of Doravirine
15PHA1031	Shreya Sunil Dalvi	A novel approach for enantioselective synthesis of Lofexidine
Prof . P. V. Devarajan		
15PHA1003	Aashvi Jain	Intrascleral delivery of Ranibizumab using biodegradable microneedles for the treatment of Macular Degeneration
15PHA1016	Priyanka Dattatray Salunkhe	Antibiotic beads for Osteomyelitis
Dr. P. D. Jain		
15PHA1010	Poorva Taskar	Encapsulation of Probiotics via an emulsion gelation system
15PHA1024	Gauri Bhatkhande	Protection of probiotic bacteria from heat stress during spray drying
15PHA1026	Apurva Rajesh Pardeshi	A Novel Strategy to Enhance the ADCC activity of Monoclonal Antibodies
Prof. K.S. Laddha		
15PHA1006	Nilesh Kulkarni	Medicine for dengue
15PHA1009	Aditya Sindhusagar Dhule	Extraction of Ferulic acid.
Prof. V. B. Patravale		
15PHA1027	Drashty Mehta	To increase blood flow to the extremities for diabetic patients
15PHA1028	Purav Shah	A noninvasive drug delivery for Neovascular Age -related Macular Degeneration
Prof. S. Sathaye		
15PHA1005	Sanika Shashank Naware	Type 3 diabetes: Alzheimer's due to insulin resistance in Brain.
15PHA1001	Pooja Naik	Amyloid proteins: Help or Hindrance?

Dr. V. N. Telvekar		
15PHA1008	Rajesh Dugane	Montelukast Sodium Dry syrup
15PHA1021	Asang Borkar	Nelfinavir Mesylate as a liquid syrup
Prof. P. R. Vavia		
15PHA1012	Chaitali Shah	Targeted therapy for gastroenteropancreatic cancer
15PHA1022	Shakshi Singh	Etanercept - Sustained Release Parenteral

T. Y. B. PHARM SEMINAR 2018-19		
Prof. Mariam S. Degani		
15PHA1018	Rahul Ambhore	Overview of some APIS containing 6 membered nitrogen heterocyclic ring
Prof. P. D. Amin		
16PHA129	Zubiya Pathan	Xerostomia-causes and treatments
Dr. G. U. Chaturbhuj		
16PHA111	Harshawardhan Wadmare	Review on synthesis of selexipag and opicapone
16PHA125	Sushil Bondre	Review on synthesis of crisaborole and pimavanserin
Prof. P. V. Devarajan		
16PHA115	Pintu Rathod	Intra-articular Drug Delivery System
Dr. H. K. Chaudhari		
16PHA123	Sumedh Bahadure	Indiplon
16PHA119	Shriganesh Tak	Antidepressants
Prof. A. R. Juvekar		
16PHA126	Tejaswini More	Targeting Drug Resistance in Glioblastoma Multiforme
Dr. P. D. Jain		
16PHA105	Alina Patel	Strategies to manipulate glycosylation of monoclonal antibodies for enhanced biological activity
Prof. S. V. Joshi		
15PHA1023	Mamta Kamble	Gelucire and its applications in Pharmaceuticals
Prof. K.S. Laddha		
16PHA106	Amina Khan	Trichothecenes
Prof. V. B. Patravale		
16PHA114	Nitisha Gurav	Surgical Glues
Prof. S. Sathaye		
16PHA107	Avni Shah	The Pharmaceutical Sector: From Drug Discovery to Recall (A Complete Evaluation)
Dr. V. N. Telvekar		
16PHA101	Abhijeet Kanode	Advances of Synthesis in 1,2,3-triazole
Prof. P. R. Vavia		
16PHA109	Sanika Chivate	Targeted Drug Delivery in Cancer

POST GRADUATE STUDENTS

M Pharm Seminar & Critical Review 2018-19		
Prof. S. V. Joshi		
18PHC204	Anannya Sircar	Newer anticoagulant drugs, and their structure activity relationships. Perspectives about the structural similarity of linezolid and rivarixaban
Prof. M. S. Degani		
18PHC201	Nachiket Narendra Dandekar	Deuterated drugs in Medicinal chemistry: Methods of synthesis and Applications
Prof. P. D. Amin		
18PHP202	Shruti Lohakare	Role of silver nanoparticle in wound care
18PHP205	Kaustubh Pawar	Customized API and Excipients
Dr. G. U. Chaturbhuj		
18PHC205	Amol Balu gare	LCMS-orbit trap
18PHC206	Akash Kerba Jakkalwad	N-Halogen amide derivatives containing oxidizing agent
Prof. P. V. Devarajan		
18PHP207	Acharya Prayas	Impact of Nanoparticle Shape in Targeted Drug Delivery
Dr. H. K. Chaudhari		
18PHC202	Divya Rane	Dual inhibitors as new strategy for drug discovery
18PHC203	Rashmi sahu	HIV Inhibitors
Prof. A. R. Juvekar		
18PHM201	Priyanka Panchal	Insulin Resistance and Parkinsons Disease
Prof. K.S. Laddha		
18PHM204	Nitesh Jaiswal	Natural hair colorants and their chemistry
18PHM205	Yash Gujarathi	Natural protein based sweeteners from botanicals
Prof. V. B. Patravale		
18PHP201	Shridhar Divate	Aptamer in neurodegenerative diseases
18PHP203	Pankaj Gupta	Innovative approach for treatment and prevention of brain aneurysm
Prof. S. Sathaye		
18PHM202	Chetana More	Role of mitochondria and mitochondrial DNA in chronic disease as diabetes
18PHM203	Neha Pai	Insulin Resistance: Implications and Nutraceutical/Herbal Remedies
Prof. P. R. Vavia		
18PHP204	Mahesh Mengade	Recent Advances and Challenges in mucoadhesive formulations
18PHP206	Manindra Mahapatra	Recent advancement in mouth ulcers

M. Tech. Seminar & Critical Review 2018-19		
Prof. S. V. Joshi		
18PHT211	Shivani Gokul Bhokare	Synthesis of Bisoprolol Fumarate
18PHT215	Supriya Ruprao Morey	Synthesis of Brimonidine Tartrate
Prof. Mariam S. Degani		
18PHT209	Pratap Piraji Sarode	methods of synthesis of alkyl resorcinols
18PHT212	Shrithesh Dinanath Jagtap	Synthesis of Orotic Acid
Prof. P. D. Amin		
18PHT213	Shweta Shivpal Singh	Amorphous solid dispersion for solubility Enhancement of BCS class II drugs
18PHT208	Prashik Subhash Jamdhade	Fluid Bed Processing-Design & Application
Dr. G. U. Chaturbhuj		
18PHT205	Maya Chandrakant Mali	Impact of mother liquor recycle on the impurity buildup in crystallization processes
Prof. P. V. Devarajan		
18PHT206	Rahane Ajit Meghana	Exosomes for drug delivery system
18PHT217	Tamilselvan V	Mesoporous Silica Nanoparticles for Targeted Drug Delivery Systems
Dr. H. K. Chaudhari		
18PHT203	Jagdish Ramrao Jadhav	Determination of curcuminoids in curcuma longa l. by HPLC coupled with electrochemical detector
18PHT218	Varad Rajeev Muthal	Cytochrome P450: Exploiting diversity and application as biocatalyst
Dr. P. D. Jain		
18PHT207	Mrudula Prakash Waghmare	3D-Printing of Tablets: A new vision of personalised medicine
18PHT210	Sanjay Santaram Malge	Green Techniques for Microneedle Fabrication
Prof. K.S. Laddha		
18PHT202	Irfan Dastgir Manulla	Separation of Various Products from Castor Oil (Undecylenic Acid and Azelaic Acid)
Prof. V. B. Patravale		
18PHT201	Avinash Gunjal	Glioblastoma: Treatment, challenges and way forward
18PHT204	Madhuri Kshirsagar	A novel nanoparticles impregnated ocular insert for enhanced bioavailability to the posterior segment of an eye: In vitro, in vivo and stability studies
Prof. P. R. Vavia		
18PHT216	Suyog Pande	Recent trends in ophthalmic drug delivery system.

M. Tech. Pharm Biotech. Seminar & Critical Review 2018-19		
Prof. S. V. Joshi		
18PBT201	Khushboo Maurya	Role of Antioxidants in prevention of Alzheimer's disease
Prof. M. S. Degani		
18PBT205	Shubham Saini	Downstream purification of Monoclonal Antibodies
Prof. P. V. Devarajan		
18PBT207	Sushant Balasaheb Jadhav	Bioprinting and Bioinks -A new paradigm for 3D organ development
Prof. P. D. Jain		
18PBT202	Nitin Rawat	Biomarkers for determination of mitochondrial function and their applicability as diagnostics
Prof. V. B. Patravale		
18PBT203	Prachi Bansal	Temperature stable vaccines
Prof. S. Sathaye		
18PBT207	Vijay Chaudhary	3D Bio-printing of mammalian tissues

M Pharm Research Project I 2018-19		
Prof. S. V. Joshi		
18PHC201	Nachiket Narendra Dandekar	Synthesis of Apixaban intermediate
Prof. M. S. Degani		
18PHC204	Anannya Sircar	Biological screening of potential anti-infective agents
Prof. P. D. Amin		
18PHP206	Manindra Mahapatra	Formulation and characterization of topical oral care products
18PHP207	Acharya Prayas	Formulation and characterization of wound care products
Dr. G. U. Chaturbhuj		
18PHC202	Divya Rane	Rational In-silico Molecular Modeling for Neglected Tropical Disease Leishmaniasis
18PHC203	Rashmi Sahu	Computer aided Molecular Modeling and synthesis of new entities for Disease Filariasis
Prof. P. V. Devarajan		
18PHP204	Mahesh Mengade	Innovative drug delivery for coccidiosis
Dr. H. K. Chaudhari		
18PHC206	Akash Kerba Jakkalwad	Drug design, molecular docking, QSAR model development and synthesis of Halogenated phenazine derivatives as an antimicrobial agent against MRSA
18PHC205	Amol Balu Gare	Synthesis of benzofuran and its derivatives as antibacterial agent
Prof. A. R. Juvekar		
18PHM202	Chetana More	Extraction and isolation of beta amylin from various plant
18PHM203	Neha Pai	Separation of gamma Oryzanol from rice bran
Prof. K.S. Laddha		
18PHM204	Nitesh Jaiswal	Evaluation of phytoconstituent Morin in Ips induced memory impairment model in mice

Prof. V. B. Patravale		
18PHP202	Shruti Lohakare	Formulation & Characterization of ophthalmic drug delivery system.
18PHP205	Kaustubh Pawar	Metalodendrimers for burn management and wound healing & Formulation of Nanocochleates
Prof. S. Sathaye		
18PHM201	Priyanka Panchal	Pharmacodynamic evaluation of luteolin formulation in rotenone model of parkinson disease
18PHM205	Yash Gujarathi	Pharmacokinetic evaluation of luteolin in rats
Prof. P. R. Vavia		
18PHP201	Shridhar Divate	Development and evaluation of probiotic formulation.
18PHP203	Pankaj Gupta	Solubility enhancement of BCS class II drug using cyclodextrin complexation.

M. Tech. Pharma Research Project I 2018-19		
Prof. S. V. Joshi		
18PHT209	Pratap Piraji Sarode	Design and synthesis of deferiprone
18PHT202	Irfan Dastgir Manulla	Synthesis of Iron Chelating Agent (Deferasirox)
Prof. Mariam S. Degani		
18PHT211	Shivani Gokul Bhokare	Continuous flow process development for the synthesis of volatile oils
18PHT215	Supriya Ruprao Morey	Extraction and Isolation of polyphenols from the peels of orange Fruit
Prof. P. D. Amin		
18PHT204	Madhuri Kshirsagar	Various approaches for targeting posterior segment of eye with nanosystem
18PHT217	Tamilselvan V	Preparation of Amorphous Solid Dispersion for solubility enhancement.
Dr. G. U. Chaturbuj		
18PHT210	Sanjay Santaram Malge	Synthesis of Prostaglandin analogs
18PHT207	Mrudula Prakash Waghmare	Synthesis of Drug intermediate Corey lactone P
Prof. P. V. Devarajan		
18PHT213	Shweta Shivpal Singh	Oral bio-enhanced drug delivery system
18PHT216	Suyog Pande	ATIS for ophthalmic drug delivery system
Dr. H. K. Chaudhari		
18PHT212	Shritesh Dinanath Jagtap	Design and synthesis of novel Benzofuran and its derivatives as antibacterial agent
18PHT205	Maya Chandrakant Mali	Design and synthesis of Inhibitors for the treatment of pain
Dr. P. D. Jain		
18PHT201	Avinash Gunjal	Solubility enhancement of BCS class II and IV drug by using biopolymer
18PHT203	Jagdish Ramrao Jadhav	simultaneous evaluation of dissolution and permeation of drugs

Prof. K.S. Laddha		
18PHT218	Varad Rajeev Muthal	Development of affordable technology for isolation of Gallic Acid from Myrobalan Fruits (Terminalia Chebula Linn.)
Prof. V. B. Patravale		
18PHT208	Prashik Subhash Jamdhade	Functional Co-processed excipient for pharmaceutical application
Prof. P. R. Vavia		
18PHT206	Rahane Ajit Meghana	Formulation and Development of Medicated Gauze

M. Tech. Pharm Biotech. Research Project I 2018-19		
Prof. S. V. Joshi		
18PBT201	Khushboo Maurya	A Comparative study regarding Chemical synthesis and characterization of tripeptides
Prof. M. S. Degani		
18PBT205	Shubham Saini	Biotransformation studies of pharmaceutical drugs and natural products by Cunnighamella elegans
Prof. P. V. Devarajan		
18PBT207	Sushant Balasaheb Jadhav	Point of care for clinically significant blood group
Prof. P. D. Jain		
18PBT202	Nitin Rawat	Bio printing of gut cells using gelatin based bio ink
Prof. V. B. Patravale		
18PBT203	Prachi Bansal	Fabrication of phospholipid vesicle based invitro blood brain barrier model
Prof. S. Sathaye		
18PBT207	Vijay Chaudhary	Invitro evaluation of luteolin as it neuro productive nature in vitro neuroblastoma cell line model

RESEARCH TOPICS (THESIS WORK)				
Ph. D. (Tech.)				
No.	Research Scholar	Previous Institute	Project	Supervisor
1.	Sandeep R. Avadutha	D. G. Ruparel College	Synthesis of Biological active compound	Prof. S. V. Joshi
2.	Pritam V. Bagwe	ICT, Mumbai	Synthesis of Biologically active peptide and related compound	Prof. S. V. Joshi
3.	Vaingankar Pradya	ICT	Hot melt extrusion for fixed dose combinations of anti-diabetic and anti-hypertension therapy	Professor P. D. Amin
4.	Tausif K	UICT, Jalgaon	Development of novel modified release formulation using continuous process technology.	Professor P. D. Amin
5.	Surwanshi Dilip	Mumbai University	Development and evaluation of innovative bioenhanced formulations	Professor P. D. Amin
6.	Shinde Umesh	ICT	Hot melt extrusion in novel drug delivery system	Professor P. D. Amin
7.	Jha Durgesh	ICT	Topic Approval Awaited	Professor P. D. Amin
8.	Shah Devanshi	ICT	Topic Approval Awaited	Professor P. D. Amin
9.	Sunny Wankhade	UDPS, Nagpur	Topic Approval Awaited	Professor P. D. Amin
10.	Sharda D'Souza	Mumbai University	Topic Approval Awaited	Professor P. D. Amin
11.	Purushottam Sutar	-	In process	Dr. Ganesh U. Chaturbhuj
12.	Sushant Bhalerao	-	In process	Dr. Ganesh U. Chaturbhuj
13.	Pravin Khedkar	-	In process	Dr. Ganesh U. Chaturbhuj
14.	Prena Anil Ganwir	-	In process	Dr. Ganesh U. Chaturbhuj
15.	Vaishali Jadhav	-	In process	Dr. Ganesh U. Chaturbhuj
16.	Wani Rucha	-	Design, Synthesis and Evaluation of Novel Nitrogen Containing Heterocycles as anti-infective agents	Dr. H. K. Chaudhari
17.	Khambete Mihir Promod	Institute of Chemical Technology	Design and synthesis of molecular libraries for Alzheimers disease	Prof. Mariam S. Degani
18.	Anantram Aarti	Prin. K.M. Kundnani College of Pharmacy	Targeting cellular pathways for the design and synthesis of small molecule anticancer agents	Prof. Mariam S. Degani

19.	Agre Neha Pradeep	Institute of Chemical Technology	Design, Synthesis and Biological Evaluation of Novel Antituberculosis Agents	Prof. Mariam S. Degani
20.	De Suparna Subrata	SCOP Vadgaon, Pune	Lead optimization of molecules for tuberculosis	Prof. Mariam S. Degani
21.	Chatale Bando Chhagan	NIPER, Mohali	Taste masking by inhibition of taste receptors	Prof. Mariam S. Degani
22.	Likhite Vishakha vivek	Bombay college of pharmacy	To be finalised	Prof. Mariam S. Degani
23.	Joshi Bhagyashri	Mumbai Education Trust Institute of Pharmacy	Drug Adsorption Models for predicting Bioenhancement Strategies for Poorly Permeable Drugs	Professor P.V. Devarajan
24.	Chawla Shweta	ICT	Inorganic Nanocarriers in drug delivery and diagnosis	Professor P.V. Devarajan
25.	Jahagirdar Priyanka	ICT	Nano drug delivery systems for targeted delivery of anti-tubercular agents	Professor P.V. Devarajan
26.	Das Saugandha	JSS, Mysore	Nanocarriers for targeted drug delivery to the RES	Professor P.V. Devarajan
27.	More Krantisagar	Sinhagad College of Pharmacy, Vadgaon	Nanotechnology approaches for bioenhanced delivery of nutraceuticals and nutraceutical drug combinations	Professor P.V. Devarajan
28.	MaithaniaHeena	KMKCP	Nanoparticulate drug delivery systems for targeted therapy of infectious diseases	Professor P.V. Devarajan
29.	Kotak Darsheen	Ramanbhai Patel Institute of Pharmacy, Charotar University	Nanocarriers for Bioenhanced and Targeted Delivery in Osteoporosis.	Professor P.V. Devarajan
30.	Joshi Harsh	Shri Sarvajani Pharmacy College	Formulation of Controlled and Novel Drug Delivery systems	Professor P.V. Devarajan
31.	John Riyo	Amrita institute of medical science and research centre	Formulation Development of In Situ Nanosuspension	Professor P.V. Devarajan
32.	Wavhule Pradip	SGRS college of Pharmacy, Pune	Microwave assisted Drug Delivery Systems	Professor P.V. Devarajan
33.	Vinod Ipar	UICT, Jalgaon	Bioenhanced Nutraceutical Delivery System	Professor P.V. Devarajan
34.	Lokhande Amit	ICT, Mumbai	Inhalable Nanocarrier based Drug Delivery System for Lung Targeting	Professor P. V. Devarajan
35.	Shevade Sukhada	Bombay College of Pharmacy	Long Acting Parenteral Depot Systems for Alzheimer's Disease Mumbai	Professor P. V. Devarajan
36.	Kudale Pawan	AISSMS, Pune	Intramuscular Controlled Release Implant	Prof. P. V. Devarajan
37.	Todke Pooja	NIPER, Ahmedabad	Amphoterecin B Nanoformulation by Facile Insitu Process	Prof. P. V. Devarajan

38.	Attar Esha	Sinhagad College of Pharmacy, Vadgaon, Pune	Bioenhanced & Targeted drug delivery system of deuterated Mitocurcumin	Prof. P. V. Devarajan
39.	Dhage Pratibha Ninaji	M.G.V College of Pharmacy, Nashik	Evaluation of biologically active compounds for neuroprotective effect	Professor A. R. Juvekar
40.	Gursahani Malvika Sunil	Bharati Vidyapeeth College of Pharmacy, Navi Mumbai	Evaluation of biologically active compounds in neurodegenerative disorders	Professor A. R. Juvekar
41.	Pai Sarayu Arvind	Bombay College of Pharmacy	Evaluation of phytoconstituents in obesity and its complications	Professor A. R. Juvekar
42.	Chowdhury Amrita Ashokkumar	ICT, Mumbai	Evaluation of neuropharmacological profile of naturally occurring compounds in neurodegenerative disorders	Professor A. R. Juvekar
43.	Mestry Snehal Nitin	ICT, Mumbai	Phytochemical and Pharmacological investigations of Punica Granatum Linn. In Diabetic Nephropathy	Professor A. R. Juvekar
44.	Gursahani Malvika	BVP, Mumbai	Evaluation of biologically active compounds in neurodegenerative disorders	Professor A. R. Juvekar
45.	Pai Sarayu	BCP, Mumbai	Evaluation of phytoconstituents in obesity and its complications	Professor A. R. Juvekar
46.	Gore Manish	ICT	Micro-fluidic technology for in-vitro organ engineering	Dr. Prajakta Dandekar Jain
47.	Bangde Prachi	ICT	Development of palladium complexes as anticancer agents	Dr. Prajakta Dandekar Jain
48.	Dobhal Anurag	IIIT	Development of continuous process for the preparation of polymeric nano-particles and studying their interactions with lipid bilayers by molecular dynamics simulations	Dr. Prajakta Dandekar Jain
49.	Lalit Khare	ICT	Green-By-Design strategies for extraction or synthesis of bio-actives	Dr. Prajakta Dandekar Jain
50.	Aditya Narvekar	University of Mumbai	Development of orthogonal characterization approach for biologics and biosimilars	Dr. Prajakta Dandekar Jain
51.	Devashree Jahagirdar	Dr.D.Y.Patil university	In Process	Dr. Prajakta Dandekar Jain
52.	Nikita Aware	ICT	In Process	Dr. Prajakta Dandekar Jain
53.	Adwait Bhagvat	ICT	In Process	Dr. Prajakta Dandekar Jain
54.	Akhade Meenakshi	ICT	Studies on Quinazoline and Pyridine alkaloids	Professor K. S. Laddha
55.	Patil Sapna	Bhartiya Vidyapeeth College of Pharmacy, Pune	Studies on Iridoids- Its isolation, Extraction and chemistry	Professor K. S. Laddha

56.	Gangurde Subodh	NDMVP Nasik	Extraction, isolation and chemical modification of anthraquinones from senna and aloe	Professor K. S. Laddha
57.	Thakkar Shefali	Maliba pharmacy college	Chemical investigation and establishing quality control standards of asphaltum.	Professor K. S. Laddha
58.	Kamble Kranti	S. N.D.T College of pharmacy	Studies on Anthocyanin	Professor K. S. Laddha
59.	Godiyal Shilpa	Bharti Vidyapeeth's College of Pharmacy, Navi Mumbai	Studies on Natural Gallates	Professor K. S. Laddha
60.	Nakkala Komalatha	Kakatiya University Warangal	Studies on Triterpenoids	Professor K. S. Laddha
61.	Swami Megha	AISSMS College of Pharmacy, Pune	Nanoengineered particulate carriers of antimalarials using novel techniques	Professor V. B. Patravale
62.	Mohurle Swapnil	IIT, Bombay	Anti-amyloid agents loaded nanocarriers via intranasal route for alzheimer's disease treatment	Professor V. B. Patravale
63.	Prabhu Rashmi	ICT, Mumbai	Functionalized non-viral vectors for breast cancer therapy	Professor V. B. Patravale
64.	Gite Sandip	UDCT, Aurangabad	Development and scale up of novel controlled release dosage forms	Professor V. B. Patravale
65.	Kadwadkar Namrata	Bombay college of Pharmacy, Mumbai	Novel drug delivery for targeting Hemoglobinopathies	Professor V. B. Patravale
66.	Mirani Amit	Bharati Vidyapeeth College of Pharmacy, Navi Mumbai	Microbicidal nanotherapeutics for HIV/AIDS	Professor V. B. Patravale
67.	Bhuptani Ronak	Bombay college of Pharmacy, Mumbai	Novel carrier systems for improved topical delivery	Professor V. B. Patravale
68.	Agrawal Ankit	ICT, Mumbai	Development of innovative micromachined macrostructures for enhanced drug delivery	Professor V. B. Patravale
69.	Kharkar Prachi	ICT, Mumbai	Nanoengineered systems for oncotherapy	Professor V. B. Patravale
70.	Sane Mangesh	UDCT, Aurangabad	Development and evaluation of vascular scaffolds	Professor V. B. Patravale
71.	Naik Shivraj	North Maharashtra University, Jalgaon	Development of Novel Drug Delivery Systems for neurodegenerative diseases	Professor V. B. Patravale
72.	Chogale Manasi	SVC college of Pharmacy, Mumbai	Novel Formulations for the Therapy of Tuberculosis	Professor V. B. Patravale
73.	Ghodake Vinod	Sinhgad Institute, Pune	Dry Powder Inhaler for Cystic Fibrosis Infections	Professor V. B. Patravale
74.	Dhoble Sagar	Bombay college of Pharmacy, Mumbai	Dry Powder Inhaler for Pulmonary Hypertension	Professor V. B. Patravale
75.	Pawar Rohit	NMIMS University, Mumbai	Development of novel diagnostic and treatment modules for dengue	Professor V. B. Patravale

76.	Dhage Shrikant	Bharati Vidyapeeth College of Pharmacy, Navi Mumbai	Nutraceutical delivery using novel excipients	Professor V. B. Patravale
77.	Upadhaya Prashant	AISSMS college of pharmacy, Pune	Intranasal colloidal formulations for diagnostic and therapeutic applications	Professor V. B. Patravale
78.	Kakade Pratik	Tatyasaheb Kore college of pharmacy, Warnanagar	Smart lipidic nanocarrier system for topical delivery	Professor V. B. Patravale
79.	Pandya Anjali	C. U. Shah College of Pharmacy, S.N.D.T. Women's University, Mumbai	Design and development of oral proteins and peptides delivery systems	Professor V. B. Patravale
80.	Pherwani Pooja	Grant Medical College, Mumbai	Pharmacology of coumarin derivative and plant part containing the same in osteoporosis	Prof. Sadhana Sathaye
81.	Peshattiwari Vaibhavi	Bombay College of Pharmacy, Mumbai	Evaluation of phytoconstituents for its antiparkinson's activity	Prof. Sadhana Sathaye
82.	Kaikini Aakruti	Bharati Vidyapeeth's College of Pharmacy, Mumbai	Investigation of Potential therapeutic moieties in diabetic complications	Prof. Sadhana Sathaye
83.	Bagle Sneha	Principal K. M. Kundanani College of Pharmacy, Mumbai	Pharmacological evaluation of Potential therapeutic entities for anti-Alzheimer activity	Prof. Sadhana Sathaye
84.	Patil Ashwini	R. C. Patel Institute of Pharmaceutical Education and Research	Not yet decided	Prof. Sadhana Sathaye
85.	Radni Deshpande	R. C. Patel Institute of Pharmaceutical Education and Research	Not yet decided	Prof. Sadhana Sathaye
86.	Yatin Gadkari	Principal K. M. Kundanani College of Pharmacy, Mumbai	Not yet decided	Dr. V. N. Telvekar
87.	Ingle Subhash	NIPER, Mohali	Silica based drug delivery system	Professor Pradeep Vavia
88.	Mahajan Ketan	UDCT, NMU Jalgaon	Polyelectrolyte multilayered systems for the treatment of infectious diseases	Professor Pradeep Vavia
89.	Patel Mayank	Bharati Vidyapeeth's College Of Pharmacy	Modified Cyclic oligosaccharides based drug delivery system for anticancer drug	Professor Pradeep Vavia
90.	Jadhav Pankaj Hanumantrao	ICT, Mumbai	Studies on application of amorphization approaches for designing efficient	Professor Pradeep Vavia
91.	Shevalkar Ganesh Bhalchandra	UDCT, NMU Jalgaon	Lipid based nanocarrier system for poorly bioavailable drugs	Professor Pradeep Vavia
92.	Yadav Nisha	C.U. Shah College of Pharmacy, Mumbai	Development of nanocarrier for enhanced brain delivery	Professor Pradeep Vavia

93.	Prajapati Mahendra	NIPER, Mohali	Surface modified targeted nanocarrier for anticancer drug delivery	Professor Pradeep Vavia
94.	Patil Mrunal	R. C. Patel College Of Pharmacy, Shirpur	Formulation and evaluation of nanocarriers for infectious diseases	Professor Pradeep Vavia
95.	Pai Rohan	Bombay College of Pharmacy, Mumbai	Surface modified nanocarriers as drug delivery systems	Professor Pradeep Vavia
96.	Ganapati Sita	VES's College of Pharmacy, Mumbai	Lipidic nanocarriers as drug delivery systems	Professor Pradeep Vavia
97.	Jadhav Dhananjay	UDCT, NMU, Jalgaon	Cyclodextrin based drug delivery systems for Rheumatoid Arthritis	Professor Pradeep Vavia
98.	Rojekar Satish	ICT, Mumbai	Novel drug delivery approaches for the anti-infective therapy	Professor Pradeep Vavia
99.	Pawar Manoj Ashok	ICT, Mumbai	Development of Controlled Release (CR) formulation of Natural Highly Purified Human Chorionic Gonadotropin (hCG)	Professor Pradeep Vavia

Integrated Ph. D. (Tech.)

No.	Research Scholar	Previous Institute	Project	Supervisor
1.	Mestry Snehal	ICT, Mumbai	Phytochemical and Pharmacological investigations of Punica Granatum Linn. In Diabetic Nephropathy	Professor A. R. Juvekar
2.	Gore Manish	ICT	In Process	Dr. Prajakta Dandekar Jain

Ph. D. (Sci.)

No.	Research Scholar	Previous Institute	Project	Supervisor
1	Balu Misal			Dr. G. U. Chaturbuj
2	Koli Uday	SIES College of Arts, Science & Commerce	Nucleic acid Loaded Nanoplexes for Biomedical Applications	Dr. Prajakta Dandekar Jain
3	Kritika Gupta	P.G.T.D Molecular Biology & Genetic Engineering, Nagpur	Development of Stable Cell line for Production of Recombinant Monoclonal Antibody	Dr. Prajakta Dandekar Jain
4	Talkar Swapnil	Ruia College, Mumbai	Gene Delivery for Cancer Therapeutics	Prof. V.B. Patravale

M. PHARM RESEARCH PROJECTS

No.	Research Scholar	Previous Institute	Project	Supervisor
1.	Prajakta	-	Synthesis of substituted benzhydrylamine derivatives	Prof. S. V. Joshi
2.	Alok	-	Comparative analysis of solid phase peptide synthesis and solution phase peptide synthesis for the tripeptide GHK	Prof. S. V. Joshi
3.	Sharvari Kshirsagar	Pune University	Crystal engineering study of ibuprofen co-crystals by HME	Professor Purnima Amin
4.	Punalekar Siddhesh	Bombay College of pharmacy (BCP)	Targeted Delivery of Anti-infective Drugs to the Brain	Professor P.V. Devarajan
5.	Mengade Mahesh	SKNCOP, Kondhwa	Innovative drug delivery system for coccidiosis	Professor P.V. Devarajan
6.	Pai Neha	ICT, Mumbai	Isolation of γ -oryzanol from rice	Professor K. S. Laddha
7.	Tayade Apurva	ICT	Isolation of bixin	Professor K. S. Laddha
8.	More Chetana	Sir Dr.M.S. Gosavi Pharmaceutical Science and research Centre, Nashik	Extraction and Isolation of beta Beta-amyrin	Professor K. S. Laddha
9.	Khare Purva	Institute of Chemical Technology, Mumbai	Awaited	Professor V.B. Patravale
10.	Jaybhaye Krishna	Dr. VitthalraoVikhePatil College of Pharmacy, Ahmednagar	Awaited	Professor V.B. Patravale
11.	Pawar Kaustubh	Maharashtra Institute of Pharmacy, Pune	Awaited	Professor V.B. Patravale
12.	Lohakare Shruti	AISSMS college of pharmacy, Pune	Awaited	Professor V.B. Patravale
13.	Jain Vishu	Shri G.S. Institute of Technology and Science	Screening of Thymol and Naringenin for antioxidant potential against Glucose induced oxidative stress	Prof. Sadhana Sathaye
14.	Mulange Shubham	Savitribai Phule Pune University	Evaluation of Phytoconstituents for anti Parkinson Activity	Prof. Sadhana Sathaye
15.	Daple Aakash	Institute of Chemical Technology	Evaluation of anti-cataractogenic activity of bioactive fraction of Saraca Indica using in-vitro and in-vivo studies.	Prof. Sadhana Sathaye

16.	Tendulkar Nayana	Institute of Chemical Technology	In vitro evaluation of borneol, ursolic acid, rosmarinic acid for their neuroprotection in rotenone induced neurotoxicity in SHSY5Y cell line.	Prof. Sadhana Sathaye
17.	Divate Shridhar	Bombay College of Pharmacy, Mumbai	Development and Evaluation of Probiotic formulation	Prof. Pradeep Vavia
18.	Gupta Pankaj	Delhi Institute of Pharmaceutical Science and Research (DIPSAR), Delhi	Solubility and Stability enhancement of Bromocriptine using cyclodextrin	Prof. Pradeep Vavia
19.	Shivam Swarnkar	Shri. G.S. Institute of technology & Sc. Indore (M.P)	Penetration and permeation enhancer for topical and oral drug delivery Formulation strategies to improve dissolution profile and solubility of poorly water-soluble drug	Prof. Pradeep Vavia

M. Tech. Research Projects

No.	Research Scholar	Previous Institute	Project	Supervisor
23.	Ansari Mujahed	UDCT, Aurangabad	Bioenhanced Drug Delivery System	Prof. P. V. Devarajan
24.	Singh Shweta	KGRDCP, Karjat, Pune	Oral Bioenhanced drug delivery system	Prof. P. V. Devarajan
25.	Pande Suyog	UDCT, Aurangabad	Aqua Triggered In-Situ gelling system for ophthalmic drug delivery	Prof. P. V. Devarajan
26.	Thingore Chetan Dinesh	MET College of Pharmacy, Mumbai	Evaluation of Rosmarinic acid against memory impairment and Alzheimer's disease	Prof. A. R. Juvekar
27.	Kshirsagar Viplav	MET College of Pharmacy, Mumbai	Hydrogen sulphide alleviates lipopolysaccharide induced memory impairment, neurodegeneration and neuroinflammation in mice.	Prof. A. R. Juvekar
28.	Jaiswal Nitesh Govind	MET College of Pharmacy, Mumbai	Evaluation of phytoconstituents for neuroinflammation induced memory impairment	Prof. A. R. Juvekar
29.	Prarthana Mistry	UDCT Aurangabad	Fabrication and characterization of starch-TPU based nanofibers for wound healing applications	Dr. Prajakta Dandekar Jain
30.	Eram Sheikh	Rizvi college of engineering	Hydrophobic deep eutectic solvent as a green technique for extracting ergosterol from mushroom	Dr. Prajakta Dandekar Jain
31.	Sonavane Radhika	Sinhgad College of Engineering	Study of Volatile Constituents in Ayurvedic Medicine- Jirakadyarishta	Professor K. S. Laddha

32.	Shinde Kairavi	Shivaji University, Kolhapur	Development of Cosmetic Product using natural Ingredients	Professor K. S. Laddha
33.	Muthal Varad		Development of affordable technology for Isolation and extraction of Gallic acid from Myrobalan fruits	Professor K. S. Laddha
34.	A Bidasagar Singha	Institute of Science & Technology, Gauhati University	Designing of biodegradable scaffolds for tissue engineering	Professor V. B. Patravale
35.	Jamdhade Prashik	UDCT, Aurangabad	Awaited	Professor V. B. Patravale
36.	Bansal Prachi	Jaipur National University, Jaipur	Awaited	Professor V. B. Patravale
37.	Saindane Sayali	Poona college of Pharmacy, Pune	Purification of Ursolic acid from tulsi and Apple peels	Prof. Sadhana Sathaye
38.	Patil Mrunalini	KIT's College of Kolhapur	In silico and in vitro studies on NADPH oxidase	Prof. Sadhana Sathaye
39.	Vishal Wadnal	-	-	Prof. Sadhana Sathaye
40.	Vijay Chaudhary	-	-	Prof. Sadhana Sathaye
41.	Daple Aakash	Institute of Chemical Technology	Evaluation of anti-cataractogenic activity of bioactive fraction of Saraca Indica using in-vitro and in-vivo studies.	Prof. Sadhana Sathaye
42.	Tendulkar Nayana	Institute of Chemical Technology	In vitro evaluation of borneol ,ursolic acid, rosmarinic acid for their neuroprotection in rotenone induced neurotoxicity in SHSY5Y cell line.	Prof. Sadhana Sathaye
43.	Yash Gujarathi	NDMVP college of Pharmacy	Pharmacokinetic study of Luteolin formulation	Prof. Sadhana Sathaye
44.	Priyanka Panchal	Malliba Pharmacy College	Pharmacodynamic study of Luteolin formulation in rotenone induced Parkinson's Disease	Prof. Sadhana Sathaye
45.	Akash Lingayat	UDCT, Aurangabad	Formulation and development of analgesic subcutaneous implants	Prof. P. D. Amin
46.	Rahane Meghana	Amrutvahini college of pharmacy, Sangamner	Development and evaluation of nitrofurazone loaded medicated gauze	Prof. Pradeep Vavia

M. Tech (Pharmaceutical Biotechnology)

No.	Research Scholar	Previous Institution	Project	Supervisor
1.	Shrivastava Parul	SJCE Mysore	Fast Disintegrating Oral Probiotics Films	Prof. P. V. Devarajan
2.	Mishra Priyanka	AMITY University, UP	Enhanced Intracellular Delivery through Nanoparticle Design	Prof. P. V. Devarajan
3.	Jadhav Sushant	KITCOE, Kolhapur	Development of Point of Care for clinically significant blood group	Prof. P. V. Devarajan
4.	Aditi Mhatre	SIES Navi Mumbai	Development and characterization of biopolymer membranes for cell culture applications	Dr. Prajakta Dandekar Jain
5.	Ankit Tiwari	Sardar vallabhbai patel university of agriculture and technology Meerut	3D spheroids of retinal cells as a pre-clinical model for diabetic retinopathy	Dr. Prajakta Dandekar Jain
6.	Abhishek Indurkar	KITs College of Engineering kolhapur	Development and standardization of bioink for 3D printing of mammalian cells	Dr. Prajakta Dandekar Jain
7.	Darshana Kamble	Investigation flux of model drug from chitosan topical gel	UDCT Aurangabad	Dr. Prajakta Dandekar Jain
8.	Bismita Sonowal	Gauhati University IST	Electrospun biopolymeric nanofibres for application on wound healing	Dr. Prajakta Dandekar Jain

M. Sc. In Sci.

No.	Research Scholar	Previous Institution	Project	Supervisor
1.	Sagar Saha (Ms. In Pharmacuetial Sciences)	Jadavpur University	Evaluation of anti-parkinson activity of a bio-enhanced formulation of Leuteolin in Zebra fish	Prof. Sadhana Sathaye / Prof. Padma Devrajan
2.	Smit Shah (Ms. In Pharmacuetial Sciences)	L. M. College of Pharmacy	Evaluation of anti-epileptic activity of a bio-enhanced formulation of Ajwain oil in Zebra fish	Prof. Sadhana Sathaye / Prof. Padma Devrajan

Postdoctoral Fellow Research Projects:

No.	Research Scholar	Previous Institution	Project	Supervisor
1.	Pulakkat Sreeranjini	Indian Institute of Science, Bangalore	Intranasal administration of multifunctional nanocarriers incorporating temozolomide and lactoferrin to combat glioblastoma multiforme	Professor V. B. Patravale
2.	Desai Ragni	Mumbai University	Development of bioenhanced Vitamin B 12 oral tablet	Prof. P. D. Amin

Government Project

Sponsor	Government (UGC Start up Grant)
Title	Design and synthesis of novel antitubercular agents
Duration	Two Years
Total amount	10,00,000/-
Principal Investigator	Dr H K Chaudhari
Research Fellows	Self

Sponsor	BRNS
Title	Modified Deuterated polyphenol as chemotherapeutic and anti-microbial agents
Duration	2018-2020
Total amount	Rs 63.108 Lakhs
Principal Investigator	Mariam Degani
Research Fellows	Mahin KI

Sponsor	BRNS
Title	Bioenhanced and targeted drug delivery system of deuterated mitocurcumin
Duration	2018-2020
Total amount	Rs 60.208 Lakhs
Co -Principal Investigator	Mariam Degani
Research Fellows	Vishakha Likhite

Sponsor	TEQIP
Title	Continuous Flow Development for the synthesis of volatile oils
Duration	Jan 2019 -mar2020
Total amount	80,000
Principal Investigator	Mariam Degani
Research Fellows	NA

Sponsor	DST
Title	DEM-AID: Innovative drug development against dementia
Duration	36 months
Total amount	36,84,240
Co-Principal Investigator	Mariam Degani
Research Fellows	Pritam bagwe

Sponsor	DST Prime Ministers Fellowship with Zim Laboratories, Nagpur
Title	Design and Development of Non-invasive Drug Delivery System for Large Molecules.
Duration	2015-2018 (3 yrs)
Total amount	Rs.24 Lakhs
Principal Investigator	Prof. Padma V. Devarajan
Research Fellows	Mr. Darsheen J Kotak

Sponsor	Department of Atomic Energy (DAE-ICT)
Title	Bioenhanced & Targeted drug delivery system of deuterated Mitocurcumin
Duration	2018-2020 (18 months)
Total amount	Rs.60 Lakhs 20 Thousands
Principal Investigator	Prof. Padma V. Devarajan
Research Fellows	Miss. Esha S. Attar

Sponsor	DST Prime Ministers Fellowship with Amaterasu Lifesciences
Title	Long Acting Parenteral Depot Systems for Alzheimer's Disease
Duration	2018-2022 (4 yrs)
Total amount	Rs. 31 Lackhs 20Thousand
Principal Investigator	Prof. Padma V. Devarajan
Research Fellows	Mr. Sukhada Shewde

Sponsor	DBT
Title	As anti-cancer agent: Synthesis and Cellular evaluation of Novel Palladacycle complexes for breast cancer
Duration	2015-2018
Total amount	2481000
Principal Investigator	Dr. Prajakta Dandekar Jain
Research Fellows	Prachi Bangde

Sponsor	RUSA
Title	Skin on a Chip for preclinical and Biomedical Applications
Duration	2016-2019
Total amount	3500000
Principal Investigator	Dr. Prajakta Dandekar Jain
Research Fellows	Manish Gore

Sponsor	DBT
Title	Microfluidic platform for developing arteficial retina
Duration	2018-2020
Total amount	6151600
Principal Investigator	Dr. Prajakta Dandekar Jain
Research Fellows	Devashree Jahagirgar

Sponsor	Rajiv Gandhi Science and Technology Commission (RGSTC)
Title	Pre-clinical evaluation of full thickness wound healing using starch based artificial skin substitute in rat model
Duration	2019-2020
Total amount	1400000
Principal Investigator	Dr. Prajakta Dandekar Jain
Research Fellow	Nikita Aware

Sponsor	Indian Council of Medical Research
Title	Quality Standards of Indian Medicinal plants and Preparation of Monographs thereon
Duration	Three years (2012-2015)
Total amount	Rs.31,51,539/-
Principal Investigator	Prof. K. S. Laddha
Research Fellows	Mr. Awdhut Pimple

Sponsor	Rajiv Gandhi Science and Technology Commission
Title	Developing technology for extraction and isolation of Anti-Arthritic drugs from plants indigenous to Maharashtra.
Duration	Two years (2013-2015)
Total amount	Rs. 55,16,999/-
Principal Investigator	Prof. K. S. Laddha
Research Fellows	Miss Pooja Bowlekar

Sponsor	Rajiv Gandhi Science and Technology Commission
Title	Extraction of Volatile oil from Orange Peels, Separation of Limonene from it and its Industrial Applications
Duration	One and half year (2015-2017)
Total amount	Rs. 19,49,250/-
Principal Investigator	Prof. K. S. Laddha
Research Fellows	To be appointed
Duration	Two years (2013-2015)

Sponsor	Ministry of Food Processing Industries (MOFPI)
Title	"Modification of Natural Polymers Starches for better application in for in food sector"
Duration	Three years (2018-2021)
Total amount	Rs. 24,09000/-
Principal Investigator	Prof. K. S. Laddha
Research Fellows	Miss Komalatha Nakkala Miss Shilpa Godiyal

Sponsor	DAE BNRS
Title	Extraction and deuteration of Natural Products of therapeutic importance for improved potency
Duration	Two Years (2018-2020)
Total amount	Rs. 16,00,000/-
Principal Investigator	Prof. K. S. Laddha
Research Fellows	Mrs. Kranti Kamble
Duration	Two Years (2018-2020)
Sponsor	DAE BNRS

Sponsor	Board of Research in Nuclear Sciences (BRNS)
Title	Intranasal colloidal formulations for diagnostic and therapeutic Applications
Duration	2016-2019
Total amount	24,40,400/-
Principal Investigator	Prof. V. B. Patravale
Research Fellows	PrashantUpadhaya

Sponsor	DAE
Title	Modified deuterated polyphenols as chemotherapeutic and anti-microbial agents
Duration	3 years
Principal Investigator	Prof. Sadhana Sathaye

Sponsor	DST
Title	DEM-AID: Innovative drug development against dementia
Duration	3 years
Total amount	Rs. 36,84,240/-
Principal Investigator	Prof. Sadhana Sathaye

Sponsor	Department of Scientific and Industrial Research (DSIR)
Title	Development of Controlled Release (CR) formulation of Natural Highly Purified Human Chorionic Gonadotropin (hCG)
Duration	36 months
Total amount	159.55 lakhs (INR)
Principal Investigator	Prof. P. R. Vavia
Research Fellows	Pawar Manoj Ashok

INDUSTRIES:

Sponsor	CSIR
Title	Purification, characterization, and pharmacological evaluation of formulation of Emu oil for its potential anti-psoriatic activity
Duration	3 years
Total amount	Rs. 32 Lakhs
Principal Investigator	Co-Investigator (Prof. Sathaye as PI)

Sponsor	Merck India Pvt Ltd
Duration	12 months
Total amount	Rs 14 lacs
Principle Investigator	Prof. P.D. Amin

Sponsor	ICPA
Duration	3 years
Total amount	Rs. 19.5 Lacs
Principle Investigator	Prof. P.D. Amin

Sponsor	LifescentInc USA
Duration	12 months
Total amount	Rs 20 Lacs
Principle Investigator	Prof. P.D. Amin

Sponsor	Cheryl Laboratories Pvt Ltd
Duration	3 years
Total amount	Rs 19.5Lacs
Principle Investigator	Prof. P.D. Amin

Sponsor	Salicylates & Chemicals Pvt Ltd
Duration	6 months
Total amount	Rs 5Lacs
Principle Investigator	Prof. P.D. Amin

Sponsor	Unilever
Duration	1 year
Total amount	Rs 4.13Lacs
Principle Investigator	Prof. P.D. Amin

Sponsor	Salicylates Pvt Ltd
Title	Process optimization of Intermediates
Duration	2017-2019
Total amount	13,00,000/-
Principal Investigator	Mariam Degani
Research Fellows	Manish kumar

Sponsor	Ambarnath organics
Title	Synthesis molecules targeting latent/MDR Tuberculosis
Duration	2017-19
Total amount	12,00,000/-
Principal Investigator	Mariam Degani
Research Fellows	Harikrishna A.S

Sponsor	Phoenix Pharmeceuticals, LA, USA
Title	Formulation of controlled and novel drug delivery systems
Duration	2013-2018 (5yrs)
Total amount	US \$ 34,000
Principal Investigator	Prof. Padma V. Devarajan
Research Fellows	Mr. Harsh Joshi

Sponsor	Phoenix Pharmeceuticals, LA, USA
Title	Controlled Drug Delivery systems
Duration	2014-2018 (4 yrs)
Total amount	US \$ 34,000
Principal Investigator	Prof. Padma V. Devarajan
Research Fellows	Mr. Rijo John

Sponsor	Amaterasu Lifescience
Title	Innovative Parenteral Formulation
Duration	2018-2020 (2 yrs)
Total amount	24 Lakhs 80Thousand
Principal Investigator	Prof. Padma V. Devarajan
Research Fellows	Mr. Pawan Kudale

Sponsor	Amaterasu Lifescience
Title	Innovative Parenteral Formulation
Duration	2018-2020 (2 yrs)
Total amount	24 Lakhs 80Thousand
Principal Investigator	Prof. Padma V. Devarajan
Research Fellows	Mr. Hero Vaswani

Sponsor	M/s. Total Herb Solutions Pltd
Title	Development of analytical method for Herbal drugs and formulations
Duration	6 months (2014 - 2015)
Total amount	Rs. 50,000/
Principal Investigator	Prof. K. S. Laddha
Research Fellows	-

Sponsor	M/s Sheekharr Starch Private Limited
Title	Development of modified starch.
Duration	One year (2015 - 2016)
Total amount	Rs. 3,20,000/
Principal Investigator	Prof. K. S. Laddha
Research Fellows	-

Sponsor	M/s. Haridevka, MUMBAI
Title	Development of Herbal/Ayurvedic Skin and Hair Care Products.
Duration	Two years (2019-2021)
Total amount	5,12,500
Principal Investigator	Prof. K. S. Laddha
Research Fellows	-

Sponsor	Ferring Limited
Title	Oral peptide drug delivery
Duration	2018-2020
Total amount	22,65,961/-
Principal Investigator	Prof. V. B. Patravale
Research Fellows	Sandip Gite, Amit Mirani

Sponsor	Neo-Innova healthcare Limited
Title	Development of prolonged action natural PMD insect repellent in gel formulation
Duration	2019-2020
Total amount	6,40,000/- (GBP 7500)
Principal Investigator	Prof. V. B. Patravale
Research Fellows	Sankalp Gharat

Sponsor	Godrej Limited
Title	Efficacy of BioGod
Duration	2019-2020
Total amount	2,50,000/-
Principal Investigator	Prof. V. B. Patravale
Research Fellows	NA

Sponsor	LifeScient INC.
Title	-
Duration	3 years
Total amount	-
Principal Investigator	Prof. Sadhana Sathaye

Sponsor	Nippon Synthetic Chemicals Ltd. Japan
Title	Testing and evaluation of performance of NSC's proprietary materials
Duration	-
Total amount	30,000 \$
Principal Investigator	Prof. Pradeep R. Vavia
Research Fellows	Pankaj Hanumantrao Jadhav

DETAILS OF NATIONAL AND INTERNATIONAL COLLABORATIONS

NATIONAL COLLABORATIONS

1. Tata Institute of Fundamental Research, Mumbai
2. National Institute for Research in Reproductive Health, Parel, Mumbai
3. National Institute of Immunohaematology, Mumbai
4. Radiation Medicine Centre, Tata Hospital, Parel, Mumbai
5. National JALMA Institute of Leprosy & Other Mycobacterial Diseases, Agra
6. Advanced Centre for Treatment, Research & Education in Cancer (ACTREC), Navi Mumbai
7. Post graduate Institute of Veterinary and Animal Sciences, Akola
8. Bombay Veterinary College, Mumbai
9. Govt. Dental College, Mumbai
10. Bhabha Atomic Research Centre (BARC), Mumbai
11. IIT, Delhi
12. CDRI, Lucknow
13. NIIH, Mumbai
14. National Burns Centre, Navi-mumbai
15. National Institute of Mental Health and NeuroSciences, Bangalore.
16. Department of Biosciences and Bioengineering, IIT Mumbai.
17. G.S. Medical College, Mumbai.
18. KEM Hospital, Mumbai.
19. National AIDS research Institute, Pune.
20. Nanobios lab, IIT Bombay
21. Department of Biochemistry and Jamunlal Bajaj Tropical Disease Research centre, Mahatma Gandhi institute of Medical Sciences, Sevagram, Wardha-442102, Maharashtra, India.
22. Amity University, Noida
23. Tata Memorial Hospital, RMC, Mumbai
24. Board of Radiation Isotope Technology (BRIT), Mumbai

INTERNATIONAL UNIVERSITY/ INSTITUTE

1. National Facility for Biopharmaceutical. Evaluation of Topical formulation for the treatment of Psoriasis.
2. St. Petersburg ITMO University, Russia
3. University of Bradford, UK
4. Berlin, Germany

5. University of Geneva, Switzerland
6. University of Tokyo, Japan
7. Hoshi University, Japan
8. University of Bradford, UK
9. Discipline of Pharmaceutical Sciences, School of Health Sciences, University of KwaZulu-Natal, Durban, KwaZulu-Natal, South Africa.
10. Aix-Marseille University, CNRS, Interdisciplinary Center of Nanoscience of Marseille, UMR 7325, 13288 Marseille, France.
11. Universite des Sciences et Techniques, Montpellier, France
12. University of Delaware, USA.
13. Miami University, USA.
14. Atlanta Georgia, USA.
15. Neopharma Limited, UK
16. Birbeck University of London.
17. Open Innovation Drug Discovery, Eli Lilly and Company, Lilly Corporate Center, Indianapolis, IN 46285, USA
18. King's College London.
19. Newton-Bhabha Placement program with UK universities:
 - i. Queen's University, Belfast, UK: Prof Ryan Donnelly of School of Pharmacy
 - ii. University of Turine, Italy: Francesco Trotta, Michele Trotta, Roberta Cavalli.

PUBLICATION

No.	Authors	Title	Journal	Vol. No.	Pages	Year
1.	Reyniel Ben Carvalho and Prof. S. V. Joshi	Solvent and catalyst free synthesis of 3,4-dihydropyrimidin-2 (1f1H)-ones/thiones by twin screw extrusion	Green Chemistry	21	1921	2019
2.	Gangurde S A, Laddha K. S. and Joshi S. V.	A greener approach to synthesis of Diacerein	Indian Drugs	56(04)	7	2019
3.	KP Sawant, R Fule, M Maniruzzaman, PD Amin	Extended release delivery system of metoprolol succinate using hot-melt extrusion: effect of release modifier on methacrylic acid copolymer.	Drug Delivery and Translational Research	1-15	3.09	2018
4.	J Pawar, D Suryawanshi, K Moravkar, R Aware, V Shetty	Study the influence of formulation process parameters on solubility and dissolution enhancement of efavirenz solid solutions prepared by hot-melt extrusion: a QbD.	Journal of Pharmaceutical Investigation	47(6)	559-574	2018

5.	Kailas M, Tariq A, Jaywant P, Purnima Amin	Application of moisture activated dry granulation (MADG) process to develop high dose immediate release (IR) formulations	Advance powder Technology	28(4)	1270-1280	2018
6.	Tousif A, Kailas M, Maniruzzaman M, Purnima Amin	Effect of melt extrudability and melt binding efficiency of polyvinyl caprolactam polyvinyl acetate polyethylene glycol graft copolymer (Soluplus®) on release pattern of hydrophilic and high dose drugs*,	Materials Science and Engineering-C	99(6)	563-574	2018
7.	Prof. P. D. Amin	Influence of Different Melttable Binders on the SolidState Behaviour and Dissolution Profiles of Solid Lipid Extrudates Processed Via Continuous Hot Melt Granulation	Pharmaceutics Journal (MDPI)	-	1-27	2018
8.	Santosh Gejage*, Purnima Amin	Development and validation of a stability indicating HPLC assay method for tacrolimus in semi-solid dosage form & bulk drug.	Indo American Journal of Pharmaceutical Research	8(4)	390-399	2018
9.	Ipar VS, Dsouza A, Devarajan PV.	Enhancing Curcumin Oral Bioavailability Through Nanoformulations.	European Journal of Drug Metabolism and Pharmacokinetics	-	1-22	2019
10.	Jahagirdar PS, Gupta PK, Kulkarni SP, and Devarajan PV	Polymeric Curcumin Nanoparticles by A Facile In Situ Method For Macrophage Targeted Delivery.	Bioengineering & Translational Medicine	4 (1)	141-151	September, 2019
11.	J Pawar, D Suryawanshi, K Moravkar, R Aware, V Shetty	Study the influence of formulation process parameters on solubility and dissolution enhancement of efavirenz solid solutions prepared by hot-melt extrusion: a QbD.	Journal of Pharmaceutical Investigation	47(6)	559-574	-

12.	Kailas M, Tariq A, Jaywant P, Purnima Amin	Application of moisture activated dry granulation (MADG) process to develop high dose immediate release (IR) formulations	Advance powder Technology	28(4)	1270-1280	2.94
13.	Tousif A, Kailas M, Maniruzzaman M, Purnima Amin	Effect of melt extrudability and melt binding efficiency of polyvinyl caprolactam polyvinyl acetate polyethylene glycol graft copolymer (Soluplus®) on release pattern of hydrophilic and high dose drugs*,	Materials Science and Engineering-C	99(6)	563-574	2018
14.	Purnima Amin	Influence of Different Melttable Binders on the SolidState Behaviour and Dissolution Profiles of Solid Lipid Extrudates Processed Via Continuous Hot Melt Granulation	Pharmaceutics Journal (MDPI)	-	1-27	2018
15.	Santosh Gejage*, Purnima Amin	Development and validation of a stability indicating HPLC assay method for tacrolimus in semi-solid dosage form & bulk drug.	Indo American Journal of Pharmaceutical Research	8(4)	390-399	
16.	Anil S. Mali1 • Chinmay S. Potnis2 • Ganesh U. Chaturbhuj1	Aluminized polyborate: a novel catalyst for the multicomponent solvent free synthesis of alkyl 1,2,6 trisubstituted 4 [(hetero) arylamino] 1,2,5,6 tetrahydropyridine 3 carboxylates	Journal of the Iranian Chemical Society	15	1399-1409	2018
17.	Deelip S Rekunge, Ishwari A Kale, Ganesh U Chaturbhuj	An efficient, green solvent-free protocol for the synthesis of 2, 4, 6-triarylpyridines using reusable heterogeneous activated Fuller's earth catalyst	Journal of the Iranian Chemical Society	15(11)	2455–2462	2018

18.	Deelip S Rekunge, Hersh S Bendale, Ganesh U Chaturbhuj	Activated Fuller's earth: an efficient, inexpensive, environmentally benign, and reusable catalyst for rapid solvent-free synthesis of 1-(amido/ amino) alkyl-2-naphthols	Monatshefte für Chemie-Chemical Monthly	149 (11)	1991-1997	2018
19.	Manisha S Patil, Chetan K Khatri, Ganesh U Chaturbhuj	Three-component, solvent-free synthesis of Betti base catalyzed by sulfated polyborate Authors Ma	Monatshefte für Chemie-Chemical Monthly	149(8)	1453–1457	2018
20.	Trupti Kashinath Khatal and Ganesh Ulhasrao Chaturbhuj*	Computational Analysis of the Binding Site(s) of TNF β -TNFR1 Complex: Implications for Designing Novel Anticancer Agents	Clinical Cancer Drugs	5	94-104	2019
21.	Amey Palav, Balu Misal, Anilkumar Ernolla, Vinod Parab, Prashant Waske, Dileep Khandekar, Vinay Chaudhary, Ganesh Chaturbhuj	m-CPBA-NH3 (g) system: A safe and scalable alternative for manufacture of (substituted) pyridine and quinoline N-oxides	Organic Process Research & Development			2018
22.	Vinod A. Chaure, Saurabh B. Ganorkar, Ganesh U. Chaturbhuj, Sanjay J. Surana and Atul A. Shirkhedkar	A Precise Review on Tenofovir Disoproxil Fumarate: An Analytical Profile	Journal of Pharmaceutical Technology, Research and Management	6(2)	153-167	2018
23.	Mirani, A.; Kundaikar, H.; Velhal, S.; Patel, V.; Bandivdekar, A.; Degani, M.; Patravale, V.,	Tetrahydrocurcumin-loaded vaginal nanomicrobicide for prophylaxis of HIV/AIDS: in silico study, formulation development, and in vitro evaluation.	Drug Delivery and Translational Research	9 (4)	828-847	2019
24.	Khambete, M.; Kundaikar, H.; Raju, A.; Lonkar, S.; Degani, M.; Ray, M. K., Design	synthesis of 5-(5-nitrothiophen-2-yl)-3-phenyl-4,5-dihydro-1H-pyrazole derivatives with improved solubility and potential antituberculosis activity	Chem Biol Drug Des	93 (1)	84-88	2019

25.	Amit, M.; Harish, K.; Shilpa, V.; Vainav, P.; Atmaram, B.; Mariam, D.; Vandana, P,	Evaluation of Phytopolyphenols for their gp120-CD4 Binding Inhibitory Properties by In Silico Molecular Modelling & In Vitro Cell Line Studies	Current HIV Research	17	1-12.	2019
26.	Sabale, S. S.; Degani, M. S.,	Magnetically Recoverable Nano Sulfated Titania Catalysed One Pot Synthesis of 4(3H)-quinazolinone Derivatives	Current Catalysis	7 (3)	167-175	2018
27.	Patel, S. S.; Bochare, M. D.; Degani, M. S.,	Preparation and characterization of a novel silica-KF composite and facile fluorination of aromatic substrates	New Journal of Chemistry	42 (24)	20095-20100	2018
28.	Mudra, K.; Sudha, R.; Mariam, D.,	Photodynamic Antimicrobial Chemotherapy Of Water Soluble Curcumin Polymeric Prodrug	World Journal of Pharmaceutical Research	7 (11)	1030-1048	2018
29.	Mali, H. M.; Sabale, S. S.; Degani, M. S.; Borkute, R.; Choudhari, A. S.; Sarkar, D.; Krishna, V. S.; Sriram, D.,	Rational design of coumarin derivatives as antituberculosis agents.	Future Med Chem	-		2018
30.	Anantram, A.; Kundaikar, H.; Degani, M.; Prabhu, A.,	Molecular dynamic simulations on an inhibitor of anti-apoptotic Bcl-2 proteins for insights into its interaction mechanism for anti-cancer activity	Journal of Biomolecular Structure and Dynamics	-	1-13	2018
31.	Anantram, A.; Janve, M.; Degani, M.; Singhal, R.; Kundaikar, H.,	Homology modelling of human divalent metal transporter (DMT): Molecular docking and dynamic simulations for duodenal iron transport	Journal of Molecular Graphics and Modelling	85	145-152	2018
32.	Pai SA, Munshi RP, Panchal FH, Gaur IS, Mestry SN, Gursahani MS, Juvekar AR.	Biomedicine and Pharmacotherapy	111	686-694	-	2019

33.	Vijaya Sadashiv Waghmare, Pallavi Ravindra Wadke, Sathish Dyawanapelly, Aparna Deshpande, Ratnesh Jain*, Prajakta Dandekar	Starch based nanofibrous scaffolds for wound healing applications	Bioactive materials	3	255-266	2018
34.	Anomitra Dey, Aditya Kamat, Sonal Nayak, Dganit Danino, Ellina Kesselman, Prajakta Dandekar, Ratnesh Jain	Role of proton balance in formation of self-assembled chitosan nanoparticles	Colloids and Surfaces B: Biointerfaces	166	127-134	2018
35.	Sathish Dyawanapelly, Pihu Mehrotra, Goutam Ghosh, Dhanashree D Jagtap, Prajakta Dandekar, Ratnesh Jain*	How the surface functionalized nanoparticles affect conformation and activity of proteins: Exploring through protein-nanoparticle interaction	Bioorganic chemistry	82	17-25	2019
36.	Saurabh Patil, R Akhil Krishnan, Shashank Bhangde, Prajakta Dandekar, Ratnesh Jain*	Comparison between solid and liquid acids for production of low molecular weight chitosan using systematic DOE-based approach	Cellulose	25	5643-5658	2018
37.	Meghna Suvarna, Sathish Dyawanapelly, Bharat Kansara, Prajakta Dandekar, Ratnesh Jain*	Understanding the stability of nanoparticle-protein interaction: Effect of particle size on adsorption, conformation and thermodynamic properties of serum albumin proteins	ACS Applied Nano Materials	1	5524-5535	2018
38.	Manasi Dhawane, Aparna Deshpande, Ratnesh Jain*, Prajakta Dandekar	Colorimetric point of care detection of cholesterol using chitosan nanofibers	Sensors and Actuators B: Chemical	281	72-79	2019
39.	Gaurav Kapadnis, Anomitra Dey, Prajakta Dandekar, Ratnesh Jain*	Effect of degree of deacetylation on solubility of low molecular weight chitosan produced via enzymatic breakdown of chitosan	Polymer International	68	1054-1063	2019

40.	Ashu Srivastav, Balasaheb Chandanshive, Prajakta Dandekar, Deepa Khushalani, Ratnesh Jain*	Biomimetic hydroxyapatite, a potential universal nano-carrier for cellular internalization and drug delivery	Pharmaceutical research	36	60	2019
41.	Nikhil D Kalane, R Akhil Krishnan, Vijay D Yadav, Ratnesh Jain*, Prajakta Dandekar	Synergistic effect of hetero-and homo-catalysts on the 'green' synthesis of 5-hydroxy methyl furfural from chitosan biomass	Cellulose	26	2805-2819	2019
42.	Sonal S Atale, Sathish Dyawanapelly, Dhanashree D Jagtap, Ratnesh Jain*, Prajakta Dandekar	Understanding the nano-bio interactions using real time surface plasmon resonance tool	International journal of biological macromolecules	123	97-107	2019
43.	R Akhil Krishnan, Tejal Pant, Suchitra Sankaranarayan, Jonas Stenberg, Ratnesh Jain*, Prajakta Dandekar	Protective nature of low molecular weight chitosan in a chitosan-amphotericin B nanocomplex-A Physicochemical study	Materials Science and Engineering: C	93	472-482	2018
44.	Shefali Prashant Thakkar, Kirti S. Laddha.	Quality Control: Curb Counterfeiting Of Asphaltum (Shilajit)	IJCRT	6(1)	1098-1103	2018
45.	S. P. Patil, K. S. Laddha.	Extraction Efficiency of Agnuside from Vitex Negundo Leaves using different techniques and its quantitative determination by HPLC	IJHSR	IJHSR	129-135	2018
46.	Shefali Thakkar, Kirti Laddha.	Isolation and Characterization of Urolithin B from Asphaltum	Journal of Pharmacognosy and Phytochemistry	8(3)	138-140	2019
47.	Gangurde S. A, Laddha K. S., Joshi S.V.	A Greener Approach To Synthesis Of Diacerein	Indian Drugs	56(4)	7-12	2019
48.	Akhade M.S, Laddha K.S.	Quantitative assessment of Vasicine and Vasicinone in different marketed formulations using HPLC	Indian Drugs	56(8)	79-80	2019

49.	A. Mirani, H. Kundaikar, S. Velhal, V. Patel, A. Bandivdekar, M. Degani, V. Patravale.	Evaluation of phytopolyphenols for their gp120-CD4 binding inhibitory properties by in silico molecular modelling & in vitro cell line studies	Current HIV Research	doi: 10.2174/1570162X17666190611121627		2019
50.	S. Dhoble, V. Patravale.	Development of anti-angiogenic erlotinib liposomal formulation for pulmonary hypertension: a QbD approach	Drug Delivery and Translational Research	doi: 10.1007/s13346-019-00641-2.		2019
51.	A. Mirani, H. Kundaikar, S. Velhal, V. Patel, A. Bandivdekar, M. Degani, V. Patravale.	Tetrahydrocurcumin-loaded vaginal nanomicrobicide for prophylaxis of HIV/AIDS: in silico study, formulation development, and in vitro evaluation	Drug Delivery and Translational Research	9	828-847	2019
Review Article						
52.	S. Dharadhar, A. Majumdar, S. Dhoble, V. Patravale.	Microneedles for transdermal drug delivery: a systematic review	Drug Development and Industrial Pharmacy	45	188-201	2019
53.	Dr. Sanjay Tamoli, Dr. Kuldip Kohli, Aakruti Kaikini, Suraj Muke, Afroz Shaikh, Sadhana Sathaye	-	(Accepted)			2019
54.	Sneha Bagle, Suraj Muke, Sagar Saha, Shankarnarayanan Jayakodi, Arunkanth Krishnakumar, Sadhana Sathaye	-	International Journal of Research in Pharmaceutical Sciences (Accepted)	10	1-6	2019
55.	Priya Ghumatkar; Sachin Patil; Vaibhavi Peshattiwar; Tushara Vijaykumar; Vikas Dighe; Geeta Vanage; Sadhana Sathaye.	The modulatory role of phloretin on A β 25–35 induced sporadic AD in wistar rats	Naunyn-Schmiedeberg's Archives of Pharmacology	-	-	2018

56.	Khambete, Mihir; Murumkar, Prashant; Kumar, Amit; Darreh-Shori, Taher; Yadav, Mange; Khare, Lalit; Peshattiwar, Vaibhavi; Sathaye, Sadhana; Degani, Mariam,	Designing and synthesis of Pyrazoline containing multifunctional anti-Alzheimer's agents,	ACS Medicinal Chemistry Letters. (Under communication)	-	-	2018
57.	Suraj Muke, Vaibhavi Peshattiwar, Aakruti Kaikini, Sneha Bagle, Vikas Dighe, Sadhana Sathaye	Neuroprotective effect of Coumarin nasal formulation: Kindling model assessment of Epilepsy	Frontiers in Pharmacology	-	-	2018
58.	P Ghumatkar, V Peshattiwar, S Patil, S Muke, D Whitfield, D Howlett, P Francis, S Sathaye.	The effect of phloretin on synaptic proteins and adult hippocampal neurogenesis in A β (1-42) injected male wistar rats	Journal of Pharmacy and Pharmacology	70(8)	1022-1030	2018
59.	Yogesh B.Sutara, JaishreeK.Mali, Vikas N.Telvekar,RajuS. Rajmani, AmitSingh	Transferrin conjugates of antitubercular drug isoniazid: Synthesis and in vitro efficacy	European Journal of Medicinal Chemistry	183	111713	2019
60.	Jaishree K. Mali, Yogesh B. Sutar, Akshata R. Pahelkar, Preeti M. Verma , Vikas N. Telvekar	Novel fatty acid-thiadiazole derivatives as potential antimycobacterial agents	Chemical Biology & Drug Design	-	-	2019
61.	Prajapati, M.K., Bishnu, A., Ray, P., Vavia, P.R.	Selectivity Enhancement of Paclitaxel Liposome Towards Folate Receptor-Positive Tumor Cells by Ligand Number Optimization Approach	AAPS PharmSciTech	20(8)	317	2019
62.	Shevalkar, G., Vavia, P.	Solidified nanostructured lipid carrier (S-NLC) for enhancing the oral bioavailability of ezetimibe	Journal of Drug Delivery Science and Technology	53	201-211	2019
63.	Pai, R.V., Monpara, J.D., Vavia, P.R.	Exploring molecular dynamics simulation to predict binding with ocular mucin: An in silico approach for screening mucoadhesive materials for ocular retentive delivery systems	Journal of Controlled Release	309	190-202	2019

64.	Shevalkar, G., Pai, R., Vavia, P.	Nanostructured Lipid Carrier of Propofol: a Promising Alternative to Marketed Soybean Oil-Based Nanoemulsion	AAPS PharmSciTech	20(5)	201	2019
65.	J Monpara, D Velga, T Verma, S Gupta, P Vavia.	Cationic cholesterol derivative efficiently delivers the genes: in silico and in vitro studies	Drug delivery and translational research	9 (1),	106-122	2019
66.	Ingle, S.G., Pai, R.V., Monpara, J.D., Vavia, P.R.	Liposils: An effective strategy for stabilizing Paclitaxel loaded liposomes by surface coating with silica	European Journal of Pharmaceutical Sciences	122	51-63	2018
67.	Monpara, J., Kanthou, C., Tozer, G.M., Vavia, P.R.	Rational Design of Cholesterol Derivative for Improved Stability of Paclitaxel Cationic Liposomes	Pharmaceutical Research	35	1-17	2018

PATENTS : Applied/Granted

No.	Inventors	Title	Country	Funding agency
PROFESSOR P. D. AMIN				
1.	Vishal Kataria, Geeta Umesh Yadav, Kailas Kalicharan Moravkar, Swikruti Sen Amin Purnima Dhanraj.	Oral Dispersible Film Compositions Prepared by Twin-Screw Hot Melt Extrusion Technology	India	Jubeln Lifesciences Pvt. Ltd. Bangalore
2.	Vishal Kataria, Geeta Umesh Yadav, Devanshi Sandeep Shah, Kailas Kalicharan Moravkar, Amin, Purnima Dhanraj,	Topical preparations of carbomer based gel and emulgel using twin-screw hot melt extrusion technology	India	Jubeln Lifesciences Pvt. Ltd. Bangalore
3.	kailas M, Tousif K, Santosh G, Purnima Amin.	Directly compressible grade api's/ excipients by melt granulation technology	India	ICT/TEQUIP
4.	Karan S, Santosh G, Divakar J, Umesh S, Purnima Amin, Rahul A, Boundugulapati Murli, Vasant S, Shirish D.	Pharmaceutical composition containing melt extruded ibuprofen and fixed dose combination thereof	India	Acg Pharma Technologies Pvt. Ltd. Pune
5.	Dilip S, Tousif K, Mamta k, Purnima Amin.	Application of soluplus as a film former in oral dispersible film using hot melt extrusion technology	India	ICT/TEQUIP
PROFESSOR PADMA V. DEVARAJAN				
6.	Daud, Anwar Siraj Sapkal, Nidhi Prakash Bonde, Minal Nandkumar Devarajan, Padma Venkitachalam Kotak, Darsheen Jitendrabhai	Oral mucosal delivery systems comprising monophasic concentrate of Teriparatide	-	ZIM Laboratories Limited
7.	Devarajan, Padma Daware, Shilpa	A Liquid Injectable Composition	India	ICT, Mumbai

DR. PRAJAKTA DANDEKAR JAIN				
8.	Gore Manish Ravikiran, Dandekar Jain Prajakta, Jain Ratnesh	Microfluidic device for the development of in-vitro co-cultures of mammalian tissues	India	RUSA
9.	Gore Manish Ravikiran, Dandekar Jain Prajakta, Jain Ratnesh	Microfluidic mammalian co-culture device	India	RUSA
10.	Prajakta Dandekar, Ratnesh Jain, Vijay Yadav, Nikhil Kalane, Rohan Chhabra, Anomitra Dey, Tejal Pant	Kit for pyrogen detection and depyrogenation of water	India	-
11.	Prajakta Dandekar, Ratnesh Jain, Vijay Yadav	Methods for preparation of water-soluble and water-insoluble derivatives of saccharides and alkali, alkaline earth, transition and noble metals	India	-
12.	Pofali Prasad Ashok, Jain Ratnesh Dharamchandra, Dandekar Jain Prajakta, Pattani Aditya Sunil	Method of manufacturing concentrated silver nanopowder	India	-
13.	Prajakta Dandekar, Ratnesh Jain and Vandana Patravale	Indian Trademark entitled 'NANOTARG'	India	-
14.	Ratnesh Jain, Prajakta Dandekar and Vandana Patravale	Polymeric Nanoparticles of Curcumin for Improved Delivery	India	-
15.	Kalyani Barve, Laddha K. S., Jaykumar B (2006)	Safed musli composition and preparations thereof	India	-
16.	Ganesh Ahuja, Kirti Laddha (2017)	Instant legume-based pre-comestible	World-wide	
17.	Kirti Laddha, Shreeram Agharkar	Process of preparing herbal extracts	U.S	Moleac pvt. ltd.
PROFESSOR V. B. PATRAVALE				
18.	Sagar Dhoble, Roma Trivedi, Vandana Patravale	Point of care diagnostic device for early detection of vitamin-B12 deficiency in non-serological sample	India	Self-Applied
19.	Amit Mirani, Vandana Patravale	Glycerol Monolaurate based microemulsion and drug delivery system	India	Self-Applied
PROFESSOR SADHANA SATHAYE				
20.	Sadhana Sathaye, Ganesh Chaturbhuj, Chetan Khatri, Suraj Muke	Development and Evaluation Of Wedelolactone For Antiepileptic Activity By Using Nasal Formulation For Improved Efficacy	India	UGC
21.	Sadhana Sathaye, Suraj Muke	AQUALIBLE: a superefficient product for water nourishment and management	India	UGC

BOOK

No.	Author(s)	Title	Publisher	Place	Year
1	Padma V. Devarajan	Targeted Intracellular drug delivery by Receptor Mediated endocytosis	Springer	-	In press
2	K. S. Laddha	Extraction and Isolation of Phytochemicals	Yucca Enterprises	Mumbai, India	2019

BOOK CHAPTERS

No	Author(s)	Title	Editor	Publisher	Place	Year	Page
1.	Dilipkumar S, Umesh S, Durgesh kumar J, Purnima Amin	Application of quality by design approach for hot melt extrusion process optimization	Sarwar Beg/ Md Sauib Hasnain	Elsevier	London, UK	2019	209-228
2.	Neha P. Agre, Mariam .S. Degani and sanjib bhakta	Prospects of Pre-clinical [6.6.0] Bicyclic Nitrogen Heterocyclics in the Treatment of Tuberculosis	Daniele castangolo, venkatesan Jayprakash and yusuf ozkay	CRC Press, Taylor & Francis group		2019	-
3.	More K.S, Ipar V. S. Lokhande A.S., D'Souza A. A, Devarajan P.V.	Nanotherapeutics: Enabling Vitamin D3 as a multifaceted nutraceutical"	Bhupinder Singh Bhoop	CRC Press	-	2018	183-212
4.	V. Patravale, P. Upadhaya, R. Jain	Preparation and Characterization of Micelles	Volkmar Weissig Tamer Elbayoumi	Humana Press	Totowa, New Jersey, US	2019	19-29
5.	Neeraj Tandon, Parul Sharma	Quality Standards of Indian Medicinal Plants" M) <i>Althaea officinalis</i> Linn.	-	Indian Council of Medical Research	New Delhi	2018	1
6.	Neeraj Tandon, Parul Sharma	Quality Standards of Indian Medicinal Plants" N) <i>Arnebia benthamii</i> (Wall. ex G. Don) I. M. Johnston	-	Indian Council of Medical Research	New Delhi	2018	20
7.	Neeraj Tandon, Parul Sharma	Quality Standards of Indian Medicinal Plants" O) <i>Borassus flabellifer</i> Linn.	-	Indian Council of Medical Research	New Delhi	2018	34

8.	Neeraj Tandon, Parul Sharma	Quality Standards of Indian Medicinal Plants” P) Commiphora caudata (Wight & Arn.) Engl.	-	Indian Council of Medical Research	New Delhi	2018	98
9.	Neeraj Tandon, Parul Sharma	Quality Standards of Indian Medicinal Plants” Q) Crateva religiosa G. Forst.	-	Indian Council of Medical Research	New Delhi	2018	110
10.	Neeraj Tandon, Parul Sharma	Quality Standards of Indian Medicinal Plants” R) Lobelia nicotianifolia Roth ex Schult.	-	Indian Council of Medical Research	New Delhi	2018	150
11.	Neeraj Tandon, Parul Sharma	Quality Standards of Indian Medicinal Plants” S) Parmelia perlata (Huds.) Ach.	-	Indian Council of Medical Research	New Delhi	2018	214
12.	Neeraj Tandon, Parul Sharma	Quality Standards of Indian Medicinal Plants” T) Punica granatum Linn.	-	Indian Council of Medical Research	New Delhi	2018	248
13.	Neeraj Tandon, Parul Sharma	Quality Standards of Indian Medicinal Plants” U) Selinum vaginatum (Edgew.) C. B. Clarke	-	Indian Council of Medical Research	New Delhi	2018	259
14.	M. Joshi, R. Prabhu, V. Patravale.	Fabrication of nanostructure lipid carriers (NLC) based gels from microemulsion template for delivery through skin	Volkmar Weissig Tamer Elbayoumi	Humana Press	Totowa, New Jersey, US	2019	279-292
15.	V. Patravale, A. Mirani.	Preparation and Characterization of Solid lipid nanoparticles based gel for Topical Delivery	Volkmar Weissig Tamer Elbayoumi	Humana Press	Totowa, New Jersey, US	2019	293-302
16.	V. Patravale, A. Joshi	An overview of the therapeutic aspect of living drugs probiotics	Ahmed Kamal	IGI Global	Hershey, Pennsylvania, USA	2018	1-34

17.	J. Disouza, K. Patil, P. Kakade, V. Patravale.	Dietary Fibers and Nutraceuticals in Prevention of Hypertension	Ahmed Kamal	IGI Global	Hershey, Pennsylvania, USA	2018	192-232
18.	V. Patravale, S. Naik, S. Dhage.	Role of Diet, Functional Foods, and Nutraceuticals in Brain Disorders	Ahmed Kamal	IGI Global	Hershey, Pennsylvania, USA	2018	256-287
19.	V. Patravale, N. Kadwadkar, S. Patki, J. Disouza.	Nutraceutical and Functional Foods in Treatment of Anemia	Ahmed Kamal	IGI Global	Hershey, Pennsylvania, USA	2018	308-339
20.	S. Talkar, S. Dhoble, A. Majumdar, V. Patravale.	Transmucosal Nanoparticles: Toxicological Overview, Advances in Experimental Medicine and Biology in Cellular and Molecular Toxicology of Nanoparticles	Quaiser Saquib, Mohammad Faisal, Abdulaziz A. Al-Khedairy, Abdulrahman A. Alatar	Springer International Publishing	Basel, Switzerland	2018	37-57

ENDOWMENT FELLOWSHIPS AND LECTURES ORGANIZED

Sr.	Date of Lecture	Fellowship	Distinguished speaker/Affiliation	Title of Lecture
1	December 19, 2018	Professor (Mrs.) M. R. Baichwal Visiting Fellowship	Dr. Santylal Daya Faculty of Pharmacy Rhodes University Grahamstown 6140, South Africa	The role of melatonin in Alzheimers disease
2	January 31, 2019	Themis Endowment Lecture	Prof. Dr. Claus- Michael Lehr Professor at Saarland University Co-founder and Head of the department “Drug Delivery” at the Helmholtz Institute for Pharmaceutical Research Saarland (HIPS), Saarbrucken, Germany	Drug Delivery Technologies against infectious diseases
3	May 24, 2019	TEQIP III and UGC CAS II	Dr. Sailata Prabhu, Sr. Director/Sr. Scientist Genentech, USA	Drug Development at Genentech: Science, Patients, People
4	June 21, 2019	TEQIP III and UGC CAS II	Dr. Abdul Samad, Director, Vetware Pvt Ltd, Mumbai	Drug delivery for Cattle in the Dairy Industry
5	July 26, 2019	TEQIP III & UGC CAS II	Mr. Kenji Obata GM Functional Additives Division	Functional MCC & its Appliaction

GENERAL PUBLICATIONS

PROF. VADANA B. PATRAVALE

- V. Ghodake, P. Shah, and V. Patravale. Use of cannabis: Heralding new era of beauty. Ingredients South Asia (2019)
- Sreeranjini P, Vandana B. Patravale. 3D bioprinting: The digital healthcare revolution. Pharmabiz (2018)

MEMBERSHIP OF IN-HOUSE COMMITTEES

PROFESSOR S. V. JOSHI

- BOG member
- UAA
- Library
- IQAC
- Purchase

PROFESSOR P. D. AMIN

- Vice president-Technical association and Dean (Student affairs)

DR. G. U. CHATURBHUI

- Department TEQIP Coordinator

PROFESSOR M. S. DEGANI

- Head of Department, DPST
- Co-ordinator of PMMMNMTT
- UG-PC committee

PROFESSOR P. V. DEVARAJAN

- Member Board of Governors
- Institute TEQIP Coordinator
- President ICT Innovation Council
- Member Startup Policy Committee
- Coordinator of M. Tech Pharmaceutical Biotechnology Course
- Member UGPC
- Member PGPC
- Member Academic Council
- Member Anti-ragging Committee
- Member Library Committee
- Member Mentoring and Counselling Cell

PROFESSOR A. R. JUVEKAR

- Mentor for first year B.Pharmacy students
- Class teacher for M.Pharm first year

DR. PRAJAKTA DANDEKAR JAIN

- Member, UDCT Alumni Association
- Member DST-FIST committee

PROFESSOR K. S. LADDHA

- Dean Infrastructure and Campus Development
- Chairman, Purchase Committee
- Telecom Incharge

PROFESSOR V. B. PATRAVALE

- Editor, Bombay Technologist
- Lab in-charge, Undergraduate Pharmaceutics Laboratory
- Member, Inhouse Committee
- In-charge, B. Tech. Projects, Department of Pharmaceutical Sciences and Technology
- In-Charge, Pharmacy Council of India, Department of Pharmaceutical Sciences and Technology

PROFESSOR S. SATHAYE

- Chair person of Institutional Animal Ethics Committee.
- Member of Safety Committee.
- Student's welfare Committee.
- Member of examination squad.

DR. V. N. TELVEKAR

- Member of Scrap Committee
- In-Charge of In plant training;
- In-Charge of industrial visit
- In-Charge of Community Service
- Co-ordinator, PMMMNMTT

PROFESSOR P. R. VAVIA

- Dean, Academic Program
- Colloquium in-charge, ICT
- In-plant training co-ordinator, Pharmaceutical Department, ICT
- Member, Institutional animal ethics committee, ICT
- Chairman, Examination committee, ICT
- Member, Equal Opportunity Cell, ICT
- Member, Fee's committee, ICT

INVITED LECTURES:

PROF. P. D. AMIN

Guest Lecture at Faculty Development Program sponsored by UGC. Jan 08 2018. At NMIMS University Mumbai

PROF. M. S. DEGANI

- Invited talk on "Molecular Modelling: Few Case Studies" in a workshop on "Rational Drug Design: Fundamentals, Pitfalls and Way Ahead" at SVKM's Dr. Bhanuben Nanavati College of Pharmacy, 19 th May 2018.
- Talk on "Challenging Alzheimer's Disease; Medicinal Chemistry for Therapeutics and Diagnostics" in a workshop on Innovations in Chemistry - Laboratory to Society (ICLS-2018) at Jalgaon, March 2018
- Invited talk on "Tuberculosis: Present and Way Ahead" at Bharati Vidyapeeth Deemed University, Poona College of Pharmacy, February 2018.
- Invited talk on "Studies on Alzheimer's Disease; Diagnostics and Therapeutics" at Bharati Vidyapeeth Deemed University, Poona College of Pharmacy, February 2018.

PROF. P. V. DEVARAJAN

- Lecture talk on 'Intelligent Strategies to Circumvent the Blood Brain Barrier' delivered in AAPS NIPER Student Chapter, National Institute of Pharmaceutical Education and Research, SAS Nagar, Mohali, Punjab, on 3rd June 2019.
- Delivered a lecture on topic title "In situ Nanotechnology Expanding Horizons of Nanomedicine", in Women Empowerment in Science and Technology of the National Academy of science India, Mumbai chapter on 13th May 2019.
- Delivered a lecture on topic title "Innovations in nanocarriers", in Savitribai Phule Pune University Sponsored National Level Seminar at Maharashtra Cosmopolitan Education Society's Allana College of College of Pharmacy, on 8th March, 2019.
- Lecture talk on "Mega Challenges for Materials in Nanomedicine" delivered in international seminar titled Materials for Advanced Technologies, held at GCE Keonjhar, Bhubaneswar on 6th March, 2019.
- Delivered a lecture on topic titled "Bioenhancement strategies and Lipid drug delivery systems", at Gattefosse, Mumbai, on 13th February, 2019

- Delivered a lecture on topic titled "In situ Nanotechnology Revolutionizing Nanomedicine", at Reliance Lifesciences Retreat, on 7th January, 2019
- Lecture talk on "Receptor Mediated Targeted Drug Delivery System for Hepatocellular Carcinoma" delivered in ACDSF Workshop 2018 Program, held at ACTREC, Navi Mumbai on 8th October, 2018.
- Chairing a session on "Infectious disease" at 1st Controlled release Asia meeting, Singapore on 24th-25th September 2018.
- Delivered a talk on "In situ nanotechnology enabling point of care Nanomedicine" in National Symposium on Materials in Healthcare at GITAM, Hyderabad on 6-8th September 2018.

ORAL / POSTER PRESENTATIONS:

DR. H. K. CHAUDHARI

- Refresher course in chemical Sciences and Technology, October 25-November 14, 2017, at UGC sponsored by University of Mumbai
- Innovations in Basic Sciences, January 5, 2018 at Savitri Phule Pune University & MVPS

PROFESSOR P. V. DEVARAJAN

- Saugandha Das and Padma V. Devarajan presented a poster titled "In situ Amphotericin B Lipid Nanoparticles enabling Point of Care Nanomedicine" in Institute of Chemical Technology, Mumbai on "Innovation Idea Competition" on 10th May, 2019
- Vinod Ipar, Rekha Sigal and Padma V. Devarajan presented a poster titled "Bioenhanced Haldi Doodh To Boost Immunity" in Institute of Chemical Technology, Mumbai on "Innovation Idea Competition" on 10th May, 2019
- Amit Lokhande and Padma V. Devarajan presented a poster titled "Innovative Curcumin Ophthalmic Gel for Cataract" in Institute of Chemical Technology, Mumbai on "Innovation Idea Competition" on 10th May, 2019
- Darsheen J. Kotak and Padma V. Devarajan "Sublingual film of salmon calcitonin hydroxyapatite nanoparticles a non-invasive alternative to parenteral administration" in 12th Biennial Globalization of Pharmaceutics Education Network (GPEN) Conference, 26th to 29th September 2018 at Singapore.
- Heena V. Maithania, Abdul Samad and Padma V. Devarajan presented a poster titled "Buparvone Solid

lipid nanoparticles for targeted delivery in theiriosis” in 1st Controlled release Asia meeting held on 24th-25th September at Singapore.

- Darsheen J. Kotak and Padma V. Devarajan presented a poster titled “Sublingual hydroxyapatite loaded nanoparticles of salmon calcitonin for osteoporosis as” in 1st Controlled release Asia meeting held on 24th-25th September at Singapore.
- Harsh A. Joshi, Raghavendra S. Patwardhan, Deepak Sharma, Santosh Sandur and Padma V. Devarajan presented a poster titled “Solid Lipid Nanoparticles of Baicalein with enhanced Anti-inflammatory Activity” in Society of Biological Chemist (SBC), Mumbai Chapter held on 13th October 2018
- Harsh A. Joshi, Raghavendra S. Patwardhan, Deepak Sharma, Santosh Sandur and Padma V. Devarajan presented a poster titled “Solid Lipid Nanoparticles of Baicalein with enhanced in vitro anticancer activity” in Nanobiotech 2018 held on 24th-27th October 2018.
- Rijo John*, Padma V. Devarajan Presented Poster on “Targeted Drug Delivery- Special Reference for Receptor Mediated Transcytosis in Crossing Blood Brain Barrier” in the “IBRO/APRC Chandigarh Neuroscience Symposium” held at University Institute of Pharmaceutical Sciences Panjab University, 12 October 2017.

PROF. A. R. JUVEKAR

- Thingore CD, Kshirsagar VV, Gursahani MS, Juvekar AR. “Rosmarinic acid attenuates oxidative stress, neuroinflammation and neurodegeneration against lipopolysaccharide-induced Alzheimer’s disease in mice” (poster), presented at Alzheimer’s Association International Conference, Los Angeles, USA, July 2019

DR. PRAJAKTA DANDEKAR JAIN

- Patil S, Gupta K, Pandit A, Dandekar P, Jain R, (2019) Oral delivery of peptides: Innovation to preclinical Evaluation 17th International Symposium on Advances in Technology and Business Potential of New Drug Delivery Systems organized by Controlled Release Society-Indian Chapter (CRS-IC) February 2019
- Ghodke S, Dandekar P and Jain R (2019), Polyrotaxane: Cyclodextrin Based Supramolecular Assembly, Poster Presentation at Controlled Release Society -Indian Chapter 2019, The Lalit, Mumbai, India, and February 2019.

- Mistry P, Khare L, Dandekar P (2019), Fabrication and characterization of starch-TPU based nano fibers for wound healing applications, Poster Presentation at 17th International Symposium on Advances in Technology and Potential of New Drug Delivery Systems, Controlled release society-Indian Chapter 2019, The Lalit, Mumbai, India, Feb 2019.
- Rohra N, Gaikwad G, Dandekar P and Jain R (2019), Production of uniform insulin crystals using hydrodynamic flow focusing device for sustained release, Poster Presentation at 17th International Symposium on Advances in Technology and Business Potential of New Drug Delivery Systems, The Lalit, Mumbai, India, February 2019
- Dhawane M, Gupta K, Deshpande A, Jain R and Dandekar P (2019) Colorimetric point-of-care detection of cholesterol using chitosan nanofibers, Poster presentation at CRS-IC 2019, The Lalit-Mumbai, India, February 2019
- Krishnan RA, Mhatre O, Sheth J, Prabhu S, Jain R, Dandekar P (2019), Synthesis of Zinc oxide Nanostructures using orange peel oil and their incorporation in composite films with Chitosan, Poster presentation at 17th International Symposium of Controlled Release Society - Indian Chapter, The Lalit, Mumbai, India, February 2019.
- Jahagirdar D, Mandawgade S, Dandekar P and Jain R (2019), Evaluation of novel probiotic composition in Oral health, Poster Presentation at CRS Mumbai Chapter, The Lalit, Mumbai, India, February 2019
- Gaikwad G, Bangde P, Jain R and Dandekar P (2019), Continuous synthesis of trimethyl chitosan/palladiumnanoparticles as potential anti-cancer therapy, Poster Presentation at 17th International Symposium of Controlled Release Society - Indian Chapter at Hotel The Lalit, Mumbai, February 2019.
- Gupta K, Modi D, Jain R and Dandekar P (2018) Production of High Titre Recombinant Monoclonal Antibody against TNF- α , Poster presentation at BPI 2018, Indian Institute of Technology-Delhi, India, December 2018
- Nagendra P, Saldanha M, Jain R, Dandekar P (2018) Optimization of Process Parameters to Maximize Antibody Production Using Design of Experiments, Poster Presentation at Bioprocessing India 2018, Indian Institute of Technology, Delhi, India, December 2018.
- Patil S, Dandekar P, Jain R (2018) Chitosan based

coprocessed excipients for improved tableting 3rd Wadhvani Research Center for Bioengineering (WRCB) Industry Day, IIT, Mumbai, November 20, 2018

- Gore M, Bute M, Yadav S, Majumder A,
- Gosavi S, Jain R and Dandekar P. (2018), Development and evaluation of artificial skin using microfluidics for preclinical research, Poster presentation at 3rd WRCB Industry Day 2018, Indian Institute of Technology Bombay, Mumbai, India, November 2018.
- Yadav D V, Gupta K, Dandekar P and Jain R (2018) Green Synthesis of Silver Nanoparticles and its Biomedical Application, Poster presentation at BESCON 2018, Indian Institute of Technology-Mumbai, India, October 2018
- Gaikwad G, Bangde P, Jain R and Dandekar P (2018), Continuous synthesis of trimethyl chitosan/palladiumnanoparticles as potential anti-cancer therapy, Poster Presentation at Conference BESCON-2018 at Indian Institute of Technology Bombay, India, October 2018.
- Rohra N, Gaikwad G, Dandekar P and Jain R (2018), Process development for producing uniform insulin crystals using microfluidic device, Poster Presentation at Biological Engineering Society Conference 2018, Indian Institute of Technology, Bombay, India October 2018.
- Tejal Pant, Prajakta Dandekar, Ratnesh Jain (2018) Development and characterization of 3D lung spheroids Poster Presentation at Biological Engineering Society Conference 2018, Indian Institute of Technology, Bombay, India October 2018.
- Koli U, Nilgiriwala K, Sriraman K, Jain R, Dandekar P (2018), tackling tuberculosis infection in macrophages using chitosan oligosaccharide nanoplexes. Poster presentation at “Nanobiotech-2018”, All India Institute of Medical Sciences(AIIMS), New Delhi, India, October 2018.
- Aware N, Pant T, Jain R, Dandekar P (2018), Potential of Polymethylmethacrylate Copolymer for developing microcarriers for mammalian cell culture, Poster Presentation at NanoBiotech 2018, All India Institute of Medical Science, Delhi, India, October 2018.
- Dey A, Dandekar P, Jain R. (2018) Exploring the Interaction of Chitosan Polymer with Lipid Bilayer For siRNA Delivery. Poster presentation at “Nanobiotech-2018”, All India Institute of Medical Sciences(AIIMS), New Delhi, India, October 2018.

- Koli U, Jahagirdar D, Dandekar P and Jain R (2018), Gene silencing using chitosan oligosaccharide-siRNA nanoplexes for alleviating lung diseases, Poster Presentation at SBC Mumbai, ICT, Mumbai, India, September 2018
- Koli U., Jain R., Dandekar P. (2018), Gene silencing using chitosan oligosaccharide-siRNA nanoplexes for alleviating lung diseases. Poster presentation at Indian Chitin and Chitosan Meeting, National Chemical Laboratory (NCL), Pune, India, October 2018.
- Krishnan RA, Mhatre O, Sheth J, Prabhu S, Jain R, Dandekar P (2018), Synthesis of Zinc oxide Nanostructures using orange peel oil and their incorporation in composite films with Chitosan, Poster presentation at 7th Indian Chitin and Chitosan Society Meeting, CSIR-NCL Pune, India, October 2018.
- Dey A, Kamat A, Dandekar P, Jain R. (2018) The indispensable role of proton balance in the formation of self-assembled chitosan nanoparticles for siRNA delivery. Poster presentation at 7th Indian Chitin and Chitosan Society Meeting, CSIR-NCL Pune, India, October 2018.
- Pant Tejal, Murarka Vidhi, Dandekar Prajakta, Jain Ratnesh (2018) Chitosan based microcarriers for potential large-scale culture of mammalian cells Poster presentation at 7th Indian Chitin and Chitosan Society Meeting, CSIR-NCL Pune, India, October 2018
- Rohra N, Gaikwad G, Dandekar P and Jain R (2018), Hydrodynamic flow focusing for producing uniform insulin crystals giving sustained release, Poster Presentation at 1st Controlled Release Asia meeting 2018 at Biopolis, Singapore, September 2018.
- Dey A, Dandekar P, Stenberg J, Jain R. (2018) Elucidating the uptake kinetics of chitosan nanoparticles for siRNA delivery. Poster Presentation at 1st Controlled Release Asia meeting 2018 at Biopolis, Singapore, September 2018.
- Gaikwad G, Bute M, Gadge S, Gosavi S, Jain R and Dandekar P (2018), Split and Recombine Micromixer based continuous Synthesis of Chitosan Nanoparticles, Oral Presentation at Microfluidics and Lab on a Chip conference organized by SELECTBIO at Mumbai, India.
- Ganatra P, Adithya Vs, Jain R and Dandekar P. (2019) FDM 3D printing as a tool for rapid prototyping and manufacturing of controlled release tablets. Poster presentation at 17th Controlled release society-Indian chapter at The Lalit, Mumbai. February 2019.

PROFESSOR VANDANA B. PATRAVALE

- Controlled Release Society Annual meeting and Exposition at Valencia, Spain 2019
- Smart nanocarriers for anti cancer therapeutics, Two Week AICTE Sponsored Faculty Development Programme "Challenges, opportunities, and Recent advances in Cancer therapeutics and its molecular targets" at Konkan Gyanpeeth Rahul Dharkar College of Pharmacy & Research Institute, Karjat, Dist. Raigad (Mumbai), Maharashtra, India
- Brain targeted nanotherapeutics, at Gokhale Education Society's Sir Dr. M. S. Gosavi College of Pharmaceutical Education & Research organized 2 days state level conference entitled "Opportunities, Challenges and Future Perspectives in Pharmaceutical Sciences", Nashik, Maharashtra, India 2019
- Functionalized nanosystems as Trojan horses for superior therapeutics at AMSAB 2019, NMIMS, Mumbai, Maharashtra, India 2019
- Brain targeted nanotherapeutics, at Savitribai Phule Pune University Pune Sponsored Two Days International Level conference on "Multidisciplinary Healthcare Research: Challenges, Opportunities and Newer Directions", Pune, Maharashtra, India 2019

Conference/symposia presentations

- Cupposomes: Next generation nanoassembled lipidic drug delivery system,; Dhoble S; at SELECTBIO 2019 on 'Novel Formulation Strategies 2019' in session 'Academic Innovation Oral Presentations' ; Hyderabad, India, May 2019
- Investigation of correlation between stability of lipidic nanoparticles and polymorphic transitions in the lipid phase; Naik S,; at International conference on advances in material science and applied biology (AMSAB); Mumbai, India, January 2019
- Nano-coformulation of docetaxel and pomegranate seed oil for cancer treatment; Talkar S,; at International conference on advances in material science and applied biology (AMSAB); Mumbai, India, January 2019
- Liposomes of garlic extract: strategy to prevent and eradicate biofilm in cystic fibrosis; Ghodake V,; at International conference on advances in material science and applied biology (AMSAB); Mumbai, India, January 2019

- Novel Excipient Screening Protocol to Anticipate the Long-Term Stability of Lipidic Nanoparticles,; Naik S;
- Fabrication of Loteprednol Etabonate Nanosuspension Using Quality-By-Design (QbD) Approach for Ophthalmic Application; Kakade P; 1st controlled Release Asia Meeting; Biopolis, Singapore, September 2018
- Anti-angiogenic Liposomal Formulation for Pulmonary Hypertension- A QbD Approach; Dhoble S,; 1st controlled Release Asia Meeting; Biopolis, Singapore, September 2018
- Peptide Metalloendrimers: A Novel Topical Platform Technology; Pandya A,; 1st controlled Release Asia Meeting; Biopolis, Singapore, September 2018
- Identification of anti-dengue phytocompounds: An in silico approach; Pawar R,; 1st controlled Release Asia Meeting; Biopolis, Singapore, September 2018

EVENTS OF ORGANIZED-2018-19 under TEQIP

Sr.	Period of Activity	Participant	Activity Coordinator	Objectives	External Participation
1	30/8/2018	UG, PG and PhD Students	Prof. S. V. Joshi	Obtain Knowledge about opportunities related to Indo German R&D networking offered by Indo German Science and Technology Centre for boosting industry academic collaborations, Speaker Dr Roshan Paul Director IGSTC	Speaker Dr Roshan Paul Director IGSTC
2	27/11/2018	UG and PG Students	Prof. S. V. Joshi	Lecture on Blood Products	Dr. Sumant S. Karnik , Haffkine Bio Pharmaceutical corporation Ltd
3	12/19/2018	UG, PG and PhD Students	Prof. S. V. Joshi	Latest development in Pharmaceuticals Technology & Chemistry	Prof. S. Daya, Faculty of Pharmacy, Rhodes University South Africa
4	12/02/2019	UG, PG and PhD Students	Prof. S. V. Joshi	Half day semina for Students, the following applications chemists from shimadzu will be deployed for the lectures 1) Ms. SampadaKhopkar for UV & IR spectroscopy 2) Mr. PurushottamSutar , for Mass Spectrometry	Shimadzu Corporation
5	22/02/2019	PG Students	Dr. P. D. Jain	Update research students organised Industry Expert Lecture on Achemical biology approach towards understanding the human neurological disorder PHARC	Speaker: Dr. SiddeshKamat Department of Biology, IISER Pune
6	28/03/2019	PG Students	Dr. VB. Patravale	Dr. Gopakumar Nair deliver a lecture on " " Intellecturas Property Rights" to graduate & Post graduate students	Dr. Gopakumar Nair , Director of Gopakumar Nair Associates, Mumbai

Programs organized by the faculty

Faculty	Program Details	Period of activity	Deliverables
Prof. S. V. Joshi	Workshop organized on " Improving communication Interpersonal skills and time management w.r.t. Pharma Industry	19/03/2018 to 21/03/2018	Application on Thermal Analysis in Pharma Industry
Dr. S. V. Joshi	Hands on training on Animal cell culture and molecular techniques using the human / cancer cell lines for various expts	16/07/2018 to 22/07/2018	Attend Cell culture Workshop at International Center for Stem Cells, Cancer and Biotechnology, Pune
Prof. K. S. Laddha	Workshop on "Extraction and isolation of Phytoconstituents"	8/09/2018 to 9/9/2018	Extraction Techniques and skills
Prof. S. V. Joshi	two days International workshop on Quality by design Practical Implementation of Tools & Practices of QbD & L6 in Pharma Product Development	12/10/2018 to 13/10/2018	Learn the basic of QbD
Dr. P. D. Jain	Hands on training workshop on Biosimilar / Biologics Characterization (Biosimilar Workshop 2018) at ICT	29/11/2018 to 1/12/2018	Focused on Biosimilar / Biologics Characterization to excel in the field of biologics development in depth understanding of the structure plays an important role
Prof. M. Degani	Workshop on Industry's way of running a medical chemistry program, with interactive exercises & case studies. And Symposium on the advances in the Industry approach towards the drug discovery process.	1/03/2019 to 3/03/2019	Industrial Medicines Chemistry Workshop
Dr. P. D. Jain	Update research students organised Industry Expert Lecture on A chemical biology approach towards understanding the human neurological disorder PHARC	22/02/2019	Research Industry related work
Dr. Patravale	Dr. Gopakumar Nair deliver a lecture on " Intellectual Property Rights" to graduate & Post graduate students	28/03/2019	Knowledge about Intellectual Property rights

Clinical Data Management 17th to 26th Dec 2018

Venue: Institute of Chemical Technology

EXPERT PROFILES

No	Name	Organization	Topic
1	Arun D Bhatt	Consultant	Overview of Clinical Research
2	Sarika Mhatre	Tata Consultancy Services	Overview of the Programme/Clinical Operations
3	Rajesh Pandey	Tata Consultancy Services	Life cycle of Drug Development
4	Dr. Amolkumar Hule	SIRO Clinpharm Pvt Ltd.	Regulatory Medical Writing
5	Gajanan Joshi	Tata Consultancy Services	Pharmakovigilance
6	Gauresh Somani	Tata Consultancy Services	Aggregate Safety Reports
7	Nishant Payal	Tata Consultancy Services	Overview to Regulators
8	Vishal Mhatre	Tata Consultancy Services	Regulatory Affairs
9	Sarika Shirke	Tata Consultancy Services	Publication Writing/Abstract Writing
10	Sneha Divekar	Cognizant Technology	Clinical Data Management
11	Sushil Barkur	Alkem Laboratories	Mindshift
12	Dr. Sanket Jadhav	--	Overview of Protocol Writing, Synergy between Different domains of clinical research/Overview of Programme Learning/Concluding Session
13	Anagha Bhatkhande	-	Biostatistics in Clinical Research
14	Shivaji Bote	-	Clinical Data Management

Pharmaceutical Marketing Management 6th to 15th Jan 2019

Venue: Institute of Chemical Technology

EXPERT PROFILES

No	Name	Organization	Topic
1	Pramila Naik	Healthscape Business Solutions Pvt Ltd.	Brand Management
2	Monica Gangawani	Ipsos Healthcare, India	Market Research
3	Ayaz Sufi	Roomi Consultancy	Marketing Workshop Brand Audit and Branding
4	Manisha Vithaldas	Abbott	Field work in Pharmaceutical Industry
5	Sahil Desai	Fermenta Biotech Ltd	International Pharma Marketing
6	Shailesh Kulkarni	Pfizer Ltd	Importance of Logistics & Purchases
7	Manisha Naigot	-	-
8	Milind Mangle	Angel Consultancy and Services	Pharma Marketing Overview
9	Nitin Kagalkar	-	-
10	Soham Wagh	GSK	Pharma Market Overview
11	Hitesh Mistry	Sales Training	BCG Product Portfolio Matrix

INDUSTRIAL CONSULTANCY

Faculty	Name of Company	Area of Advice	Period
Professor S. V. Joshi	Salicylates and chemicals Pvt. Ltd.	Synthesis optimization of orotic acid	2017-2020
Professor M. S. Degani	Salicylates and chemicals Pvt. Ltd.	13,00,000/-	2017-2020
	Ambernath Organics Pvt. Ltd.	12,00,000/-	2017-18
	CSR grant		
Professor P. D. Amin	ICPA	Oral care	3 years
	Merck	Nutraceuticals	12 months
	Unilever	Personal care	2 years
	Lifescent INC USA	Inserts	12 months
	Cheryl Laboratories Pvt Ltd	Topical formulations	3 years
	Salicylates & Chemicals Pvt Ltd	Excipients	6 months
	Jubeln Lifescience Bangalore	HME	12 months
	Bajaj Healthcare Ltd	Solid dosage forms	12 months
Professor P. V. Devarajan	Zim Laboratories	Pharmaceuticals and drug delivery systems	2014- present
	Emcure Pharmaceuticals Pvt Ltd	Pharmaceuticals and drug delivery systems	2013- present
	Phoenix Pharmaceuticals, LA, USA		
Dr. Prajakta Dandekar Jain	Unilever	Method of quantifying skin deposition of Moringa Protein	
Professor K. S. Laddha	Total Herb solutions	-	Ongoing
	Ms sheekhar starch pvt.ltd.	-	Ongoing
	M/s. Haridevka, MUMBAI		
Professor V. B. Patravale	Sahajananad Technologies Pvt. Ltd.	Pharmaceuticals	2001-ongoing
	Cadila Pharma Ltd.	Pharmaceuticals	2003-ongoing
Professor P. R. Vavia	Nippon Synthetic Chemicals Ltd. Japan	-	January 2018

DETAILS OF POST-GRADUATE/ PH. D. STUDENTS WHO PASSED OUT

Name	Course	Title
Professor K. G. Akamanchi		
Kapil Sharad Chaudhari	Ph. D. (Tech) Pharmaceutical Technology	Design, synthesis and applications of novel dendritic lipids
Professor P. D. Amin		
Santosh Maruti Gejage	Ph. D. (Tech.) Pharmaceutics	Novel Lipidic drug delivery system by using HME
Kailas Moravkar	Ph. D. (Tech.) Pharmaceutics	Application of different dry and continuous techniques to develop different solid dosage forms
Professor M. S. Degani		
Bochare Machhindra Dattatray	Ph.D.(Tech)	Method development for synthesis of organofluorine compounds

Shelke Rupesh Uttamrao Rajanibai	Ph.D.(Tech)	Design and synthesis of novel multi-targeting anti-infectives
Mali Hemlata Mohan Vasumati	Ph.D.(Tech)	Design, synthesis and evaluation of Nitrogen containing heterocycle as antimycobacterial agents
Sabale Sandip Shankar	Ph.D.(Sci)	Green approach towards synthesis of pharmaceutically important compounds
Patel Sagar Shantilal	Ph.D.(Tech)	Newer techniques for synthesis of organofluorine compounds
Sachin L. Lonkar	Ph.D. (Tech.)	Synthesis of Phase-II metabolites by Green methods
Professor V. B. Patravale		
Swapnil Mohurle	Ph.D. (Tech.)	Anti-amyloid agents loaded nanocarriers via intranasal route for Alzheimer's disease treatment
Professor P. D. Jain		
Yadav Vijay	PhD(Tech) Green Technology	Green synthesis and study of metal nanostructures for biomedical applications
Chhabra Rohan	PhD(Tech) Bioprocess Technology	Bioprocessing Of Scaffolds For Tissue Engineering
Krishnan Akhil	PhD(Tech) Green Technology	Green processes for producing low molecular weight polysaccharide polymer and fabricating their nanocarriers for biomedical applications
Professor A. R. Juvekar		
Mestry Snehal Nitin	Ph. D (Tech) Pharmacology	Phytochemical and Pharmacological investigations of Punica Granatum Linn. In Diabetic Nephropathy
Professor K. S. Laddha		
Poonam Ashok Agarwal	Ph. D. (Tech.) Pharmacognosy	Studies on Proto alkaloids
Professor Sadhana Sathaye		
Mallikarjun Laxmiputra Patil	Ph. D. (Tech) Pharmacology	Recovery and transformation of lignin to value added products
Suraj Abhimanyu Muke	Ph. D. (Tech.) Pharmacology	Isolation and purification of wedelolactone from herbal
Dr. V. N. Telvekar		
Yogesh Baburao Sutar	Ph. D. (Tech.) Pharmaceutical Technology	Protein mediated targeted drug delivery: synthesis and evaluation
Jaishree Kishor Mali	Ph.D. (Tech) Pharmaceutical Chemistry	Synthesis of novel antitubercular agents and development of new synthetic methodologies for heterocyclic compounds
Professor P. R. Vavia		
Jadhav Nitin	Ph.D. (Tech.) Pharmaceutics	Novel carrier based drug delivery system
Monpara Jasmin	Ph.D. (Tech.) Pharmaceutics	Advanced nanocarrier system for targeted delivery of antineoplastic agent

M. Pharm

Name	Title
Professor S. V. Joshi	
Reyniel Ben Carrelho	Mechanochemical synthesis of Pharmaceutically important compounds
Prof. P. V. Devarajan	
Sheetal Munindra Oholkar	Pulmonary drug delivery by Nebuization
Professor M. S. Degani	
Aakash Rajkumar Madhwani	Design, Synthesis and Biological Evaluation of Coumarin-3-carboxamides as potential anti-tuberculosis agents
Nitin Parsram Ahuja	Design, Synthesis and Biological Evaluation of Isoniazid derivatives as potential anti- tuberculosis agents
Dr. G. U. Chaturbhuj	
Mr. Pranav S. Bang	-
Vishal Anil Bansode	Development of new methodology for the efficient synthesis of biologically active polyhydroquinolines using a homogeneous recoverable acid catalyst
Dr. H. K. Chaudhari	
Shahnawaz Iqbal Qureshi	-
Professor A. R. Juvekar	
Shilpee Gautam Chanda	Evaluation of the anti-inflammatory activity of syringic acid
Professor K. S. Laddha	
Limbraj Baburao Rakh	Extraction & isolation of Azadirachtin form seeds of Azadirachta Indica
Professor V. B. Patravale	
Aparana Dogra	Novel Lipid based oral delivery system of rivastigmine
Professor S. Sathaye	
Vishu Mukesh jain	To Study The Antioxidant Potential Of Thymol And Naringenin Against Glucose Induced Oxidative Stress In Nrk-52e Cells
Shubham G. Mulange	Screening Of Anti-Parkinsonian Activity Of Phytoconstituents Against Rotenone Induced Neurotoxicity In A Zebra Fish Model
Dr. V. N. Telvekar	
Preeti MUKESH Verma	Sulfur containing hetero-cycles as an anti-infective agent
Professor P. R. Vavia	
Chaitali Rajkumar Bora	Formulation and evaluation of microemulsion based emulgel griseofulvin

M. TECH.

Name	Course	Title
Professor S. V. Joshi		
Pritam V. Bagwe	M. Tech. Pharm Biotech	Synthesis process optimizaion of Alpha Glycerolphosphoryl choline. (Alpha-GPC)
Professor P. V. Devarajan		
Manisha Mahadev Sannake	M. Tech. Pharma	Brain Targeted Drug Delivery Systems
Hiral Mukhesh Vegad	M. Tech. Pharm Biotech	Nanoparticle as vaccine adjuvants
Pramod Jadhav	M. Tech. Pharm Biotech	Point of Care Test Kit for Pregnancy Detection in Cattle

Professor P. D. Amin

Sagar Subhash Chandane	M. Tech. Pharma	
Sonal Ashokrao Agarkar	M. Tech. Pharma	Formulation and Development of Sustained release Gliclazide tablet with different hydrophilic polymers by using a Direct compression technique
Professor M. S. Degani		
Rajesh Goraksh Pawar	BPT	Extraction, Separation, Purification and Testing of Anti-cancerous compound from Guava
Km Nazima	M. Tech. Pharm Biotech	Isolation and Purification of DHFR enzyme from Recombinat
Dr. G. U. Chaturbhuj		
Neha Jaysing Pawar	M. Tech. Pharma	Optimizing synthesis of Nifedipine via Design of experiments (DoE)
Dr. H. K. Chaudhari		
Revati D Dhayfule	M. Tech. Pharm Biotech	
Suraj Shyamkumar Kapale	M. Tech.	Design And Synthesis Of Anticancer Agents
Dr. Prajakta Dandekar Jain		
Eram Mustafa Shaikh	BPT	Hydrophobic deep eutectic solvent as a green technique for extracting ergosterol from mushroom
Sagar Balu Ingle	Green Technology	HMF production using solid acid as catalyst
Nagendra P	M. Tech. Pharm Biotech	Optimization of cell culture process by DOE for the production of monoclonal antibody
Nikita Ashok Aware	M. Tech. Pharm Biotech	Exploring polymethylmethacrylate copolymer for developing microcarrier scaffold for mammalian cell culture
Prathana Pankaj Mistry	M. Tech. Pharma	Fabrication and characterization of starch-TPU based nanofibers for wound healing applications
Professor K. S. Laddha		
Raghvendra K. Dharmadhikari	M. Tech.	Separation, & Isolation and characterization of essential oils and coumarins
Saurabh B. Ambure	M. Tech.	Separation of volatile oil and its components from piper cubeba
Professor V B Patravale		
Anjana P Menon	M. Tech. Pharm Biotech	Studies on Lauryl derivative as an HIV-1 entry inhibitor
Arkasubhro Aviti Chatterjee	M. Tech.	Aqueous Ethyl cellulose nanodispersion for pharmaceutical applications
Professor Sadhana sathaye		
Ganesh Venkatraman Bhat	BPT	Extraction and Purification of Arecholine
Safala S. Malvankar	M. Tech. Pharm Biotech	Role of Xanthine Oxidase in inflammatory conditions
Paramita Batabyal	M. Tech. Pharm Biotech	In silico studies on xanthine oxidase
Dr. V. N. Telvekar		
Satish laxmanrao Wagh	M. Tech. Pharma	Design, synthesis, and evaluation of oxadiazole derivative as antimicrobial agent.
Professor P. R. Vavia		
Gajanan Dattatraya Indurkar	M. Tech. Pharma	Formulation and evaluation of microemulsion based nasal spray of antipsychotic agent

MAJOR ACCOMPLISHMENTS:

PROFESSOR M. S. DEGANI

Prof. Degani has been a Professor in Pharmaceutical Chemistry since 2006 and is currently Head of Department of Pharmaceutical Sciences and Technology. She has more than sixty five publications in international peer reviewed journals and has a Scopus h-index of 15. She has filed two international and several Indian patents. She has also co-authored a book on retro synthesis. She is actively involved in various industrial projects and consultancy in the areas of process chemistry and drug discovery. She has guided 21 PhD and 43 over Masters' students. Currently there are 08 PhD students and 7 Masters' students working in her research group. Dr. Degani has been awarded the Distinguished Alumni Award by C. U. Shah College of Pharmacy in 2007 Mumbai, Gharda Award for research publications in 2009 and Best Teacher Award of ICT 2013 and 2015. She is a fellow of the Maharashtra Academy of Sciences.

DR. PRAJAKTA DANDEKAR JAIN

- Galenus-Privatstiftung Award, Austria, 2016 to attend the 43rd Annual Meeting and Exposition of the Controlled Release Society, Seattle, USA, July 2016
- 'Gandhian Young Technological Innovation Award 2016' based on work related to the development of Development of a novel, non-biological pyrogen/microcellular components detection technique for purification and depyrogenation of water', March 2016 (Award winners: Vijay Yadav, Rohan Chhabra, Nikhil Kalane, AnomitraDey and Tejal Pant awarded at RashtrapatiBhavan by Honourable Dr. RaghunathMashelkar)
- Third Prize during 7th Edition BEST-INDIA 2015 (Biotechnology Entrepreneurship Student Teams) sponsored and promoted by DBT, Govt. of India and managed by Association of Biotechnology Led Enterprises – ABLE, February 2016 (Winning Team: Vijay Yadav, Rohan Chhabra, Nikhil Kalane, AnomitraDey and Tejal Pant)

PROFESSOR K. S. LADDHA

- 4 Monographs in Quality Standards of Indian Medicinal Plants' Volume 13, 2015, published by Indian Council of Medical Research, New Delhi as a part of ICMR project.
- 13 Monographs in Quality Standards of Indian Medicinal Plants' Volume 15, 2017, published by Indian Council of Medical Research, New Delhi as a part of ICMR project.
- 9 Monographs in Quality Standards of Indian Medicinal Plants' Volume 16, 2018, published by Indian Council of Medical Research, New Delhi as a part of ICMR project

PROFESSOR V. B. PATRAVALE

- Prof. Indira Parikh 50 women in education leaders award by 7th World Education Congress (2018)

PROFESSOR S. SATHAYE

- 1 student awarded Ph. D. degree, 4 students awarded masters' degree.
- 06 peer- reviewed publications in international journals.
- 02 patents applied.
- Recipient of 3 awards for presentations (oral and poster) in national and international conferences and industry defined problems.
- Expert pharmacologist on various scientific committees.

PLACEMENT DATA

B. Pharm

Sr.	FullName	Roll No	Jobber/ Apper	Jobber status	Placed At	Package	Remarks
1	Sachin Ramraj Kori	13PHE1029	Jobber	placed	Spinco Biotech Pvt Ltd.	-	-
2	Deepti Suresh Mataghare	14PHA1001	Jobber	placed	Astrazenca	3.58	-
3	Monil Mehul Shah	14PHA1002	Jobber	placed	Biocon	2.92	-
4	Samruddhi Vidyadhar Subhane	14PHA1003	Appear	-	Bombay College of Pharmacy	-	Master
5	Sanjay Santaram Malge	14PHA1004	Appear	-	ICT Mumbai	-	Master
6	Jesal Rajkumar Makwana	14PHA1005	Appear	-	Competative Exam Preparation	-	-
7	Ajay Anant Gawali	14PHA1006	Appear	-	MPSC Exam Preparation	-	-
8	Amol Balu Gare	14PHA1007	Appear	-	ICT Mumbai	-	Master
9	Pradnya Ashok Ingle	14PHA1008	Appear	-	Pune College of Pharmacy	-	Master
10	Sanjana Sanjay More	14PHA1009	Appear	-	Competative Exam Preparation	-	-
11	Kalyani Vilas Desale	14PHA1011	Appear	-	National Institute of Pharmaceutical Education and Research, Mohali	-	Masters
12	Rupam Ashok Singh	14PHA1012	Appear	-	NIPER, Mohali	-	Masters
13	Ravindra Phulpagar Sali	14PHA1013	Appear	-	Competative Exam Preparation	-	-
14	Umang Sunil Amrutkar	14PHA1014	Jobber	placed	Zenkem	-	-
15	Tanishka Satyajit Saraf	14PHA1015	Appear	-	Mercer University	-	Ph.D in Nuero Pharmacology
16	Singh Vaibhav	14PHA1016	Appear	-	Competative Exam Preparation	-	-
17	Neha Ramesh Pai	14PHA1017	Appear	-	ICT, Mumbai	-	Master
18	Snehal Sunil Daware	14PHA1018	Appear	-	National Institute of Pharmaceutical Education and Research, Mohali	-	-
19	Ankita Narendra Kshatriya	14PHA1020	Appear	-	National Institute of Pharmaceutical Education and Research, Mohali	-	-

20	Sonali Makarand Vaidya	14PHA1021	Jobber	placed	Innovation Biological for Internship	-	-
21	Akanksha Madhav Kale	14PHA1022	Appear	-	Mercer University	-	-
22	Keyur Ravindrakumar Rane	14PHA1023	Appear	-	Competative Exam Preparation	-	-
23	Swaraj Ganpat Pawar	14PHA1024	Appear	-	Competative Exam Preparation	-	-
24	Revathi Tharmaraj Reddy	14PHA1027	Appear	-	University of Alberta, Edmonton, Canada	-	MS in Chemical Biology
25	Bilva Nitin Burkule	14PHA1028	Appear	-	Competative Exam Preparation	-	-
26	Parth Nimish Kadakia	14PHA1029	Appear	-	ETH ZÜRICH, Switzerland	-	MS
27	Shruti Vijay Awari	14PHA1030	Appear	-	NIPER, Mohali	-	Master
28	Saina Sanjay Prabhu	14PHA1031	Appear	-	Creighton University	-	MS
29	Aditya Rajesh Kamat	14PHA1032	Appear	-	Indian Institute of Science	-	-

3.58	Highest package
2.92	Minimum Package
3.25	Median

B. Tech. Pharma

Sr.	FullName	Roll No	Jobber/ Apper	Jobber status	Placed At	Package	Remarks
1	Juhi Viraj Salgaonkar	14PHT1001	Appear	-	-	-	Phd
2	Priyanka Shankar Pawar	14PHT1002	other	-	Competative Exam Preparation	-	-
3	Kushal Dilip Dhake	14PHT1003	Appear	-	Competative Exam Preparation	-	-
4	Chinmay Hemant Khanolkar	14PHT1004	Appear	-	IIT Pr	-	-
5	Abhishek Anil Naik	14PHT1005	Jobber	Placed	Biocon	2.92	-
6	Saquib Salim Shaikh	14PHT1006	Jobber	Placed	Glenmark	7.5	(7Lac + 50000 bonus)
7	Vishvesh Janardan Raje	14PHT1007	Appear	-	Competative Exam Preparation	-	-
8	Sandeep Santosh Sadgir	14PHT1008	Jobber	Placed	Biocon	2.92	-

9	Shashank Kamlesh Bhangde	14PHT1009	Appear	-	-	-	MS
10	Pooja Jitendra Kotwal	14PHT1010	Jobber	Placed	Glenmark	7.5	(7Lac + 50000 bonus)
11	Manan Chandraj Shah	14PHT1012	Appear	-	-	-	Phd
12	Ayush Aditya Pal	14PHT1013	Appear	-	-	-	Phd
13	Himani Ravindra Garud	14PHT1014	Jobber	Placed	Biocon	2.92	-
14	Mrunmayee Chandrashekhar Patil	14PHT1015	Appear	-	Competitive Exam Preparation	-	-
15	Pratik Nitin Dalvi	14PHT1017	Appear	-	-	-	ms
16	Nidhi Raghuram -	14PHT1020	Appear	-	-	-	Phd

7.5	Highest package
2.92	Minimum Package
2.92	Median

Post Graduate

Sr.	Name	Roll No	Offer Letter	Job App	Job Status	Placed At	Package	Remarks
1	Aakash R. Madhwani	16PHC201	Yes	Jobber	Placed	Abbott	6	-
2	Nitin P. Ahuja	16PHC202		Jobber	Placed	Abbott	6	-
3	Preeti M. Verma	16PHC203	Yes	Jobber	Placed	Abbott	6	-
4	Reyniel B. Carvalho	16PHC204	Yes	Jobber	Placed	Abbott	6	-
5	Shahnawaz I. Qureshi	16PHC205	-	Jobber	Placed	Dr. Reddy	-	-
6	Vishal A. Bansode	16PHC206	-	Jobber	Placed	Dr. Reddy	-	-
7	Jyoti S. Batgire	16PHM201	-	Jobber	-	-	-	-
8	Limbraj B. Rakh	16PHM202	-	Jobber	-	-	-	-
9	Shilpee G. Chanda	16PHM203	-	Jobber	-	-	-	-
10	Vishu M. Jain	16PHM204	Yes	Jobber	Placed	Biocon	3.7	-
11	Shubham G. Mulange	16PHM205		Jobber	Placed	Spinco Biotech Pvt Ltd.		Refuse order
12	Aparana Dogra	16PHP201	Yes	Jobber	Placed	Abbott	6	-
13	Chaitali R. Bora	16PHP202		Jobber	Placed	Dr. Reddy	4.5	-
14	Sagar S. Chandane	16PHP204	Yes	Jobber	Placed	Abbott	4.5	-
15	Sheetal M. Oholkar	16PHP205	Yes	Jobber	Placed	Spinco Biotech Pvt Ltd.	-	-
16	Shivam Swarnkar	16PHP206		Jobber	Placed	Glenmark Pharmaceuticals	7.5	-
17	Devendra Singh Meena	16PHP203		other				Left

M. Tech. Pharma

Sr.	Roll No	Name	Jobber/ Apper	Jobber Status	Placed At	Package
1	17PHT201	Ajay Nandu Salunke	Jobber	placed	DHARAMSI MORARJI CHEMICAL CO.LTD	5
2	17PHT202	Akash Vijay Lingayat	Jobber	placed	Novartis	6
3	17PHT203	Darshana Dayanand Kamble	Jobber	-	-	-
4	17PHT204	Ishwari Avinash Kale	Jobber	placed	Novartis	6
5	17PHT205	Mujahed Hussain Ansari Sayeed Hussain Ansari	Jobber	-	-	-
6	17PHT206	Prajakta Dilipkumar Suradkar	Jobber	-	-	-
7	17PHT207	Sourabh Vinod Khadse	Jobber	-	-	-

VISITING FACULTY 2018-19 (First Half)

Sr.	Name of the faculty	Subject	Degree	Branch
1	Dr. Dimple R. Bhatia	PBT 2125, Immunology and Vaccines	M. Tech	Pharmaceutical Biotechnology
2	Dr. Smita Limaye	PBT 2102, Advances in Recombinant DNA Technology	M. Tech	Pharmaceutical Biotechnology
3	Dr. Archana S. Iyer	PBT 2106, Make-up Subject 1 Fundamentals of Microbiology	M. Tech	Pharmaceutical Biotechnology
4	Mr. V. Y. Sane	PBT 2106, Make-up Subject 1 Chemical Engineering	M. Tech	Pharmaceutical Biotechnology
5	Dr. Geeta Godbole	PBT 2121, Advanced Biochemistry	M. Tech	Pharmaceutical Biotechnology
6	Dr. Divya Lal Saxena	PBT 2121, Advanced Biochemistry	M. Tech	Pharmaceutical Biotechnology
7	Mr. V. Y. Sane	CET 1803, Pharmadeutical Engineering	F.Y.B.Pharm	Pharmacy
8	Ms. Shefali Chutke	HUT 1102, Communicatin Skills and Psychology	F.Y.B.Pharm	Pharmacy
9	Dr. Vishwas Sangale	PHT 1213, Clinical Pharmacy and Drug Interactions	F.Y.B.Pharm	Pharmacy
10	Dr. Ramajanaki D. Iyer	HUT 1103, Sociology and Ethics	S.Y.B.Pharm	Pharmacy
11	Dr. Vrushali Keer	PHT 1505, Pharmacognosy II	F.Y.B.Pharm	Pharmacy
12	Mrs. Ramalakshmi Anand	PHT 1118, Forensic Pharmacy & Drug Store Management	T.Y.B. Pharm	Pharmacy
13	Dr. Anuradha Pol	PHT 1117, Cosmeticology	T.Y.B. Pharm	Pharmacy
14	Mr. M. H. Navlur	HUT 1202, Pharmaceutical Management	Final Y.B. Pharm	Pharmacy
15	Mr. Mihir Khambete	PHT 1410, Pharmaceutical & Medicinal Chemistry IV	Fin. Y. B. Pharm	Pharmacy
16	Mrs. Rajashri Survase-Ojha	PHT 2019, Industrial Pharmacy	M. Tech	Pharmaceutical Technology
17	Dr. Anirudh Shenvi	PHT 2021, Advanced Pharmaceutical Technology	M. Tech	Pharmaceutical Technology

VISITING FACULTY 2018-19 (Second Half)

Sr.	Faculty	Subject	Degree	Branch
1	Dr. Archana S. Iyer	PBT2105 Advanced Analytical Tools in Biotechnology	M. Tech	Pharmaceutical Biotechnology
2	Dr. Ramajanaki D. Iyer	PBT 2123 Biostatistics	M. Tech	Pharmaceutical Biotechnology
3	Dr. Divya Lal Saxena	PBT 2127 Process Biotechnology	M. Tech	Pharmaceutical Biotechnology
4	Dr. Vishwas Sangale	PHP 2508 Advanced Medicinal Natural Products Laboratory	M. Tech	Pharmaceutical Technology
5	Dr. Mudra Kapoor	PHT2020, Drug Delivery Technology	M. Tech.	Pharmaceutical Technology
6	Dr. Dhananjay Rane	PHT 2022 Active Pharmaceutical Ingredients Technology	M. Tech.	Pharmaceutical Technology
7	Mr. Madan M. Aggarwal	MAT 1202 Mathematics & StatisticsII	F. Y. B. Pharm	Pharmacy
8	Dr. Hemant Khanolkar	PHT1103 Physical Chemistry and Physical Pharmacy	F. Y. B. Pharm	Pharmacy
9	Prof. Vijayalaxmi S. Suvarna	IPP 1102, Computer Laboratory	S.Y.B.Pharm	Pharmacy
10	Dr. Divya Lal Saxena	PHT 1097 Applied Molecular Biotechnology	T. Y. B. Pharm	Pharmacy
11	Dr. Ramajanaki D. Iyer	HUT1106 Environmental Science and Technology	Final Y B. Pharm	Pharmacy
12	Dr. Girish M. Khandekar	PHT1099 Drug Synthesis Approaches	Final Y B. Pharm/ B.Tech.	Pharmacy
13	Dr. Jyoti Baliga	PHT1092 Pharmaceutical Packaging Technology	Final Y B. Tech.	Pharmacy
14	Dr. Premlata Ambre	PHT1057 Medicinal Chemistry III	Final Y B. Tech.	Pharmacy

Third Year B. Pharm

Year: 2018-19

In-Plant Training

Sr.	Roll No.	Name	In-plant training Company name
1	15PHA1001	Pooja Naik	Abbott healthcare Ltd (R & D centre)
2	15PHA1002	Akhil Shah	NGL Finechem Ltd
3	15PHA1003	Aashvi Jain	FDC Ltd.
4	15PHA1004	Ragini Pillay	Watson pharma private LTD
5	15PHA1005	Sanika Naware	Ferring Pharmaceuticals Pvt Ltd
6	15PHA1006	Nilesh Kulkarni	Glenmark pharmaceutical Ltd. And University of Hannover
7	15PHA1007	Omkar Deshpande	Abbott
8	15 PHA1008	Rajesh Dugane	Aditi Pharmaceutical Solapur
9	15PHA1009	Aditya Sindhusagar Dhule	Aditi Pharmaceuticals Pvt. Ltd.
10	15PHA1010	Poorva Taskar	Hindustan Unilever Limited

11	15PHA1012	CHAITALI SHAH	P.J.HEALTHCARE
12	15PHA1013	Ketaki Dhurve	FDC Ltd.
13	15PHA1014	Pratik Gite	Aditi Pharmaceuticals pvt. Ltd.
14	15PHA1015	Sushil Chavan	Aditi Pharmaceuticals pvt.Ltd.
15	15PHA1016	Priyanka Salunkhe	Raptakos, Brett & Co. Ltd.
16	15PHA1017	Viraj Modak	Reptakoss and Brett ,Thane
17	15PHA1019	Priyanka Bare.	Raptakos and Brett
18	15PHA1020	Tejal R Varekar	IPCA laboratories kandivali
19	15PHA1021	Asang Borkar	Aditi Pharmaceuticals pvt. Ltd.
20	15PHA1022	Shakshi Singh	U.S. Vitamins Pvt Ltd
21	15PHA1024	Gauri Bhatkhande	Indoco Remedies
22	15PHA1025	Shweta Sabu	Glenmark
23	15PHA1026	Apurva Rajesh Pardeshi	Glenmark Pharmaceuticals Ltd., Nashik
24	15PHA1027	Drashty Mehta	Sri Gopal Krishna Labs Pvt. Ltd.
25	15PHA1028	Purav Shah	USV Private Limited
26	15PHA1029	Tanvi Sanjay Patil	Glenmark Pharmaceuticals Limited, Satpur Nasik
27	15PHA1030	Aishwarya Bhasi	Abbott R & D, Andheri.
28	15PHA1031	Shreya Sunil Dalvi	Glenmark R & D navi mumbai

MAJOR ACCOMPLISHMENTS

PROF. P. V. DEVARAJAN

OPPI SCIENTIST AWARD 2018, for contribution to research in Veterinary and human healthcare in infectious diseases & cancer, awarded by Organisation of Pharmaceutical Producers of India (OPPI), at OPPI's Annual day celebration on October 11, 2018 in the Ballroom of Hotel Taj Lands End, Bandra, Mumbai

DR. PRAJAKATA DANDEKAR JAIN

Awards by research students:

1. Third Prize for poster presentation on work related 'Oral delivery of peptides: Innovation to preclinical Evaluation' at the 17th International Symposium on Advances in Technology and Business Potential of New Drug Delivery Systems organized by Controlled Release Society-Indian Chapter (CRS-IC), February 2019 (Award winner: Saurabh Patil, Kritika Gupta and Aashish Pandit)
2. Prime Minister's Fellowship for conducting research along with Bajaj Healthcare Ltd., August 2018 (Award winner: Lalit Khare)
3. Second prize for 'Novel Idea Competition for Post-graduate students' organized by UDCT Alumni Association (UAA) during UAA 30th Foundation Day and Technology Day Celebrations at Institute of Chemical Technology, Mumbai, May 2018 (Award winner: Manish Gore)

PROF. P. R. VAVIA

Prof. P. R. Vavia and his student awarded with Global RESOMER Award 2017 (third position) for developing the "Novel bilayer dissolving microneedle arrays with concentrated PLGA nano-microparticles to targeted intradermal delivery: Proof of concept".

ABSTRACT OF THESIS

M. Pharm

Studnets: Ms. Sheetal Oholkar

Supervisor: Prof. P. V. Devarajan

PULMONARY DRUG DELIVERY BY NEBULIZATION

Tylosin (TYL) is an antibiotic drug, available as conventional oral dosage for the treatment of Mycoplasmosis caused by Mycoplasma Gallisepticum (MG). Studies has shown that the oral bioavailability of tylosin tartrate (TYL TRT) is less than 50% hence current research work focuses on formulation and evaluation of essential oil based emulsion system of TYL for pulmonary drug delivery by nebulization. TYL has two salts namely TYL TRT and TYL phosphate (TYL PHOS). Studies indicated that solubility of TYL TRT in water was very high(500mg/ml) and is also soluble in organic solvents like Ethanol, Methanol, ACN, DMSO, etc. on other hand, TYL PHOS is insoluble in water and I other solvents. Eucalyptus oil, Tea tree oil and Citronella oil were used for comparative studies and optimization of formulation of TYL TRT. Different concentrations of drug, ethanol and oil were nebulized to study the effect of drug loading, effect on % yield, density, particle size and settling time of nebulized formulation. It was observed that, as concentration of ethanol and oil increases the % yield and settling time (36.5±0.5 min) increases but density (0.33 gm/cm³) and particle size (3.6±0.1 μm) decreases. The studies indicate that Eucalyptus oil is more effective than other two oils. A chamber was designed, fabricated and evaluated with plates arranged at specific difference from each other in it, to evaluate settling time of formulation as an important parameter for nebulization efficiency.

Students: Mr. Shubham Mulange

Supervisor : Prof. Sadhana Sathaye

SCREENING OF ANTI-PARKINSONIAN ACTIVITY OF PHYTOCONSTITUENTS AGAINST ROTENONE INDUCED NEUROTOXICITY IN A ZEBRA FISH MODEL

Parkinson's disease (PD) is the second most common debilitating neurodegenerative disease affecting 7 to 10 million of people worldwide. Oxidative stress, mitochondrial dysfunction and neuroinflammation are the major hallmarks observed in PD pathophysiology. Current therapeutic approaches are plagued with serious adverse effects which compromise the quality of life. Therefore, treatments that provide neuroprotection and/or disease-modifying effects remain an urgent unmet clinical need. In order to understand the multiple complex pathological mechanisms involved in degeneration and considering the limitation of conventional Rat and mice model, we developed rotenone induced zebrafish model in which zebrafishes were administered with 4mc/kg dose of Rotenone period of 8 days to induce parkinsonian symptoms in zebrafish. This protocol replicates all necessary pathological key features of PD. In therapeutic studies, we aim to investigate the neuroprotective and neurotrophic effects of naturally occurring phytoconstituents like Ursolic acid as well as Daidzein. Our objective is also to explore the underlying mechanisms with respect to PD.

Student: Ms. Vishu Jain

Supervisor : Prof. Sadhana Sathaye

TO STUDY THE ANTIOXIDANT POTENTIAL OF THYMOL AND NARINGENIN AGAINST GLUCOSE INDUCED OXIDATIVE STRESS IN NRK-52E CELLS

Glucose induced oxidative stress is thought to play a critical role in the etiology and development of diabetic complications. All therapeutic options provide symptomatic relief rather than a cure to the root cause. Reducing oxidative stress through phytoconstituents can not only help ameliorate the development of complications but can also help preventing it. Objectives: The aim of the study was to investigate the antioxidant effect of Thymol and Naringenin against high glucose induced cytotoxicity and oxidative stress through NRK-52E cells (Norvegicus rat kidney cells) Materials and Methods: cells were treated with 25 mM concentration of glucose for 48 hours followed by incubation with a range of concentration of Thymol and Naringenin for 24 hours. Reduction in reactive oxygen species generation, cell viability, antioxidant enzymes (Reduced glutathione, superoxide dismutase, Catalase), mitochondrial membrane potential, and lipid peroxidation were assessed on these high glucose induced rat kidney cells. Results: Upon treatment with high glucose (25 mM) there was significant

increment in ROS generation, lipid peroxidation and consumption of enzymatic antioxidants. In contrast, treatment with Thymol and Naringenin significantly decreased ROS generation, lipid peroxidation. In addition, mitochondrial membrane potential was stabilized and antioxidant enzymes were up regulated in high glucose induced NRK-52E cells. Conclusion: The study suggests that both Thymol and Naringenin at proper doses can act by significantly improving the antioxidant defence system, which was deteriorated by high glucose induced oxidative stress.

Students: Ms. Chaitali Bora

Supervisor : Prof. P. R. Vavia

FORMULATION AND EVALUATION OF MICROEMULSION BASED EMULGEL GRISEOFULVIN

Griseofulvin(GRI) is an antifungal drug, available as conventional oral dosage for the treatment of dermatophytosis. Researches propose delivering GRI topically to increase its efficiency. Current research work focuses on formulation and evaluation of essential oil based microemulsion system for topical delivery of GRI. Studies indicated solubility of GRI in Oreganum was higher (132.602 ± 38.2 mg/ml) followed by clove oil (52.1341 ± 28.6 mg/ml) and holy-basil oil (17.3078 ± 0.071 mg/ml) as compared to synthetic oils. Several surfactants and cosurfactants were screened to form microemulsion with these selected oils. The ratio of surfactant: cosurfactant was finalized by ternary phase diagram. The formed microemulsion were clear with globule size of ME with Oreganum oil, holy-basil oil and clove oil to be 113.5 ± 46 nm, 125.6 ± 23 nm and 182.1 ± 91 nm respectively. The formulated o/w microemulsion was then incorporated into a carbopol gel system. Rheological studies showed typical concave curve for a shear thinning system with pseudo-plastic flow. The Ex-vivo permeation study shows that %permeation of drug suspension gel is poor ($0.200 \pm 0.095\%$) as compared to emulgel with Oreganum oil, with holy-basil oil and with clove oil which show %permeation of $24.98 \pm 10.4\%$, $4.66 \pm 3.2\%$ and $2.75 \pm 1.08\%$ respectively. The retention of drug from formulation with Oreganum oil was the highest i.e. $79.41 \pm 12\%$ in the skin followed by formulation with clove oil ($20.82 \pm 13\%$), Holy-basil oil ($15.48 \pm 10\%$) and aqueous gel ($2.97 \pm 1.5\%$) respectively. In the antifungal study formulation with Oreganum oil was more effective against the dermatophytes. Hence out of all three formulations, one with Oreganum oil was found to enhance the permeation and skin deposition of GRI in skin.

Also this formulation has good anti-fungal activity against dermatophytes. All three formulations were found to be stable in the stability testing studies according to ICH guidelines at $25^\circ\text{C} \pm 2^\circ\text{C}/60\% \text{ RH} \pm 5\% \text{ RH}$, $30^\circ\text{C} \pm 2^\circ\text{C}/65\% \text{ RH} \pm 5\% \text{ RH}$ and $40^\circ\text{C} \pm 2^\circ\text{C}/75\% \text{ RH} \pm 5\%$ for a period of three months.

M. Tech.

Students: Mrs. Manisha Sannake

Supervisor: Prof. P. V. Devarajan

BRAIN TARGETED DRUG DELIVERY SYSTEMS

Glioblastoma Multiforme (GBM), stage IV astrocytoma, is the most dreadful brain tumour having average life span of 12-15 months affecting over 14000 people per year. Brain tumour is one of the prevalent cancers with still unmet needs for the efficient treatment with targeted delivery of chemotherapeutics to the brain tumour cells with least side effects. The major challenge in achieving treatment with desired efficacy is inability to attain the effective concentration of therapeutics in the brain tumours due to Blood Brain Barrier (BBB). Withaferin A (WA), a Steroidal lactone from Withania somnifera has shown antitumor properties against wide range of tumours including GBM

and shows higher cell permeability with least or no side effects. In current study, we present WA loaded mucoadhesive microemulsion (ME) with globule size < 20 nm to be administered via intranasal route that favours rapid uptake through olfactory & trigeminal nerves for enhanced brain bioavailability. The MEs were formulated using functional components including Docosahexanoic acid (DHA) rich oil, Coconut oil (coco) & Tween 80 which have been proven to enhance brain uptake by receptor mediated endocytosis. DHA rich oil also provides antitumor effect. Coconut oil provides antiGBM effect by simulating ketogenic diet. Tween 80 acts as p-gp efflux inhibitor. Capmul MCM (cap) was also used in combination with functional oils for better emulsification of long chain fatty acid from functional oils thereby obtaining higher drug loading by virtue of higher oil incorporation. Optimized WA cap-coco-DHA ME was developed with globule size of 13.55 ± 1.55

nm with PDI of 0.216 ± 0.005 implying size based passive targeting via paracellular route. High drug loading of WA was achieved by adding HP β CD as solubilizer cum precipitation inhibitor. Zeta potential was of 14.57mV was obtained, suggesting ME stability. The ME was also found to be mucoadhesive with adhesion force of 50.13gms ensuring longer nasal residence & thereby constant drug supply to the brain for longer duration of time. Ex-vivo permeation studies of WA cap-coco-DHA ME revealed 12-folds enhancement in flux and permeability co-efficient in comparison to WA solution. 2.5 and 3-folds increase in WA flux was observed from WA cap-coco ME and WA cap-DHA ME in comparison to WA cap ME, suggesting role of functional oils in enhancement of permeation. WA cap-coco-DHA ME showed cytotoxicity in U87 GBM cell lines with IC50 of $6.63 \pm 0.6188 \mu\text{g/ml}$ confirming its antiGBM activity. IC50 of $17.75 \pm 0.7998 \mu\text{g/ml}$ obtained by blank cap-coco-DHA ME proved the antiGBM effect of functional components. WA cap-coco-DHA ME was found to be stable for 2 months at accelerated conditions as per ICH guidelines. Thus, Intranasally administered mucoadhesive WA cap-coco-DHA ME stabilized with HP β CD represents brain targeted drug delivery system with potential of enhanced brain uptake and improved efficiency of treatment applicable in antiGBM therapy.

Students: Mr. Hiral Vegad

Supervisor: Prof. P. V. Devarajan

NANOPARTICLE AS VACCINE ADJUVANTS

Vaccine immunization has been the most effective way to protect individuals and the community against debilitating infectious diseases. New generation of vaccines such as recombinant DNA and subunit vaccines despite their better tolerability, are often much less immunogenic. Although a variety of adjuvants have been used in experimental vaccines, most of these materials only elicit an antibody response and have undesirable side effects therefore, there is an urgent need for the development of new and improved vaccine adjuvants. The present study, evaluates two nanoparticles formulations encapsulated with BSA as model antigen for cell mediated and humoral response. First is BSA encapsulated GAN-GMS lipomer which is a hybrid of polymer (Gantrez AN-119) and lipid Glyceryl Mono-Stearate (GMS) nanoparticles and second one is BSA encapsulated Chitosan-Dextran sulphatananoparticles (Chito-DS-NP). BSA encapsulated Lipomer and Chito-DS-NP with entrapment efficiency 80-87% and 65-70% was successfully prepared. Size range of both the nanoparticles were optimized between 350 – 450 nm with PDI in between of 0.2- 0.3. Zeta potential of BSA entrapped Lipomer and chito-DSNP were found to be -14.25 Mv and -9.2 mV respectively. Negative zeta potential suggest stabilization of nanoparticles. Both types of nanoparticles are non-cytotoxic and rapidly uptaken by macrophage cell line, confirmed by MTT assay and fluorescence microscopy respectively. The adjuvant efficiency of nanoparticles was carried out in vivo immunization in Balb/C mice. Evaluation of IgG, IgM and cytokines production between Lipomer, Chito-DSNP and FDA approved Alum adjuvant was carried out by ELISA in order to compare their adjuvant property.

Students: Mr. Pramod Jadhav

Supervisor: Prof. P. V. Devarajan

POINT OF CARE TEST KIT FOR PREGNANCY DETECTION IN CATTLE

Pregnancy diagnosis is an important facet of better reproductive management in livestock such as cows and buffaloes for success in cattle management to ensure optimized and sustained milk production throughout the year. At present, available livestock pregnancy detection techniques like rectal palpation, ultrasonography, contains PVD-1 reagent which has the ability to bind to the pregnancy associated marker: Abscisic acid (ABA) present in the urine of cattle. After mixing urine sample with reagents A and B provided in the kit, a deep red color obtained which indicates pregnant

cow and light orange color indicate non-pregnant cow. It is because of the presence of high concentration of ABA in the urine of pregnant cows than that in the urine of non-pregnant cows. The POC test kit was purposefully designed to be low cost, on site use, rapid, non-invasive and the accuracy of the results have been compared with the conventional method and showed more than 90% correlation with ultrasonography. Also, the developer kit can detect pregnancy as early as 20 days after artificial insemination (AI). The testing showed good results in buffaloes than in cows. The result represents great potential of the proposed colorimetric method as a POC test for pregnancy detection in cattle and offers broad accessibility in resource-limited settings. "PREG---DET" is an animal side, affordable, portable, early pregnancy detection kit could create a revolution in the dairy farming industry.

Student: Mr. Ganesh Bhat

Supervisor: Prof. Sadhana Sathaye

EXTRACTION AND PURIFICATION OF ARECOLINE

Natural remedies to treat health problems are in practice since ages. There are improvements in this area of therapeutics, which includes higher purity compounds with much specific action and fewer side effects. Exploration of natural elements such as plants for their health beneficial and therapeutic effects is always in scope due to various advantages of such compounds in contrast with other molecules from artificial origins. The drug of our interest Arecoline is an anti-Alzheimer drug, which is present in Areca Catechu L. seed. The plant has other notable health benefits too. Our project has focussed on enhancing the isolation of phytochemical components with the main emphasis on arecoline from the Areca seed using the enzyme-assisted extraction method. The optimization was carried through Response surface methodology using Quadratic Optimal Design. The Optimized batch had an enhanced yield of 165.1% which summed up to 3.3g/kg of raw material was then purified by hydrophobic interaction chromatography. A process was developed using a 1.03cm*15cm column with Sepabeads SP 700 as a stationary phase, ethanol, with citrate-phosphate buffer of pH 3.8 was used as the mobile phase. A 96.7% purification was achieved with a recovery of 92.4%. A novel HPLC method was developed for analysing the concentration of the arecoline and four other phytoconstituents. The method contained Synchronis C-18 column of 250mm*4.6mm dimension and with a gradient mobile phase consisting of Acetonitrile with Isopropyl Alcohol and 0.1% orthophosphoric acid.

Student: Ms. Safala Malvankar

Supervisor: Prof. Sadhana Sathaye

ROLE OF XANTHINE OXIDASE IN INFLAMMATORY

Xanthine Oxidase (XO) is a member of molybdoenzyme family and has a catalytic role in purine degradation, metabolizing hypoxanthine to xanthine and xanthine to uric acid (UA). It is a source of reactive oxygen species and has several pathophysiological implications. XO is widely distributed in various organs especially liver and small intestine. It is also present in mammalian milk. In our study, partial purification of XO is carried out from rat liver and enzyme activity was found out to be 0.002024 units/ml. XO plays an important role in the pathophysiology of disorders such as gout arthritis, diabetic complications, neurodegenerative and cardiovascular diseases. It will be interesting to study the substances interacting with this enzyme. Inhibition of this enzyme will inhibit ROS mediated disorders. XO, being a major metabolizing enzyme, studies on the enzyme will indicate drug like properties of a substance as well as potential of a therapeutic candidate to produce drug interaction during polypharmacy. In our study, Phloretin and thymoquinone was assayed with XO in vitro for its interaction and possible activity. Phloretin found to inhibit the enzyme linearly i.e. as the concentration of drug increases the percentage inhibition increases. IC50 value of phloretin was found to be 100.24 μ g/ml. On the other hand, thymoquinone found to activate the enzyme. Its PC50 value was found to be 166.02 μ g/ml. The results demonstrated the ability of phloretin to lower serum urate levels and thymoquinone to activate xanthine oxidase. Therefore, they may contribute to maintain the homeostatic balance of XO in the

Student: Ms. Paramita Batabyal

Supervisor: Prof. Sadhana Sathaye

IN-SILICO STUDIES ON XANTHINE OXIDASE

Xanthine oxidase (XO) is the metabolizing enzyme that is physiologically involved in the conversion of xanthine to uric acid. Uric acid in high concentration is responsible for inflammatory conditions namely diabetic complications, neurodegenerative diseases (Parkinson disease, epilepsy, Alzheimer's disease) etc. Hence, modulation of XO activity could be an important target for developing drugs. In-vitro screening of number of compounds is an expensive and time-consuming process. In-silico screening of the phytoconstituents with the enzyme XO will identify the most suitable drug candidate which can be further evaluated using in-vitro experimentation. Molecular docking is an approach to predict receptor-ligand binding modes. The use of high-throughput screening in the pharmaceutical and biotechnology industries has led to the investigation of large number of compounds for their biological activity. Docking is a clear computational strategy of choice to augment and accelerate structure-based drug discovery. This focused approach will reduce cost and

time. In the present study, a library of phytoconstituents has been docked using 'Maestro Schrodinger' software with XO; forming the basis of rational drug discovery. Molecular Mechanics/Generalized Born/Surface Area (MMGB-SA) was done to validate docking results. Based on the results of docking, Phloretin was selected for further study. Molecular dynamics study was performed to see the stability of interaction between the enzyme XO and phloretin. According to literature, histamine is an activator of XO. In-vitro assay to explore effect of histamine on XO was optimized.

Student: Mr. Gajanan Indurkar

Supervisor: Prof. P. R. Vavia

FORMULATION AND EVALUATION OF MICROEMULSION BASED NASAL SPRAY OF ANTIPSYCHOTIC AGENT

Iloperidone (ILO) is an atypical antipsychotic agent approved by the US FDA in May 2009 for the treatment of schizophrenia in adults. Current marketed formulation of Iloperidone is an oral tablet which has low oral bioavailability due to low aqueous solubility and extensive first pass metabolism. The present study is aimed at developing microemulsion based nasal formulation for Iloperidone to enhance its bioavailability. From various oils screened, Iloperidone showed maximum solubility in Capmul-PG12 which was selected as an oil phase for microemulsion. Cremophor RH-40 was selected as a surfactant and since the solubility of Iloperidone was high in N, N-dimethylacetamide (111.34 mg/ml) was selected as co-solvent to increase the drug loading in the formulation. Based on the pseudoternary phase diagram, Oil: Surfactant: Co-solvent (1:2:1) ratio was selected as final formula because of bigger microemulsion region. The formulated ME was clear with % transmittance of 94.56 ± 4.32 % and average globule size of 22 ± 4.2 nm. Final formulation was further subjected to physicochemical characterization such as drug content, pH, viscosity and thermodynamic stability. In-vitro release study revealed that the % cumulative release of Iloperidone was significantly higher from formulation (42 ± 0.19 %) as compared to plain drug suspension (4 ± 0.25 %). The Ex-vivo permeation study through freshly excised goat nasal mucosa showed, permeation of plain drug suspension was poor (3 ± 0.05 %) as compared to ME formulation (35 ± 0.09 %). The final optimised formulation was found to be stable in stability testing according to ICH guidelines at $25^\circ\text{C} \pm 2^\circ\text{C}/60\% \text{RH} \pm 5\% \text{RH}$, $30^\circ\text{C} \pm 2^\circ\text{C}/65\% \text{RH} \pm 5\% \text{RH}$ and $40^\circ\text{C} \pm 2^\circ\text{C}/75\% \text{RH} \pm 5\%$ for a period of three months.

Ph.D. (Tech.)

Student: Mr. Suraj Muke

Supervisor: Prof. Sadhana Sathaye

ISOLATION AND PURIFICATION OF WEDELACTONE FROM HERBAL

Epilepsy is a brain disorder characterized by sudden recurrent seizures. Considering the fact that epileptogenesis is a process that affects the quality of life, our goal is to delay the process of epileptogenesis and to increase the latency of epileptic attacks, offering better quality of life to patients. Traditional system of medicines has a promise in some of the medicines, which have been used for the treatment of epilepsy. One such medicinal plant is Eclipta alba (EA). According to Ayurvedic philosophy, the juice of leaves of EA is pounded with garlic and pepper for the treatment of epilepsy. Taking clue from the Ayurvedic system of medicines, we formulated coumarin fraction of EA, namely, coumarin nasal formulation (CNF) for its nasal delivery. CNF was analyzed by using high performance liquid chromatography (HPLC) and ultraviolet absorption spectroscopy for its drug content determination. In vitro drug release studies were performed in simulated nasal electrolyte solution (SNES) maintaining constant pH of 5.5 at 37°C . Irritation by CNF was evaluated using hen's egg test chorioallantoic membrane (HET-CAM) assay. Formulation was found to be non-irritant in HET-CAM assay. CNF was further assessed in vivo by measuring the progress and attainment of pentylenetetrazole (PTZ) kindling in mice. Neuronal changes were assessed by hematoxylin and eosin (H&E) and Nissl staining technique. Glial fibrillary acidic protein (GFAP) a neuroinflammatory marker and tumor necrosis factor alpha (TNF- α) an inflammatory marker were also measured. CNF (10 mg/kg, nasal route) when given as a pretreatment lowered seizure score and delayed the progression of seizure similar to diazepam. CNF decreased the PTZ induced oxidative damage, TNF- α as well as GFAP levels in the midbrain tissue particularly in hippocampus region. The results suggest that CNF may be a promising therapeutic approach to offer protection from sudden recurrent seizures alone or in combination with current drugs in management of epilepsy.

Student: Mr. Nitin Jadhav Ph.D. (Tech) Pharmaceutics

Supervisor: Prof. P. R. Vavia

NOVEL CARRIER BASED DRUG DELIVERY SYSTEM

The aim of present investigation was the preparation of dodecylamine template-based hexagonal mesoporous silica (HMS) as a carrier for poorly water-soluble drug (fenofibrate). HMS material has distinctive characteristics such as easy synthesis, high surface area and wormhole pores. These characteristics are highly admirable to make use of it as a carrier in drug delivery system. HMS was prepared by pH and temperature-independent process. Fenofibrate was loaded into the HMS by solvent immersion method using organic solvent. The BET surface area of HMS was evaluated by nitrogen adsorption/desorption analysis. HMS and drug-loaded HMS were characterized by differential scanning calorimetry (DSC), X-ray powder diffraction (XRPD), Fourier transform infrared spectroscopy (FTIR), scanning electron microscopy (SEM), transmission electron microscopy (TEM) and contact angle study. The HMS-based system was also evaluated for in vitro and in vivo study as compared to plain drug. The BET surface area of HMS was found 974 m²/g with a narrow pore size average of 2.6nm. The DSC and XRD study confirmed the amorphization of drug within the HMS. SEM and TEM study showed morphological features of HMS as well as revealed the wormhole porous structure. Contact angle study showed improvement in aqueous wetting property of drug within the HMS (contact angle 46°). The In vitro drug release study showed a remarkable dissolution enhancement in HMS-based system as compared to plain drug. In vivo pharmacodynamic study (hyperlipidaemia model) exhibited HMS-based formulation was significantly improved the bioavailability of fenofibrate. Thus, HMS has admirable properties; makes it a potential carrier for delivery system of poorly water-soluble drugs.

Student: Mr. Jasmin Monpara

Supervisor: Prof. P. R. Vavia

ADVANCED NANOCARRIER SYSTEM FOR TARGETED DELIVERY OF ANTINEOPLASTIC AGENT

The aims of the research work were to synthesize ethyl(cholesteryl carbamoyl)-L-arginate (ECCA), an arginine-conjugated cholesterol derivative, and to evaluate its application as a gene delivery vector. The interactions of ECCA with DNA duplex were studied using molecular dynamics (MD) simulations. It was found that the guanidine group of ECCA could interact with the phosphate group of DNA through ionic interactions as well as hydrogen bonds. The structure of DNA was stable throughout the simulation time. Liposomes were formulated using ECCA and soya phosphatidylcholine (SPC) by a thin-film hydration method. They had the particle size of ~ 150 nm and the zeta potential of + 51 mV. To ensure the efficient binding of DNA to the liposomes, the ratio of DNA to ECCA was optimized using gel retardation assay. Further, serum stability, haemolysis and cytotoxicity studies were carried out to determine the stability and safety of the lipoplexes. Circular dichroism spectroscopy was used to determine the interaction of DNA and cationic liposomes. Cellular uptake pathway was determined by studying the uptake of coumarin-loaded lipoplexes at 4 °C and in the presence of uptake inhibitors, i.e. genistein, chlorpromazine and methyl- β -cyclodextrin. Transfection studies were carried out to evaluate the transfection efficacy of the ECCA-loaded lipoplexes. The binding of DNA and lipoplexes was found to be stable in the presence of serum, and no degradation of DNA was observed. The lipoplexes showed low haemolysis and cytotoxicity. The uptake of coumarin-loaded liposomes was decreased up to ~ 20% in the presence of clathrin- and caveola-mediated uptake inhibitors, indicating a role of both the pathways in the uptake of the inhibitors. Satisfactory transfection efficiency was obtained compared to Lipofectamine®. Thus, cationic cholesterol derivative is a useful tool for gene delivery vector.

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In absentia: Mohurle Swapnil [Ph. D. (Tech.)], Swami Megha [Ph. D. (Tech.)], Prabhu Rashmi [Ph. D. (Tech.)], Kadwadkar Namrata [Ph. D. (Tech.)], Sane Mangesh [Ph. D. (Tech.)], Chogle Manasi [Ph. D. (Tech.)], Menon Anjana [M. Tech. (Biotech)], ChatterjeeArkosubro[M. Tech. (Pharma)], SuradkarPrajakta[M. Tech. (Biotech)]

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BRIEF CAREER PROFILE

Prof. Mariam S. Degani

Dr. Mariam S. Degani is working at Institute of Chemical Technology, Mumbai since 1998 and currently is Sir Dorabjee Tata Professor in Pharmaceutical Chemistry. She was Head of the Department of Pharmaceutical Sciences and Technology (Aug 2015- Dec 2018). Earlier she was a lecturer at SNDT Women's University, Mumbai from 1985-1998.

Dr. Degani is working in two broad research areas viz. drug discovery and process chemistry. In drug discovery, she is involved in computer assisted rational drug design and synthesis of small focused libraries of potential therapeutic agents. Currently, this has resulted in a molecular library of over 600 molecules, which is available for screening on different drug targets. Her current drug discovery research involves design and synthesis of small molecules for Tuberculosis, Alzheimer's disease and Cancer. She has many national and international collaborations, to help screen the molecules, like ACTREC, BARC, TIFR, NCL, Eli Lilly Open Source drug discovery etc.

Her other areas of interest include process chemistry with focus on fluorine chemistry and deuterium chemistry, design and synthesis of task specific ionic liquids and very recently, flow chemistry based process optimization.

As an outcome of her extensive research in the above areas, Prof. Degani has more than sixty five publications in international peer reviewed journals and has a Scopus h-index of 15. She has filed two international and several Indian patents. She has also co-authored a book on retro synthesis. She is actively involved in various industrial projects and consultancy in the areas of process chemistry and drug discovery. She has guided 21 PhD and over 40 Masters' students. Currently there are 08 PhD students and 4 Masters' students working in her research group. Dr. Degani has been awarded the Distinguished Alumni Award by C. U. Shah College of Pharmacy in 2007 Mumbai, Gharda Award for research publications in 2009 and Best Teacher Award of ICT 2013 and 2015. She is a fellow of the Maharashtra Academy of Science.

Prof. Sadhana Sathaye

Prof. Sadhana Sathaye is an eminent research scientist working in the field of pharmacology with an academic experience of 28 years. The overarching fields of her research encompass various neurological disorders like epilepsy, Parkinson's and Alzheimer's disease with a clear vision of establishing novel therapeutic interventions by exploring herbs and modern medicinal drugs. She has over 70 national and international publications to her credentials and has been a renowned speaker in several esteemed national and international conferences. Her horizon is not limited to academia but expands to industry wherein she extends her services as a consultant to the pharmaceutical industry in India.

Prof. P. R. Vavia

Prof. P. R. Vavia is a Professor in Pharmaceutics at The Institute of Chemical Technology, Mumbai. Currently, he is the Dean of academic programmes at Institute of Chemical Technology. He has more than 30 years of teaching experience to undergraduate, postgraduate and doctoral students. So far, Prof. Vavia has guided over 55 Master students and 43 Ph.D. students who are placed at key positions in leading pharmaceutical organizations. Presently, his research group comprises 3 masters and 13 Ph.D. students. Till date, he has 149 peer reviewed scientific publications in national and international journals to his credit, with more than 1555 citations and H-index of 26. Prof. Vavia has given more than 250 research presentations at national and international levels. Going with the pace of growing pharmaceutical sector, Prof. P.R. Vavia and his research group is involved in fundamental as well as industrial research allied to interdisciplinary areas of pharmaceutical science. The principal objective of his research is always set to surmount constraints for efficient delivery of potential drug candidates and fabrication of value added non-infringing drug formulations. He has 10 granted patents (3 international and 7 Indian patents), 35 complete patent specifications.



Inauguration of M. Tech. (PBT) Laboratory through total funding from Mrs. Maharukh Rutomjee - Distinguished Alumnus ICT



Renovation of Main Laboratory and Research Laboratory: Substantial funding from Dr. A. V. Rama Rao – Distinguished Alumnus ICT

UG / PG LABORATORIES



Non teaching staff of DPST won GOLD MEDAL at Maharashtra state level pharmacy intercollegiate sports competition "VIGOUR 2018-FACULTY & STAFF" JOINTLY ORGANIZED BY MICE Society's Allana College of Pharmacy Azam Campus, Camp, Pune

