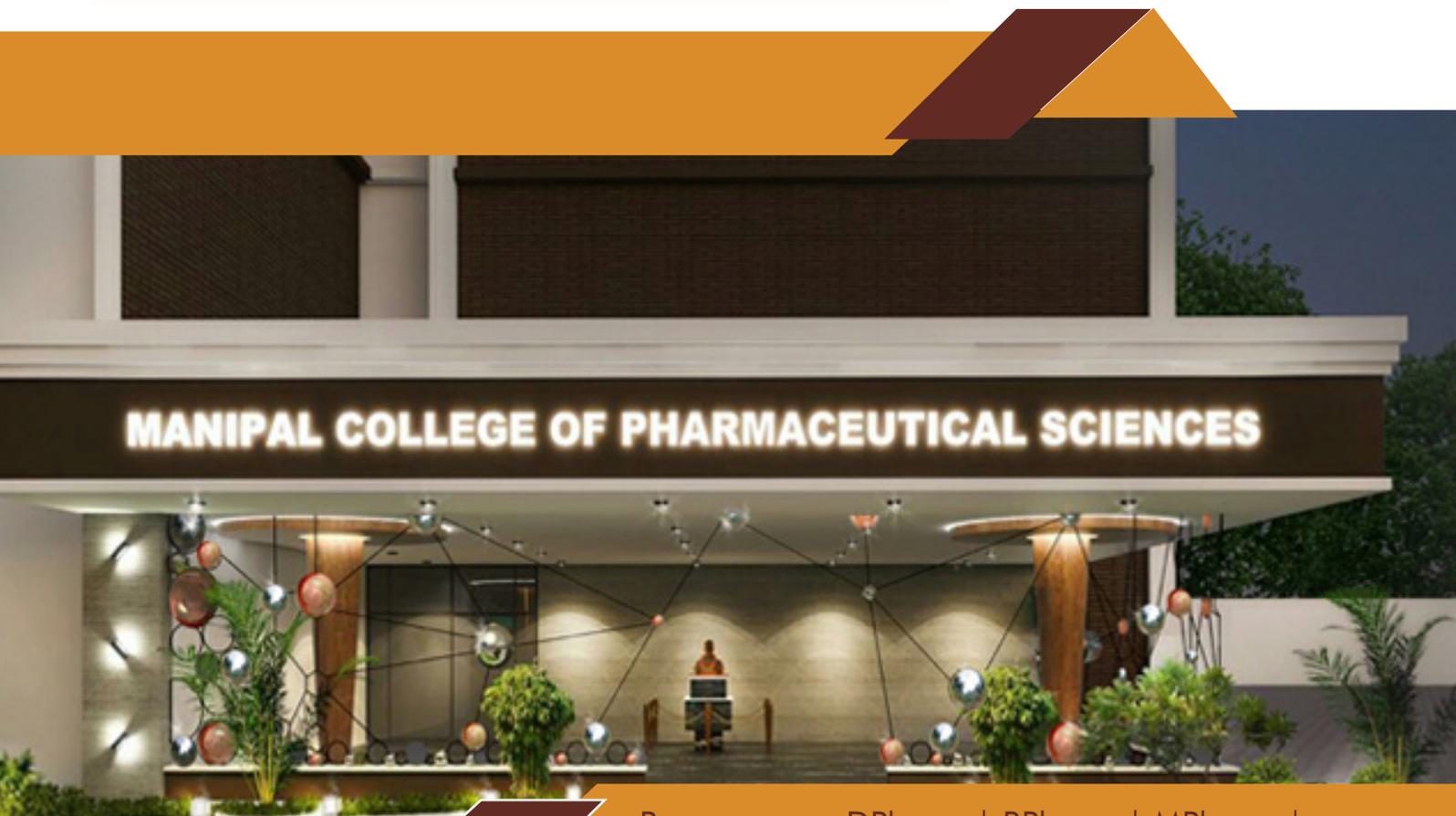




# MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES

MANIPAL

*(A constituent unit of MAHE, Manipal)*



Programmes: DPharm | BPharm | MPharm |  
PharmD | PharmD (PB) | Doctoral



## ABOUT

### Vision

“Excellence in Pharmaceutical Education and Research”

### Mission

“Marching with the Times”

### Rankings

- Manipal College of Pharmaceutical Sciences (MCOPS) has found its name in the top 151-200 colleges in the QS
- World University ranking, 2020 in the Pharmacy and Pharmacology category.
- Manipal College of Pharmaceutical Sciences was ranked 1st among pharmacy institutions by the National Institutional Ranking Framework (NIRF), MHRD, Government of India, April 2016
- MCOPS is ranked first in the careers360 2020 ranking among private pharmacy colleges in the country



MCOPS finds place  
between 151- 200  
in QS World University Ranking, 2020



NIRF Rankings 2020: MCOPS is at the 7th place among  
pharmacy colleges in India



## Accreditation

National Assessment and Accreditation Council (NAAC) has declared Manipal Academy of Higher Education accredited with CGPA of 3.30 on four point scale

National Board of Accreditation (NBA) has accredited the BPharm programme of Manipal College of Pharmaceutical Sciences which is valid until 2022

## INFORMATION ON PROGRAMMES

### Programmes offered

Sl	Programme	Intake
1	DPharm : Diploma in Pharmacy – 2 years duration	60
2	BPharm : Bachelor of Pharmacy – 4 years duration	100
3	PharmD : Doctor of Pharmacy – 6 years duration	30
4	MPharm : Master of Pharmacy – 2 years duration in the following specializations	165
	Pharmaceutics	15
	Pharmaceutical Chemistry	15
	Pharmacology	15
	Pharmacognosy	15
	Pharmaceutical Administration	15
	Pharmacy Practice	15
	Pharmaceutical Quality Assurance	15
	Pharmaceutical Biotechnology	15
	Pharmaceutical Regulatory Affairs	15
	Industrial Pharmacy	15
Pharmaceutical Analysis	15	
5	PharmD – Post Baccalaureate: 3 years duration	10
6	PhD: 3 to 4 years duration	15– 20

SI	Programme	Intake
7	Certificate Courses	
	Research Orientation – 2 months	30/ Batch
	Fundamentals of Digital Marketing – 40 hours	15/ Batch
	Novel Drug Delivery and Nanopharmaceuticals : Concepts to Experiments – 30 hours	15/ Batch
	Generic Drug Regulations – 15 hours	15/ Batch
	Translational Research – 6 weeks	20/ Batch
	Clinical Research and Regulations – 8 weeks	20/ Batch

### Doctor of Philosophy (PhD)

PhD admission is one of the ways to promote research in an institution. Keeping this in mind, MCOPS is admitting on an average 15 to 20 PhD students in every year. In 2019, a record 54 scholars were enrolled into PhD programme. The PhD programme is designed to provide quality output in terms of patents and publications in reputed journals with a high impact factor, indexed in Scopus and Web of Science. For a PhD student, it is mandatory to publish at least two research papers from their project. To run the PhD programs hassle-free, candidates are enrolled in the following schemes

DST	-	01
SERB	-	01
Industry sponsored	-	04
DST- Inspire	-	02
CSIR	-	02
ICMR	-	03
AICTE– National Doctoral Fellowship (NDF)	-	04
AICTE-QIP scheme	-	03
Dr TMA Pai PhD Scholarship Programme	-	34

### Master of Pharmacy (MPharm)

MPharm degree programme regulations are based on PCI notification in the gazette of India, # 362, dated December 11, 2014. Duration of programme is two years, comprising four semesters. Curriculum and syllabus for the programme will be prescribed from time to time by Manipal Academy of Higher Education based on the inputs from Pharmacy Council of India, New Delhi.



## DEPARTMENT OF PHARMACEUTICAL CHEMISTRY

### Faculty members

1. Suvarna G Kini, PhD, Professor (suvarna.gk@manipal.edu)
2. G. Gautham Shenoy, PhD, Professor (gautham.gs@manipal.edu)
3. BS. Jayashree, PhD, Professor (bs.jayashree@manipal.edu)
4. Jessy Elizabeth Mathew, PhD, Associate Professor (jessy.james@manipal.edu)
5. Varadaraj Bhat G, PhD, Associate Professor (varad.g@manipal.edu)
6. Alex Joseph, PhD, Associate Professor (alex.joseph@manipal.edu)
7. Vijaya Bhaskar K, PhD, Associate Professor (kv.bhaskar@manipal.edu)
8. Jagadish P C, PhD, Associate Professor (jagadish.pc@manipal.edu)
9. Jeyaprakash R S, PhD, Associate Professor (jeya.prakasham@manipal.edu)
10. Ruchi Verma, PhD, Assistant Professor-Senior Scale (ruchi.verma@manipal.edu)
11. Aravinda Pai, PhD, Assistant Professor-Senior Scale (aravind.pai@manipal.edu)

### Overview

The Department of Pharmaceutical Chemistry was established in the year 1963. Currently, there are 11 faculty members in the department. All the faculty members have doctoral degree. All the UG labs are equipped with state-of-art facilities

The department offers two PG programmes at the masters' level viz Pharmaceutical Chemistry (introduced in 1970) and Pharmaceutical Analysis (introduced in 2017).

The department is well equipped with sophisticated instruments which helps students for their academic and research purpose. Students get projects/ internship in the industry and employment in academia as well as in industry. Our alumni are spread all over the world including the National Institute of Health-USA, University of Wyoming-USA, University of Waterloo-Canada, St. John's University-New York.



**Funded by AICTE under MODROBS**



## Research Areas

Focused research areas of the department are development of new chemical entities for the treatment of cancer, diabetes, tuberculosis, microbial, fungal and viral infection, neurological disorders like Alzheimer's.

Faculty members are actively engaged in research and they publish their work in reputed international journals.

The department is successful in getting financial support from various funding agencies like DBT, DST, AICTE, VGST and ICMR.

The research work is also presented at reputed national/international conferences.

The department has collaboration with Lupin Pharma, Jubilant life sciences, DRILS and The Himalaya Drug company.



**FLASH CHROMATOGRAPHY**  
FUNDED BY AICTE UNDER RPS GRANT  
@ Department of Pharmaceutical Chemistry



**INVERTED MICROSCOPE**  
FUNDED BY AICTE UNDER MODROBS SCHEME  
@ Department of Pharmaceutical Chemistry

## Instrument/equipment/facilities

The department is equipped with sophisticated instruments like HPLC, FT-IR, Flash chromatographic system, UV-Visible spectrophotometer, parallel synthesizer, cyclic voltameter, CO<sub>2</sub> incubator, microcentrifuge, Trans Blot system.



**Trans Blot system from BIOCARE grant**

The above instruments have been procured with the help of financial support from funding agencies.

The department has state of the art laboratory facilities which includes Drug design lab, synthetic lab, analytical lab and tissue culture lab. Molecular Modelling Facility is been created which is powered by Schrodinger software.



**Schrodinger's Molecular Simulation Lab**



**RESEARCH LAB**

## Collaborations

- The Department of Pharmaceutical Chemistry interacts with industries and government organizations like CDRI Lucknow, IICT Hyderabad, BARC Mumbai for providing training to the postgraduate students.
- Many faculty members are co-guides for candidates of Lupin Labs and DRILS for their doctoral research.

### International Collaborations:

- School of Pharmacy, University of Waterloo, Canada
- Institute of Chemistry, Colombo

### National Collaborations:

- Lupin Limited, Pune
- DRILS, Hyderabad

Within Manipal Academy of Higher Education:

- Kasturba Medical College, Manipal
- Manipal Institute of Technology, Manipal
- Centre for Virus Research, Manipal



PARALLEL SYNTHESIZER



ROTARY EVAPORATOR

## Significant achievement of staff or students

- Total grants secured from various funding agencies: 3.60 Crores
- Patents Granted: 04
- Patents filed: 01
- Publications in peer reviewed journals: 320
- Industry collaboration leading to PhD: 02

## Schrödinger Centre for Molecular Simulations:

A Memorandum of Understanding was signed between Manipal Academy of Higher Education (MAHE), Manipal and Schrödinger, LLC, New York, USA for setting up a centre of Excellence in Molecular Simulation in Manipal. The Centre is named as “Manipal - Schrödinger Centre for Molecular Simulations”.

This is the first-of-its-kind pact where Schrödinger, LLC is signing a MoU with an Indian University. Accordingly, Schrödinger will provide guidance and training to the scientists of MAHE in MAHE's efforts towards becoming a pioneer in the field of molecular simulations. MAHE has subscribed Schrödinger package in total, being unique amongst the Universities in the country.

The centre aims at developing a few new chemical entities (NCEs) for the treatment of cancer, infectious diseases, Alzheimer's disease and take them to clinical trials in the next 5 years. Besides, the centre will provide

opportunities for faculty members, research scholars and postgraduate students to get trained in the area of molecular simulations through workshops and seminars.

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### Recruiters

- |                      |                   |             |              |
|----------------------|-------------------|-------------|--------------|
| •Novartis            | •Pfizer           | •Dr Reddy's | •Hetero Labs |
| •Abbott Laboratories | • GlaxoSmithKline | •Lupin      | •Glenmark    |
| •Indegene            | • Piramal         | • Zydus     |              |
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### Core content

Skills for Pharmaceutical Chemists

- Synthetic organic chemistry skills
- Ability to purify drugs and intermediates
- Analytical instrumentation skills for compound characterization
- Broad understanding of biology and biological functions and how drugs work
- Teamwork and interpersonal skills
- Good communication skills

### Manipal - Schrödinger Centre for Molecular Simulations



## Student projects

1. Design, Synthesis and Biological Evaluation of Novel Pyrrolidine-2,5-diones and  $\beta$ -lactams.
2. Synthesis of Quinoxaline Derivatives for PDE4 Inhibition
3. Synthesis and biological evaluation of Quinolone substituted Thiazolidine-4-ones
4. Synthesis and biological evaluation of novel Quinoline carboxamide analogs
5. A validated RP-HPLC-PDA method for quantification and optimization of rebaudiosides in extracts of Stevia rebaudiana leaves.

## Job opportunities

This discipline offers a wide variety of job opportunities in academic, pharmaceutical, biotechnology, and medical device companies, government agencies, and in research laboratories.

Pharmaceutical chemists are involved in designing and synthesizing new drugs as well as evaluate those drugs which are already in the market.

The expertise of Pharmaceutical Chemists is utilized in improving the process by which pharmaceuticals are made and thereby develop the most cost-effective and environmentally friendly process.

Pharmaceutical Analysts are very much sought by the pharmaceutical industries for their skills in critically analysing and

manipulating the properties of drugs.

They are involved in developing stringent analytical methods to the product for ensuring purity and develop methods that are useful for toxicological and pharmacological investigations.



**MILLIPORE WATER PURIFIER**



As a BPharm and MPharm student at MCOPS, I was involved in research activities which enhanced my skills and confidence. The teachers in dept. of Pharm Chemistry are amazing. Specialization in Pharmaceutical Analysis has created in me the keenness in the field of spectroscopy and chromatographic science. The industrial internships provided by the department enhanced my skill set and helped in learning the emerging techniques.

**Kalikrishna Praveen Gadde**

BPharm and MPharm (2014-20)  
Research Scientist, Novartis Ltd, Hyderabad



I am thankful to the faculty of Dept. of Pharmaceutical Chemistry, at Manipal College of Pharmaceutical Sciences for shaping my career path early on. I am a proud graduate of MCOPS.

**Praveen P. Nekkar Rao**

BPharm and MPharm (1991-97)  
Associate Professor, Pharmaceutical Sciences  
University of Waterloo, Canada

## DEPARTMENT OF PHARMACOLOGY

### Faculty Members

1. C Mallikarjuna Rao, PhD, Principal and Professor (mallik.rao@manipal.edu)
2. K Sreedhara Ranganath Pai, PhD, Professor and Head (ksr.pai@manipal.edu)
3. K Nandakumar, PhD, Professor (nandakumar.k@manipal.edu)
4. Rekha R Shenoy, PhD, Associate Professor (rekha.shenoy@manipal.edu)
5. Yogendra Nayak, PhD, Associate Professor (yogendra.nayak@manipal.edu)
6. Anoop Kishore, PhD, Associate Professor (anoop.kishore@manipal.edu)
7. Jayesh Mudgal, PhD, Associate Professor (jayesh.mudgal@manipal.edu)
8. Madhavan Nampoothiri G, PhD Assistant Professor- Selection Grade (madhavan.ng@manipal.edu)
9. Pawan G Nayak, PhD, Assistant Professor (pawan.nayak@manipal.edu)

### Overview

Department of Pharmacology was established in 1965 and has been catering to the needs of undergraduate and postgraduate students. Since 1970, it is offering the MPharm programme in Pharmacology. The department has three spacious laboratories, a cell culture lab, library, smart classrooms and instrument rooms. The labs are used for BPharm, MPharm part-1 practicals and MPharm part-II research.



### Research Areas

Cancer, metabolic disorders, inflammatory diseases, chemoprevention, wound healing and tissue repair, neuro-pharmacology, diabetes and psycho-pharmacology



## Instrument/Facilities

The department has sophisticated, state-of-the-art instruments, mainly acquired through grants secured from funding agencies. Flow cytometer, HPLC, fluorescent microscope, inverted microscope, UV spectrophotometer, ELISA plate reader, gel documentation system, Trans-Blot (for Western Blotting) and CO<sub>2</sub> incubator are some of the notable instruments that support high-quality research work



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## Collaborations

Harvard University and Molecular Neurotherapy and Imaging Laboratory in the departments of Radiology and Neurology at Massachusetts General Hospital, Boston, USA

- Griffith University, Australia
- Enovate Bio Life, Mumbai
- Wyoming University, USA
- Indus Biotech, Pune
- Cholayil Private Limited, Chennai

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## Significant achievement of staff and students

Dr Anoop Kishore is the Coordinator of “Centre for Digital Learning” which received VGST funding

Dr Jayesh Mudgal, a collaborator with Dr Devinder Arora, Griffith University, Australia

Dr KSR Pai secured the DBT grant in collaboration with Cotton college Guwahati, Assam, India.

Dr Nandakumar received a funding from DST- SERB under EMR scheme

Suman Manandhar, AICTE-NDF scholar received the “Young Researcher Award” in Drug Design and Discovery Technologies conference (CDDT-2019) during 21 - 22 November 2019 conducted by Ramaiah University of Applied Sciences, Bangalore and Royal Society of Chemistry.

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- Publications: 402
  - PhDs: 33
  - MPharm: 312
  - Grants received: 103
  - Patent granted: 01
  - Grant amount received from various funding agencies: 2.9 crores (last 5 years)

## Recruiters

Syngene International, IQVIA, Indegene Life Systems, Biocon, Novartis, Dr Reddy's, Mylan

## Core Content

Tissue-based experiments

Animal handling

In-vivo and invitro pharmacological experimentation

Academic pre-requisites of clinical research

Finest infrastructure with sophisticated and well-equipped laboratories.

Hands-on training in vitro and in vivo experimental pharmacology.

Full-fledged cell culture lab (Western blotting, flow cytometry, cell analyzer).

Technical skills in instrument handling (HPLC, Electrophoresis, Fluorescent imaging).

Industry sponsored projects to provide a rich experience to research scholars and MPharm students.

## Student projects

Pre-clinical evaluation of anticancer activity of 5 amino-3, 4-dimethylisoxazole against lung adenocarcinoma

Testing the efficacy of Medhyarasayana for cognitive- induced dysfunction

Evaluation of virgin coconut oil and sunflower oil enriched diet against colchicine induced dementia in rats

## Job opportunities

Research scientist in R & D

Clinical research associate in CRO

Business development (BD) in CRO

Pharmaceutical company (basic research)

Pharmacovigilance

Medical/ scientific writing



Pharmacology department of Manipal College of Pharmaceutical Sciences is one of the best departments I have ever come across. The faculty members make the learning easier and fun and the lab has all the facilities required for thorough learning of the subject. The teaching involves more of practical aspects rather than just the bookish knowledge, which made the subject easier for me to understand. The concepts imparted by my teachers will always remain with me and help in achieving greater heights in my career.

**Aishwarya TMM Iyengar**

MPharm (2018-20)

Senior Research Associate Trainee, Department of In-vivo Pharmacology, Syngene Bengaluru

MCOPS offers the right platform for great aspirants to fly high. I consider myself to be lucky for having done my post-graduation at MCOPS which nurtured my career with Dr Reddy's.

**Pavan Venkatesh** (MPharm 2014-16)

Lead – Innovation

Portfolio Strategy, Global Marketing and R&D Partnerships,  
Dr Reddy's Laboratories, Ltd



## DEPARTMENT OF PHARMACEUTICS

### Faculty Members

1. Srinivas Mutalik, PhD, Professor and Head (ss.mutalik@manipal.edu)
2. Koteswara KB, PhD, Professor (kb.koteswara@manipal.edu)
3. Shaila Angela Lewis, PhD, Associate Professor - Senior Scale (s.lewis@manipal.edu)
4. Mahalaxmi R, PhD, Associate Professor (mahalaxmi.r@manipal.edu)
5. Usha Y Nayak, PhD, Associate Professor (usha.nayak@manipal.edu)
6. Anup Naha, PhD, Associate Professor (anup.naha@manipal.edu)
7. Vamshi Krishna T, PhD, Associate Professor (vamshi.krishna@manipal.edu)
8. Girish Pai K, PhD, Assistant Professor – Selection Grade (girish.pai@manipal.edu)
9. Lalit Kumar, PhD, Assistant Professor – Selection Grade (lalit.kumar@manipal.edu)
10. Jyothsna M, PhD, Assistant Professor (jyothsna.manikkath@manipal.edu)
11. Aswathi R Hegde, MPharm, Assistant Professor (aswathi.hegde@manipal.edu)

### Overview

The Department of Pharmaceutics, established in 1970, has two MPharm specializations viz., Pharmaceutics and Industrial Pharmacy.

At UG level, the department exposes young minds to the world of dosage form development and evaluations, physical pharmaceutics and basics of biopharmaceutics and pharmacokinetics, so as to ignite their passion for formulation development and make them ready for taking up the mantle of industrial pharmacist.

At PG level, MPharm Pharmaceutics and MPharm Industrial Pharmacy are offered

by the department in order to cater the ever increasing demands of the pharmaceutical industries, research organizations and academic institutions with emphasis specially given in the area of formulation development and novel drug delivery systems. The students will be exposed to subjects such as modern pharmaceutical analytical techniques, drug delivery systems, regulatory affairs, molecular pharmaceutics and nano-dosage forms, advanced biopharmaceutics and pharmacokinetics, computer aided drug delivery systems and cosmeceuticals.



## Research areas

The department chiefly focuses on pharmaceutical formulations and novel drug delivery systems (NDDS) for oncology, neurological disorders, ocular and liver ailments, etc. NDDS and nanotechnology based formulations cover various drug delivery systems such as nanoparticles, liposomes,

solid lipid nanoparticles, nanostructured lipid carriers, dendrimers, sustained and immediate release dosage forms, implants, multiparticulate systems, transdermal systems, etc.

## Instrument/ facilities

The department is equipped with sophisticated instruments and facilities like

- Twin Screw Processor/ Hot melt extruder
- HPLC systems
- Differential Scanning Calorimetry
- Rotary flash evaporator
- Lyophilizer
- Zeta sizer and ATR- FTIR Spectrophotometer
- High speed homogenizer
- High pressure homogenizer
- UV Transmittance analyser
- Brookfield viscometer
- Computational facilities (Schrödinger software and work station, Gastro Plus, Design Expert)



## Collaborations

- School of Pharmacy, The University of Queensland, Australia
- National Defense Medical Center, Taipei, Taiwan
- The School of Pharmacy, University of Brighton, UK
- University of South Australia, Adelaide, Australia

- University of Pittsburgh, USA
- King's College London, UK
- Steer Engineering, Bangalore
- Dr Reddy's Laboratories, Hyderabad
- NITTE University Centre for Research, Mangalore
- BITS Pilani Hyderabad Campus, Hyderabad

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### Significant achievement of staff or students

- Dr Srinivas Mutalik received Top Peer Reviewer 2019 by Publons, A clarivate Analytics Company
- Dr Lalit Kumar received Best Poster award during APTICON 2019, 24th National APTI Convention, DIT University Dehradun, 11-13 Oct 2019
- Dr Shaila Lewis received Best Oral Presentation award in International Conference on Advances in Chemical and Materials Sciences, Department of Studies in Chemistry, Mangalore University, Mangalore, held during 17-19, October 2019
- Ms. Reema Narayan received the DST-SERB Travel grant award for participating in the 2019 AAPS PharmSci 360, Texas, USA.
- Ms. Reema Narayan Received "Woman Scientist Award" at International Conference on Advances in Pharmaceutical and Health sciences (ICAPHS 2020) held at NITTE University during 20-22 February 2020.
- Ms. Navya Ajitkumar Bhaskaran received International Travel Grant from Council of Scientific and Industrial Research (CSIR), New Delhi to participate and present research work in the Applied Pharmaceutical Analysis (APA, 2019) conference conducted by The Boston Society on "Regulated Bioanalysis, Discovery Bioanalysis & Technologies and Mechanistic ADME
- Ms. Salwa received Travel grant from Indian Council for Medical Research, New Delhi and University of Toronto, School of Pharmacy to take part in AAPS/IBBS workshop on "Novel approaches targeting brain barriers for effective delivery of therapeutics" held at Hyatt Regency Dulles, Virginia, USA during April 29-May 1, 2019.
- Ms. Sadhana Mutalik bagged the Young Scientist Award at the 12<sup>th</sup> National Women's Science Congress organized by Women Scientist Forum, Swadeshi Vijnana Andolana, Vijnanabharati, New Delhi held at SBRR Mahajana First Grade College, Mysuru during 7-9 November 2019
- Mr. Sivakumar Kannan received Best Poster Award for "Sports Pharmacy- A new Horizon in Indian Sports" at 24th National Conferences of Association of Pharmacy Teachers of India (APTI-2019) on 11-13 October at Dehradun

### **Center for Drug Delivery Technologies:**

The centre, comprising several researchers, has been created for successfully executing the research projects related to novel drug delivery technologies, conducting hands on training workshops and seminars, submitting the proposals for funding, attempting to transform the developed product into scaled up

product, adding the value to ongoing research work by taking the inputs from allied research areas, etc. It is also one of the activities of the centre to approach the funding agencies and industries to provide grants, projects, instruments and to establish state-of-the-art facility in a specified area.

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### **Core content**

**MPharm Pharmaceutics:** This programme was introduced in 1970. The course content is methodically structured and designed to prepare the students for a career in pharmaceutical industry and to continue research activities in various pharma avenues including higher studies. The programme provides various opportunities for students to participate in R & D projects and to develop research skills.

**MPharm Industrial Pharmacy:** This programme was introduced in 2013. It is designed in such a way that student would get a clear idea on the various aspects of pharma industry which could suit the present day requisites of the industry. Valuable inputs are provided under this programme to equip the students for job opportunities in pharmaceutical industries and also to continue with research for higher degrees.

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### **Student projects**

- Development and Evaluation of Long Circulating Nanoparticles Containing Lipid Lowering Drug
- Study of The Inclusion Complex of Telmisartan With Sulfobutyl Ether Beta-Cyclodextrin
- Formulation and Evaluation of Novel Metformin Tablet To Reduce Gastric Acidosis On Its Chronic Use
- Studies on Hydrogel Loaded Microsponge Entrapped Anti-Inflammatory Drug
- Development of Glycosylated Mesoporous Silica Nanoparticles to improve Antimicrobial efficacy of Fluoroquinolone antibiotic

### **Job opportunities**

Pharmaceutical Industries: There are different areas such as production/ manufacturing, validation aspects, quality assurance/ control, technology transfer, process development, formulation development, generic product development, drug metabolism and

pharmacokinetics (DMPK), intellectual property rights, pharmacovigilance, scientific writing and regulatory affairs where candidates of both the disciplines are getting recruited

Entrepreneurship and consultancy: a pharmaceutical company or as consultants  
Postgraduates are also trained and encouraged to pharma companies  
to build their career as entrepreneurs to start

## Testimonials



I wouldn't have what I am today without blessings and encouragement of my faculty of MCOPS. Those were indeed the BEST days of my life. Can't thank them enough for shaping my career.

**Sumit Agarwal**

MPharm (2007-09)  
Director, Sain Medicaments Pvt. Ltd.  
Hyderabad, India

The years I spent researching in MCOPS as a PhD student is an incredibly fulfilling experience. MCOPS boasts state-of-the-art facility and cores, which create a rich environment for research. Dealing with my peers and professors during my tenure exposed me to myriad facets, which served me well both personally and professionally. Overall, it was a life-changing experience which I thoroughly enjoyed.

**Dr Praful B. Deshpande**

PhD (2010-13)  
Lead Scientist, Product Development, Teva Pharmaceuticals, Dublin, Ireland



MCOPS was a great experience for me and whatever I achieved today is due to the strong foundation the college gave me through its unmatched faculty, unique facilities and great study programme. I feel extremely proud to be an alumna, so without a second thought I admitted my daughter in this premier institute.

**Debjani Singh**

Sr. General Manager (Formulation Development),  
Zydus Cadila Healthcare Ltd. (Ahmedabad)

## DEPARTMENT OF PHARMACOGNOSY

### Faculty Members

1. Richard Lobo, PhD, Associate Professor - Senior Scale & Head (richard.lobo@manipal.edu)
2. Manjunath Setty M, PhD, Professor, (mm.setty@manipal.edu)
3. Aswatha Ram H.N, PhD, Associate Professor (aswatharam.hn@manipal.edu)
4. Chandrashekar K.S, PhD, Associate Professor (cks.bhat@manipal.edu)
5. Vasudev R Pai, MPharm, Assistant Professor - Senior Scale (pai.vasudev@manipal.edu)

### Overview

The department was established in 1971, under the eminent leadership of well-known pharmacognosist of international repute Dr M.A. Iyengar. Since its inception the department has witnessed an exponential growth which was nurtured and further developed by Dr Annie Shirwaikar, Dr C.S. Shreedhara and Dr M. Manjunath Setty. Presently the department is headed by Dr Richard Lobo.

The strength of the department lies in its modern labs, sophisticated instruments and high quality research output. The department has produced about 166 post graduates and 18 PhD scholars who are enjoying impressive positions in industry and academia. About 306 publications in the journal of national and international repute with good impact factor testify the quality research output of the department.

### Research areas

- Herbal drug standardization
- Development of Nano-herbal formulation
- Medicinal Plant Tissue Culture
- Evaluation of traditional herbal formulation
- Isolation and purification of phytoconstituents
- Development of nutraceuticals and cosmeceuticals
- Biological screening of herbs/herbal/traditional product

### Instrument/equipment



**Tablet Dissolution Tester**



**High performance liquid chromatography (HPLC)**



**High performance thin layer chromatography (HPTLC)**

## Collaborations

Natural Remedies Pvt. Ltd. Bangalore, India  
Himalaya Drug Co. Bangalore, India  
Collaboration with Piramal Life Sciences, Mumbai, India  
Dabur Research Foundation, Ghaziabad, India

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## Significant achievement of staff

### Dr Richard Lobo

- Received Good Teacher Award 2017 for Excellence in teaching from Manipal College of Pharmaceutical Sciences, Manipal on the occasion of Awards ceremony and Annual day function, 2017
- Received Dr APJ Abdul Kalam Award for Teaching Excellence 2018, by Marina Labs Research and Development, Chennai, on 13th October 2018
- Received Professor of the Year in Pharmacognosy award by Venus International Foundation, Venus International Healthcare Awards ceremony on 21st Sep. 2019

### Dr Aswatha Ram H.N

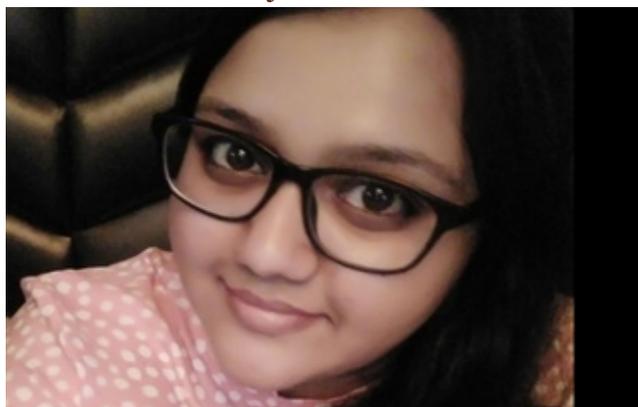
- "CITATION OF APPRECIATION" honoured by APTI, for attending maximum National Annual APTI Convention.

### Dr Chandrashekar.K.S

- Received Distinguished Alumni award- from Manipal College of Pharmaceutical Sciences, Manipal -2011, on the occasion of Awards ceremony and Annual day function.
- Received Dr P. D. Sethi annual Award 2013 –Certificate of merit- for the paper "Invitro Antidiabetic activity of Pentacyclic triterpenoids and fatty acid esters from Bauhinia purpurea"

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**One of our alumnae Tejaswini Kalkundri (Batch 2016-2018) has joined for PhD in Griffith university, Australia**



### Recruiters

Natural Remedies Pvt. Ltd. Bangalore, India  
Himalaya Drug Co. Bangalore, India  
Sun Pharma, Ahmedabad, India  
Ranbaxy Laboratories Limited  
Glaxosmithkline pharmaceuticals limited  
Dabur Research Foundation, Ghaziabad, India

## Core content

Herbal drug development and Research

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### Student projects

- Pharmacognostical, phytochemical, antioxidant and anticancer studies of *Macrosolen parasticus* L. Danser
  - Investigations of Pharmacognostical, Phytochemical and Anti-inflammatory potentials of *Terminalia Elliptica* Willd. Bark
  - Formulation and evaluation of floating tablets from the piper nigrum extract against helicobacter pylori
  - Phytochemical studies on bioactive extracts of *Memecylon umbellatum* and *Nardostachys jatamansi* and screening for their anticancer activity
  - Formulation and evaluation of floating tablets of liquorice extract
- 

### Job opportunities

- Research and Development
- Product Management
- Academics

The infrastructure, research laboratories with most advanced and cutting edge scientific instruments along with the equally competent and highly qualified teaching staff at MCOPS makes it unique.

#### Vinit Parmar

Senior Executive  
RA, Eli Lilly and Company



It has been exciting two years, through learning new things and refreshing knowledge. If at all I find any chance, I would rush to Manipal again.

#### Sunnyhita Nanda

Registration Specialist, Farmina, Poland

Manipal is the place we get the exposure to the different cultures apart from the academics. Here the faculty is like family members which create a homely environment.

#### Srinivas Reddy J

Research Scientist, Advinus Therapeutics Pvt, Ltd



## DEPARTMENT OF PHARMACY PRACTICE

### Faculty Members

1. Mahadev Rao, PhD, Professor & Head (mahadev.rao@manipal.edu)
2. Leelavathi D Acharya, PhD, Associate Professor (leela.da@manipal.edu)
3. Sreedharan, PhD, Associate Professor (nair.sreedhar@manipal.edu)
4. Vijayanarayana Kunikatta, PhD, Associate Professor (vijayanarayana.k@manipal.edu)
5. Surulivel Rajan M, PhD, Associate Professor ( msv.rajana@manipal.edu)
6. Radhakrishnan Rajesh, PhD, Assistant Professor-Selection Grade ( rajesh.r@manipal.edu)
7. Rajesh V, PhD, Assistant Professor-Selection Grade ( rajesh.v@manipal.edu)
8. Sonal Sekhar M, PhD, Assistant Professor-Selection Grade ( sonal.sekhar@manipal.edu)
9. Girish Thunga P, PhD, Assistant Professor-Selection Grade ( girish.thunga@manipal.edu)
10. Prasanna Kumar, MPharm, Assistant Professor-Selection Grade (prasanna.shetty@manipal.edu)
11. Kanav Khera, PhD, Assistant Professor-Selection Grade ( kanav.khera@manipal.edu)

### Overview

Department of Pharmacy Practice of MCOPS, established at Kasturba Medical College Hospital, Manipal in 2001, specializes in Clinical Pharmacy services. The department caters to the needs of clinicians and patients by undertaking services such as medication therapy management, patient counselling, drug information services, medication reconciliation, pharmacovigilance, periodic safety update report (PSUR), Clinical Research, health screening programme, community outreach programme and

continuing Pharmacy education programme. H-index of 36 demonstrates our scholarly influence. The department has several collaborations with national and international institutes of repute. We represent MAHE for global TB portal consortium of the National Institute of Health (NIH), USA. Besides, the department is recognized as training centre for Pharmabridge programme of the International Pharmaceutical Federation (FIP).

### Research areas

- Medication Therapy Management
- Pharmacoepidemiology & Pharmacoeconomics
- Pharmacometrics
- Clinical Toxicology and Drug Safety
- Clinical Translational Research & Pharmacogenomics

## Instrument/equipment

- Quant 5 Studio-Real time PCR
- Centrifuge (Eppendorf)
- -80°C Deep freezer
- Thermocycler
- Liquid nitrogen tank
- Facilities
- Translational research lab
- Drug information lab
- Pharmacokinetic lab

Industry Standard Softwares-  
Micromedex, Phoenix WinNonlin-  
Certara, MedCalc, SPSS



## Collaborations

### National

- All India Institute of Medical Sciences, Jodhpur
- Novartis Healthcare, Hyderabad
- All India Institute of Medical Sciences, Bhopal
- Saroj Gupta Cancer and Research Institute, Calcutta
- TATA-ACTREC, Mumbai
- PGIMER, Chandigarh

### International

- University of Kentucky, USA
- University of Southern California, USA
- Griffith University, Australia
- National Institute of Allergy and Infectious Diseases (NIAID), USA
- AIMST University, Malaysia
- PUMAS-AI, Inc., USA

## Significant achievement

### Staff:

- Two-third of the staff received Pharmabridge training fellowship
- Dr Rajesh V received Grant-in-aid (GIA), Dept. of Health Research, Govt. of India
- Dr Mahadev Rao received approval for ICMR-Adhoc Research Grant 2020
- Dr Rajesh R received ICMR-Adhoc Research Grant 2020
- Dr Girish Thunga received ICMR-Adhoc Research Grant 2020
- Dr Kanav Khara received MAC ID Seed grant award 2020
- Total publications: 380
- Grant received : >Rs. 5 Crores ( Last 5 years)

### Students:

1. Ms Pooja Gopal Poojari, Research Scholar received first place in the oral paper presentation in "Online International Conference on Recent Advances in Child Psychiatry 2020" held by Department of Psychiatry, Chettinad Hospital and Research Institute, Kelambakkam, Tamil Nadu on 23rd and 24th June 2020.

2. Ms. Anmi Jose and Dr. Muhammed Rashid, research scholars received DST-INSPIRE Fellowship 2020
3. Dr Shilia Jacob Kurian, Ms. Viji Chandran, Ms Pooja Gopal Poojari, Mr. Levin Thomas, Dr. Prashant Chandra and Ms. Suspita Sahu research scholars received ICMR SRF Fellowship in 2020
4. Irene Lalhruaimawii, research scholar received National Fellowship and Scholarship for Higher Education, Ministry of Tribal Affairs in 2020
5. Mr. Elstin Anbu Raj S joined as research fellow under DHR-ICMR Grant-in-Aid scheme.
6. Dr. Matcha Saikumar joined as research fellow under ICMR-Adoc research grant.
7. Dr Shilia Jacob Kurian, Research Scholar won Second Prize under Clinical Research stream in “Student’s Pharmaceutical Conclave” organized by Pharmacist Society of Kerala, in association with Kerala Private Pharmacists Association (KPPA) on 21st August 2020.

The department is a part of International TB Portals Programme, National Institute of Allergy and Infectious Diseases (NIAID), USA

#### Centre of excellence

- Centre for Toxicovigilance and Drug Safety
- Centre for Translational Research

#### Annual Conference

- International Clinical Pharmacy Conference (CPCON)

#### Training Centre

- Certara Qualified Training Centers, which is a programme designed to train students in India on the use of Certara software such as Phoenix WinNonlin.
- Training centre for Pharmabridge programme of the International Pharmaceutical Federation (FIP), The Netherlands

#### Recruiters

- Indegene Inc., Bangalore
- Novartis, Hyderabad
- DRG (Clarivate), Mumbai
- IQVIA, Bangalore
- Cognizant, Bangalore
- Accenture, Bangalore
- Sun Pharma, Mumbai



## Core content

- Pharmacotherapy (Medication therapy management)
- Pharmaceutical care (Clinical/ hospital/ community pharmacy)
- Pharmacovigilance
- Clinical Toxicology (Toxidrome and management of poison)
- Clinical Pharmacokinetics
- Pharmacoepidemiology (Drug utilization evaluation)
- Pharmacoeconomics (Assessment of cost of therapy and disease management)
- Clinical research

## Student projects

1. M ZA, Lavu A, Ansari M, V RA, Vilakkathala R. A Cross-Sectional Study on Single-Day Use of Proton Pump Inhibitors in Tertiary Care Hospitals of South India. *Hosp Pharm.* 2021 Apr;56(2):109-115. doi: 10.1177/0018578719873876.
2. Kumar R, Shweta, Kumar S, Prajapati VB, Enumula D, lewis LES, Acharya LD. Prescribing Pattern of Antibiotics in Neonates in a Tertiary Care Hospital in South India. *Research J. Pharm. and Tech.* 2021; 14(2):1059-1064. doi: 10.5958/0974-360X.2021.
3. Marcus H, Varma M, Miraj SS. Association of Serum Vitamin D Status with Development of Type 2 Diabetes: A Retrospective Cross-Sectional Study. *Clinical Nutrition Open Sciences.*2021;36: 1-13. doi:10.1016/j.nutos.2020.12.005
4. Mark K, Hyder S, Rashid M, Chandran VP, Seshadri S, Seshadri S, Nair S, Thunga G. Survival benefits of N-Acetylcysteine in rodenticide poisoning: Retrospective Evidence from an Indian tertiary care setting. *Curr Clin Pharmacol.* 2020 May 12. doi: 10.2174/1574884715666200513090634.
5. Poojari PG, Khan SA, Shenoy S, Acharya LD, Shetty S, Bose S, Pai K, Kunhikatta V, Thunga G. Identification of risk factors and metabolic monitoring practices in patients on antipsychotic drugs in South India. *Asian J Psychiatr.* 2020 Oct;53:102186. doi: 10.1016/j.ajp.2020.102186.

## Job opportunities

1. Clinical Pharmacist
2. Pharmacovigilance specialist
3. Clinical Research Associate
4. Data Scientist
5. Clinical Data Manager
6. Medical Liaison Officer
7. Pharmacometric Scientist
8. Medical Affairs
9. Academics
10. PhD and Postdoc research (India & Abroad)



Getting a postdoctoral fellowship wouldn't have been possible if it weren't for the faculty of MCOPS, especially the strong support and constant guidance of professors of the Department of Pharmacy Practice, MCOPS. The ardent and profound practical exposure I have imbibed here would not have been possible at any other institution in India, especially when it came to Pharmacometrics, so trust me when I say that this is the place where dreams come true.

**Dr Mitali Gaurav**

PharmD (2011-17), Pharmacometrician,  
Cognigen-A Simulations Plus Company,  
Lancaster, New York, USA



The clinical experience as well as the basic research exposure from Dept. of Pharmacy Practice had helped me to adapt quickly and also to be confident in my job role. I do realize that the department had a significant role in shaping my personality and had always been approachable and supportive

**Kavitha Elsa Varghese**

PharmD (2012-18)  
Health Economics & Market Access Executive  
Yes2Treatment Pvt.Ltd, Bangalore

## DEPARTMENT OF PHARMACY MANAGEMENT

### Faculty Members

1. Manthan Janodia, PhD, Professor & Head (manthan.j@manipal.edu)
2. D Sreedhar, PhD, Associate Professor-Senior Scale (d.sreedhar@manipal.edu)
3. Virendra S Ligade, PhD, Associate Professor (virendra.sl@manipal.edu)
4. Pradeep M Muragundi, PhD, Associate Professor (pradeep.mm@manipal.edu)
5. Bhavana B Bhat, PhD, Assistant Professor (bhavana.bhat@manipal.edu)

### Overview

Dr P Gundu Rao, a Visionary Principal of then College of Pharmacy (now MCOPS), initiated the course sensing the need for qualified marketing professionals in the field of Pharmaceutical Industry. Following his footsteps, Dr N. Udupa, former principal

and Dr J. Venkata Rao, Former Professor and Head, Department of Pharmaceutical Biotechnology, MCOPS, contributed immensely to the growth of the Department and worked tirelessly to bring the Department to the forefront.

### Focused research areas of the Department

- Health Economics and Outcomes Research
- Intellectual Property Rights
- Market and Marketing Research
- Cosmeceuticals and Nutraceuticals

## Collaborations

### 1. Research Paper Collaboration:

Title: Emerging trend of pharmacoconomics and health outcomes research in India.

Author: P. D. Ahiawodzi, Department of Public Health, Campbell University College of Pharmacy and Health Sciences, Buies Creek, North Carolina 27506, United States.

### 2. Department of Pharmacy Administration, School of Pharmacy, the University of Mississippi, USA.

## Infrastructure/Facilities



Well ventilated and spacious classrooms provide opportunities for students and faculty to interact during the class hours



Computers with latest software and high speed connectivity



Department library has a collection of books ranging from different subjects to National and International Journals and magazines.

### **Significant achievement of staff and students in terms of awards/ accolades**

- DST-NSTMIS Grant Awardee 2018-2019: Dr Manthan D. Janodia was awarded a research grant from Department of Science and Technology (CHORD/NSTMIS Division), Govt. of India.
- Ms. Bhavana B. Bhat, received scholarship from International Society for Pharmacoepidemiology to attend and present her abstract in 11th Asian Conference on Pharmacoepidemiology, Xian, China during 27-29 October 2018.
- Dr Pradeep M. Muragundi, was selected for ISPOR meeting travel grant award to attend the ISPOR Asia Pacific 2018 conference in Tokyo during September 8-11, 2018.
- Dr D Sreedhar, was selected for prestigious ISPOR Travel Grant to attend ISPOR Europe Conference to be held in Barcelona, Spain during 10-14 November,2018.

Throughout the year various case studies are solved where the students are made to deal with actual organisational level problems into decision making and business strategies.





Group discussions are organised on contemporary topics or on current scenarios to keep students updated on the recent developments and trends in pharmaceutical industries and to improve communication skills

Article presentation sessions are meant for students to improve knowledge and analytical skills while accessing latest articles from top journals such as Harvard Business Review, etc

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### Recruiters

- Pfizer
- Himalaya
- Lupin
- Micro Labs Limited
- Novartis
- Decision Research Group
- Precision Business Insights
- Natco Pharma Limited

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### Syllabus

- Principles and Practice of Business Management
- Principles and Practice of Pharmaceutical Marketing
- Regulatory Affairs and Intellectual Property Rights
- Principles of Disease Management
- Managerial Economics
- Financial Management
- Entrepreneurship Management
- Human Resource Development
- Retail Business Management

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### Student projects

1. Analysis of FDA warning letters issued to Indian pharmaceutical and medical device companies: A retrospective study.  
*Shray Bablani, Manthan Janodia*
2. Evaluating pharmaceutical marketing knowledge and attitude among medical representative in Mumbai City: A quantitative study  
*Juilee Bhegade., Virendra Ligade*
3. Health Related Quality of Life among Medical Representatives.  
*Anirudh Kotlo, Ajay Maram, Pradeep M Muragundi, Manthan Janodia, Virendra Ligade*
4. Perception of people and comparison of cost between branded and generics: A study in Udupi region, Karnataka, India.  
*Prateeksha Kamath, Oliosha Pani, Pooja Mohanraj, Bhavana Bhat*
5. Management of quality system in pharmacovigilance using deviation handling and CAPA.  
*Shibani Mishra, D. Sreedhar*

## Job opportunities

- Sales and Marketing
- Product Management
- International Marketing
- Human Resource Management
- Intellectual Property Rights and Regulatory Affairs
- Distribution and Pharmacy Chains
- Digital Marketing and Business Research
- Contract Research Organizations
- Medical Writing
- Data Analysis
- Retail Management

## Testimonials

I was as a student, associated with MCOPS, Dept. of Pharmacy Management from 2001-2003, nevertheless till today I very much reminisce my association with the dept. as it has shaped mine and many careers, by providing with a unique advantage of aptly applying Pharmaceutical knowledge in corporate management and marketing strategy for the Pharmaceutical Market. With the industry relevant curriculum, MCOPS has guided and moulded the students' professional orientation and has motivated them to seek beyond the obvious. I would advise all the students to appreciate the fact that they are branded products from MCOPS and they would definitely make their mark in the industry, academia, research or any other field they choose to tread.

### **Devesh Kothari**

MPharm (2001-03)  
Assistant General Manager  
Alembic Pharmaceuticals Ltd.



I have thoroughly enjoyed my experience and had an awesome time at management department of MCOPS. I have seen myself transform from a student to industry ready professional under the guidance of our esteem professors of the department. Department provides opportunity of holistic learning by state of the art facility, open interaction with industry professionals, conferences/seminars on contemporary issues which all polishes your knowledge much beyond academics.

This management course gives proper guidance for establishing oneself in industry as a marketing strategist, regulatory professional, intellectual property professional, international business executive, managerial economics & financial management professional, business development personnel, product management, and HR management executive.'

### **Sonal Kirtty**

MPharm 2006-08  
Associate Consultant  
TekIP® Knowledge Consulting Pvt. Ltd

## DEPARTMENT OF PHARMACEUTICAL QUALITY ASSURANCE

### Faculty Members

1. Sudheer Moorkoth, PhD, Professor and Head, (moorkoth.s@manipal.edu)
2. Krishnamurthy Bhat, PhD, Professor, (km.bhat@manipal.edu)
3. SG Vasantharaju PhD, Associate Professor- Sr scale, (sg.vasantharaj@manipal.edu)
4. Muddukrishna Badamane Sathyanarayana, PhD, Associate Professor, (krishna.mbs@manipal.edu)
5. Swapnil Jayant Dengale, PhD, Associate Professor, (swapnil.jd@manipal.edu)
6. Ramya Ravi, MPharm, Assistant Professor, (ramya.ravi@manipal.edu)
7. Athira R Nair, MPharm, Assistant Professor, (athira.nair@manipal.edu)

### Overview

At under graduate level, the programmes are developed to address all the demands of the pharmaceutical industry. Students are trained on the analytical techniques with hands-on skill, which is a crucial learning that strengthens the concepts covered in the theory classes.



The department and the programme prepares the students to be competent, industry ready quality professionals through value added rigorous training. They are encouraged to prepare seminar on various topics, tutorial and discussion, which helps in overall development of students. Department also inculcate the research skills in students at early stages of the course.

### Research areas

1. Development of analytical and bio-analytical method and validation,
2. Pharmaceutical materials science including crystal engineering and crystal structure manipulations of drug molecules
3. Drug Metabolism and Pharmacokinetic studies,
4. Quality management system of pharmaceutical industry
5. Preparation and submission of dossiers.

## **Instrument/equipment/facilities**

The department has high end sophisticated analytical instruments like tandem LC with ion trap mass analyzer, Ultracentrifuge, GCMS, DSC, HPTLC, UV Visible spectrophotometers, FTIR spectrophotometer, Fluorimeter, Flame Photometer, HPLC systems with various detectors including ECD, UV, PDA and

fluorescence etc. These facilities serve both industry and academic research.

The Department of Pharmaceutical Quality Assurance is the only department among academic institution in the country to have licensed e-CTD software (Take solutions) to train the postgraduate students in drug e-filing procedures.



**Tandem LC with ion trap mass analyzer (LC-MS)**



**Gas chromatography-mass spectrometry (GC-MS)**



**High-performance liquid chromatography (HPLC systems - various detectors including ECD, UV, PDA and fluorescence)**



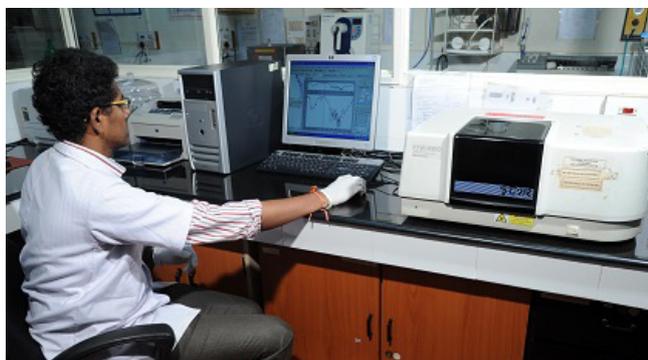
**Differential scanning calorimetry (DSC)**



**High-performance thin-layer chromatography (HPTLC)**



**UV Visible spectrophotometers**



**FTIR spectrophotometer**



**Milli-Q Water purification System**



**Ultracentrifuge**

### **Collaborations**

Dr Swapnil J Dengale published an article titled “Recent advances in co-amorphous drug formulations” in collaboration with Prof. Thomas Rades group, Copenhagen University, Denmark in *Advanced Drug Delivery Reviews* which is one of the reputed journals in the field of Pharmaceutical Sciences.

### **Significant achievement of staff or students**

1. Dr Krishnamurthy Bhat, went on Antarctica Expedition from 14 Nov 2019 to 23 Feb 2020 to investigate the presence of pharmaceutical and personal care product in the adjacent sea waters near Bharati Station in East Antarctica. He also presented a paper in International Conference Antarctic research on 17<sup>th</sup> Jan 2020, Larsemenn Hills, Prydz bae area in Antarctica.
2. Ms. Navya Sree KS (TMA Pai Research Scholar) successfully completed her 12 months (Jan – Dec 2019) SERB Overseas Visiting Doctoral Fellowship Programme as visiting scholar under the supervision of Dr Lynne S. Taylor, Professor of Pharmacy, Department of Industrial and Physical Pharmacy, Purdue University, Indiana, United States.

3. Dr Sudheer Moorkoth received prestigious research funding from Grand Challenges Canada for initiating newborn screening programme for India in the year 2017.
4. Dr Muddukrishna and team received ANVESHAN, organized by Research Division of Association of Indian Universities and prototype model got second prize in south zone university level.
5. Dr Swapnil J Dengale received TMA Pai gold medal for outstanding research in the year 2015, which was awarded for the paper titled “Fabrication, solid state characterization and bioavailability assessment of stable binary amorphous phases of Ritonavir with Quercetin” published in European Journal of Pharmaceutics and Biopharmaceutics. He also delivered an invited talk on “The relevance of co-amorphous formulations in developing the supersaturated drug delivery systems” in graduate school of pharmaceutical sciences, Chiba University, Chiba, Japan. August 2018.
6. Dr SG Vasanthraju received Association of Pharmaceutical Teachers of India best paper award for Determination of Lamotrigine and Felbamate in pediatric plasma samples by Reverse Phase High Performance Liquid chromatography published in Indian Journal of Pharmaceutical Education & Research.
7. Ms Ramya Ravi received Good Teacher Award 2019 for Excellence in Teaching from Manipal College of Pharmaceutical Sciences, Manipal on the occasion of ‘Awards ceremony and Annual Day Function 2020’

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### **Unique features of department**

The Department is an analytical service provider and consultant for many pharmaceutical industries like Steer Engineering, Get well pharma, etc. The department also helps many students from neighboring academic institutions like NITTE University, Yenepoya University, and SDM & Muniyal Institute of Ayurveda Medical Sciences, various pharmacy colleges across the state of Karnataka and beyond in fructifying their research efforts. Staff members of the department act as a consultant, evaluators, book authors, journal referees, editors, etc., because of their competency and contribution in the core knowledge domain. Key features of the department are state of the art facility, diversified capabilities, team of academicians

with rich industry expertise and international exposure, specialized and focused analytical services and patient sample analysis for therapy planning and outcome. Also regulatory affairs professionals from industry have been appointed as adjunct faculty and they visit the department to appraise the students on the latest developments in Pharmaceutical Regulatory Affairs. Department of Pharmaceutical Quality Assurance is the only department among academic institution in the country to have licenced e-CTD software (Take solutions) to train the postgraduate students in drug e-filing procedures.

“As societal commitment, the Pharmaceutical quality assurance department with the support

of Grand Challenges Canada (funded by Govt. of Canada and Vision Group of technology Govt. of Karnataka) initiated and implemented new born screening program for the district of Udupi”.

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### Recruiters

1. GlaxoSmithKline
2. Novartis
3. Decision Resources Group: Healthcare Research and Data
4. Syngene International Ltd
5. Novo Nordisk
6. Indegene Life Systems
7. Eli Lilly and Company
8. Mylan
9. Dr Reddy's Laboratories
10. Lupin research park
11. Merck & Co.

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### Core content

#### 1. MPharm Pharmaceutical Quality Assurance

Analytical research and Stability testing, Bioanalytical method development and validation, Quality functions like quality and system designs, deployment and execution, Overview of regulatory functions like dossier preparations for regulated markets, deployment and execution. Document maintenance and regulatory compliance.

#### 2. MPharm Pharmaceutical Regulatory Affairs

Regulatory Affairs personnel liaises with various divisions within the industry during various phases of drug development, manufacturing, marketing

and clinical research. Externally it is the key interface between the company and the regulatory authorities. The core content of the course includes the regulations and laws concerning medicinal products, pharmaceuticals, veterinary medicines, medical devices, and food and Nutraceuticals in developed and emerging markets, Pharmaceutical patents, IPR and regulations, Clinical trials and its regulation, quality safety and efficacy guidelines, quality assurance and management. They are involved in preparing and submitting the relevant regulatory dossiers to health care authorities around the world.

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### Student projects

1. Development and Validation of a Dried Blood Spot test for Thiamine deficiency among infants by HPLC–fluorimetry - Elizabeth Mary Mathew & Pradnya Sakore, published in Biomedical Chromatography.
2. Photodegradation of Methyl cobalamin and its Determination in Commercial formulations - A. H. Chamle & Shane Lobo, published in Indian Journal of Pharmaceutical Sciences.
3. The Significance of Utilizing In Vitro Transfer Model and Media Selection to Study the Dissolution Performance of Weak Ionizable Bases: Investigation Using Saquinavir as a Model Drug – Mohith Chegireddy, published in AAPS PharmSciTech

4. Complex Generic Products: Insight of Current Regulatory Frameworks in US, EU and Canada and the Need of Harmonization - Sandeesha Lunawat, published in Therapeutic Innovation & Regulatory Science.
5. Determination of Lamotrigine and Felbamate in pediatric plasma samples by Reverse Phase High Performance Liquid chromatography - Sumith Kumar Jain, published in Indian Journal of Pharmaceutical Education & Research.

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### Job opportunities

MPharm Pharmaceutical Quality Assurance specialization:

- a. Pharmaceutical Industry:
  - Research and development: Bio-analytical, Analytical, Drug development, Formulation Development
  - Operations: Quality Assurance, Quality Control, Regulatory compliance
- b. Medical Device Industry
- c. Food and Nutraceutical Industry
- d. Cosmetic Industry
- e. Drug testing laboratories (Govt. & Pvt.)
- f. Administrative and enforcement jobs in Regulatory bodies
- g. Startups/consultancy services/ Entrepreneurship
- h. Various academic roles

MPharm Pharmaceutical Regulatory Affairs

- a. Pharmaceutical Industry: Regulatory affairs department (Drug approval submissions, Dossier compilation, Review, Publishing, Labelling specialist).
- b. Drug Control Department (Drug inspector)
- c. Various central govt. institutes such CDRI etc.
- d. Academia



An institution is the lengthened shadow of one man. With this in mind, I joined the Dept. of Pharmaceutical Quality Assurance in MCOPS for the first time away from home and it was here I realized that home could be found in more than one place, i.e., where the heart is. From state of the art instruments and technology to wide array of extremely talented and knowledgeable teachers, this college has it all. This combined with the guidance and support from my department really helped pave the path for my future and get me to where I am today and for that I'll always be thankful.

**Sushant Shete**

Senior Research Associate (Trainee), Syngene International

The way our college focuses on research, articles, presentations and seminars along with the theory is what makes us stand out in our domain. The department & college has developed me to be better professional through its placement assistance and it helps me day in and day out even today. I feel proud to be an MCOPS alumna

**Sandeesh Lunawat**

Patent Intern, IQVIA, Bangalore



Manipal University has been excellent and a memory to cherish for a lifetime. I am grateful for the effort of department of Pharmaceutical Quality Assurance to pitch us all at a platform like Novartis and other renowned companies

**Krishnaveni**

Regulatory publishing associate, Novartis Healthcare Pvt.Ltd

MAHE and MCOPS in particular is a great institution for student learning. The best thing about student here is the independence in studies and number of additional opportunities available. I was very lucky to have such a supportive faculty and group of friends. I have enjoyed interacting with different people at college.

**Lakshman Reddy**

Submission Delivery Specialist, GlaxoSmithKline



### Faculty Members

1. V M Subrahmanyam, PhD, Professor (vm.subra@manipal.edu)
2. Raghu Chandrashekhar, PhD, Professor (raghu.c@manipal.edu)
3. Jesil Mathew A, PhD, Associate Professor (jesil.m@manipal.edu)
4. Angel Treasa Alex, PhD, Associate Professor (angel.alex@manipal.edu)
5. Venkatesh Kamath B, MPharm, Assistant Professor-Selection grade (venkatesh.kamath@manipal.edu)
6. K Kiran Kumar, PhD, Assistant Professor (kirankumar.reddy@manipal.edu)

### Overview

Department of Pharmaceutical Biotechnology possesses a unique blend of experienced and young teachers involved in teaching various courses of BPharm, PharmD and DPharm programmes such as Biochemistry, Pharmaceutical Microbiology, Pharmaceutical Biotechnology and Cell and Molecular Biology. The department offers a two year postgraduate course MPharm in Pharmaceutical Biotechnology; split into four semesters. In the first semester, theoretical and practical inputs on both basic and applied aspects of microbial and cellular biology, bioprocess engineering, and advanced Pharmaceutical Biotechnology are discoursed. In addition to this, protein and protein formulations, immunotechnology, bioinformatics and computational technology and biological evaluation and drug therapy are addressed in the second semester. Third semester comprises of electives. The students will have extensive practical hands-on training in recombinant DNA technology,

basic molecular biology techniques, animal tissue culture, fermentation, proteomics, diagnostic tests (ELISA), western blot, nano-biotechnology etc. In the fourth semester, the students take up project work and are trained to do extensive literature survey to identify research gaps, formulating research problem, designing research protocols and implementing them to generate data followed by interpretation to arrive at conclusions for the defined research problem.

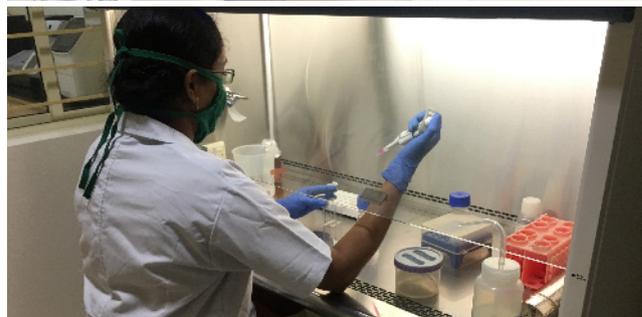
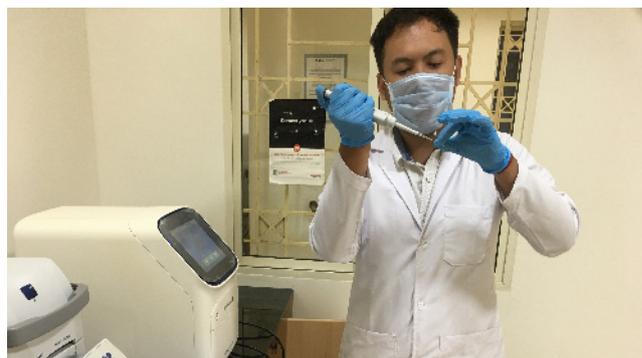


### Research Areas

- Gene silencing and therapy
- Microbial process development
- Protein and peptide based therapeutics
- Microbial drug resistance
- Virology and drug discovery

### **Instrument/equipment/facilities**

- a. Molecular biology facility: PCR, RT-PCR, Electrophoresis and imaging unit, ELISA and Fluorescent plate readers
- b. Animal cell culture with cell freezing facility; inverted tissue culture microscope with fluorescent attachment,
- c. A microbiology laboratory with laboratory scale fermenter , laminar flow hoods and biosafety cabinets
- d. Proteomics facility with electrophoresis, Western blot and purification equipment



### **Collaborations**

- a. Department of Biochemistry, Missouri University, Columbia, MO, USA
- b. Division of Microbiology, CSIR- Central Drug Research Institute, Lucknow, India 226031
- c. Cancer Biology Laboratory, Department of Biosciences and Bioengineering, Indian Institute of Technology Guwahati, Assam-781039, India
- d. Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, Kerala, India
- e. Fourrts India Laboratories, Chennai, India
- f. Juggat Pharma, Bengaluru, 560 074, India

### **Significant achievement**

- a. Dr Raghu Chandrashekar H., received 'Alumni award' from National College of Pharmacy, Shimoga in recognition of professional achievements on 01.12.2018
- b. Dr Raghu Chandrashekar H., received 'Fellows of Antiviral Research Society' award by Antiviral Research Society, India in recognition of contributions in the field of HSV Drug Discovery in the national seminar organized at Sir CV Raman-K.S.Krishnan International Research Centre of Kalasalingam University, Krishnankoil, Madurai, Tamilnadu on October 24-25, 2017.
- c. Dr Jesil Mathew and Mr Ananthamurthy Koteswara received Innovation Day 2017 award from Innovation Centre MAHE for the proposal "Lactosans: The Bloat Free Milk.

- d. Dr Angel Treasa Alex - MCOPS Good Teacher Awards 2015 & 2017, Dr TMA Pai Gold Medal for Outstanding Research-2017, Best Oral Presentation Award- IPC, Dec-2015, JSS University, Mysuru.
- e. Mr. B Venkatesh Kamath – MCOPS Good teacher award 2019; Excellence in Teaching Award- 2012
- f. Dr J Venkata Rao (former faculty) and team received DST project titled “A strategy of effective treatment of drug resistant breast cancer” for Rs. 81.17 lakhs, completed in June 2019.
- g. Dr VM Subrahmanyam, Professor and Head; Co-investigator: Dr Raghu Chandrashekar, received a DBT grant of Rs. 42.32 lakhs and successfully completed the project titled, “Improving therapeutic efficacy of antifungal drugs using marine microbial chitinase” in August 2019.

The department has excellent infrastructure, state-of-art laboratories, seminar room, departmental library and equipment and most importantly, faculty specialized in Pharmaceutical Biotechnology. Students with background in Pharmaceutical sciences, specializing in Pharmaceutical Biotechnology, will have a unique advantage of being placed in biopharmaceutical industry. The

curriculum is designed considering the rapid advancements in the field of biotechnology, biosimilars and bio-pharmaceuticals, as per the PCI mandate. The job potential lies in the areas such as research and development, production, quality control and assurance of biopharmaceuticals and also in academia, in India and abroad.

### Recruiters

- a. Biocon India Ltd., Bangalore
- b. DRG Biosciences, Hyderabad
- c. Indegene, Bangalore
- d. Dr Reddy’s Biosciences, Hyderabad
- e. Serum Institute, Pune
- f. Syngene International Ltd., Bangalore
- g. Novartis, Hyderabad
- h. Sun Pharmaceuticals, Aurangabad
- i. Wockhard
- j. Lupin, Pune
- k. Panacea Biotech

### Core content

The curriculum of MPharm Pharmaceutical Biotechnology is designed for a period of two years, providing theoretical and practical exposure to core and fundamental subjects during the first three semesters and research

(project) work during the fourth semester. The curriculum, framed and revised timely as per the industrial requirements in the making of competent pharmacists with Pharmaceutical Biotechnology area of specialization is executed by PCI.

### Student projects

- a. Recycling human hair waste to enrich soil fertility
- b. Isolation, characterization and screening of beta galactosidase producing microorganisms.
- c. In Search of Better Breast Cancer Drug: An In-silico and Nucleotide Therapeutics Approach
- d. Genotypic analysis and in silico assessment of gyrA isolated from fluoroquinolone-resistant urinary isolates of E.coli
- e. An in vitro study on liposomal formulation containing a combination of microbial chondroitinase and serratiopeptidase for neuronal axon regeneration

## Job opportunities

Our students were well placed in biotechnological companies like Biocon, Wockhard, Lupin, Serum Institute, Panacea biotech etc. Some have taken up doctoral studies in prestigious Universities across the globe and few others in academics.



The Department of Pharmaceutical Biotechnology, MCOPS, with its distinguished faculty and best-in-class research facilities, has helped me strengthen my understanding of core theoretical concepts and expand my laboratory skillsets, shaping up a deep sense of zeal towards research in therapeutics.

### **Akshit V Jain**

MPharm (2018-20)  
Biocon, Bangalore

I had made a right decision by joining Dept. of Pharmaceutical Biotechnology for MPharm. This institution and Dept. are well equipped with latest technology and infrastructure which help students to learn in more efficient way. This department has helped me to evolve as a student and teachers have helped me to evolve as a professional person which is required to face real life challenges at work.

### **Arbind Kumar Mandal**

MPharm (2018-20)  
DRG, Gurugram



Department of Pharmaceutical Biotechnology, MCOPS, MAHE is the right choice for those who want to pursue M Pharm in Biotechnology. The department renders advance subject knowledge along with hands on practical exposure. Pursuing my M Pharm in this department along with divine guidance of my teachers has led me to make honest career choice. M Pharm in Biotechnology is definitely an outgrowing research field with broader opportunities. I feel wonderful and blessed to be a student of this department.

### **Reona Fernandes**

MPharm (2018-20)  
Indegene Pvt Ltd. Bangalore



# EXEMPLARY RESEARCH AND INNOVATION

## Research Highlights

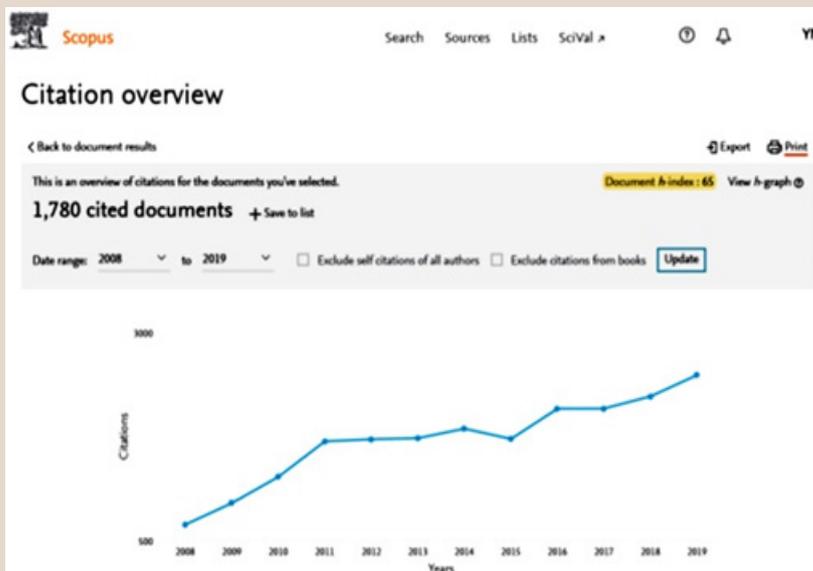
Research at large is a dominant factor to determine the ranking status of an academic institution nationally and globally. The following data explains the research potential of MCOPS in quantity and quality.

### Research Output

Overall Achievements	Upto 2018	2019	Total
Papers published in International and National journals	2,144	156	2,300
Presentations in International and National conferences	1,958	92	2,050
Research Projects accomplished/ ongoing	305	65	370
PhDs Registered	210	51	261
PhDs Awarded	178	9	187
PhDs Ongoing	66	51	117
Grants received (in crores)	30.06	7.88	37.94

### Citation index as on 31.12.2019

Total Publications	1767
Total Citations	23447
Citation per paper	13.27
h-index by Scopus	65



The citation per paper and the h-index signify the kind of research going in MCOPS- a hub of research of MAHE.

## Quality of publications

In the last five years MCOPS has achieved 741 publications

### Overall research performance

Entity: MCOPS- 29 January 2020 · Year range: 2014 to 2019 · Data source: Scopus, up to 22 Jan 2020 ·

Scholarly Output   
741

Authors  
1,490

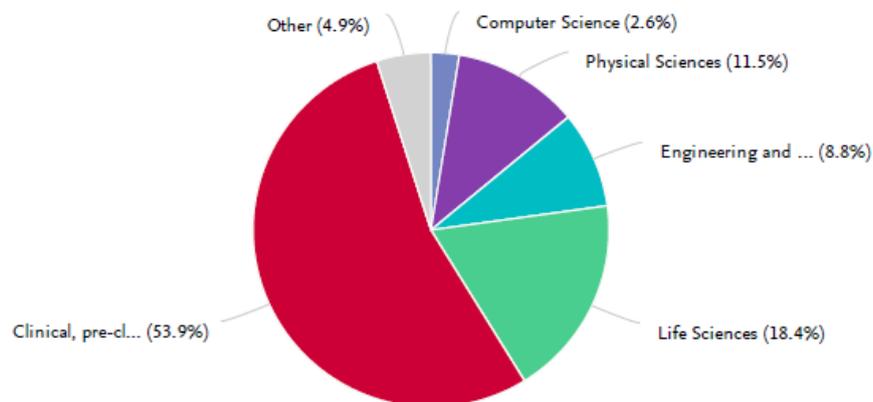
Field-Weighted Citation Impact   
0.70

Citation Count   
3,281

Citations per Publication   
4.4

### Publications by Subject Area

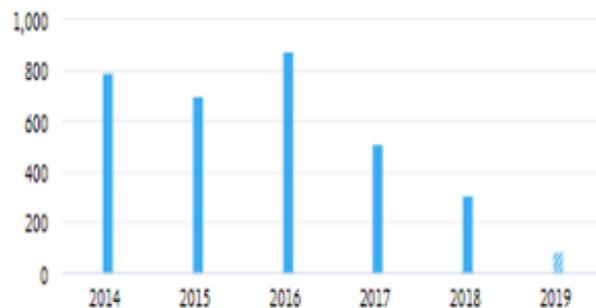
Entity: MCOPS- 29 January 2020 · Year range: 2014 to 2019 · Data source: Scopus, up to 22 Jan 2020 ·



## Quality of Publications (Last Five Years Data)

Citation Count 

**3281**



 Incomplete year 

Citations per Publication 

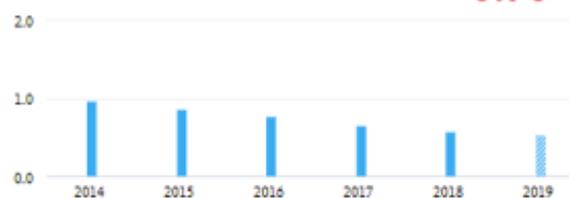
**4.4**



 Incomplete year 

Field-Weighted Citation Impact 

**0.70**



 Incomplete year 

## Consultancy services

MCOPS has a centre named 'Drug Analysis and Development Centre' which provides consultancy service.

## Expanding Reach and Internationalization

### Foreign Universities

1. AIMST University, Malaysia
2. University of Basel, Switzerland
3. UCSI, University, Malaysia
4. WROCLAW University of Science and Technology, Poland
5. The University of Mississippi, USA
3. National Institute of Health, USA
4. Fourrts Laboratories Pvt. Ltd., Chennai
5. IDRS Private Ltd., Bangalore
6. SP Accure Labs Pvt Ltd, Hyderabad.
7. Median Technologies SA and US Biolab Corporation, INC
8. CRDF Global, USA

### Industries/ Research Centers

1. Shreya Life Sciences Pvt. Ltd., Mumbai
2. Encube Ethicals Pvt Ltd., Mumbai
9. Vipragen Biosciences Pvt. Ltd., Mysore
10. Certara, USA, Inc
11. University of Kentucky, USA

## TB Portals Programmes with NIH, USA

Dr Mahadev Rao, Professor and Head, Department of Pharmacy Practice represents India for International TB Portals Consortium since 2018. Currently, the TB Portals Consortium includes 19 partnering countries including India.

## MAHE - Griffith University Collaboration

Our collaborator, Dr Devinder Arora



### Patents

Filed	-	04	Published	-	14
Granted	-	11	Commercialized	-	01

## Research Contributions

Patents granted	11 (As on Sept 2020)
Books/Chapters Published	77 (As on May 2020)
Grants received (in crores)	37.94 (As on Dec 2019)
Research Projects	completed- 305 ongoing- 65 (As on Dec 2019)
Presentations in International and National conferences	2065 (As on May 2020)
Total Publications	1787 (As on May 2020)
Total Citation	23447 (As on Dec 2019)
Citation Per Paper	13.27 (As on Dec 2019)
h-index of MCOPS	65 (As on Dec 2019)

## INTERNATIONALIZATION



Group	Activity	Sophisticated Instruments	Research Area
Drug Design and Development	Designing and synthesizing drug molecules and evaluating their biological activity	Schrodinger Software Flash Chromatography Gel Electrophoresis Cyclic Voltametry Parallel synthesiser	Anticancer Antitubercular Anti-Alzheimer
Pharmaceutical Biology	Study of drugs that are obtained from natural sources	HPTLC, HPLC Spectrophotometer Lyophilizer Cooling centrifuge	Phytochemistry Standardization of herbal formulations Biological screening of herbal drugs
Pharmaceutical Quality Assurance	Analytical and Bioanalytical method development and validation	LCMS/MS GC MS HPLC UV Visible Spectrophotometer Fluorimeter	Crystal Engineering New Born Screening Stability Testing

Group	Activity	Sophisticated Instruments	Research Area
Pharmaceutical Biotechnology	Undertakes research and gives consultancy on Bioprocess and Molecular aspects of bioactive compounds	PCR, Gel Documentation, Inverted microscope, microplate reader and electrophoretic instruments	Fermentation technology, enzyme technology and molecular biology of bioactive compounds
Drug Discovery	Pre clinical studies	Western blotting Flow cytometry RT PCR Tissue culture lab	Cancer Biology Metabolic Disorder CNS Pharmacology
Drug Delivery	Formulation and Development of dosage forms	Planetary Ball Mill Twin Screw Processor High Speed Homogenizers, Malvern Zeta sizer DSC	Nanoparticles Solubility enhancement Targeted drug delivery
Pharmacotherapy and Translational Research	Clinical pharmacy services and research, Translational and quantitative pharmacology research	Phoenix Winnonlin, Nonmem, Medcalc, SPSS, Micromedex - Software packages and data bases	Clinical pharmacy research Precision therapy including pharmacogenomics and pharmacometrics Pharmacoeconomics and Outcome research
Pharmaceutical Marketing Management and Health	Pharmaceutical Marketing, Brand Management, Health Economics and Outcomes Research	Not applicable	Pharmaceutical Marketing Brand Management Health Economics and Outcomes Research

## Student Exchange

The institution hosts and sends students on an exchange programme to foreign universities for professional and cultural immersion for the overall development of the student.

### Exchange of Student (Bilateral/Unilateral) through:

1. IPSF (International Pharmaceutical Students Federation – MAPS-MAHE is the only University in India to have IPSF membership)
2. IASTE (International Association for the Exchange of Students for Technical Experience)
3. AIESEC (International Association for Students in Economic and Commercial Sciences)
4. Bilateral/Unilateral through Memorandum of Understanding with Partner Universities

## **Opportunities for students during student exchange at MCOPS**

1. Short term Observership (7-14 days)
2. Research Projects under faculty (1-3 months)
3. Immersion in BPharm/PharmD programme (1-2 months)
4. Semester abroad programme

### **Partner Universities**

MCOPS has 35 Foreign Universities as its partner in regard to research collaborations and student/faculty exchange programmes, namely,

1. Edinburgh Napier University
2. University of Lille , France
3. University of Brighton, UK
4. University of Findlay, USA
5. The University of Queensland, Australia
6. Griffith Health University, Australia
7. The Free State Provincial Government (FSPG), Republic of South Africa
8. University Sains Malaysia
9. The University of Sydney, Australia
10. University of Southern California, USA
11. University of Dublin, Ireland
12. Kumasi Technical University, Ghana
13. Universidad Catolica San Antonia De Murcia, Spain
14. RAK Medical & Health Sciences University, UAE
15. Molecular Neurotherapy and Imaging Laboratory of Massachusetts General Hospital & Harvard Medical School, Boston, MA, USA

### **Areas To Collaborate**

1. Research Collaboration (Joint research proposals for funding, joint publication)
2. Supervision of PhD or Postgraduate students jointly
3. Undergraduate/Postgraduate student exchange/immersion
4. Host continuing pharmacy education programme (conference, workshop)
5. Faculty Exchange

## COLLABORATIONS & MoUs



MCOPS collaborates with Sai Radha Pharma India Pvt Ltd



MoU with Vipragen Biosciences Pvt. Ltd., Mysuru



MoU with AIMST University, Malaysia

## CONFERENCES AND WORKSHOPS

### 6<sup>th</sup> International Conference on Clinical Pharmacy (CPCON-2021)

January 8-9, 2021 virtually on Microsoft Teams, organized by department of Pharmacy Practice, MCOPS, Manipal.



### 6<sup>th</sup> International Congress of the Society for Ethnopharmacology, India (SFEC- 2019)

The conference was organized by Manipal College of Pharmaceutical Sciences, Centre for Integrative Medicine and Research (CIMR) and Manipal Academy of Higher Education, Manipal, in association with Society for Ethnopharmacology, India at Manipal during February 8-10, 2019



### Workshop on Molecular Docking, Virtual Screening and Computational Biology

A four-day workshop was conducted in collaboration with Schrodinger Software Company during February 4-7, 2019



## Good Pharmacy Practice Education (GPPed)

Good Pharmacy Practice Education (GPPed) is an annual project of the office of Asia Pacific Region of International Pharmaceutical Students Federation (IPSF) organized during March 2 - 5, 2019



## AICTE sponsored Quality Improvement Programme

Organized by Departments of Pharmacology, Pharmacy Practice and Pharmacognosy, MCOPS during March 18 -30, 2019



AICTE sponsored Faculty Development Programme “Conduct of Research and Publication Ethics” during August 19-31, 2019



AICTE sponsored Faculty Development programme on “Pharmacy Teachers’ Pedagogical Knowledge and the Pharmacy Teaching Profession” during September 23 – October 5, 2019





AICTE sponsored Quality Improvement programme on “Drug Discovery and Analytical Techniques: An update on Education and Research” during November 4-16, 2019

### **Manipal-Bristol Myers Squibb symposium on DMPK**

MCOPS and Biocon-Bristol-Myers Squibb Research and Development Centre conducted a joint one- day symposium on May 31, 2019



### **ICMR sponsored Ethnomedicine: An update 2019**

MCOPS and Centre for Integrative Medicine Research (CIMR), MAHE organized one day programme titled “Ethnomedicine: An update 2019” on June 22, 2019



### **ISPOR Workshop - Design Thinking**

A workshop on “Design Thinking” was organized jointly by Department of Pharmacy Management, MCOPS, MAHE and ISPOR Manipal Student chapter on October 11, 2019





**Workshop on Fundamentals of Clinical Research, July 7, 2019**



## FACULTY GUEST LECTURE

### Faculty members invited to deliver lectures in International conferences

Dr Girish Pai K, Associate Professor, Department of Pharmaceutics delivered a lecture on “Effective management of manufacturing defects to avoid product recalls: A challenge to pharmaceutical industry” in 2nd International Conference on Fostering Interdisciplinary Research in Health Sciences (ICFIRHS 2019, September 14-15), held at AIMST University, Malaysia.

Dr Mahadev Rao, Professor and Head, Department of Pharmacy Practice, MCOPS gave a speech on “Integrating Pharmacogenomics and Population Pharmacokinetics for Precision Therapy in Tuberculosis patients” in Chisinau, Moldova 2019 International TB Portals Consortium

Dr Mahadev Rao represented India for International TB Portal Consortium 2019 at Chisinau, Moldova



Dr Surulivelrajan M, Associate Professor, Department of Pharmacy Practice participated as a speaker in the Drug Metabolism & Pharmacokinetics and Population PK/PD Modelling held at the International Medical University, Kuala Lumpur, Malaysia during October 8 – 10, 2019



## HONOURS FOR FACULTY



### **Dr Jyothsna Manikkath - Coordinator of FIP**

Ms Jyothsna Manikkath, Assistant Professor, Department of Pharmaceutics, MCOPS was appointed as Publication Coordinator of International Pharmaceutical Federation – Young Pharmacists' Group (FIP-YPG) for the year 2019



### **Dr Sonal Sekhar - MAC ID Seed Grant Award**

Dr Sonal Sekhar, Assistant Professor – Selection Grade, Department of Pharmacy Practice received MAC ID Seed Grant Award for the year 2019-20 worth INR 2.00 Lakhs.



### **Dr Anup Naha - Provenance 2019**

The team “Health Beyond Time” comprising Dr Anup Naha, MCOPS, Dr Somu G, KMC, Manipal and Ms Usha Rani, PSPH was one among the top finalists of Provenance 2019.



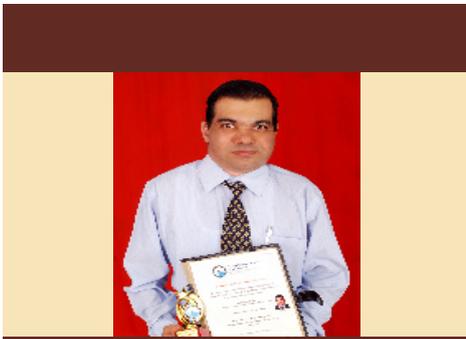
### **Dr Surulivel Rajan – Best Poster Presentation Award**

Dr Surulivel Rajan, Department of Pharmacy Practice won Best Poster Presentation Award for the poster titled “Population Approach Pharmacokinetic Modeling of Aminophylline in Preterm Neonates” at International Conference on Translational Research Strategies for Drug Discovery and Clinical Development held during July 20-21, 2019 at Hyderabad organised by CRC Pharma LLC, New Jersey, USA.



### **Ms Ramya Ravi - Best Oral Presentation Award**

Ms Ramya Ravi, Assistant Professor, Department of Pharmaceutical Quality Assurance at Manipal College of Pharmaceutical Sciences, received the best oral presentation award in 2nd International Conference on Fostering Interdisciplinary Research in Health Sciences (ICFIRHS) 2019 held at AIMST University, Malaysia during September 14-15, 2019.



### **Dr Richard Lobo – Professor of the year (Pharmacognosy) Award**

Dr Richard Lobo, Department of Pharmacy Practice has been selected as a “Professor of the Year (Pharmacognosy)” under the Pharmacy Discipline during the 2nd Venus International Healthcare Awards – VIHA 2019 which was held on September 21, 2019 at Green Park, Chennai.



### **Dr Jyothsna M - FIP Travel Scholarship 2019**

Dr Jyothsna received FIP Travel Scholarship 2019 from International Pharmaceutical Federation to participate in the 79th FIP World Congress on Pharmacy and Pharmaceutical Sciences at Abu Dhabi, UAE during September 22- 26, 2019.



### **Dr Kanav Khara - Award of Excellence in Clinical Pharmacy – 2019.**

Dr Kanav Khara, Department of Pharmacy Practice received Award of Excellence in Clinical Pharmacy – 2019 during World Pharmacists Day 2019 held at KMC Hospital, Attavar, Mangalore on September 25, 2019 for his service in providing clinical pharmacy training to hospital Pharmacists, Nursing staff and Community Pharmacists.



### **Mrs Aswathi R Hegde – Best Poster Award**

Mrs Aswathi R Hegde, Assistant Professor, Department of Pharmaceutics was awarded the best poster for the poster at SYMBIOT 2019, a national level symposium organized by Department of Biotechnology and Institution of Engineers, Biotechnology Chapter (IEBT), Manipal Institute of Technology, Manipal on September 26, 2019 at Manipal Institute of Technology, Manipal.



### **Dr N Udupa - APTI - Shri Bhojraj Panjamool Life Time Achievement Award**

Dr N Udupa, Director – Research (Health Sciences) MAHE, received the prestigious “APTI - Shri Bhojraj Panjamool Life Time Achievement Award” from Association of Pharmaceutical Teachers of India (APTI) during APTICON 2019 (24th Annual National Convention of APTI) which was organized by DIT University at Dehradun, Uttarakhand State during October 11 - 13, 2019.



### **Dr Bhavana B Bhat - Best Poster Award**

Dr Bhavana B Bhat, Assistant Professor, Department of Pharmacy Management, MCOPS won “Best Poster Award” and “Cash Prize” for the poster Presentation in National Conference on Pharmacoepidemiology and Pharmacoeconomics (NCPP) organized at JSS College of Pharmacy, Mysore during September 26-28 2019.



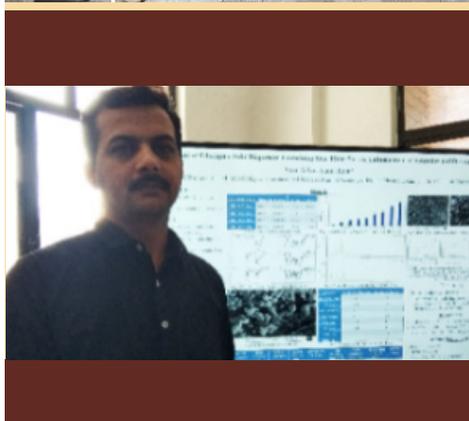
### **Mr Vasudev Pai - Best Oral Presentation Award**

Mr Vasudev Pai, Assistant Professor, Department of Pharmacognosy, MCOPS, won “Best Oral Presentation Award” in International Conference (SPER-Bangkok 2019) on October 3-4, 2019



### **Dr Vijayanarayana, Dr Sreedharan, Dr Rajesh V and Dr Sonal Sekhar M - ISPE Scholarship**

Dr Vijayanarayana, Dr Sreedharan, Dr Rajesh V and Dr Sonal Sekhar M, Department of Pharmacy Practice, MCOPS received International Society for Pharmacoepidemiology (ISPE) Scholarship for attending ISPE’s 12th Asian Conference on Pharmacoepidemiology (ACPE), Kyoto, Japan during October 11-13, 2019. Dr Sreedharan received full scholarship which additionally covers travel reimbursement of airfare and accommodation to attend the ACPE 2019.



### **Dr Lalit Kumar - Best E-Poster Presentation Award**

Dr Lalit Kumar, Assistant Professor-Selection Grade, Department of Pharmaceutics, MCOPS, received the Best E-Poster Presentation Award for his research work. He presented a research paper in the 24th Annual National Convention of Association of Pharmaceutical Teachers of India (APTICON-2019) during October 11-13, 2019 held at DIT, Dehradun, India.



### **Dr Shaila A Lewis - Best Oral Presentation Award**

Dr Shaila A Lewis, Associate Professor, Senior Scale, Department of Pharmaceutics, MCOPS, received Best Oral Presentation Award in International Conference on Advances in Chemical and Materials Sciences, Department of Studies in Chemistry, Mangalore University, Mangalore during October 17 -19, 2019



### **Dr Manthan D Janodia - ISPOR Europe 2019 Travel Grant**

Dr Manthan D Janodia, Professor and Head, Department of Pharmacy Management, was awarded a travel grant by International Society of Pharmacoeconomics and Outcomes Research (ISPOR) to attend and present a paper in ISPOR Europe 2019 conference held at Copenhagen, Denmark during November 2 - 7, 2019.



### **Dr Pradeep M Muragundi - First Prize in poster presentation**

Dr Pradeep M Muragundi won First prize for the poster titled “How good is the Quality of YouTube Video communication for Antibiotic Resistance” presented during National Conference on Antibiotic Resistance- A Global update, conducted by the MPH programme of Prasanna School of Public Health, MAHE on November 14, 2019.



### **Dr Krishnamurthy Bhat – Participation in 39th Indian Scientific Expedition to Antarctica**

Dr Krishnamurthy Bhat, Professor, Department of Pharmaceutical Quality Assurance, was selected to participate in 39th Indian Scientific Expedition to Antarctica by Ministry of Earth Sciences, Govt. of India.



### **Dr Abhijeet Pandey - EMBO Fellowship**

Dr Abhijeet Pandey received the prestigious EMBO (European Molecular Biology Organization) fellowship for carrying out a part of his research project at Medical University of Graz, Austria. Dr Pandey is a Postdoctoral Research Fellow with Dr Srinivas Mutalik, Professor and Head, Department of Pharmaceutics, MCOPS, Manipal.



## SOCIAL OUTREACH ACTIVITIES

### Visit to Spandana Vocational Rehabilitation Centre for Mentally Challenged Person, Uppoor by the students of Griffith University, Australia

On January 27, 2019, Community Development Committee (MAPS) in association with Student Exchange Committee (MAPS) went on an educational tour along with 18 students from Griffith University, Australia to Spandana Vocational Rehabilitation Centre for Mentally Challenged Person, Uppoor



### Blood Donation Camp

On February 19, 2019, an event by International Pharmacy Students Federation (IPSF) the members of Community Development Committee (MAPS) in association with Student Exchange Committee (MAPS) organized a Blood Donation Camp at the Blood Bank, Kasturba Hospital, Manipal in collaboration with MCOPS.



### Cancer Awareness Programme

To mark the occasion of celebrating Cancer Awareness month on February 28, 2019, Community Development Committee (MAPS) in collaboration with Dept. of Pharmacy Practice, Dept. of Clinical Psychology and Dept. of Palliative Medicine and Support Care, MAHE, Manipal Karnataka; had organized and conducted a Health Education programme for Cancer Patients



## Daan Utsav

The VSO volunteers of MCOPS kickstarted the third day of Daan utsav on October 4, 2019 with the project 'SEVA KA SAATH' wherein they took over the morning cleaning duties of the housekeeping staff to lessen their workload





## STUDENTS' CORNER

### Griffith University students' visit

Manipal College of Pharmaceutical Sciences hosted a team of 18 undergraduate students from Griffith University, Gold Coast, Australia during January 14 - February 8, 2019 as part of student exchange programme



### MCOPS students' visit to APPS 2019

About 23 students from MCOPS represented Manipal Association of Pharmacy Students (MAPS) in the 18th Asia Pacific Pharmaceutical Symposium (APPS) held July 6-13, 2019, in Bandung, Indonesia. MAPS was the 3<sup>rd</sup> largest delegation among 350+ delegates from Asia Pacific Member Associations of International Pharmaceutical Students Federation (IPSF)



### **Interactive session with Mr Naman Gupta, BPharm Alumnus**

Naman is one amongst the nine successful candidates and the only pharmacy graduate from India to clinch Australia Awards Scholarships to pursue his higher education in Australia. Naman obtained his admission in Pharmacy Australia Centre of Excellence (PACE), University of Queensland



### **Professional Society Events**

Innovative Communication Club (I2C) is a club comprising students, research scholars and faculty members. I2C is committed to creating an environment of research and learning, igniting young minds, and stimulating a spirit of discovery and leadership. The club consists of research scholars designated to different posts and is constituted every year.

## Qalam 2019



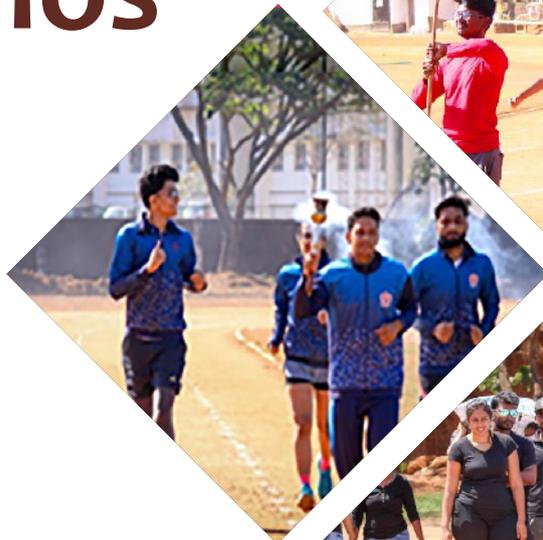
## Genesis 2019



## Genesis 2019



# Annual Sports Meet “Athlos”



## ALUMNI

### Alumni meet at Hyderabad

MCOPS alumni meet was held in Daspalla D-Convention Hall, Hyderabad on July 7, 2019



### Silver Jubilee Alumni Meet of BPharm batch 1990-1994

The silver alumni meet of BPharm batch 1990-1994 was held on November 16, 2019 at MCOPS

### Silver Jubilee Alumni Meet (Bpharm Batch 1990-94)



**Alumni Meet During 71st Indian Pharmaceutical Congress, Chennai**  
Alumni meeting was held during 71st IPC, Chennai on December 21, 2019



**MCOPS Alumni Cricket Lovers Reunion 2.0 (MCLR 2019) on December 29, 30, 2019**

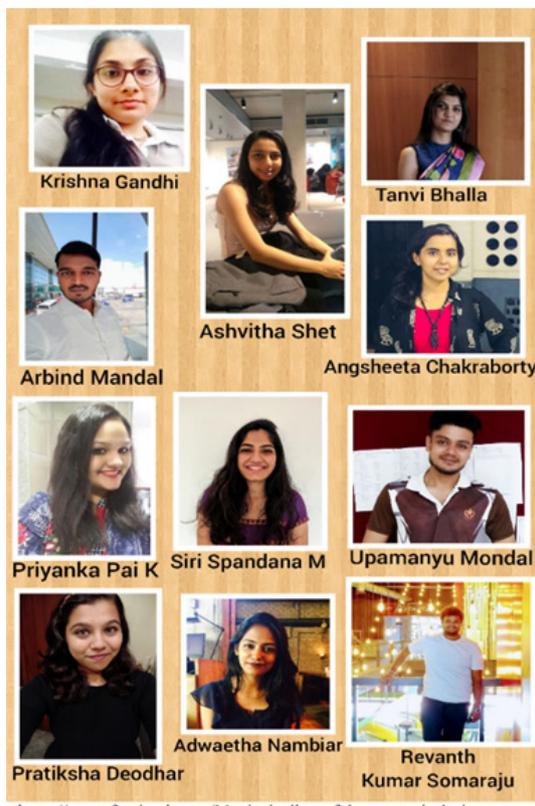


## PLACEMENT

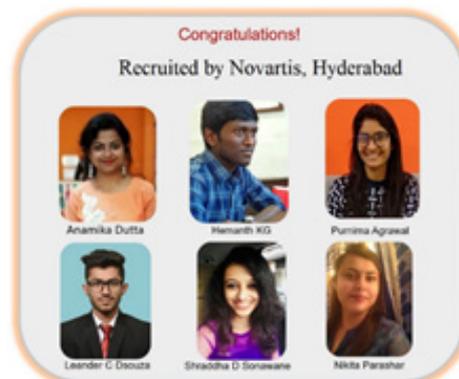
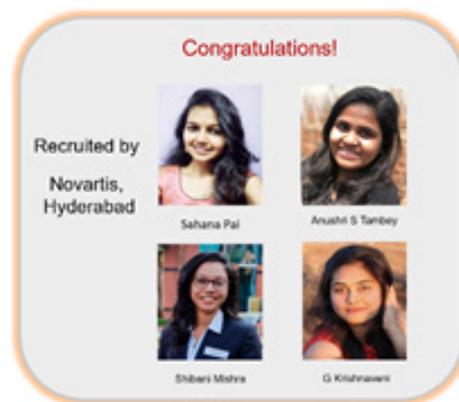
A total of 35 companies have offered jobs to MCOPS students. Overall companies were happy to recruit students and gave a positive feedback about students in terms of their knowledge and attitude. Place of work was mostly in Bangalore and Mumbai. Positions offered were research associate, junior research scientist, junior analysts, junior regulatory specialist, product specialist etc., A few top companies who have come for campus drive were, Abbott, Eurofins Advinus, Biocon, Dr Reddy's, Decision Resources Group, Himalaya, Indegene, Lotus, Novo Nordisk, Oaknet healthcare, Parexel, Sun Pharma and Syngene



### Students placed in reputed companies



<https://www.facebook.com/Manipalcollegeofpharmaceuticalsciences>



Placement visits  
**Indegene**



**DRG**



**GSK**



# WELCOME TO MANIPAL

Manipal is a locality of Udupi city, located 8 kilometres from centre of City in Karnataka, India and is administered by the Udupi City Municipality. It is located in the part of Coastal Karnataka, 62.8 km north of Mangalore and 8 km (5.0 mi) east of the Arabian Sea. From its location on a plateau, it commands a panoramic view of the Arabian Sea to the west and the Western Ghats to the east. Home to the Manipal Academy of Higher Education, the town attracts more than twenty five thousand students every year and hence consists more of student population. From June to August, Manipal witnesses one of the most extreme monsoons in the world, with the annual precipitation ranging from 500–560 cm (200–220 in). Being away from large urban centres and the highly tropical climate of the town attracts a large number of birds, with 155 different species of birds. The nearest railway station is located about four kilometers west of Manipal in Udupi station (UD) on the Konkan railway line and the nearest international airport is Mangalore International Airport (formerly Bajpe Airport), which is located around 62 km (39 mi) south from Manipal

<https://en.wikipedia.org/wiki/Manipal>



## CONTACT US

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