दिपसरु - कुलगीत

हे दिपसरु महान तुम्हारी जय हो जय जय जय हो

भेषज विज्ञान के कल्पतरु हे दिपसरु,
भारत के गौरव भैषज्य के वैभव हे विपदहरु,
भैषजिकी क्रिया विज्ञान अभिज्ञान भैषज गुण विज्ञान,
स्नातक परास्नातक विद्यावारिधि के गुरुकुल हे विषमहरु,
हे दिपसरु महान तुम्हारी जय हो जय जय जय हो II1II

पूर्व में दिल्ली कॉलेज आफ फार्मेसी फिर दिपसार,
वर्तमान में दिपसरु विराट भेषज ज्ञान का आगार,
मंतव्य ऐसा देश अपना हो भेषज में पूर्णतः आत्मनिर्भर,
हे औषधि के लाल प्रगति पथ ले चलो शीर्ष पहुँचा दो सत्वर II2II हे दिपसरु महान II

भेषज अंग उपांग वाक् देवी का उपक्रम मंगल दिपसरु,
छात्र और संकाय समर्पित औषधि का गुणदोष निरूपित,
अद्भुत यह स्थान प्रचुर है ज्ञान देश हो व्याधि विमूलित,
औषधीय वृक्षों पर शोध प्राचीन अर्वाचीन का अनुपम सेतु II3II हे दिपसरु महान II

ज्ञान भारती भेषज के इस विश्वपीठ को अपनी मंगल वाणी दे दो ,
शोध जान्हवी रहे निरंतर दिग दिगंत यशपूरित कर दो,
मातु सरस्वति इस परिसर में सार ज्ञान की धारा भर दो,
हे शारदे सुजान प्रदान विमल मति आस यह पूरी कर दो,
हे दिपसरु महान तुम्हारी जय हो जय जय जय हो II4II

CONTENTS

उपराज्यपाल
दिल्ली
LIEUTENANT GOVERNOR
DELHI

सत्यमेव जयते

राज निवास
दिल्ली-११००५४
RAJ NIWAS
DELHI-110054

19th May, 2016

MESSAGE

I am happy to learn that the Delhi Pharmaceutical Sciences and Research University is publishing its Annual Report for the year 2015-16.

Delhi Pharmaceutical Sciences and Research University as an institution has a mandate not only to impart education, training and research in pharmaceutical sciences and allied areas but also to cater to the health needs of our people. It is my hope that the Delhi Pharmaceutical Sciences and Research University will strive hard to nurture leaders in the field of pharmaceutical innovation and research who can fulfill the gap of therapeutic needs of our society.

I wish my very best to students, faculty and staff of the Delhi Pharmaceutical Sciences and Research University in all their endeavours.

(Najeeb Jung)

ARVIND KEJRIWAL
CHIEF MINISTER

सत्यमेव जयते

GOVT. OF NATIONAL CAPITAL TERRITORY OF DELHI
DELHI SECRETARIAT, I.P. ESTATE, NEW DELHI-110002
PHONE : 23392020, 23392030

D.O. No. : OSD CMI/57
Date : 20/05/2016

MESSAGE

It gives me immense pleasure to know that Delhi Pharmaceutical Sciences & Research University is publishing its annual report for the year 2015-16.

I believe that the university would continue to produce best pharmaceutical professionals for the service of nation and promote research and development in this fields linked with betterment of human life.

I give my best wishes to students, faculty and staff of university for success of the annual report.

(Arvind Kejriwal)

MANISH SISODIA
मनीष सिसोदिया

सत्यमेव जयते

DEPUTY CHIEF MINISTER
GOVT. OF NCT OF DELHI
उप मुख्यमंत्री, दिल्ली सरकार
DELHI SECTT, I.P. ESTATE,
दिल्ली सचिवालय, आई०पी०एस्टेट,
NEW DELHI-110002
नई दिल्ली–110002
Email. msisodia.delhi@gov.in

D.O. No. : Dy CM/2016/149
Date : 27th May, 2016

Message

I am glad to know that Delhi Pharmaceutical Sciences and Research University is bringing out its Annual Report for the Academic Year 2015 – 16.

The Annual Report for the Univesity is an important platform for the Students, Faculty & the Staff to express themselves as it would be carrying vital information on the latest developments that are taking place. I am pleased with the endeavors of this University to promote the pharmacy profession and bring this important health care field into limelight.

I extend my greetings and best wishes for the publication of the Annual Report for the year 2015 – 16.

(MANISH SISODIA)

K.K. SHARMA, IAS

मुख्य सचिव
राष्ट्रीय राजधानी क्षेत्र दिल्ली सरकार
दिल्ली सचिवालय, आई.पी.एस्टेट, नई दिल्ली-110002

CHIEF SECRETARY
GOVT. OF NATIONAL CAPITAL TERRITORY OF DELHI
DELHI SECRETARIAT, IP ESTATE, NEW DELHI-110002
Tel.: 2339 2100, 2339 2101 Fax : 011-2339 2102
E-mail : csdelhi@nic.in

MESSAGE

I am delighted to know that Delhi Pharmaceutical Sciences and Research University is publishing its annual report for the year 2015-16, which is an important media for publishing the research activities that have been carried out in the university. The annual report contains details of research activities and achievements of the year apart from providing vital information to the aspiring students who wish to take pharmacy as their career.

I appreciate that the university is doing an excellent service in producing pharmaceutical and other health professionals. I am sure that the University will continue to produce talented pharmaceutical professionals in the service of nation.

I wish all the best to students, faculty and staff of the university.

sharma

(K.K Sharma)

PUNYA S SRIVASTAVA I.A.S
Sectetatry

सत्यमेव जयते

Government of NCT of Delhi
Department of Higher Education and
Training & Technical Education
Muni Maya Ram Marg, Near
T.V. Tower, Pitam Pura, Delhi-110088
Phone : 27322573, 27322948,
Fax : 27325341

D.O. No. Secy/TTE/50
Dated: 18/05/2016

MESSAGE

I am delighted to know that Delhi Pharmaceutical Sciences and Research University is publishing its Annual Report for the year 2015-16 which is an important instrument for highlighting the University's research and academic achievements, reflecting the services offered to the nation by this premier University of Pharmacy.

I appreciate that University is imparting pharmaceutical education to the students to make them competent and contribute positively to the health sector.

My best wishes to the faculty and students of the University.

Punya Salila

(PUNYA SALILA SRIVASTAVA)

MANOJ KUMAR I.A.S.
Director

सत्यमेव जयते

Department of Training & Technical Education
Government of NCT of Delhi

D.O. No. : PS/Misc./2016/ 84

Dated : May 18, 2016

MESSAGE

I am happy to know that Delhi Pharmaceutical Science and Research University is bringing out its Annual Report for the year 2015-16.

The Annual Report showcases the research carried out by the faculty and post-graduate students of the University. It also reflects the achievements of the students throughout the year. The University produces well-trained pharmaceutical and other health professionals to cater to the need of Health Sector. I trust that the University will continue to strive hard to achieve new milestones in the field of research and innovation to produce affordable drugs.

I extend my best wishes for the development of University and publication of Annual Report for the year 2015-16.

18/5/16

(Manoj Kumar)

Office Address : Room No. 201, Muni Maya Ram Marg, Pitampura, Delhi - 110088
Telephone No. : 011-27322472 Fax : 27327458 E-mail : dirtte.delhi@nic.in, manoj1960@gmail.com

From the Desk of Hon'ble Vice Chancellor

Today's world has ushered in a new era of education, where knowledge cannot be confined to classrooms and texts, but has to be modernised to help in the nation building so as to meet the challenges of the 21st century. This university, Delhi Pharmaceutical Sciences and Research University (DPSRU), New Delhi was established by act of the Delhi Assembly in 2008. But it has come into operations in 2015, after I had the privilege to join as its first Vice Chancellor in August 2015.

The vision of DPSRU is to prepare quality pharmacists, pharmaceutical scientists, physiotherapists, hospital managers and public health professionals, etc for the country. Now it is the endeavour of this university to ensure that education in the field of pharmacy and allied health sciences is imparted to all irrespective of class, caste, creed, colour or culture. The university has been equipped with sophisticated equipments, laboratories, state of the art museum, playground, swimming pool, hostels for boys and girls, SBI-ATM, food court, herbal garden, quarters for faculty and staff, guest house with all facilities, physiotherapy-OPD, Yoga centre, etc.

Modernization and change in curriculum is the need of the hour, to keep pace with the requirement of the industry. In this direction we have made changes in the Bachelor of Pharmacy syllabus for VIIIth semester, by giving a choice of elective of four subjects viz. Drug Regulatory Affairs, Clinical Pharmacy, Pharmacovigilance and Pharmcoeconomics, with two compulsory subjects Research Methodology and Scientific Paper Writing. The student will also undergo training, seminar presentation and project writing during this semester. This is the first such change in the country. Post graduate courses in seven disciplines of Pharmacy (Pharmacology, Pharmaceutics, Pharmaceutical Chemistry, Pharmacognosy & Phytochemistry, Drug Regulatory Affairs, Quality Assurance and Clinical Pharmacy). Also Master in Public Health, Mater in Hospital Management and MBA (Pharmaceutical Management) have been started from this academic session. It would not be out of place to mention here that we have introduced entrance tests for PhD programmes of this university followed by a six month pre-PhD course work, in guidelines of UGC, New Delhi.

It is pertinent to mention here that the teaching faculty, staff and students have brought many laurels to the university through their commitment and involvement and made DPSRU an inseparable part of National Pharmaceutical Research system. Skill development programmes and preparing students for establishing themselves as entrepreneurs is also the effort of the faculty. Training and Placement of students is an essential part and parcel of this university.

In the next session we intend to add few more post graduate courses like Master in Physiotherapy (Orthopaedics), Masters in Physiotherapy (Electrotherapy), Master in Pharmacoeconomics, Master in Medical Device, to cater to the needs of the country.

Indeed, I strongly believe that it is our collective responsibility to take DPSRU to greater heights. The onus of turning these challenges into opportunities lies in responding faith and commitment in ourselves in accomplishing this task.

This annual report is a platform used for recording progress of DPSRU, events, fond memories so as to disseminate to all. We assure that all of us together will continue to serve as pioneer University of India for Pharmacy, with constant support from one and all.

DPSRU

University of Excellence...

DPSRU

DELHI PHARMACEUTICAL SCIENCES AND RESEARCH UNIVERSITY

Delhi Pharmaceutical Sciences and Research University (DPSRU), the first Pharmacy University of India, and perhaps Asia, is a Delhi state university that was enacted by Delhi Government legislation. The university is situated in University campus besides the old block. The university is recognized by UGC under section 2F and efforts have been made for recognition under section 12B of the UGC Act. Life Sciences Sector Skill Development Council (LSSSDC) declared Delhi Pharmaceutical Sciences and Research University as accredited vocational training partner with accreditation no LFSVTAF16078. NBA has accredited D.Pharm, B.Pharm and M.Pharm (Pharmacology).

An Overview

The Delhi Institute of Pharmaceutical Sciences and Research one of the departments of Directorate of Training and Technical Education was founded in 1964 as a Department of Pharmacy at Kashmiri Gate Polytechnic for imparting Diploma in Pharmacy. The department was later on shifted to Pusa Institute and then to present campus at Pushp Vihar, New Delhi in 1979. College of Pharmacy was upgraded and named as Delhi Institute of Pharmaceutical Sciences and Research vide gazette notification of July 2004, under Department of Training and Technical Education, GNCT of Delhi affiliated to University of Delhi. Delhi Pharmaceutical Science and Research University (DPSRU) was enacted by Govt. legislation on 11th September 2008. DPSRU has being developed as State of Art, well equipped Centre of Excellence and is producing top class pharmaceutical scientists, pharmacists thereby significantly contributing towards the development of World and India in particular.

The University has completed one year, living up to its high standards in teaching and research in the field of Pharmaceutical and Allied Sciences.

Motto

- To produce high-class Pharmaceutical Scientists by awarding Ph.D, M. Pharmacy degrees to meet the global requirements for Drug Discovery and Development, Quality Assurance and Regulatory Affairs and pharmacovigilance.
- To impart quality education by awarding Master of Pharmacy in branches like Pharmaceutics, Pharmacology, Pharmaceutical Chemistry, Pharmacognosy, Drug Regulatory Affairs, Clinical Research, Quality assurance and M.B.A. Pharma Management.
- To impart quality education by awarding Pharmacy degrees and to bring DPSRU on the global map of pharmaceutical education.
- To impart quality education in allied health sciences like physiotherapy Masters in Public Health.

Vision of DPSRU

Delhi Pharmaceutical Sciences and Research University (DPSRU) has been set-up with the vision to prepare quality pharmacists, pharmaceutical scientists and physiotherapists, Hospital Managers and Public Health professionals etc. for the country.

Adequate guidance, extensive training with broad vision is provided to students through multi dimensional programs by the experienced faculty and industry- institute interaction coupled with latest tools and techniques to make them potential leaders, research scientists and entrepreneurs with assured placement in their chosen profession.

This is done in order to confirm the contributions of specified pharmacists in the field of medical and paramedical sciences to meet the global requirements for Drug Discovery and Development, Quality

Assurance and Regulatory Affairs etc.

Achievments

Govt of India,Ministry of human Resource development,Department of higher education wide letter dated 27.5.2016 DPSRU has taken into consideration to be connected under National Knowledge Network (NKN). This is as per inniative of MHRD, National mission of education information communication and technology (NMEIC&T):

To provide connectivity for education and learning related means of students, teachers and lifelong partners in the university.

Theme of university

A Centre of excellence in Pharmaceutical and Allied Sciences

The University has very well established and organized research laboratories equipped with sophisticated instruments in various potential areas like Genome Research, Pharmacokinetics, Antifertility and Infertility, Ocular Pharmacology, Indian System of Medicine, Novel Drug Delivery Systems, Pharmaceutical Chemistry Lab, Herbal Drug Technology, Cardiovascular Research Lab, Physiotherapy Centre, etc. Students have the opportunity to work in these specialized state-of-art laboratories. Each department possesses highly sophisticated instruments for post graduates and Ph. D. researchers along with all facilities for practical training of undergraduates.

Centres and Divisions

- Centre for Basic Sciences
- Centre for Development of Pharmacology & Toxicology
- Centre for Pharmaceutics
- Centre for Medicinal Chemistry
- Centre for Natural Products/ Herbal Drug Technology
- Centre for Pharmaceutical Technology
- Centre for Pharmaceutical Analysis
- Centre for Biotechnology
- Centre for Pharmacy Practice
- Centre for Pharmaceutical Management
- Centre for Clinical Research
- Centre for Pharmaceutical Bio Informatics
- Centre for Quality Assurance (Drugs and Pharmaceuticals)
- Centre for allied sciences

A meeting of Board of Governers was held on 13.4.2016 and following decisions were made:

Board of Governors (From Left to Right) Mr. Raj Kumar, Mrs. Punya Salila (Secretory), Dr. Decca, Dr. S.S. Agrawal (Vice Chencellor Dpsru) Inspecting the Premises of University

- Introduction of the two new courses i.e. Master's Degree in Hospital Administration and Master's Degree in Public Health
- The conversion of M.Pharm Pharmaceutical Management into M.B.A Pharmaceutical Management was agreed by the board.

CONFRENCES & SEMINARS CONDUCTED

- Dr. Niharika Nath, PhD, Associate Prof. Life Sciences, New York Institute of Technology, New York delivered a lecture on **"Novel NSAIDs and Cancer Prevention"** on 18th Jan 2016.
- Shri Rajiv Kumar Saigal delivered 16 lectures on the topic **"Marketing and Product Launch Dynamics"** in the month of January 2016 and February 2016.

  Topics covered were:
  - Introduction to marketing concept
  - Difference between selling and marketing
  - Relevance of marketing concept to Indian companies
  - Marketing mix basics
  - Understanding consumer behaviour
  - STDP basics
  - Concept of branding
  - Social responsibility and marketing ethics
  - Role of brand manager and marketing manager
  - Presentation of brand launch
- A lecture by Dr. Mahesh C Kaushik on **"Standardization of Molecular Techniques of "western blotting"** was delivered on **04th Feb 2016**.
- Shri. Gunendranath Ray, Ex Dy. Drug Controller General of India delivered 8 lectures in the month of March 2016.
- Dr. Ashoke Mukherjee delivered lecture on **"Regulatory strategies of Drug Development"** on **10th & 11th March 2016**.
- An International Conference on **"RECENT ADVANCES IN HEART HEALTH AND RESEARCH"** on **22nd April, 2016** in association with **International Society for Adaptive Medicine.**
- A lecture by Prof. Krishna Kumar, department of pharmaceutics and pharmacokinetics, Howard University, Washington DC was delivered on **"Certain Aspects of Nano Technology"** on **29th December 2015**.
- Dr. Dinender K Singla, Professor and Head, Division of Metabolic and Cardiovascular Sciences, Burnett School of Biomedical Sciences, College of Medicine, University of Central Florida delivered a lecture on **30th May, 2016**.

CONFERENCES

"International conference of Pharmacoeconomics and outcomes research" Oct 31st 2015

Fourth International Conference of Pharmacoeconomics and Outcomes Research was organized at Delhi Pharmaceutical Sciences and Research University sector- III, Pushp Vihar, New Delhi- 110017

The highlights of the conference are given below:

Release of abstract book (Left to Right: Prof. DP. Pathak, Dr. S.K. Gupta, Ms. Punya Salila, Mr. Manoj Kumar, Prof. S.S. Agrawal)

Lamp lightning by Dignitaries.

Dignitaries on the Dias.

Dignitaries with delegates

- Conference was attended by national and international experts in the field who gave plenary lectures and highlighted the importance of the subject.
- Conference had 4 plenary symposia on various topics.
- Young scientists gave podium presentation which was attended by faculty and students.
- Poster session was organized. Overall more than 50 students from different parts of the country participated.
- Eminent speakers from USA participated in the deliberation and gave state of art in the subjects of their specialization.
- Panel discussion was held on PHARMACOECONOMIC GUIDELINES FOR INDIA.
- Symposium on biostatistics and meta-analysis was also organized.
- Overall the conference was a grand success and was attended by 300 delegates.

Dr. Pawan Singal, Director of the Institute of Cardiovascular Sciences, St. Boniface General Hospital and the University of Manitoba, Winnipeg, Canada lighting the lamp

Prof. S.S. Agrawal Hon'ble Vice Chancellor DPSRU delivering a lecture.

Left to right: Mr. S.L.Nasa, Prof. S.S.Agrawal, Prof. Pasha, Prof. D.P.Pathak, Dr. Pawan Singal, Prof. Li.

International Conference on "Recent Advances in Heart Health and Research" 22nd April, 2016

Delhi Pharmaceutical Sciences and Research University had organized an International conference on Recent Advances in Heart Health and Research.

The highlights of the conference are as follows:

- The conference was a meeting of professors, scientist, cardiologist and research scholar working in the field of cardiac health.
- Professor Dwivedi delivered a lecture on **"lifestyle and prevent heart failure"**. He emphasized on diseases originating from the lifestyle.
- Professor Ren Ki Li (Toronto) delivered lecture on **"novel conductive to prevent cardiac arrhythmia"** and explained the role of biomaterial to human health, compatibility and significances with research programme.
- Professor Pawan Singhal director institute of cardiovascular sciences (Canada) deliver the lecture on **cytokines, innate signalling and heart failure** and put a concept to establish a correlation between various inflammatory marker indication and cardiac health.
- Professor Qadar Pasha, research scientist at CSIR-Institute of Genomics and integrative Biology, gave a presentation on **"Gene Polymorphism in Vascular Homeostasis and Hypertension"**.
- Professor (Dr) Sanjiv Dhingra, from Canada, presented his pioneer work on **"the cardiac stem cell therapy"** and focussed on the pharmacological and genetic interventions to study the molecular mechanism responsible for alterations that lead to changes in the immune characteristics of stem cells following differentiation.
- Conference was concluded by Prof (Dr) S.S Agrawal, vice chancellor, Delhi Pharmaceutical Sciences and Research University.

ACHIEVEMENTS & RESEARCH

MAJOR ACHIEVEMENTS IN THE FIELD OF RESEARCH

ONGOING RESEARCH PROJECTS {SESSION 2015-2016}

Title: Anti -estrogenic activity of certain phyto–constituents

Dabur Research and Development Center

Chief investigator:
Prof (Dr.) S. S. Aggarwal

Allocated amount: **Rs 7 Lakh plus**

Title: Development of drugs for the medical therapy of Diabetic Retinopathy using natural products

Department of Science and Technology (DST)
PRDSF

Chief Investigator:
Dr. S. K. Gupta
Professor Emeritus

Allocated amount- **Rs 17,41,200/-**

Title: Development of drug for the medical management of Diabetic Retinopathy using ayurvedic drugs

Chief Investigators:
Dr. S. K. Gupta
Department of Science and Technology (DST)

Allocated amount- **Rs 77, 93,200/-**

Title: Development of herbal drugs for the prevention and treatment of Diabetic Retinopathy and to elucidate their mechanism of action in experimental rat models

Chief investigators:
Dr. S. K. Gupta
Professor Emeritus
Department of Science and Technology- UKEIRI PROJECT

Allocated amount- **18,24,000/-**

MAJOR ACHIEVEMENTS IN THE FIELD OF RESEARCH

ONGOING RESEARCH PROJECTS {SESSION 2015-2016}

Title: Clinical ocular pharmacology and therapeutics

Department of Science and Technology (DST), Government of India under 'Utilization of Scientific Expertise of retired Scientists' (USERS) Scheme

Chief investigators:
Dr. S. K. Gupta

Allocated amount: **Rs.9,66,000/-**

Title: Rivastigmine loaded nanostructured lipid carrier (NLC) integrated scaffolds transdermal patch system for the treatment of Alzheimer's disease and Parkinson's disease dementia

Department of Science and Technology (DST) – Fast track Scheme for young Scientists
Science and Engineering Research Board (SERB)

Chief Investigator:
Dr. Meenakshi K Chauhan
Asstt. Professor (Pharmaceutics)

Allocation Amount: **Rs. 19,38,000/-**

Title: Design, synthesis and biological evaluation of novel phosphodiesterase-4 (PDE4) inhibitors.

DST sponsored –Fast track Scheme for young Scientists

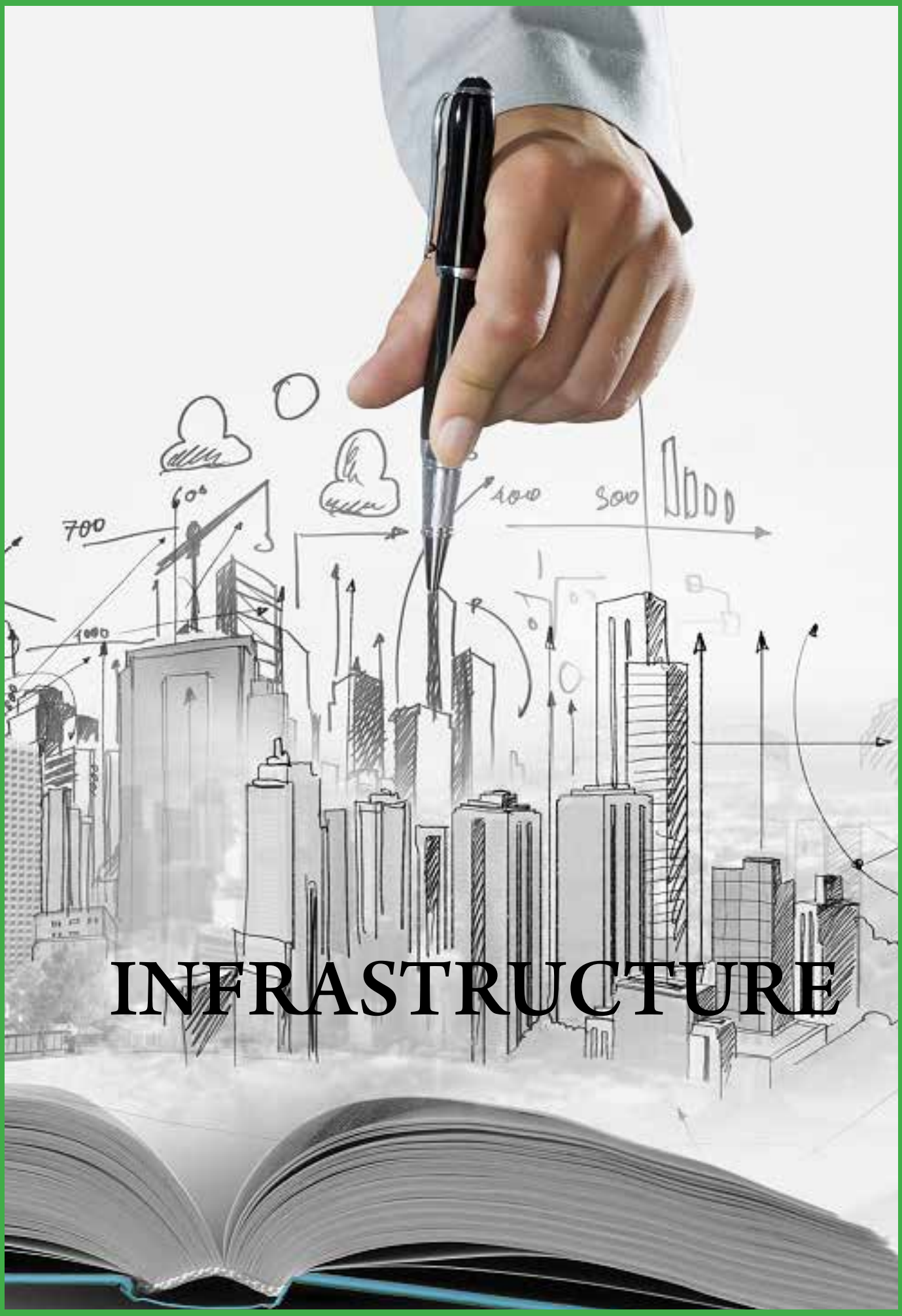
Chief Investigator:
Dr. S. R. Wakode
Assot. Professor (Pharmaceutical Chemistry)

Allocated Amount: **Rs. 25,00,000/-**

Title: To Study the Intestinal Fructose Transport (via GLUT2& GLUT 5 transporters) in Rodent Model of Fructose Induced Childhood-overweight/obesity and Investigate the Preventive Potential of Medicinal Plants Therein

Principal Investigator:
Dr. Rajani Mathur
Asstt. Professor (Pharmacology)

Allocated amount: **Rs. 38,37,067/-**


INFRASTRUCTURE

INFRASTRUCTURE AND FACILITIES

EIGHT STOREY PG RESEARCH BLOCK

The 8+1 PG block has been constructed for which finance department had accorded the approval and sanctioned Rs. 48 crore for the building of new infrastructure.

CENTRAL INSTRUMENTATION LABORATORY

The central instrumentation laboratory constitutes the heart of the cooperative research activities at the institution. This facility houses many sophisticated specialized equipment for research work of students and researchers.

ANIMAL HOUSE

The institute has a 1000 sq.ft. Air conditioned Animal House, along with a rabbit run it is first of its kind in India meeting the requirement of all the research activities and CPCSEA protocol. It also has the service areas like records office, washing and autoclaving area, raw material room for animal Feed and a feed preparation room. The experimental modules have been placed at the proximal end of the animal area while the supply and breeding modules are placed at the far end. In order to facilitate unidirectional movement of clean and dirty material, the animal area comprises of a central clean corridor with the dirty corridor located on either side of the rooms at first floor and on ground floor "clean & dirty" corridor concept has been implemented. The veterinarian staff has been taken on contract basis. Our animal house supplies rats/mice/ rabbits to other colleges/ research Institutes approved by CPCSEA. The experienced and helpful technical staff of the Animal House assists the research workers

Old Animal House


New Animal House

in their animal experiments, and is responsible for proper maintenance of this key facility.

INFORMATION TECHNOLOGY CENTRE

All the major research laboratories, faculty rooms, Administration, library, animal house, seminar hall, lecture theaters, auditorium, guest house, etc. are connected by LAN and internet connections. This center provides a variety of services to the students in literature search, computation and graphics. Major software packages available: Windows, Norton Antivirus, Sigma Plot 10.01 and Sigma stat 3.5, server OS 2004.

Up gradation to 40 Mbps WiFi from existing 10 Mbps leaseline and networking of entire DPSRU campus is being initiated.Information technology centers provide 24x7 access to internet. The Institute has fiber optic network with switch backbone connecting auditorium, Seminar Hall to the main building. The network nodes cover all research laboratories by expanding the network through structured cabling in all the floors/ research labs of the Institution building. Troubleshooting support is also being provided in resolving network and hardware related problems,

IT Centre

along with software support for beginners.

MEDICINAL HERBAL GARDEN

The Botanical Garden at DIPSAR is used by M.Pharm and Ph. D. students working on herbal projects for growing plants for use in their experiments and collection. Here herbs are cultivated according to their season to get maximum yield of useful component of herbal drug. At present one herb is used to get constant yield on mass scale, its sowing is done in April and is harvested in August. This helps in obtaining

Constant and good quality of active principles. It also helps in training PG students about collection and cultivation of natural products.

Herbal Garden

MUSEUM

Museum is facilitated with all kinds of educative anatomical models.

Museum

AUDITORIUM

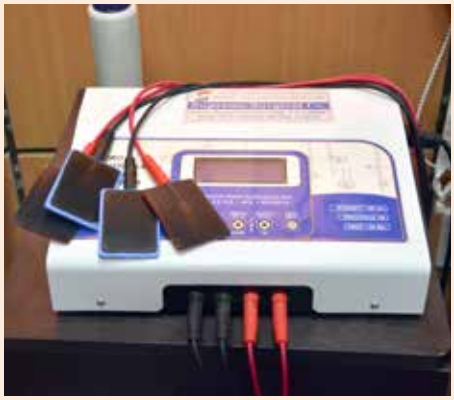
Institute has a centrally air-conditioned auditorium with a seating capacity of 450. The auditorium also houses well-furnished seminar hall on the first floor for conducting scientific seminars / meetings.

Auditorium

PHYSIOTHERAPY OPD









DELIBERATIONS

State of the art fully air-conditioned four deliberation rooms exists with the capacity of more than 150 students each with audio visual facility. These deliberation rooms have been named accordingly Lecture Theater 1 - Dr. A. R. Kidwai deliberation hall, Lecture Theater 2 - Prof. Pawan Kr. Singhal deliberation hall, Lecture Theater 3 - Dr. G. Narendra Kumar deliberation hall & Lecture Theater 4. Other than routine lectures, seminars of M. Pharm. and Ph. D. students are also held thrice a week in deliberation halls.

LIBRARY

The Library covers a total area of 4400 sq. ft. with a reading area of 2000 sq. ft. and a stacking area of 2400 sq. ft., is fully air-conditioned. It is situated on the first floor of the front wing of the Institute. The Library has been equipped with modern furniture, reprography facility and library software system. Established in 1979, the DIPSAR Library is vibrant, well organized information system which enables the user to find out the required information in minimum time. It has one of the richest Pharmacy Library collections in India with over 17,000 books covering all branches of Pharmaceutical Sciences like Pharmaceutics, Pharmaceutical Chemistry, Pharmacology, Pharmaceutical Biotechnology,

Pharmacognosy and Pharmaceutical Technology. It also has a good collection of books of basic sciences related to Pharmacy like Medicine, Pathology, Biochemistry and Microbiology. During the year 2015-16 the library added 334 books to the library collection. It also subscribed to 8 international and 17 national journals.

FACILITIES

(A) INDIA INTERNATIONAL HOSPITALITY CENTRE (IIHC)

A guest house is situated inside the complex with the name of "India International Hospitality Centre". This hospitality center is a fine state of art giving an infinite look to the complex. It's a double storey building giving a concrete look. It has visitors room fully furnished and equipped with phone facility which has been renovated. Ground floor has 5 double seated rooms and 3 suites

(for VIP guests) are constructed on first floor. All rooms are fully furnished, air-conditioned, fitted with Jacuzzi (water baths), Steam Baths. Room service is available all the time along with cooking facility. Centre also has a

multicuisine to serve scientists and medical fraternity visiting the University from all over the world.

(B) FOOD COURT

A fully air conditioned food court is there where faculty, staff and students get quality food and snacks.

(C) STAFF QUARTERS

The residential complex includes well maintained Staff Quarters. It has also been planned to build a new residential block for the staff at the place of the old guest house.

(D) GIRLS HOSTEL

A new PG block has been created along with the existing ones. Mrs. Manju Vyas and Mrs S Latha has been serving as the wardens of UG and PG sections.

(D) BOYS HOSTEL

A new building has been constructed in front of the


table tennis facility


Hostel mess


Hostel room


Boys hostel

existing B.D. Miglani Boys hostel. A mess has been constructed in the first floor which is ready to use. Also a fully air conditioned study room and an IT room will be available in the upcoming months. Dr. R.B. Bodla has been serving as the warden of both the boy's hostel.


Gymnasium


Swimming Pool

(E) GYMNASIUM and SWIMMING POOL

University has a state of art Gymnasium and swimming pool aiming at preparing healthy all-rounder professionals.

RESEARCH LABORATORIES AND INSTRUMENTATION FACILITIES

Most of the undergraduate and post graduate laboratories have been renovated and fully equipped with latest sophisticated instruments.


UV spectrophotometers


central instrumentation lab


HPTLC


HPLC

Real time PCR instrument


PG Pharmacognosy lab


Indian system of medicine lab


Hospital Pharmacy lab


Rota evaporator


Dissolution apparatus

INSTRUMENTATION FACILITIES

Autoclave, Beckman Coulter Counter, Capsule Filling Machine, Coating and Polishing Machine, Cooling Centrifuge, DLS, Disintegration Apparatus, Dissolution Apparatus, Distillation Unit, Fermenter,Friability Test Apparatus, High Pressure Homogenizer, Inverted Microscope, Laminar Flow Hood, Mechanical Sieving Machine, Millipore Vacuum Pump, Rheometer, Rotary Tablet Punching Machine, Rota-evaporator, Serological Water Bath, Single punch tablet machine, Ultrasonicator, Zetasizer, Binocular Microscope, Calorimeter, Column Chromatography, DSC, Flame Photometer, Fluorimeter, FTIR, GC, HPLC, HPTLC, Karl Fischer Apparatus, pH Meter, Refractometer, Rotavapour, Turbovap Concentrator, UV Spectrophotometer, Actophotometer, Analgesiometer, Condon's Rat Manometer, Continuous Avoidance, Response Apparatus, Cook's Pole Climbing, Digital Plethysmometer, Electroconvulsiometer, ELISA Reader, Haag - Street Universal Slit, Kymographs, Lagendorff Assembly, Organ Bath Assembly, Rotarod Apparatus, Semi-Autianalyzer, Camera Lucida, Digital Melting Point Apparatus, Muffle Furnace, Rotavapor, Soxhlet Apparatus, Stage Microscope, Short Wave Diathermy, T.E.N.S (trans electrical nerve stimulation), IFT (Interferential Therapy), Ultrasonic Therapy, Hydro collator unit, Quadriceps table, Traction unit, Muscle stimulator, Paraffin wax Bath, Shoulder wheel.

PLACEMENT CELL

The Institute has active placement cell very well coordinated by the incharge Mrs. Amrita Parle. We have been having closer to 100% placements in leading national and multinational pharmaceutical companies and academic Institutions of repute at all levels. i.e. undergraduate, postgraduate (all branches), PhD and diploma level. All the Bachelors and Masters students are placed in different multinational and national pharmaceutical companies through campus interviews even before completion of their respective degree. This year campus interviews have been conducted in the college by reputed companies viz. Matrix, EVS, Guardian, Jubilant, WNS, APC, Ranbaxy, Martin-Harris, Viva, Dabur, Indigene, Novartis, Religare, Value-edge etc. The college is experiencing a fast academic growth to the challenges of the 21 century. In the highly competitive environment, the college is capitalizing on itsstrengths in areas such as academic innovation, comprehensivetraining and flexible educational deliverysystems. Widely acknowledged for its innovativeand responsible role, for which it is entrusted,the "Delhi Institute of Pharmaceutical Sciencesand Research" has produced top class PharmaceuticalScientists for the technological up-gradation ofthe industry and for service to the community in allbranches of pharmaceutical sciences. In keepingwith the times, Institute is a conscientious steward,effectively utilizing human as well as financialresources.The interaction of administration, faculty,and students; the efficient use of physical facilities;and consistent updating of the campus contributeto the quality education.

PLACEMENTS 2015-2016

S.N0	NAME OF STUDENTS	COMPANY	SPECIALIZATION	JOB PROFILE
1	Namita Kaushik	APCER	Pharmacology	Pharmacovigilance Associate
2	Garima	APCER	Pharmacology	Pharmacovigilance Associate
3	Aarushi Gupta	APCER	Hospital Pharmacy	Pharmacovigilance Associate
4	Divya Mishra	APCER	Quality Assurance	Pharmacovigilance Associate
5	Jyoti Yadav	APCER	Pharmaceutics	Pharmacovigilance Associate
6	Sulabh Khurana	APCER	Medicinal Chemistry	Pharmacovigilance Associate
7	Vishvendra Chaudhary	APCER	Herbal Drug Technology	Pharmacovigilance Associate
8	Jyoti Bhateja	APCER	Pharmaceutics	Pharmacovigilance Associate
9	Anshu Gulati	APCER	Pharmaceutics	Pharmacovigilance Associate
10	Nisha Bhatt	APCER	Clinical Research	Pharmacovigilance Associate
11	Arnab Chakraborty	NOVARTIS	Clinical Research	Associate Analyst
12	Jahnavi	NOVARTIS	Pharmaceutics	Associate Analyst
13	Neetu Sharma	NOVARTIS	Medicinal Chemistry	Associate Analyst
14	Surbhi Gupta	NOVARTIS	Clinical Research	Associate Analyst
15	Mitali Soni	IMS health	Pharm Management	Business Analyst
16	Prashant Soni	IMS health	Clinical Research	Business Analyst

17	Harshit Chitransh	IMS health	Herbal Drug Technology	Business Analyst
18	Lavanya Singh	IMS health	Quality Assurance	Business Analyst
19	Sanyam Handa	Empower School of Health	Pharm Management	Pharmacovigilance Associate
20	Jahnavi	Empower School of Health	Pharmaceutics	Pharmacovigilance Associate
21	Jyoti Bhateja	Empower School of Health	Pharmaceutics	Pharmacovigilance Associate
22	Arun Nayak	Empower School of Health	Pharm Management	Pharmacovigilance Associate
23	Divya Mishra	Empower School of Health	Quality Assurance	Pharmacovigilance Associate
24	Nitu Shah	MSD	B.Pharma	Therapy Manager
25	Sachin Goyal	MSD	B.Pharma	Therapy Manager
26	Sachin Kumar	MSD	B.Pharma	Therapy Manager
27	Mrigna Malhotra	MSD	B.Pharma	Therapy Manager
28	Himani Bhardwaj	MSD	B.Pharma	Therapy Manager
29	Sanjeev Kumar	MSD	B.Pharma	Therapy Manager
30	Prachi Sharma	Astra Zeneca	B.Pharma	Trainee Territory Business Manager
31	Swati Ahuja	Astra Zeneca	B.Pharma	Trainee Territory Business Manager
32	Ritika Beechwani	Religare	D.Pharma	Pharmacist
33	Monirul Alam	Religare	D.Pharma	Pharmacist
34	Nadir Hussain	Religare	D.Pharma	Pharmacist
35	Neetu	Religare	D.Pharma	Pharmacist
36	Mohini Khanna	Religare	D.Pharma	Pharmacist

OTHER FACILITIES AT UNIVERSITY CAMPUS

- SBI ATM at University Campus
- Musical Fountain
- Sports Complex
- Swimming Pool

New Musical Fountain

SBI ATM

Old Musical Fountain

Gymnasium

sports complex

FACULTY & STAFF

TEACHING FACULTY

TEACHING FACULTY

Honourable Vice Chancellor DPSRU
Prof. (Dr.) S.S. Agrawal

Offtg. Registrar DPSRU cum Offtg. Director DIPSAR
Prof. (Dr.) D.P. Pathak

Offtg. Additional Registrar
Prof. (Dr.) S.K. Sharma

CENTRE FOR PHARMACOLOGY & TOXICOLOGY

Prof. (Dr.) S.S. Agrawal
Professor

- Honourable Vice Chancellor, Delhi Pharmaceutical Sciences and Research University
- Head, Department of Pharmacology

Dr. (Mrs.) Rajani Mathur
Assistant Professor

- In-charge Animal House
- In-charge Library
- HoD, Clinical Research Department
- In-charge Central instrumental Lab

Mr. Sachin Kumar
Lecturer

- Deputy Store Officer.

Mrs. S. Latha
Assistant Professor

- In-charge QIP and PCI
- Hostel Warden (Girls)

Dr. Ajit Kumar Thakur
Assistant Professor

CENTRE OF PHARMACEUTICS

Dr. Harvinder Popli
Professor

- Incharge IT

Dr. P. K. Sahoo
Associate Professor

- Incharge Student Affairs
- In-charge University Examination
- HoD, Department of Pharmacy, DU
- HoD, Department ofPharmaceutics
- HoD, department of Pharmaceutical Management
- HoD, department of DRA

Dr. (Mrs.) Meenakshi K. Chauhan
Assistant Professor

- In-charge Information Technology Centre.
- In-charge website, University Web Administrator.
- In-charge Time-table, D. Pharm., B. Pharm, M. pharm
- In-charge for DPSRU Annual Report

Mr. Bhagchand
Associate Professor

- In-charge Sessional Examinations
- Hostel Warden (Boys)

Mr. Anil Kumar
Lecturer

- Deputy Purchase Officer.
- Monitoring the pulse polio immunization programme

Mr. Satish Manchanda
Lecturer

- Dy. Dean (Students affairs)
- Member Annual report committee

Dr. Geeta Aggarwal
Assistant Professor

- Training and Placement Officer
- Incharge PCI/ AICTE / QIP related work

Dr. Madhu Gupta
Assistant Professor

CENTRE OF PHARMACEUTICAL CHEMISTRY

Prof. (Dr.) D.P. Pathak
Professor

- Officiating Director, DIPSAR
- Officiating Registrar, DPSRU
- HoD, Pharmaceutical Chemistry Department

Mrs. Amrita Parle
Associate Professor

- In-charge Sports
- In charge Placement cell

Dr. Sharad Wakode
Associate Professor

- HoD, Quality Assurance Department
- Store Officer
- In-charge Guest House

Mrs. Himangini
Lecturer

- Deputy In charge QIP
- Member of purchase committee

Dr. R. B. Bodla
Assistant Professor

- Hostel Warden (Boys)

Dr. Rajiv Kumar
Assistant Professor

- Incharge IT

CENTRE OF DRUG REGULATORY AFFAIRS

Dr. J Swaminathan
Assistant Professor

Dr. Artiben R Thakkar
Associate Professor

- Purchase Officer

CENTRE OF PHARMACOGNOSY AND PHYTOCHEMISTRY

Dr. S.K. Sharma
Professor-consultant

Mrs. Manju Vyas
Associate Professor

- Hostel Warden (Girls)
- In-charge Alumini (DAF)
- HoD, Pharmacognosy Department
- In charge of Pulse polio immunization program

Mr. P. N. Raju
Associate Professor

- In-charge Sessional Examinations

Mrs. Sakshi Bajaj
Lecturer

- Deputy sports incharge
- Member DIPSAR alumini forum (DAF)
- Member Annual report committee

Dr. Mahaveer Dhobi
Assistant Professor

- Boys Hostel Warden

CENTRE OF PHYSIOTHERAPY

Ms. Deepika Aggarwal
Teaching Assistant

Ms. Komal Singh
Teaching Assistant

- Incharge Sports/ Security/ Sanitation Services

Ms. Shivi Rajvanshi
Teaching Assistant

PROFESSOR EMERITUS

Prof. S. K. Gupta,
PhD, DSC (Hon.), FIPS, FIACS, FISER, FRSM, FICR (UK)
Professor Emeritus, Clinical Research (DIPSAR)
Advisor to Pharmacovigilance Program of India (PvPI)

Laboratory Staff

Administrative Staff

ADMINISTRATIVE TEAM AND NON-TEACHING STAFF

ADMINISTRATIVE STAFF

1. Mr. Prashant Raghav
   (Administrative Officer)
2. Mr. Sudarshan
   (Office Suprintendant- I)
3. Mr. Ghanshyam Dutt Meena
   (Office suprintendant- II) (Care Taker)
4. Mr. Ajay Puri (DDO)
5. Mrs. Rita Miglani
   (Stenographer, Grade-II)
6. Ms. Indumati
   (Stenographer)
7. Mr. Anjana
   (Head Clerk)
8. Mr. Trilok Chand
   (UDC)
9. Mr. Dalbeer
   (LDC)
10. Ms. Talvinder Kaur
    (LDC)

LIBRARY STAFF

1. Mr. S. Sengupta
   (Librarian)
2. Ms. Namrata
   (Contractual Library Attendant)
3. Ms. Neeru
   library attendant

NON-TEACHING STAFF

1. Mr. K. N. Neogi
   (Glass Blower)
2. Mr Bhagwati
   (Laboratory Attendant)
3. Mr. Dharamveer
   (Laboratory Attendant)
4. Mr. Man Singh
   (Laboratory Assistant)
5. Mr. Pradeep Kumar
   (Laboratory Attendant)
6. Mr. Ram Narayan
   (Laboratory Attendant)
7. Mr. Naresh
   (class IV)
8. Mr Rajju
   (class IV)
9. Mr. Mohd. Asif
   (Contractual Sr. Lab assistant)
10. Ms. Bimla Rawat
    (Contractual Store keeper)
11. Mr. Denesh
    (Contractual Laboratory Assistant)
12. Mr. Mohit
    (Contractual Laboratory Assistant)
13. Ms. Deepali
    (Contractual Laboratory Assistant)
14. Mr. S. K. Sinha
    (Contractual Laboratory Assistant)
15. Ms. Neeta Rathore
    (Contractual Laboratory Assistant)
16. Mr. Sujoy Robinson
    (Contractual Laboratory Assistant)
17. Mr. Naresh
    (Contractual Animal Attendant)
18. Mr. Kaushal (Contractual Driver)

SUPPORTING CUM ASSISTING STAFF

1. Pankaj
   IT Assistant
2. Mr. H.k Sharma
   Pti
3. Mr. Jatin
   Lab Attendant
4. Mr. Avinash Bansal
   Lab Attendant
5. Mr. Ram Kumar
   Lab Assistant
6. Mr. Ramji Lal
   Lab Attendant
7. Ms. Shalini
   Lab Assistant
8. Mr. Devender Kumar
   Lab Assistant
9. Ms. Amita
   Clerk Cum Computer Operator
10. Ms. Saroj
    Clerk Cum Computer Operator
11. Mr. Vishnu Pillai
    Data Entry Operator
12. Ms. Jyoti Baisla
    LDC
13. Mr. Lakshay Dahiya
    LDC
14. Mr. Gaurav
    Peon
15. Mr. Manish
    Peon
16. Mr. Lal Bahadur
    Driver
17. Ms. Menu Gupta
    Girls Hostel Matron
18. Mr. Bishan Singh Jeena
    Boys Hostel Matron
19. Mr. Naresh Chauhan
    Liftman Cum Helper
20. Mr. Prateek Tokas
    Lifeguard
21. Mr. Krushna Maroti Malthane
    Guest House Attendant
22. Mr. Yak Bahadur Agatimagar
    Guest House Attendant
23. Mr. R.p Sharma
    Assistant Registrar (Admin)
24. Mr. Husain Alam
    Assistant Registrar (Examination)

PART TIME NON-TEACHING STAFF

1. Mr. Sukhbeer Singh

RTI MATTERS

1. Dr. D.P. Pathak
   (FAA)
2. Mr. Prashant Raghav
   (PIO)
3. Shri Sudarshan
   (APIO)

ACHIEVEMENTS AND CONTRIBUTION OF FACULTY IN RESEARCH AND ADMINISTRATION

PROF S.S AGRAWAL

Prof. S.S Agrawal received Oration Award at Second Panjab University Pharma Convocation, Panjab University, Chandigarh, held on 4th May, 2016.

Convocation address and Panjab University Pharmaceutical Sciences Oration – 2016 on **"Shifting Paradigms in Pharmaceutical Education and Research"**

Conferences attended

- Governing Body Member of Amity University, Madhya Pradesh, Amity University, Gwalior, held on 7th May, 2016.
- Received Oration Award at Second Panjab University Pharma Convocation, Panjab University, Chandigarh, held on 4th May, 2016.
- Chairman of International Conference on "Recent Advances in Heart Health & Research" at Delhi Pharmaceutical Sciences & Research University, held on 22nd April, 2016.
- Attended "5 years of IPC's commitment as National Coordination Centre for Pharmacovigilance Programme of India (PvPI)" at Gulmohar Hall, India Habitat Centre, Lodhi Road, New Delhi, held on 14th April, 2016.
- Participated as key note speaker at National Seminar on "Current Scenario in Novel Drug Delivery Systems" at Sri Sai College of Pharmacy, Badhani, Pathankot (Punjab), held on 17th March, 2016.
- Chief guest at National Conference on "Perspectives and Challenges in Pharmaceutical Sciences" at Shree Ganpati Institute of Technology, NH-24, Ghaziabad (Delhi-NCR) -201302, held on 5th March, 2016.
- Chairman of Pharmatech Session at International Conference on Innovations in Pharmaceutical Sciences at Sri Aurobindo Institute of Pharmacy, Indore (M.P) 453111, held on28th Feb. 2016.
- Attended International Conference of Indian Academy of Biomedical Sciences at India Habitat Centre held on 26th Feb. 2016.
- Attended National Conference on "Emerging trends in Pharmaceutical Sciences and Regulatory Affairs" at Bhagwan Mahavir Education Foundation Campus, Bharthana, Surat held on 6th Feb. 2016.
- As chairperson atNational Symposium on "Role of National Formulary of India for improving use of medicines" held at India International Centre, Maxmuller Marg, New Delhi – 110003 on 14th Jan. 2016.
- As chairperson at67th Indian Pharmaceutical Congress held at JSS University, Mysuru during 19th – 22nd Dec. 2015.
- As National Advisory Board Member of ISPOR India ChapterFourth International Conference

of Pharmacoeconomics & Outcomes Research held at Delhi Pharmaceutical Sciences & Research University on 31st Oct. 2015.

Publications

- Adulteration of Mercury in Skin Whitening Creams-A nephrotoxic agent. Current medicine research and practice.
- Adulteration of synthetic PDE-5 inhibitors viz., sildenafil and tadalafil in marketed herbal aphrodisiacs by HPLC- 2016.
- Adulteration of Mercury in Skin Whitening Creams-A nephrotoxic agent- II-2016 – Present Status.

PROF. D.P. PATHAK

Conferences and seminars attended

- National Symposium on "Role of National Formulary of India for Improving Use of Medicines" at India International Centre on 14th Jan 2016.
- 38th Annual Meeting for Program for International Drug Monitoring (PIDM) in India in collaboration with NCC-PvPI and WHO at Hotel Grand New Delhi on 4-6th Nov 2015.
- Fourth International Conference of Pharmacoeconomics & Outcomes Research at DIPSAR, New Delhi on October 31st 2015.
- XIX-Quality Improvement Programme Sponsored by AICTE for Teachers of Pharmacy colleges across the country on "Recent developments in Pharmaceutical Chemistry" at DIPSAR, New Delhi on 9th-20th March 2015.
- XVIII- Quality Improvement Programme Sponsored by AICTE for Teachers of Pharmacy colleges across the country on "Recent Trends in Pharmacology & Therapeutics" at DIPSAR, New Delhi on 20th Feb-5th March 2015.
- XVII- Quality Improvement Programme Sponsored by AICTE for Teachers of Pharmacy colleges across the country on "Novel Drug Delivery Systems" at DIPSAR, New Delhi on 23rd-27th Feb 2015.

Publications

- Garima Kapoor, Dharam Pal Pathak, Rubina Bhutani and Ravi Kant., Thiazolidinone as a pharmacologically active molecule. JOCPR. 151-168 (2016)
- Navneet Sharma, Himanshu Ojha, Ambika Bhardwaj, Dharam Pal Pathak, Rakesh Kumar Sharma., preparation and catalytic applications of nanomaterials: a review. Royal Society of Chemistry. 53381-53403 (2015).
- Navneet sharma, Himanshu Ojha, Ambika Bharadwaj, Dharam pal Pathak, Rakesh Kumar Sharma., Preparation and catalytic applications of nanomaterials: a review.RSC Advances. 53381-53403(2015).
- Rubina Bhutani, Dharam Pal Pathak, Asif Husain, Garima Kapoor and Ravi Kant., A Review On Recent Development Of Pyrazoline As A Pharmocologically Active Molecule. IJPSR. 2320-5148 (2015).
- Amit Arya, Dharam Pal Pathak, Dipak K Majumdar, Satish Manchanda., Methacrylic acid-co-butylmethacrylate copolymers:design, characterization and evaluation as encapsulating material for colon targeted formulations. Designed Monomers and Polymers. 1-13(2015)
- Himangini Bansal, D.P Pathak, Recent Advances In Pyrazoline Derivatives: A Review. Indo Global journal of Pharmaceutical Sciences. Accepted

Prof. S. K. GUPTA

Major Achievements

- Advisor for pharmacovigilance programme of india, national coordinating centre, IPC, Ghaziabad, Min. of health and family welfare, Govt. of India.
- Chairman, Ethics Committee of Max Healthcare Super Speciality Hospital, New Delhi; Fortis flt. Lt. Rajan Dhall Hospital, Vasant Kunj, New Delhi; Moolchand Med City, New Delhi; Institute of Dental Sciences, Murad Nagar, U.P; ITS center for Dental Studies & Research Murad Nagar Ghaziabad Ch. Charan Singh University

- Member, Ethics Committee, EmProCell Clinical Research Pvt. Ltd., Mumbai; Department of Biotechnology (DBT), Govt. of India for the Disease & Biology; Department of Science and Technology (DST) for Pharmaceutical Research and Development Programme to promote Drug Research in the country (Govt. of India); Council for Scientific and Industrial research (CSIR) for the Project Monitoring of the Medical Sciences (Govt. of India); Delhi Institute of Pharmaceutical Sciences and Research, (Delhi University), Govt. of NCT of Delhi, New Delhi

International conferences organized

- Fourth International Conference of Pharmacoeconomics and Outcomes research held on 30th October 2015.

Books

- Drugs Screening Methods (Third Edition) - Ed S.K Gupta, Jaypee Brothers Medical Publishers (P) Ltd, New Delhi, 2016.

Paper presented in international conferences

- Arnab Chakraborty, Mohit Hans, Ashish Sharma, Dr. S. K. Gupta, "ECONOMIC BURDEN DUE TO DIABETES IN INDIAN POPULATION".
- Mohit Hans, Ashish Sharma, Anil Meena, Vikrant Anjna, Prof. S.K. Gupta, "ATTITUDE AND AWARENESS OF PHARMACOVIGILANCE TOWARD PHARMACY STUDENTS".
- Ashish Sharma, Arnab Chakraborty, Mohit Hans, Prof S.K Gupta, "PHARMACOVIGILANCE: THE INDIAN PERSPECTIVE".

DR. P. K. SAHOO

Conferences attended

- As coordinator of AICTE sponsored XVII QIP, held at DIPSAR(23-27 Feb. 2015)
- Fourth International Conference of Pharmacoeconomics and Outcomes research held on 30th October 2015.

Publications

- Anil K Sharma, P.K. Sahoo, Dipak K Majumdar, Navneet Sharma, Rakesh Kumar Sharma, Amit Tyagi. "Fabrication and evaluation of lipid nanoparticulates for ocular delivery of a COX-2 inhibitor". Drug Delivery. 2016. Accepted.
- Anil K Sharma, P.K. Sahoo, Dipak K Majumdar, A K Panda. "Biodegradable nanoparticles for topical ocular delivery of a COX-II inhibitor". Nanotechnology Reviews.2016. Accepted.
- Anil K Sharma, Amit Arya, P.K. Sahoo, Dipak K Majumdar. "Efficacy assessment of celecoxib oil drops versus arachidonic acid induced ocular inflammation in rabbits". Asian Journal of Pharmaceutical Sciences. Communicated.
- Satish Manchanda, P.K. Sahoo, Dipak K Majumdar. "Mucoadhesive Chitosan- Dextran Sulphate Nanoparticles of Acetazolamide for Ocular hypertension. Nanotechnology Reviews.2016. Accepted.
- Satish Manchanda, P.K. Sahoo, Dipak K Majumdar. "Effect of formulation factors on transcorneal permeation of Acetazolamide from aqueous drops: in-vitro & in-vivo study. Asian Journal of Pharmaceutics.2016. Accepted.
- Satish Manchanda, P.K. Sahoo, Dipak K Majumdar. "RP-HPLC method development and validation for the estimation of Acetazolamide in bulk drug and formulations with forced degradation studies". Der Pharmacia Lettre. 2016, 8 (1):338-347.

DR. S. R. WAKODE

Publications

- Triterpinoids from the stem bark of *Myrica Esculenta Buch. Ham*, Supriya Agnihotri, Sharad Wakode, Mohd Ali, World Journal of Pharmacy and Pharmaceutical Sciences, 2016,5, 1319-1327.
- Standardization of *Artabortrys hexapetalus,* Bajaj Sakshi, Wakode Sharad, International journal of Pharmacognosy and Phytochemical Research, 8(3), 2016, 398-406.

- Development and Validation of UV Spectroscopic Method for Determination of Canagliflozin in Bulk and Pharmaceutical Dosage Form. Ishpreet Kaur, Sharad Wakode, Harsharan Pal Singh, Satish Manchanda, Pharmaceutical Methods, 2015; 6(2):82-86
- Antimicrobial Properties of Benzimidazole and Mannich Bases of Benzimidazole: A Review, Pranika Kaur, S. R. Wakode, International Journal of Science and Research (IJSR) ISSN (Online): 2016; 5 (3);2319-7064

Presentations

- Oral presentation on "A combined structure- and ligand- based approach to design novel, selective PDE4b inhibitors" at 6th World Congress on Biotechnology. October, 05-07, 2015 Crowne Plaza, New Delhi, India.
- Poster Presentation on "Probing interaction requirements for selective
- Phosphodiesterase-4b inhibitors: A comparative molecular dynamics study" at 67th Indian Pharmaceutical Congress, JSS Medical college, Mysuru, 19-21 Dec 2015.

Guest lecture delivered

- On–"Carrier opportunities for pharmacy students" at Institute of Pharmacy, Malkapur, MS, 12th Jan 2016. On–"Carrier opportunities for pharmacy students" at Institute of Pharmacy, Malkapur, MS, 12th Jan 2016.
- Chief Guest for Science and Technology fest "ANVESHAN" at Gyan Bharti School, saket, New Delhi on 18th April 2016.

DR. (MRS.) MEENAKSHI K. CHAUHAN

Conferences organized and attended

- Attended the 2nd National Women Conference-2015 on Women in science- Promoting Excellence & Innovation for Future Development, held on 25-27th March, 2015.
- Coordinated XVII-Quality Improvement Programme on Novel Drug Delivery Systemheld at Delhi Institute of Pharmaceutical Sciences and Research, New Delhi, 20 - 27 Feb 2015.
- Attended short term course on "LASER: advances and applications" 26th-30th May 2015 at NITTTR, Chandigarh.
- Attended a national conference on "Curriculum innovations and challenges in technical education" 24-25th March 2015 at NITTTR, Chandigarh.
- Attended an International conference on "ICT in law for make in India and digital India and national legal summit and awards 2015" on 20th May at BSNL auditorium, New Delhi.
- Attended Fourth International Conference on Pharmacoeconomics and Outcomes Research 31st Oct 2015, New Delhi
- XVIII-Quality Improvement Programmeon Pharmacology held at Delhi Institute of Pharmaceutical Sciences and Research, New Delhi, 20 -05th March 2015.
- XVII-Quality Improvement Programme on Novel Drug Delivery Systemheld at Delhi Institute of Pharmaceutical Sciences and Research, New Delhi, 23 -27th Feb 2015

Publications

- **Meenakshi. K. Chauhan** and Nidhi Bhatt, "A simple and Modified Method Development of Vancomycin using High Performance Liquid Chromatography" J Chrom. Sep. Tech, Vol. 6 No. 7, 2015.
- **M.K. Chauhan**, P.K. Sahoo, A.S. Rawat, A. Singh, A. Bamrara, D. Sharma. *Bilosomes: A novel approach to meet the challenges in oral immunization*. Recent Pat Drug Deliv Formul. 2015 Jun 15. [Epub ahead of print].
- **Meenakshi. K. Chauhan**, Tanvi Rajput, "Quality by design: current trends in pharmaceutical research" at Jamia Hamdard, 17 April, 2016.
- **Meenakshi. K. Chauhan**, Arpita Verma, "Development and Evaluation of ethosomes loaded with carvedilol, 2016.

- Nidhi Bhatt, **Meenakshi. K. Chauhan**, "Review Article on Pharmacokinetic/ Pharmacodynamic Modeling" Pharma Times, 2015.
- **Meenakshi. K. Chauhan** et al, "Interpolyelectolyte Complex Based Floating Matrix System for Bioavailability Enhancement of Diltiazem Hydrochloride", International Conference on Current challenges in Drug Discovery Research, CCDDR- 2015, MNIT, Jaipur, 23-25 Nov., 2015.
- **Meenakshi. K. Chauhan** et al, "Nanoparticulate Polymeric Oral Delivery System for Antibiotics", 2nd National women conference- 2015, Women in Science- Promoting Excellence and Innovation for Future Development, Jiwaji University, Gwalior, 25-27 March, 2015.
- A.S. Rawat, **M.K. Chauhan** Poster paper at Chitkara University Punjab on "International conference on "Molecular pharmacology, drug discovery and nanopharmaceuticals" (MPDDNP-2015) on 27th and 28th, March 2015

Dr. (Mrs.) RAJANI MATHUR

Conferences organized and attended

- Fourth International Conference of Pharmacoeconomics & Outcomes Research 31st Oct, 2015, New Delhi.
- Special Conference of American Association of Cancer Research on Metabolism and Cancer, 2015, Seattle, USA
- XVIII - Quality Improvement Programme on Pharmacology held at Delhi Institute of Pharmaceutical Sciences and Research, New Delhi, 20 -05th March 2015.

Publications

- **Mathur R** and Agarwal R. Steroidal and non-steroidal anti-inflammatory agents for ocular use. Ed: T Velpandian. Springer International Publishing, Switzerland, 2016: 229-244.
- Prevalence of obesity and associated hypertension and diabetes in Delhi, metropolitan city of India. Aggarwal H, Kaur H, Saklani R, Saba N, Choudhary S, Dogra S, Srivastava S, **Mathur R**, Gupta SK. Indian Journal of Medical Specialities2015; 6:82-7.
- Interaction of aqueous leaf extract of *Psidium guajava* linn. (myrtaceae) with muscarinic, serotonergic and adrenergic receptor systems using isolated tissue preparations: a pharmacodynamic study. Mahaseth R, Kumar R, Shagun, Sehgal R, Rajora P, **Mathur R**. Indian J Pharm Sci 2015;77(4):493-99.
- Genistein ameliorates cardiac inflammation and oxidative stress in streptozotocin-induced diabetic cardiomyopathy in rats. Gupta SK, Dongare S, **Mathur R**, Mohanty I, Sushma Srivastava S, Mathur S, Nag TC. Mol Cell Biochem DOI 10.1007/s11010-015-2483-2.
- Genistein alleviates high glucose induced toxicity and angiogenesis in cultured human RPE cells. Gupta SK, Dongare S, Rajendran S, S Senthilkumari, **Mathur R**, Saxena R, Srivastava S. Int J Pharm Pharm Sci 2015; 7(8).
- *Psidium guajava* linn. Leaf Extract Affects Hepatic Glut2 To Attenuate Early Onset Of Insulin Resistance Consequent To High Fructose Intake: An Experimental Study. **Mathur R**, Dutta S, Velpandian T, Mathur SR. Phcog Res 2015; 7: 166-75.
- Interaction of aqueous leaf extract of Aegle *marmelos* (L.) Corr. with cholinergic, serotonergic and adrenergic receptors: An Ex-vivo study. Kumar S, Mahaseth R, Tiwari M, Sehgal R, Rajora P, **Mathur R**. Indian J Pharmacol 2015; 47:109-13.
- Sehgal R, Rajora P, Naeem U, **Mathur R**. *Aegle marmelos* activates hepatic PI3K/AKT and JAK-STAT3 pathway to stall insulin and leptin resistance in rodent model of fructose induced metabolic syndrome. Chinese J Pharmacol Toxicol (Suppl 1) 2015; 29

Travel grant award

- Sehgal R, Rajora P, Naeem U, **Mathur R**. *Aegle marmelos* activates hepatic PI3K/AKT and JAK-STAT3 pathway to stall insulin and leptin resistance in rodent model of fructose induced metabolic syndrome. The IUPHAR Conference on the

Pharmacology of Natural and traditional Medicine, 2015, Singapore. Travel Grant awarded to Ms. R. Sehgal from ICMR & Best Poster presentation by young scientist

- **Mathur R**, Tewari M. Anti-proliferative, anti-angiogenic and pro-apoptotic actions qualify *Nigella sativa* as taxane therapy adjuvant in ovarian cancer. Poster presentation in Special Conference of American Association of Cancer Research on Metabolism and Cancer, 2015, USA. Travel grant received from UGC.

Mrs. AMRITA PARLE

Conferences organized and attended

- Acted as Co- Coordinator for Fifteen days Quality improvement program in Chemistry conducted from 9th March to 20th March, 2015.

Research paper presented at conferences

- Tejpal and **Amrita Parle**, Presented oral paper at IPGA sponsored national conference on "Perspectives and challenges in pharmaceutical sciences" held on 5 March, 2016 at Shree Ganpati institute of technology.
- Tejpal and **Amrita Parle**, presented research paper at fourth international conference on "PHARMACOECONOMICS and outcomes RESEARCH" held in 31 October, 2015 at DIPSAR.
- Gurmeet Singh and **Amrita Parle,** presented research paper in fourth international conference on "PHARMACOECONOMICS and outcomes RESEARCH" held in 31 October, 2015 at DIPSAR.
- Gurmeet Singh and **Amrita Parle**, presented research paper at one day national conference on "Recent trends in health care" held on 14 March 2016 at Guru Jambheshwar University of science and Technology, Hisar.

Publications

- Gurmeet Singh and **Amrita Parle,** Unique Pandanus - Flavour, Food and Medicine, Journal of Pharmacognosy and Phytochemistry; 2016; 5(3);8-14
- Tejpal and **Amrita Parle,** Jackfruit- A Health Boon" International Journal of Research in Ayurveda and Pharmacy, would be published in May- June 2016 issue
- Komal Sharmaand **Amrita Parle,** The Most Effective and Safer Answer to Diabetes Mellitus: Alogliptin Benzoate, American Journal of Pharmtech research, 2015; 5(4); 60-80
- Komal Sharma, **Amrita Parle** and Sayeed Ahmad, Development and validation of HPTLC method for simuntaneous estimation of metformin hydrochloride and alogliptin benzoate in bulk drugs and combined dosage forms, Scholars Research Library, Der Pharmcia Lettre, 2015, 7(7);321-328
- Komal Sharma and **Amrita Parle,** Development and Validation of HPTLC Method for Estimation of Alogliptin Benzoate in Bulk Drugs and Tablet Dosage Forms, International Bulletin of Drug Research, 2015, 5(8); 81-89.
- Komal Sharma and **Amrita Parle,** Development and validation of HPTLC method for simuntaneous estimation of Alogliptin Benzoate and Pioglitazone hydrochloride in bulk drugs and combined dosage forms, International Journal of Pharma Research And Review, November 2015, 4(11); 35-42.

Mr. SATISH MANCHANDA

Conferences organized and attended

- Member Organizing Committee, AICTE sponsored XVII QIP, held at DIPSAR(23-27 Feb. 2015)
- Member Scientific Committee, AICTE sponsored XVII QIP, held at DIPSAR(23-27 Feb. 2015)
- AICTE sponsored XVII QIP, held at DIPSAR(23-27 Feb. 2015)

Publications

- **Satish Manchanda**, P.K. Sahoo, Dipak K Majumdar. "Mucoadhesive Chitosan- Dextran Sulphate Nanoparticles of Acetazolamide for Ocular

hypertension. Nanotechnology Reviews.2016. Accepted.

- **Satish Manchanda**, P.K. Sahoo, Dipak K Majumdar. "Effect of formulation factors on transcorneal permeation of Acetazolamide from aqueous drops: in-vitro & in-vivo study. Asian Journal of Pharmaceutics.2016. Accepted.
- **Satish Manchanda**, P.K. Sahoo, Dipak K Majumdar. "RP-HPLC method development and validation for the estimation of Acetazolamide in bulk drug and formulations with forced degradation studies". Der Pharmacia Lettre. 2016, 8 (1):338-347.
- Amit Arya, Dharam Pal Pathak, Dipak K. Majumdar, **Satish Manchanda**. "Methacrylic acid-co-butylmethacrylate copolymers: design, characterization and evaluation as encapsulating material for colon targeted formulations; Designed Monomers and Polymers. 19(1) 2016; 34-46
- Ishpreet Kaur, Sharad Wakode, Harsharan Pal Singh, **Satish Manachanda**."Development and Validation of a Stability-Indicating Reverse Phase HPLC-PDA Method for Determination of Canagliflozin in Bulk and Pharmaceutical Dosage Form. Pharm Methods. 2016; 7(1): 1-9
- Written the E-text for UGC E-pathshala on the topic "Characterization, applications & recent advancement in Nanoparticles" (2015-2016)
- Recorded a video lecture on the topic "Characterization, applications & recent advancement in Nanoparticles" (2015-2016) which is to be uploaded on the official website of UGC under UGC e-pathshala for PG courses under the subject Novel Drug Delivery systems II.
- Recorded a video lecture on the topic "Characterization & applications of liposomes" (2015-2016) which is to be uploaded on the official website of UGC under UGC e-pathshala for PG courses under the subject Novel Drug Delivery systems II.
- Recorded a video lecture on the topic "Characterization of Microspheres" (2015-2016) which is to be uploaded on the official website of UGC under UGC e-pathshala for PG courses under the subject Novel Drug Delivery systems II.

Mrs. SAKSHI BAJAJ

Publications

- Bajaj Sakshi,Wakode Sharad, Standarization of *Artabortrys hexapetalus*", International Journal of Pharmacognosy and Phytochemical Research 2016; 8(3); 398-406
- Accepted research paper in International Journal of Drug Development & Research (IJDDR) and tile of paper is "Pharmacognostical Evaluationand Anthelmentic Activity Of Swertia Alata Royle"

Mr. ANIL KUMAR SHARMA

Publications

- **Anil K Sharma**, P.K. Sahoo, Dipak K Majumdar, Navneet Sharma, Rakesh Kumar Sharma, Amit Tyagi. "Fabrication and evaluation of lipid nanoparticulates for ocular delivery of a COX-2 inhibitor". Drug Delivery. 2016. Accepted.
- **Anil K Sharma**, P.K. Sahoo, Dipak K Majumdar, A K Panda. "Biodegradable nanoparticles for topical ocular delivery of a COX-II inhibitor". Nanotechnology Reviews.2016. Accepted.
- **Anil K Sharma**, Amit Arya, P.K. Sahoo, Dipak K Majumdar. "Efficacy assessment of celecoxib oil drops versus arachidonic acid induced ocular inflammation in rabbits". Asian Journal of Pharmaceutical Sciences. Communicated.
- **Anil K Sharma**, Amit Arya, P.K. Sahoo, Dipak K Majumdar. "Overview of natural biopolymers as carriers of antiphlogistic agents for treatment of diverse ocular inflammations". Materials Science and Engineering C. Communicated.
- Mohd Fasih Ahmad, S. M. Ahmad, R. K. Keservani, **Anil K Sharma**,"A Study on Anti-Inflammatory Activity of Tuber Extracts of Solanum Tuberosum (Solanaceae) in Male Albino Rats", Nat. Aca. Sci. Lett. India. 2016. Accepted
- Tapsya Gautam, Surya Praksh Gautam, Raj K.

Keservani, **Anil K. Sharma**, "Phytochemical Screening and Wound Healing Potential of Cuscuta Reflexa", Journal of Chinese Pharmaceutical Sciences, 2015, 24 (5): 292-302.

- Raj K. Keservani, **Anil K. Sharma**, Urmila Jarouliya, "Protein and peptide in drug targeting and its therapeutic approach", ARS Pharmaceutica. 2015; 56(3): 165-177.
- Raj K. Keservani, Rajesh K. Kesharwani, **Anil K. Sharma**, Mohd Fasih Ahmad, "Stress, Parkinson's, Alzemer's disease: Role of Dietary Supplements", Nutraceutical and Functional Foods in Human Life and Disease Prevention. Edited by Debasis Bagchi, Anand Swaroop, Harry G. Preuss. CRC Press, Taylor and Francis. Chapter 14, 241-254, 2015. ISBN: 9781482237214.
- Raj K. Keservani, Swati Singh, Virendra Singh, Rajesh K. Kesharwani, **Anil K. Sharma**, "Nutraceuticals and Functional Foods in the Prevention of Mental Disorder", Nutraceutical and Functional Foods in Human Life and Disease Prevention. Edited by Debasis Bagchi, Anand Swaroop, Harry G. Preuss . CRC Press, Taylor and Francis. Chapter 15, 255-270, 2015. ISBN: 9781482237214.
- Raj K. Keservani, Rajesh K. Kesharwani, **Anil K. Sharma**, "Pulmonary and Respiratory Health: Antioxidants and Nutraceuticals", Nutraceutical and Functional Foods in Human Life and Disease Prevention. Edited by Debasis Bagchi, Anand Swaroop, Harry G. Preuss. CRC Press, Taylor and Francis. Chapter 17, 279-298. 2015. ISBN: 9781482237214.
- Raj K. Keservani, Rajesh K. Kesharwani, **Anil K. Sharma**, Urmila Jarouliya, "Dietary Supplements, Nutraceutical and Functional Foods in Immune Response (Immunomodulators)", Nutraceutical and Functional Foods in Human Life and Disease Prevention. Edited by Debasis Bagchi, Anand Swaroop, Harry G. Preuss. .CRC Press, Taylor and Francis. Chapter 20, 343-360, 2015. ISBN: 9781482237214.

Mrs. HIMANGINI BANSAL

Publications

- **Himangini Bansal**, D.P Pathak, Recent Advances in Pyrazoline Derivatives: A Review. Indo Global journal of Pharmaceutical Sciences. Accepted

RESEARCH ACTIVITIES

THRUST AREAS OF RESEARCH

RESEARCH ACTIVITIES

DPSRU strives to extend the horizons and explore the unimaginable potential of pharmaceutical sciences for the benefit of human race by giving prime importance to research. Students from M. Pharm and Ph. D. are involved in various research projects.

1. **DETECTION OF HEAVY METALS IN COSMETIC PRODUCTS LIKE LIPSTICKS, HAIR DYES, BEAUTY CREAMS ETC.**
2. **ADDITION OF STEROIDS IN FOOD PRODUCTS.**

CURRENT Ph.D. RESEARCH PROJECTS

BA/BE STUDIES OF DIFFERENT DRUGS

Investigator : Prof. S.S. Agrawal
Research Scholar: Mr. Pradhan (DCGI)

SPURIOUS COUNTERFEIT & SUBSTANDARD DRUGS IN DELHI NCR

Investigator : Prof. S.S. Agrawal
Research Scholar: Mr. Atul Nasa

PRESENCE OF LEAD IN DIFFERENT STATES IN PEOPLE LIVING IN DELHI NCR & ITS CORRELATION WITH DIFFERENT DISEASES THEY ARE CARRYING

Investigator : Prof. S.S. Agrawal
Research Scholar: Mr. Ravindra

TO STUDY THE EFFECT OF "ERLOTINIB NANO-PARTICLES ON LUNG'S CANCER MODELS AND COMPARATIVE STUDY OF CHEMICAL INDUCED AND CELL LINE MODEL

Investigator: Prof (Dr) S.S.Agrawal
Research Scholar: Mohd Mazhar

Cancer is a major threat to entire world population as it affects the majority of people with increasing the mortality rate across the world. Statistics provide by the GLOBOCAN-2012, 14.1 million cancer were noted around the world in 2012, of the 7.4 million cases were in men and 6.7 million in women. This figure is expected to increase approx. to 24 million by 2035. In carcinoma, malignancies arise from epithelial cells lining the internal surfaces of the various organs (e.g. mouth, esophagus, lung, intestine and uterus). In sarcoma-metastasis arise from mesodermal cells constituting the various connective tissues (e.g fibrous tissue,fat and bone). In Lymphoma, myeloma and leukemia metastasis arising from the cells of bone marrow and immune system. In this study, we plan to establish the lung's cancer model with cell line and chemical agent. These two models would be compare for the pathogenesis difference and to understand mechanism of malignancies. Chemotherapy involved the development of nano-particles of erlotinib and characterization of these nano particles viz SEM, TEM. Prepared nano -particles would be subject for the biological activity for both in vivo & in vitro. Hematological parameters and biochemical parameters shall be done to find the efficacy of erlotinib nano particles with the oral therapy.

STUDIES ON OCULAR FORMULATIONS OF SELECTED NSAID

Investigator: Dr. P.K. Sahoo
Co-Investigator: Prof. D.K. Majumdar
Research Scholar: Anil K Sharma

Drug delivery can make a big difference in ocular drug treatment. From the drug delivery point of view the eye is very interesting, a small multicompartmental system with various tissues, their boundaries, and fluid flow factors. Currently, topical delivery through eye drops accounts for about 90% of all ophthalmic formulations. However, this delivery mode is very inefficient and in some cases leads to serious side effects. Only 5% of the drug applied as drops penetrates the cornea and reaches the ocular tissue, whilst the remainder is lost or wasted. Moreover, the application of ophthalmic drops results in varying rates of drug delivery to the ocular tissues, and thus limits their therapeutic efficacy. Therefore, new types of ophthalmic drug delivery systems are highly desirable to increase the delivery efficacy and reduce side effects and to

sustain the drug therapeutic effect through control of the rate of delivery. One such approach is to use colloidal systems for ocular drug delivery which offer the possibility of controlled drug release and drug targeting, increased drug stability, high drug payload, with limited toxicity of the carriers. Ocular infections are common during summer and rainy seasons, which results into eye diseases such as conjunctivitis, keratitis, endophthalamitis etc. Conjunctivitis is manifested by inflammation in conjunctiva which may be from mild to severe prudent discharge. The corticosteroids are frequently used topically for the treatment of ocular inflammations. Their application is often associated with increase in intraocular pressure, cataract development and risk of infections. Non-steroidal anti-inflammatory drugs (NSAIDs) like indomethacin, flurbiprofen, diclofenac and ketorolac may be used as effective alternatives of steroids for treating ocular inflammation. The present study is an endeavor to formulate and evaluate conventional as well as colloidal systems of selected NSAID for ocular inflammation. The study will encompass stability studies as well as in vivo behavior of developed formulations.

SYNTHESIS OF SOME SUBSTITUTED BENZOXAZOLE LIKE HETEROCYCLIC COMPOUNDS AND THEIR BIOLOGICAL EVALUATION

Investigator: Sharad Wakode
Co-investigator: D. P. Pathak
Research Scholar: Avneet kaur

Benzoxazole nucleus is one of the most important heterocyclic compound exhibiting remarkable pharmacological activities such as antimycobacterial, anticonvulsant, anti-inflammatory, anticancer, DNA topoisomerase inhibitor, cholesterol ester transfer protein inhibitor and miscellaneous activities. Benzoxazoles can be considered as structural isosters of the naturally occurring nucleic bases adenine and guanine, which allow them to interact easily with polymers of living systems. They have shown low toxicity in warm-blooded animals. Presently, it is planned to design prototypes and evaluate for various biological activities. The designed scheme is meant to link various substituted methoxyphenyl unit with substituted aminophenol in presence of PPA which may lead to formation of substituted bennzoxazole derivatives. These derivatives will be further planned to react with various substituted benzoyl chloride and will further be evaluated for various biological activities.

DESIGN, SYNTHESIS AND BIOLOGICAL EVALUATION OF SOME NOVEL FATTY ACID DERIVATIVES

Investigator: Dr. D.P.Pathak
Research Scholar: Garima Kapoor

Fatty acids mainly Polyunsaturated Fatty Acids (PUFAs) and Monounsaturated FattyAcids(MUFAs)havevarious healthbenefits like anti-diabetic, anti-inflammatory, cholesterol lowering and in atherosclerosis, antioxidant, cosmetological effect,anti-obesity, anticancer, anti-asthmatic, protease inhibitor in chronic wounds, antibacterial activity and these are becoming increasinglyevident. Major Fatty acids are – Stearic acid, Oleic acid, Linoleic acid, α-Linolenic, EPA (Eicosapentaenoic acid), DHA (Docosahexaenoic acid). Considering the importance and significance of fatty acids in treating various metabolic and other diseases, the present study has been planned including the synthesis and biological evaluation.

SYNTHESIS, COMPUTATIONAL STUDY AND BIOLOGICAL EVALUATION OF NEW PYRAZOLINE DERIVATIVES

Investigator: Prof D P Pathak
Research Scholar: Himangini

Driven by the increased demand of pyrazolines exhibiting biological activities like anti-inflammatory, antidepressant, antimicrobial, antitumor, antitubercular drug activity as a stable fragment in biological moieties to synthesize new heterocyclic compounds which is a major topic in contemporary bioorganic synthesis. A classical synthesis of these compounds involved the base catalyzed aldol condensation reaction of aromatic ketones and aldehydes to give α, β- unsaturated ketones(Chalcones), which undergo a subsequent cyclization reaction with hydrazines affording 2-pyrazolines in the presence of suitable cyclizing reagent like acetic acid. With this background, it is considered worthwhile to prepare pyrazoline derivatives and evaluation of their biological profile. In spite of this, possible computer aided drug design will also be planned on this moieties.

PHARMACOKINETIC AND PHARMACODYNAMIC

EVALUATION OF MEDICINAL PLANT EXTRACT IN RODENT MODEL OF FRUCTOSE INDUCED METABOLIC SYNDROME

Investigator: Dr.Rajani Mathur
Co-Investigator: Dr.Thirumurthy Velpadian
Research Scholar: Jayachandran Nair

Metabolic syndrome represents a cluster of risk based on the assumption that insulin resistance is one of the major underlying contributors along with at least two other components: abdominal obesity; arthrogenic dyslipidemia; hypertension; proinflammatory and prothrombic state, with or without glucose tolerance. Globally, metabolic syndrome found to be the most frequent disorder in human leading to tissue insulin insensitivity, development of pre-diabetic state and vascular dysfunction. There is clinical and epidemiologic evidence that suggests a progressive association between fructose consumption and the development of metabolic syndrome. Previous studies conducted in this laboratory have established preventive and therapeutic effects of medicinal plant and their extracts in rodent model of fructose induced metabolic syndrome. However, the present study aimed to evaluate medicinal plant extract and their therapeutic potential in metabolic syndrome.

ORAL DELIVERY OF THERAPEUTIC PROTEIN/ PEPTIDES: DESIGN, DEVELOPMENT AND EVALUATION

Investigator: Dr. Meenakshi K. Chauhan
Research scholar: Ms. Nidhi Bhatt

Extensive efforts are being made worldwide for developing non-invasive drug delivery systems, especially via oral route which is considered to be the optimum and feasible means of administration of drug. Peptides and proteins have become the drugs of choice for the treatment of numerous diseases as a result of their incredible selectivity and their ability to provide effective and potent action. The term protein is used for molecules composed of over 50 amino acids and peptides for molecules composed of less than 50 amino acids. However direct delivery of peptide and protein drug using oral approach is not feasible due to low oral bioavailability of biological as presystemic enzymatic degradation and poor penetration of the intestinal membrane. Issues like molecular size, permeability, stability, transit time etc also affects the absorption of orally delivered peptides and proteins and thus such issues has to be properly addressed while designing the oral delivery of peptides and proteins. Currently proteins such as monoclonal antibodies (mAbs) are most commonly administered by subcutaneous injection. It is often suggested that patient compliance would improve if a non-invasive route of administration were available. Although numerous attempts have been made in the past for developing the formulations for such delivery systems but despite various attempts however, no clinically useful oral formulations have been developed. One of the main reasons seems to be the low bioavailability of protein drugs, other factors being addressing issues like absorption, permeation, degradation, stability etc. While the former can be explored using encapsulation, macromolecular conjugation and chemical modification, the latter can be explored using liposomes and lipid nanoparticles, such as solid lipid nanoparticles (SLN) and nanostructured lipid carriers (NLC). However here to achieve high association efficiency with production procedure methods are also the topics to be explored. The focus of the current research is therefore not only to search for oral delivery of peptides and proteins with design, development and evaluation in drug delivery systems but also to address the above mentioned issues along with methods for improvement in bioavailability. Besides that in the development of delivery system, the research on pharmacokinetics, analytical and regulatory consideration will also be explored.

STABILITY INDICATING METHOD DEVELOPMENT AND VALIDATION FOR THE ESTIMATION OF FEW FIXED DOSE COMBINATION DRUGS IN BLOOD SERUM AND PHARMACEUTICAL DOSAGE FORMS USING UV, HPLC AND LC MS

Investigator: Dr. R B Bodla
Research Scholar: Mr. Ravi Kant

The analytical activities concerning purities in drug products are among the most important issues in modern pharmaceutical analysis. This subject or topic for this research activity is selected based on the increasing need for the pharmaceutical industry to develop suitable analytical methods. As per the current International Conference of Harmonization (ICH) and regulatory requirements the evaluation of stability

samples must be carried out using stability-indicating analytical methods. Here in the first part of the work various techniques of spectroscopic method will be developed for the estimation of fixed dose combination drugs approved by Central Drugs Standards Control Organization (CDSCO), India and a comparative study will be done using statistical methods. Next part of the work focuses in the development of stability indicating methods using Modern chromatographic techniques such as HPLC and LCMS for estimation of drugs in formulation as well as blood serum which are accurate precise, sophisticated and are having wide range of applications. HPLC and LCMS are very powerful and sophisticated techniques and have a wide spectrum of applications in the pharmaceutical industry. The work also includes the validation of the developed methods as per ICH requirements and demonstrates the suitability of developed methods to assess the stability samples of API's.

DESIGN, SYNTHESIS AND BIOLOGICAL EVALUATION OF SOME NEW 5-MEMBERED HETEROCYCLIC SCAFFOLDS

Investigator: Dr. D.P. Pathak
Research Scholar: Rubina Bhutani

The heterocyclic ring comprises the core of the active moiety or pharmacophore. By far, the most numerous and most important heterocyclic systems are those of five membered ring. A diversity of useful biological effects is possessed by heterocyclic compounds containing the five membered ring. In view of the wide spectrum of useful biological activities of five membered heterocyclic compounds, it is considered worthwhile to explore synthetic pathways and biological evaluation of compounds built up on five membered heterocyclic skeleton like the azoles (imidazole, pyrazole, thiazole, oxazole), pyrrole, furan. The aim of present studies has been to discover some new series of compounds which may be used as drugs based on their efficacy, lesser or no side effects and low cost involved in their preparation.

ANTI-CANCER STUDIES OF FEW SELECTIVE PLANTS

Investigator: Dr. Ramesh Bodla
Research scholar: Sachin

Herbs of pharmacological importance are on the forefront as anticancer remedies. Vinblastine, Vincristine, Taxotere, Navelbine, Etoposide, Teniposide, Topotecan, Irinotecan, Doxorubicin, Dactomycin, Bleomycin and a number of other plant-derived anti-cancer compounds have been approved by United States Food and Drug Administration. Plant-derived compounds comprise a diverse group with different mechanisms of actions, which seem to have the ability to induce apoptosis. Understanding the modes of action of plant-derived anti-cancer compounds provide useful information for their possible application in cancer prevention. It is thus important to screen apoptotic inducers from plants, either in the form of crude extracts or as components isolated from them. Studies on the pharmacological mechanisms and searching for chemical structures from herbal extract for new anticancer drug caught great interest.

IDENTIFICATION, ISOLATION, CHARACTERIZATION AND BIOLOGICAL EVALUATION OF SOME HERBAL DRUGS

Investigator: Dr. S.R. Wakode
Research Scholar: Sakshi Bajaj

In the Western world, as the people are becoming aware of the potency and side effects of synthetic drugs, there is an increasing interest in the natural products, remedies with a basic approach towards the nature. All plants are well known drugs in the Indian system of medicines for their potential phytochemical and therapeutic values. Keeping in view the potential of these plants, an effort is made to standardize and evaluate these herbal drugs. Further, the drugs are selected on the basis of their proposed biological potency and easy availability.

STUDIES ON OCULAR FORMULATIONS OF SELECTED CARBONIC ANHYDRASE INHIBITOR

Investigator: Dr. P.K.Sahoo
Co-Investigator: Dr. D.K. Majumdar
Research Scholar: Satish Manchanda

Glaucoma is a serious eye disorder characterized by an increase in the intraocular pressure which leads gradually to loss of vision due to damage of the optic disk and is the second leading cause of blindness worldwide. Increase in IOP is a consequence of an imbalance between the production and drainage of aqueous humour. Intraocular pressure may also be elevated due to anatomical problems, inflammation of the

eye, genetic factors, as a side-effect from medication, or during exercise but in case of glaucoma it is very severe. Pilocarpine is the drug which is commonly used in glaucoma patient topically but is associated with side effects like blurred vision; change in vision; eyelid twitching; nearsightedness; redness or swelling of the eye; temporary stinging or burning etc., due to which other topical medications are continuously being searched.Nearly all glaucoma medications are prescribed for reducing eye pressure. Beta-blockers (Timolol and Others), Prostaglandins , Carbonic Anhydrase Inhibitors, Adrenergic Agonists, Miotics (Pilocarpine and Others).Carbonic anhydrase inhibitors decrease eye pressure by reducing the fluid in the chambers of the eye (aqueous humor). These drugs are used for glaucoma when other drugs do not work. They may be combined with other medications. The proposed study deals with the development of different topical ocular formulations of Carbonic Anhydrase inhibitors and their evaluation.

DESIGN, SYNTHESIS AND BIOLOGICAL EVALUATION OF NOVEL PHOSPHODIESTERASE-4B (PDE4B) INHIBITORS

Investigator: Dr. S.R. Wakode
Research Scholar: Vidushi sharma

Phosphodiesterases serve as essential molecular switches catalyzin the hydrolysis of the cyclicnucleotides AMP and GMP to their corresponding inactive 5 monophosphate counterparts. cAMP and cGMP are ubiquitous intracellular second messengers which play a prominent role in the regulation of important cellular functions such as secretion, contraction, metabolism and growth. Thus the elevation of their intracellular levels by DE inhibition represents a useful strategy for eliciting a variety of pharmacological effects. They are classified into 11 major families. Among them, PDE4 represents the major class of PDE expressed in human inflammatory cells and in particular in macrophages, eosinophils and neutrophils. PDE4b isoform specificity is an important latest requirement. The sequence similarity among various PDE family protein sequences leads to similar active site region among various members. In case of PDE4, there are four gene products (PDE4a, PDE4b, PDE4c and PDE4d) and multiple splice variants resulting in a variety of PDE4 isoforms and so the similarity in various isoforms e.g. PDE4b and PDE4d have 80% structural similarity.

If a ligand blocks the expression of PDE4b it shows anti inflammatory actions but if simultaneously it also blocks the PDE4d it shows side effect like nausea by mimicking the pharmacological action of α (2)- adrenoceptor antagonist. Successful in silico designing of specific ligands by structure based drug design using molecular modeling will establish the structural distinction in the PDE4 isoforms exploiting of which may lead the development of specificity in the inhibitors. SAR (Structure Activity Relationship) loration will help to establish the structural features that can give affinity and selectivity to diverge form of scaffolds. The synthesis of designed ligands and evaluation of their biological activity will give a contribution to the drug and pharmaceutical sector.

CURRENT M. PHARM. RESEARCH PROJECTS

ANTICANCER ACTIVITY OF NANOPARTICLES OF ERLOTINIB ON LUNG CANCER

Investigator: prof. S.S Agrawal
Research scholar: Garima Mishra

Lung cancer is one of the malignant tumors with the highest incidence and mortality all over the world. It kills more Americans yearly than any other neoplastic process. Mortality rates have changed little over the past several decades, despite improvements in surgical techniques, radiation therapy and chemotherapy. Lung cancer can be broadly classified into two categories small cell lung cancer and non-small cell lung cancer. A number of factors are responsible for lung cancer induction and include smoking, family history, exposure to asbestos, age etc. The aim of the present study is to develop a model which mimic the lung carcinogenesis and to evaluate the anticancer activity of nanoparticles of Erlotinib. Nanoparticles of Erlotinib was prepared by ion gelation method. Methodology include the cell culturing of A549 cell line and inoculation of cell line into pleural cavity of nude mice. Erlotinib (50 mg/kg) was used as a standard. After 14th day, therapy was started with test and standard drug Erlotinib. Efficacy of prepared nanoparticles was then compared with standard therapy. Body weight,

hematological parameters, histopathology and immunochemistry was carried out to investigate the carcinogenesis.

ANTICANCER ACTIVITY OF ANASTROZOLE LOADED CHITOSAN NANOPARTICLE IN DMBA INDUCED BREAST CANCER MODEL.

Chief Investigator : Prof. S.S. Agrawal
Research Scholar: Nishant Sharma

Cancer is a disease once called 'a disease of the western world. Cancer remains one of the leading causes of morbidity and mortality worldwide. It is predicted that by 2020, the number of new cases of cancer in the world will increase to more than 15 million, with deaths increasing to 12 million. Worldwide, it is estimated that more than one million women are diagnosed with breast cancer every year, and more than 410,000 will die from the disease, representing 14% of female cancer death.

The aim of this study is to evaluate the anticancer activity of Anastrozole nanoparticle which belongs to aromatase inhibitor class of hormonal therapy for cancer. Anastrozole inhibits the conversion of testosterone to estrogen which is also responsible for breast carcinogenesis mainly in postmenopausal women. Preparation 0f Anastrozole nanoparticle was done by ion gelation technique using chitosan and tripolyphosphate. The model used for development of breast cancer is DMBA induced carcinogenesis at the single oral dose of 1mg/kg. After 3 months of tumor development, nanoparticle therapy was started and Anastrozole used as a standard.Efficacy of prepared nanoparticle was then compared with the standard therapy. Body weight hematological parameters, histopathology, and immunochemistry were carried out to investigate the breast carcinogenesis.

ANTITUMOR AND ANTI-METASTATIC EFFECT OF PEMETREXED-MMP9 LOADED TARGETED NANO-PARTICLES IN DEN/HEPG2 HEPATOCARCINOMA MODEL.

Chief Investigator: Prof. (Dr.) S. S Agrawal
Research Scholar: Namita kaushik

Liver cancer is the sixth most common cancer worldwide,accounting for 5.7% of the overall incident cases of cancer. Main risk factor associated with liver cancer is Hepatitis B and hepatitis C, Alcohol intake, aflatoxin and hemochromatosis. MMPs belong to a zinc-dependent family of endopeptidases implicated in a variety of physiological processes, including wound healing, uterine involution and organogenesis as well as in pathological conditions, such as inflammatory, vascular and auto-immune disorders, and carcinogenesis. MMPs have been considered as potential diagnostic and prognostic biomarkers in many types and stages of cancer. During development of carcinogenesis, tumor cells participate in several interactions with the tumormicroenvironment involving extracellular matrix (ECM), growth factors and cytokines associated with ECM, as well as surrounding cells (endothelial cells, fibroblasts, macrophages, mast cells, neutrophils, pericytes and adipocytes). Four hallmarks of cancer that include migration, invasion, metastasis and angiogenesis are dependent on the surrounding microenvironment. Critical molecules in these processes are MMPs because they degrade various cell adhesion molecules, thereby modulating cell–cell and cell–ECM interactions. So by taking MMP-9 as the target molecules collagenase V/ gelatinase, anti-MMP9 antibody was used in the mPEG-NHS ester nanoparticles. Nanoparticles were prepared by ion-gelation and chemical polymerization method. Characterization of nanoparticles included AFM, TEM, ATR and HPLC. Hepatocarcinoma model was developed using DEN as cancer initiating carcinogen, followed by the intraportal injection of HepG2 celline at week 6th. Pemetrexed (ALIMTA) was used as standard at the dose of 10mg/kg. After the model development treatment was given and Tumor volume was measured every day and calculated by the formula: 0.52xlengthxwidth2. Western blotting was done just to check the expression of MMP-9 in tissue. The results were obtained be comparing the efficacy and toxicity, body weight, hematological parameters, histopathological parameters and Immunohistochemically analysis for molecular markers (TNF, VEGF, SGPT, SGOT, Cytotoxicity assay).

CYTOTOXIC AND ANTI-ANGIOGENIC ACTIVITY OF CYCLOPHOSPHAMIDE NANOPARTICLES AGAINSTEHRLICH ASCITES CELLS BEARING MOUSE.

Chief Investigator: Prof. (Dr.) S. S Agrawal
Research Scholar: Pallavi Sharma

Cancer occurs when cells in an area of the body grow in an abnormal way. Primary peritoneal cancer (PPC) is a relatively rare cancer that develops most commonly in women. Primary Peritoneal cancer is a rare cancer. It develops in a thin layer of tissue that lines the abdomen. Peritoneum produces a fluid that helps organs move smoothly inside the abdomen. A PPC can start anywhere in this area and can affect the surface of any of the organs in the peritoneum.A small number of PPCs are thought to be caused by an inherited faulty gene linked to ovarian and breast cancer in the family.During development of carcinogenesis, tumor cells participate in several interactions with tumour microenvironment including growth factors and cytokines and angiogenic factors. As a result, fluid is filled in the abdomen of animal known as ascitic fluid. Nanoparticles of chitosan-TPP were prepared by ion-gelation method. Characterisation of nanoparticles included TEM, ATR, Zeta potential, Micromeritics and In-vitro release study was conducted. Ascites model of peritoneal cancer was developed by injecting Ehrlich Ascites Carcinoma (EAC) cell line in mice. EAC cell line was maintained in the peritoneal cavity of donor mice.Cyclophosphamide was used as standard at the dose of 10mg/kg. After the model development, treatment including standard drug cyclophosphamide and their nanoparticles were given to two groups.Body weight, food intake and water intake was measured every alternate day.Tumour volume as well as cell viability was calculated using neubauer chamber under microscope. The results were obtained by comparing the decrease in tumour volume and tumour cell viability, change in body weight, haematological parameters, histopathological parameters and immuno-histochemical analysis(TNF-alpha, VEGF, IL-12, etc).

TO STUDY THE CARDIOPROTECTIVE EFFECT OF RUTIN IN ISOPROTERENOL INDUCED MYOCARDIAL NECROSIS IN WISTAR RATS.

Chief Investigator – Prof (Dr.) S.K. Gupta
Research Scholar – Deepali Soni

The cardioprotective role of Rutin in isoproterenol (ISO)-induced alterations of hemodynamic and oxidative stress was investigated in Wistar rats. In present study, rats were treated with Rutin (10 mg/kg, per orally), Lisinopril (10mg/kg) and ISO control group (normal saline) for 30 d, with concurrent subcutaneous administration of ISO (85mg/kg) at 24h interval on last two consecutive days whereas control group was administered with vehicle only. ISO significantly attenuated cardiac antioxidant enzymes superoxide dismutase, catalase and increased plasma cardiac injury biomarkers creatine kinase-MB, alanine transaminase and aspartate transaminase. ISO also altered cardiac activity as evidenced by decrease in blood pressure and increase in heart rate. The damage due to oxidative stress was revealed by histopathology alterations such as myocyte necrosis, myofibrillar degeneration and pyknotic nucleus. However, pre-treatment with Rutin demonstrated restoration of hemodynamic alterations along with significant preservation of antioxidants and myocyte injury-specific marker enzymes. Furthermore, protective effect of Rutin was reconfirmed by the histopathological salvage of myocardium. Results of the present study demonstrated the cardioprotective potential of Rutin, as evidenced by favorable improvement in ISO-induced hemodynamic, plasma cardiac biomarkers and tissue antioxidant status along with maintenance of integrity of myocardium.

FABRICATION AND CHARACTERIZATION OF PLA-GENISTEIN NANO PARTICLES TO IMPROVE ITS BIOAVAILABILITY.

Chief Investigator: Dr. P. K. Sahoo
Research Scholar: Aarushi Gupta

Abstract: Isoflavones are highly present in legumes and soy foods. Genistein is one of the natural compounds that belong to class of isoflavones. Isoflavones including genistein exhibits an extraordinary estrogenic activity. That's why they are termed as phytoestrogens. Genistein is one of the most studied isoflavonoids with potential antitumor efficacy, but its poor water solubility limits its clinical application. Genistein , a phytoestrogen is classified under BCS Class-2. In biological systems, drug dissolution in an aqueous medium is an important prior consideration for systemic absorption. By increasing the solubility and as well as dissolution rate of drugs is a significant challenge to pharmaceutical sciences as bioavailability depends on these factors. Nanoparticles (NPs), especially biodegradable NPs, entrapping hydrophobic

drugs have promising applications to improve the water solubility of hydrophobic drugs. In this work, the PLA-Genistein loaded NPs were prepared by a modified nanoprecipitation method and characterized in the aspects of particle size, surface charge, morphology, drug loading and encapsulation efficiency, in vitro drug release, cytotoxicity and physical state of the entrapped drug. Nanoprecipitation technique is one of the most effective and accepted techniques for enhancing drug solubility. Genistein and PLA-genistein loaded nanoparticles will be characterized by scanning electron microscopy, Malvern zeta sizer, HPLC , cell culture studies and in vitro release.

DEVELOPMENT OF GLIMEPIRIDE LOADED PRO TRANSFERSOMAL GEL FOR ACCENTUATED TRANSDERMAL DELIVERY AND APPLICATION OF BOX BENKHEN DESIGN TO IDENTIFY SIGNIFICANT FACTORS AFFECTING VESICLE SIZE, PDI AND ENTRAPMENT EFFICIENCY.

Investigator: Dr. Meenakshi K. Chauhan
Research scholar: Anshu Gulati

Diabetes mellitus (DM) is a serious world health problem defined as group of metabolic disease characterised by hyperglycaemia resulting from defects in insulin secretion or insulin activity or both. Type 2 DM is associated with obesity and insulin resistance, together with defects in beta cell function. Glimepride is a medium to long acting 3rd generation sulphonyl urea antidiabetic drug which is indicated to treat type 2 DM. It acts as an insulin secretagogue. It lowers blood sugar by stimulating release of insulin by pancreatic beta cells and by inducing increased activity of intracellular insulin receptor. Glimepride is available in the form of tablet and suspension in the market with the dose of 2, 4, 8 mg per day. Direct delivery of antidiabetic drug glimepride using oral approach is not suitable because it produces hypoglycaemia during initial hours of oral administration and irregular bioavailability due to low solubility in water and poor patient compliance. Hepatic side effects includes cholestatic jaundice. Gastrointestinal side effects includes nausea, Vomiting, diarrhoea. Thus, there is a necessity for improved drug delivery for antidiabetic drug glimepride because of the scale of its use and short-comings associated with its conventional dosage form. Therefore, transdermal route is feasible because it delivers drug through skin and can be used as an alternative to oral route. Glimepride has t 1/2 of 5hrs, log p of 3.5 and low molecular wt of 490.6. All these factors make it good candidate for administration via transdermal route. But major problem associated with transdermal delivery is permeation barrier so transferosome approach has been made to enhance delivery of this drug via the skin barrier, significantly improving bioavailability as well as patient compliance. Delivery via the transdermal route is an interesting option in this respect because a transdermal route is convenient and safe. The various vesicular systems, as a transdermal carrier, have been gaining attention because they not only act as depot for delivery of contents but also act as penetration enhancers. The various carrier systems like liposomes, ethosomes and transfersomes comprising of phospholipid that are reported to be harmless and non-irritating to the skin but the poor stability is the major problem in the development of these vesicular systems at industrial and clinical levels.

In order to overcome the stability problem liquid crystalline pro-ultraflexible lipid vesicles "Protransfersome" were proposed, that will be converted into ultraflexible lipid vesicles transfersomes also known as elastic liposomes, in situ by absorbing water from the skin. Protransfersomes provide higher stability and better skin penetration ability than the traditional lipid vesicles, e.g. liposomes, niosomes etc. The proposed PTG is a liquid crystalline gel in which the drug is intercalated within phospholipids.

FORMULATION AND CHARACTERIZATION OF NANO-SIZED ETHANOLIC VESICLES LOADED WITH MICONAZOLE NITRATE FOR THE TREATMENT OF FUNGAL INFECTIONS THROUGH GEL FORMULATION

Investigator: Dr. S.R. Wakode
Research scholar: Ashmeet Kaur

The skin comprises of a formidable barrier, stratum corneum for the penetration of drug across it. Lipid vesicles like liposomes, niosomes, transferosomes and ethosomes delivery systems have been used to overcome this barrier and has attracted increasing attention in recent years. Among these, ethosomes are reported to have the potential of overcoming the stratum corneum barrier and enhance the permeability

of drug through the skin. Ethosomes are soft, malleable vesicles of nano-size, mainly composed of phospholipids, ethanol (relatively high concentration) and water. These are novel vesicular carrier for enhanced delivery to/through skin that enables drugs to reach the deep skin layers and/or the systemic circulation. Combination of phospholipids and high concentration of ethanol in vesicular formulations have been suggested to be responsible for deeper penetration and distribution in the skin lipid bilayers. Miconazole nitrate (MN) is a broad-spectrum antifungal agent of the imidazole group. MN's poor skin-penetration capability presents a problem in the treatment of cutaneous diseases by topical application. The entrapment of a drug in ethosomes can facilitate localized delivery of the drug, and improved availability by means of a controlled-release pattern can advance the treatment of fungal infections. Hence, an attempted was made to formulate dermal therapy of miconazole. The aim of this work was focused to develop and characterize the ethosomal systems for particle size, zeta potential, entrapment efficiency and in vitro release pattern. The influences of the ethosomes on ex-vivo drug skin permeation were investigated in porcine ear skin using modified franz diffusion cell.

SYNTHESIS OF NOVEL ISONICOTINIC ACID DERIVATIVES AND EVALUATION OF THEIR ANTI-MICROBIAL / ANTI-MYCOBACTERIUM ACTIVITY

Investigator: Mrs. Amrita Parle
Research scholar: Gurmeet Singh

Isoniazid is first line drug for the Treatment of tuberculosis. In multidrug resistance Tuberculosis (MDR-Tb) Resistance develops, so series of novel isoniazid derivatives are synthesized in order to increase its Anti-microbial activity as well as for its use in MDR-Tb. Formation of Schiff bases of isoniazid is carried out . Activity of These Novel Compounds will be checked *against Bacillus subtilis, Escherichia coli, Staphyllococcus aureus a*ndtheir Anti-mycobacterium activity is checked against *M.tuberculosis* H37Ra.

SYNTHESIS, CHARACTERIZATION AND BIOLOGICAL ACTIVITY OF CHALCONE DERIVATIVES

Investigator: Dr. D.P Pathak
Research scholar: Harish Chander

The study of chalcone derivatives has become of much interest in recent years on account of their antibacterial, antiviral, anti-cancer, anti-fungal, anthelminthic and insecticidal activities. Heterocyclic ring containing chalcones dramatically increase the diversity of certain biological properties. A series of novel Chalcone derivatives will be synthesized by the reaction of 3-acetyl-2,5-dimethylthiophene with corresponding active aldehyde in ethanolic NaOH by using magnetic stirrer. The newly synthesized compound will be evaluated by its melting point, TLC, and will be characterized by elemental analysis, ATR-IR, ^{1}H NMR. The newly synthesized compounds will be screened for antimicrobial, and anti-oxidant activity compared with standard drug. Antimicrobial activity will be done by paper disc method. Paper disc impregnated with antimicrobial solution will be placed on culture media and zone of inhibition will be noted.

DEVELOPMENT AND VALIDATION OF A STABILITY INDICATING UV, RP-HPLC AND HPTLC METHOD FOR THE ESTIMATION OF CANAGLIFLOZIN IN BULK DRUG AND PHARMACEUTICAL DOSAGE FORM

Investigator: Dr. Sharad Wakode
Research scholar: Ishpreet Kaur

The present study deals with the development and validation of a Stability indicating UV, RP-HPLC and HPTLC Method for the estimation of Canagliflozin in bulk drug and pharmaceutical dosage form. Canagliflozin is an oral selective Sodium-Glucose co-transporter2 (SGLT2) inhibitor which offers a novel mechanism of action for the management of type 2 Diabetes Mellitus. It is a product of Mitsubishi Tanabe Pharma and Janssen Pharmaceuticals, a division of Johnson and Johnson. It was initially approved by Food and Drug Administration in USA and later by European medicinal agency in Europe as medicinal product INVOKANA® for the treatment of Type 2 Diabetes Mellitus. As per the Literature Survey, it is revealed that the drug has been estimated by Liquid chromatographyand Ultra High Performance Liquid Chromatography-Mass Spectroscopy (UHPLC-MS) in biological fluids like human and rat plasma. But no UV-Spectroscopic method and Liquid Chromatography analysis has been reported for the estimation in bulk and pharmaceutical dosage forms. The aim and objective of the present work was to develop and validate a simple, precise, sensitive U.V., HPLC and HPTLC method for Canagliflozin

in its bulk drug and tablet dosage form.

FABRICATION AND EXPERIMENTAL EVALUATION OF INTRASTROMAL PATCH OF NATAMYCIN FOR KERATOMYCOSIS

Investigator: Dr. P.K Sahoo
Co-investigator: Dr. T. Velpandian
Research scholar: Jyoti Pal

Fungal keratitis is an inflammation of the cornea caused by the filamentous fungi. It is more common in developing countries. About 40% cases are reported each year in developing countries like India and Thailand. In India, incidence of cases is about 113 in 100000. In USA, about 30000 cases of fungal keratitis are reported each year. It is an ophthalmic emergency as prompt and reliable diagnosis with efficient treatment can prevent vision loss. The purpose of this study is to develop a formulation which may treat keratomycosis with lesser amount of dose as compared to commercially available 5% ophthalmic suspension. The patch was prepared by solvent casting method. The formulation was evaluated using HPLC method for invitro release kinetics and stability studies. The activity and compatibility of the formulation was analyzed using ATR-IR analysis, DSC analysis, weight variation, folding endurance, thickness studies, sterility testing and fungal cultures technique.

SYNTHESIS AND CHARACTERIZATION OF NOVEL THIOSEMICARBAZONES AND EVALUATION OF THEIR ANTIBACTERIAL AND ANTIOXIDANT ACTIVITY.

Investigator: Dr. Dharam Pal Pathak
Research scholar: Neetu Sharma

In the present study 17 novel thiosemicarbazone derivatives were synthesised using 2-methyl-3-thiosemicarbazide as the main reactant and different aldehydes. Reactions were monitored using thin layer chromatography technique and the newly synthesised derivatives were characterized by Elemental analysis, ATIR and NMR techniques. For antibacterial activity three bacterial strains were selected namely Bacillus subtilis (gram +ve), Escherichia coli (gram –ve), and Staphylococcus aureus (gram +ve). Antibacterial assay was performed using nutrient agar media and zone of inhibition of all the compounds which could inhibit visible growth after incubation period of 16-24 hours were calculated. Four different dilutions of the test compounds were taken and compared against ciprofloxacin as the standard drug. Antibacterial assay was performed in duplicate. The test compounds were active against both gram negative as well as gram positive bacteria. Antioxidant assay was performed using 2,2'-azino-bis (3-ethylbenzothiazoline-6-sulphonic acid) or ABTS method and 2,2-diphenyl-1-picrylhydrazyl or DPPH method. The antioxidant study was performed to establish their utility in controlling cancer mechanisms.

A RETROSPECTIVE STUDY OF SUPERSATURATED CALCIUM PHOSPHATE RINSE IN TREATMENT OF MUCOSITIS IN PATIENTS UNDERGONE HEMATOPOIETIC STEM CELL/BONE MARROW TRANSPLANTATION

Investigator: Dr (Prof) S.K Gupta
Co-investigator: Dr. Rahul Naithani, Dr. Mansi Sachdev
Research scholar: Nisha Bhatt

Oral mucositis is undoubtedly one of the most debilitating toxicities of hematopoietic stem cell transplantation. Significant oral mucositis occurs in about 75% of patients undergoing stem cell transplantation. To determine the effectiveness of Supersaturated Calcium Phosphate Rinse (SCPR) in treatment of mucositis in BMT patients, by assessing various variables/parameters such as grade of mucositis, days of mucositis, peak mucositis day, days of pain, peak pain day, days of TPN (Total Parenteral Nutrition), days to reach ANC (Absolute Neutrophil Count>500cells/mm^3), days post BMT, dose of fentanyl used, incidences of infections (gram +ve and gram –ve), age, weight, gender, conditioning regimens (melphalan v/s other), diagnosis (myeloma v/s other) and types of transplant (autologous v/s allogenic). It is a retrospective study, that's why records of Transplant patients based on inclusion/exclusion criteria were collected in a paper Case Report Form and then into a MS Excel Sheet. Data was checked and analysed (by student's t-test and p value). This study was approved by Scientific as well as Max Ethics Committee.

TIERED PRICING POLICY IN IMPROVING ACCESS TO MEDICINES IN INDIA-CURRENT SITUATION AND FUTURE DEVELOPMENT

Investigator: Dr.(Prof) S.K. Gupta
Research scholar: Prashant Soni

Objective: Access to medicines depends on four pillars i.e. affordability, adoption, availability and appropriate use. Differential/Tiered pricing, which is adaptation of drug prices to the purchasing ability of consumers in different geographical or socioeconomic segments could be a way to improve access by making pillar of affordability stronger. This research aims to explore the current scenario and key challenges in implementation of tiered pricing in India. A comparative evaluation of 30 drugs has been done to evaluate the role of tiered pricing in pharmaceuticals drugs for HIV/AIDS, Malaria, Diabetes, Blood Pressure, Respiratory infections, Tuberculosis and Cancer in India. To get deeper insights, drugs for HIV infection are comprehensively analysed for price cut, first approval, success factor and reasons behind using the tiered policy. Results: Annual health expenditure per capita of Indian population is $18 and 3.9% GDP is spent on health, 60% of which is out of pocket expenditure. HIV prevalence in India is 0.3% and 2.1 million people are living with HIV. Access to antiretroviral patented drugs, like Tenofovir by Gilead ($0.567/unit), Efavirenz by Merck ($0.650/unit), Indinavir by Merck ($0.270/unit), Raltegravir by Merck ($2.362/unit), Valganciclovir by Roche ($4.210/unit), Nevirapine by Boehringer Ingelheim ($0.600/unit), Lopinavir/ritonavir by Abbott/Abbvie ($0.203/unit) and combination Tenofovir /Emtricitabine ($0.875/unit) by Gilead, have increased by tiered pricing but generic drugs are still cheaper than lower tiered price for example Tenofovir by Cipla priced for $0.167/unit and by Ranbaxy for $0.150/unit. Conclusion: Differential pricing is not a panacea but it can be one of the useful tools to improve the access to medicines. Although it is a win-win for both consumers and industry and can reconcile both static and dynamic costs, it has not been widely implemented so far. There is an urgent need to implement regulative and legislative framework by policymakers and lawmakers to achieve success.

Part-II

NEW REGULATIONS FOR MEDICAL DEVICE IN INDIA- TAKING THE INDUSTRY TO NEXT LEVEL

In India, the medical technology sector is pegged at USD 6.3 billion, which is small as compared to rest of the global business but rapidly growing annually at CAGR of 15 percent. In India, the medical devices sector is mostly import driven with approximately 75 percent of devices are imported. There were lots of complaints about the overcharging of medical devices in hospitals with various governmental and non-governmental organizations (NGOs). Because of this, Maharashtra Food and Drug Administration (FDA) conducted a six-month long inquiry against major importing companies. The report of FDA exposed that, there is an exaggeration of around 300-700% from the price of stents at which they were imported. In spite of chances of very huge potential and growth, the Indian Medical device industry is full of challenges like import dependency, non-adequate regulatory standards and the absence of tax incentives. There are a series of measures taken by the government like 100% foreign direct investment (FDI), hike in basic customs duty by 5 percent of imported medical devices, and providing funds for functioning of medical equipment in public health facilities. Task force constitution and draft National Medical Device Policy-2015 (NMDP-2015) were the other steps for domestic production. Access, affordability and return on innovation are the three pillars of medical device industry, which should be balanced to get fruitful result. Sufficient resources are present to open the right doors of opportunities and present India as a global hub for innovation and technology.

FORMULATION AND OPTIMIZATION OF NOVEL ELASTIC VESICULAR CARRIER OF VANCOMYCIN HYDROCHLORIDE FOR ENHANCED CORNEAL PERMEABILITY

Investigator: Dr. Meenakshi K. Chauhan
Research scholar: Shipra Malik

Spanlastics are novel surfactant based nano-vesicular delivery system which has better permeability characteristics than niosomes. Vancomycin is a glycopeptide antibiotic effective against methicillin resistant bacteria. It is available as lyophilized powder for reconstitution which needs to be instilled every hour so that amount permeating cornea remains above minimum inhibitory concentration. Thus the aim is to entrap Vancomycin in the novel elastic carrier to enhance corneal permeation and reduce the

dosing frequency.

TO EVALUATE THE OUTCOMES OF CONCOMITANT CHEMO RADIOTHERAPY FOLLOWED BY EXTENDED ADJUVANT TEMOZOLOMIDE IN PATIENTS WITH NEWLY DIAGNOSED GLIOBLASTOMA - A RETROSPECTIVE STUDY

Investigator: Dr. (Prof) S.K Gupta, Dr. Rajani Mathur
Research scholar: Surbhi Gupta

The standard treatment in patients with newly diagnosed glioblastoma multiforme is radical surgical removal of the tumour, followed by radiotherapy given concurrently with temozolomide (TMZ) and then six cycles of adjuvant TMZ given monthly. It was a retrospective study including patients received more than six cycles of TMZ. This study evaluated outcomes and adverse effects of prescribing adjuvant TMZ for more than six cycles. 117 patients were treated for Glioblastoma at Max Super Speciality Hospital, Saket between December 2009 and July 2014. Out of which 37 patients received more than six cycles of adjuvant TMZ. Primary Outcome of the study was median overall survival (OS) and secondary outcomes were median progression free survival (PFS) and patterns of recurrence by the extended use of adjuvant temozolomide therapy. The median age of 37 patients was 55 years. The standard therapy by Roger stupp et al concluded median OS as 14.6 months, whereas, the patients who received more than six cycles, a median of 24 months was achieved ($P<0.001$) by Wilcoxon signed rank test. Median PFS was 14 months in our study, in comparison, to the standard therapy by Roger Stupp et al; a median PFS was 6.9 months was achieved ($P<0.001$) by Wilcoxon signed rank test. Hematologic adverse effects were mild, 2.7% grade I toxicities occurred. 24.3% patients had no recurrence over a median follow-up period of 18 months. In rest 75.7% patients, most recurrence occurred infield. In multivariate analysis, adjuvant TMZ for more than six cycles was a significant prognostic factor for both progression free and overall survival. Concomitant radiation plus temozolomide therapy followed by adjuvant temozolomide (more than six cycles) had statistically significant survival benefit with minimum additional toxicity. Thus, extended adjuvant temozolomide (more than six cycles) should be considered in patients with newly diagnosed glioblastoma.

DESIGN, SYNTHESIS AND SCREENING OF POTENTIAL INHIBITORS OF THE ENZYME NEW DELHI METALLO-B-LACTAMASE

Investigator: Mrs. Amrita Parle
Research scholar: Tejpal Arora

New Delhi Metallo-beta-lactamase-1 (NDM-1) is an enzyme that makes bacteria resistant to a broad range of beta-lactam antibiotics. The gene for NDM-1 is one member of a large gene family that encodes beta lactamase enzymes called carbapenemases. Bacteria that produce carbapenemases are often referred as "superbugs" because infections caused by them are difficult to treat. This monomeric enzyme has a molecular mass of 28 kDa and can hydrolyze all beta-lactam antibiotics except aztreonam. This project will focus on combating drug resistance from microorganisms expressing the NDM-1 enzyme. Initial in silico screening of recently published X-ray crystal structures of the NDM-1 enzyme with a large database of drug-like molecules has revealed several structures that will potentially bind well to the active site. These structures constitute the starting point for a programme to design and synthesize potential inhibitors of the enzyme. The project includes in silico screening of potential inhibitors with the help of computer models for the enzyme. The most promising compounds will be synthesized and tested against microorganisms expressing the NDM-1 enzyme.

Ph. D. THESIS SUBMITTED

Prevention and Treatment of Diabetes Induced Complications by Herbal Drugs in Experimental Rat Model
Investigator: Dr. Rajani Mathur
Co-investigator: Prof. S. K. Gupta
Research Scholar: Mr. Shirish S. Dongare

Protransfersome gel (PTG) for combination therapy: formulation optimization and performance evaluation.
Investigator: Dr. Meenakshi K. Chauhan
Co-investigator: Dr. P. K. Sahoo
Research scholar: Mr. Ashwani S. Rawat

Design and evaluation of pH sensitive copolymers for colon targeted drug delivery
Investigator: Prof. D.P. Pathak
Co-Investigator: Prof. D.K. Majumdar
Research Scholar: Amit Arya

Insulin targeted drug delivery
Investigator: Prof. D.P. Pathak
Co-Investigator: Prof. D.K. Majumdar
Research Scholar: Rajesh Kumar

M. PHARM. THESIS SUBMITTED

M.Pharm students successfully completed their work and submitted the thesis. A brief information is as follows:

Physicochemical characterization of inclusion complexes of cefpodoxime proxetil with humic acid and evaluation of its antimicrobial activity.
Investigator: Dr. P.K. Sahoo
Research scholar: Akansha Aggarwal

Synthesis, characterization, QSAR studies and biological evaluation for in vitro antimicrobial and anti-inflammatory activity of AMIDE derivatives.
Investigator: Dr. D.P. Pathak
Research scholar: Anjali Mahore

Physicochemical characterization of inclusion complexes of Cefidinir with humic acid and evaluation of its antimicrobial activity.
Investigator: Dr. S.P Agarwal
Research scholar: Deepa Gupta

Development and Evaluation of Alendronate Loaded Nanoparticulate System for Osteoporosis through Transdermal Route.
Investigator: Dr. Meenakshi Chauhan
Research Scholar: Divya Sharma

Synthesis by green chemistry, characterisation, QSAR studies and biological evaluation for anti-fungal activity of triazole, oxathiepine, benzimidazole and benzothiazole derivatives.
Investigator: Dr. D.P. Pathak
Research scholar: Divya Singh

To study the effect of aqueous extract of leaves of *Psidium guajava* on the expression of cardiac glucose transporters in rodent model of fructose induced metabolic syndrome.
Investigator: Dr. Rajani Mathur
Research scholar: Harsheen Kaur

To study the effect of aqueous extract of leaves of *Aegle marmelos* on the expression of cardiac glucose transporters in rodent model of fructose induced metabolic syndrome.
Investigator: Dr. Rajani Mathur
Research scholar: Hobby Aggarwal

Development and validation of HPTLC method for estimation of alogliptin benzoate and simultaneous estimation of alogliptin benzoate with metformin hydrochloride and alogliptin benzoate with pioglitazone.
Investigator: Mrs. Amrita Parle
Research scholar: Komal Sharma

Assessment of Novel Oral Amphotericin B loaded Stearylamine Encumbered Cationic Bilosomes.
Investigator: Dr. Meenakshi Chauhan
Research Scholar: Mayank Kandwal

To study pharmacognotical profile and anti-oxidant, anti-microbial, and anti-inflammatory activity of different extract of *Fernandoaadenophyll*.
Investigator: Mrs. Manju Vyas
Research scholar: Neerav Harit

Synthesis, characterisation and biological evaluation of heterocyclic n-mannich bases of benzimidazole derivatives.
Investigator: Dr Sharad Wakode
Research scholar: Pranika Kaur

To study the effect of ethanolic extract of seeds of *Nigella sativa* on the expression of cardiac glucose transporters in rodent model of fructose induced metabolic syndrome.
Investigator: Dr. Rajani Mathur
Research Scholar: Noorus Saba

Preparation of Loratadine-Soluplus® solid dispersions by various techniques and its optimization using 3^2 full factorial design, attaining pH-independent solubility profile.
Investigator: Dr. P. K. Sahoo
Research Scholar: Rachit Singhal

Formulation and in-vitro characterization of Telmisartan gastroretentive (hollow) microspheres.
Investigator: Dr. P.K. Sahoo
Research scholar: Salvi Bhatt

Prevention and treatment of streptozocin induced Diabetic Retinopathy in rats by Rutin Trihydrate and *Psidium guajava* extract.
Investigator: Prof. S.K. Gupta
Research scholar: Ravi Saklani

A Prospective Observational study to assess the effectiveness of Mobile Health (m-Health) and Electronic Health (e-Health) v/s conventional care for Diabetes management.
Investigator: Dr. Rajani Mathur
Research scholar: Sangeeta

Method development and validation of Adapalene in Bulk and Pharmaceutical dosage forms by HPLC.
Investigator: Dr. D.P. Pathak
Research Scholar: Sarita Verma

Safety profile of Mycophenolate Mofetil.
Investigator: Prof. (Dr.) S.K. Gupta
Research scholar: Shailesh Yadav

To Study the Neuroprotective Effect of Stevioside on LPS Induced Neuroinflammation.
Investigator: Mrs.S. Latha
Research scholar: Sheetal

Drug Regulatory Approval Process: Current Scenerio & Broad Challenges.
Investigator: Dr. P.K. Sahoo
Research scholar: Shalini Rana

Brimonidine Loaded Contact Lenses for its Extended Delivery in Glaucoma Therapy.
Investigator: Dr. Meenakshi Chauhan
Research scholar: Shruti Aggarwal

Method development and validation of Ciclesonide in Bulk and Pharmaceutical dosage form by HPLC.
Investigator: Dr. D.P. Pathak
Research scholar: Shivani Kaul

To study pharmacognotical profile and anti-oxidant, anti-microbial, and anti-inflammtory activity of different parts of *Hameila patens*.
Investigator: Mrs. Manju Vyas
Research scholar: Shweta Singh

Emerging Boom of Mobile Medical Applications for Management of Diabetes Type I & Type II.
Investigator: Dr. P.K. Sahoo
Research scholar: Shwetlata Singh

Development and validation of Stability Indicating RP-HPLC method for Estimation of Lenalidomide in Bulk and Pharmaceutical Dosage form.
Investigator: Dr. R.B. Bodla
Research scholar: Sonia Goswami

To systhesize, characterize and evaluate the anticancer activity of 4-Phenylthiosemicarbazide derivatives.
Investigator: R.B. Bodala
Research scholar: Vikas Verma

Safety Profile of Tacrolimus from Period of 2012 to 2014.
Investigator: Dr. Rajani Mathur
Research scholar: Vijay Sharma

ACADEMIC TOPPERS

ACADEMIC TOPPERS 2015-16

D.PHARM TOPPERS

Lalit
(1st rank) | (D.Pharm 1st year)

Ashish Miglani
(2nd rank) | (D.Pharm 1st year)

Himanshi Gupta
(1st rank) | (D.Pharm 2nd year)

Pawan Gupta
(2nd rank) | (D.Pharm 2nd year)

B.PHARM TOPPERS

Khushboo
(1st rank) | (B.Pharm 1st year)

Anushkha Gupta
(2nd rank) | (B.Pharm 1st year)

Aarzoo Thakur
(1st rank) | (B.Pharm 2nd year)

Sheena Sharma
(2nd rank) | (B.Pharm 2nd year)

Neha Tyagi
(1st rank) | (B.Pharm 3rd year)

Tanya ralli
(2nd rank) | (B.Pharm 3rd year)

Kanika Jain
(1st rank) | (B.Pharm 4th year)

Pratika Pahwa
(2nd rank) | (B.Pharm 4th year)

M.PHARM TOPPERS

Shipra Malik
(1st rank) | (Pharmaceutics)

Jyoti Yadav
(2nd rank) | (Pharmaceutics)

Garima Mishra
(1st rank) | (Pharmacology)

Nishant
(2nd rank) | (Pharmacology)

Pallavi Sharma
(2nd rank) | (Pharmacology)

Aarushi Gupta
(1st rank) | (Hospital Pharmacy)

Jyoti Pal
(2nd rank) | (Hospital Pharmacy)

Ashmeet Kaur
(1st rank) | (Quality Assurance)

Ishpreet Kaur
(1st rank) | (Quality Assurance)

Lavanya
(2nd rank) | (Quality Assurance)

Neetu Sharma
(1st rank) | (Pharmaceutical Chemistry)

Sulabh Khurana
(2nd rank) | (Pharmaceutical Chemistry)

Prashant Soni
(1st rank) | (Clinical Research)

Surbhi Gupta
(1st rank) | (Clinical Research))

Nisha Bhatt
(2nd rank) | (Clinical Research)

Mitali Soni
(1st rank) | (Pharm . Management)

Sanyam Handa
(2nd rank) | (Pharm. Management)

Harshit Chitransh
(1st rank) | (Herbal drug technology)

Jyotsana Rashmi
(2nd rank) | (Herbal drug technology)

M.PHARM TOPPERS (1st Semester)

Tanvi Rajput
(1st rank) | (Pharmaceutics)

Taniya Ganeriwal
(2nd rank) | (Pharmaceutics)

Vandana Singh
(1st rank) | (Pharmacology)

Danish Malik
(2nd rank) | (Pharmacology)

Richa Rajora
(1st rank) | (Hospital pharmacy)

Priyanka Singh
(2nd rank) | (Hospital pharmacy)

Swarnali Goswami
(1st rank) | (Quality Assurance)

Yashu Malhotra
(2nd rank) | (Quality Assurance)

Aakansha Sharma
(2nd t rank) | (Quality Assurance)

Keshav Anand
(1st rank) | (Pharmaceutical chemistry)

Uma Agarwal
(2nd t rank) | (Pharmaceutical chemistry)

Vikrant Anjna
(1strank) | (Clinical Research)

Mahaveer Sharma
(2nd t rank) | (Clinical Research)

Priyanka Udinia
(1st rank) | (Pharm. Management)

Juhi Jain
(2nd rank) | (Pharm. Managemen)

Neel Ratnam
(1strank) | (Herbal drug technology)

Lalit
(2nd rank) | (Herbal drug technology)

CAMPUS ACTIVITIES

STUDENT UNION (2015-2016)

Rahul Saini
(President)

Anmol Wadhwa
(Vice-President)

Rajni Mehra
(General Secretary)

Anurag Singhal
(Cultural Secretary)

Gyan Prakash
(Sports Secretary)

Ankita Kumari
(Girl's Representative)

Nitin Nagpal
(Diploma Representative)

Komal Negi
(Degree Representative)

Taniya Ganeriwal
(M.Pharm Representative)

Robin Singh Rawat
(B.Pt Representative)

CAMPUS ACTIVITIES

1. STUDENT'S UNION ELECTION

Union Office Bearers (Pharma Nexus) were elected unanimously on 16th sept 2015 for current Academic Session (2015-2016). 1. President, 2. Vice-President, 3. Cultural Secretary, 4. Sports Secretary, 5. M. Ph. Representative, 6. B. Ph. Representative 7. D.Ph. Representative, 8. Girl's Representative, 9. B.PT representative.

2. TEACHERS DAY CELEBRATIONS

Students used the opportunity of Teachers Day to the fullest by expressing their respect, adoration and love for their teachers by organizing a function on 5th Sep 2015. Teachers enjoyed the show while students performed and gave away titles and gifts to their beloved mentors.

3. FRESHER'S DAY

The Freshers day was celebrated on 16th November 2015 in University auditorium. All the freshers enthusiastically participated in this programme. Prof. D.P. Pathak, Director DIPSAR, gave them a welcome speech and motivated the freshers to work hard and to be sincere towards their studies to achieve their goals in life. Ms and Mr Fresher were Aayushi Jain (B.Pharm 1st Year) and Nishant Chowdhary (B.Pharm 1st Year) respectively.

4. MTNL HEALTH MELA

University in association with Heart Care Foundation of India (HCFI) organized Inter- college festival at MTNL Perfect Health Mela between 6th – 8th November, 2015 at Talkatora Stadium.

Following are the events and their respective winners:

Western dance solo: Sanskriti Bisht(b. pharm 4th year)-1st prize

Fashion show: Fashion Society -2nd prize

Choreography event: D Flying Dance crew- 3rd prize

Poster making: Manavi Kapur (B.pharm 3rd year) - 4th prize

Slogan writing: Neekita Sharma (B.pharm 3rd year) - 4th prize

5. GURUPURAB

The auspicious occasion of Guru Nanak Dev ji's the Gurupurab was celebrated on 14th November 2015 the University auditorium. The students organized Kirtan and Guru Ka Langar. Gurudwara Head addressed the gathering regarding various aspects about Guru Nanak Devji and his teachings.

6. BASANT PANCHAMI

The celebrations for Saraswati Pooja were organized on 27th February 2016 by P. G. and Ph. D. students of University. Prayers were offered by all.

7. HANUMAN JAYANTI

The celebrations for Hanuman Jyanti were organized

by P. G. and Ph. D. students of University. Prayers were offered by all. Later students organized a langar for everybody.

8. JANAMASHTAMI

University students celebrated the birth of Lord Krishna in college campus with high spirits on 10th August 2015

9. SPORTS DAY

Sports day is being organized on 7thMarch 2016.

10. ANNUAL DAY

Annual day was celebrated on 31st March 2016 with an extreme excitement & participation by students & all the winners of sports day were awarded by Honorable Vice Chancellor Prof. S.S. Aggarwal. Also the most prestigious LG Trophy was awarded to Ms. Taniya Ganeriwal for her extraordinary performance in academics as well as co-curricular activities.

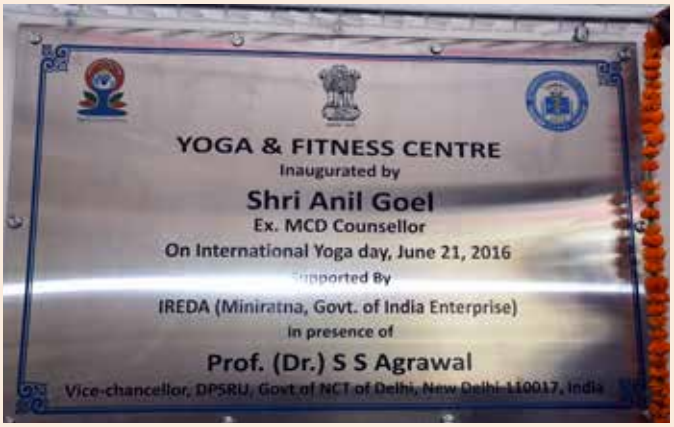
11. FAREWELL

Farewell was organized on 1st April, 2016and celebrated by students for the D.Pharm 2nd Year, B.Pharm 4th year and M.pharm 2nd year students. Ms and Mr Degree were Himani Bhardwaj (B.Pharm 4th Year) and Devender Saini (B.Pharm 4th Year) respectively, Ms. and Mr. M.Pharm were Mitali Soni (M.Pharm 2nd Year) and Arun Nayak (M.Pharm 2nd Year) respectively and Ms and Mr Diploma were Rajni Mehra (D.Pharm 2nd Year) and Akshay Dhinman (D.Pharm 2nd Year) respectively.

12. INTERNATIONAL YOGA DAY CELEBRATION – 2016

Delhi Pharmaceutical Sciences and Research University (DPSRU) celebrated International Yoga Day on 21 st June, 2016 under the guidance of Prof. (Dr.) S. S. Agrawal, Hon'ble Vice-Chancellor, DPSRU. On the occasion "Yoga & Fitness Centre" was inaugurated by Sh. Anil Goel, Former MCD Counsellor, New Delhi. The centre is sponsored by Indian Renewable Energy Development Agency (IREDA), Miniratna, Government of India Enterprise. After the inauguration of the centre, Prof. Agrawal mentioned in his speech that Yoga is not only helpful in making our lives healthy but gives more energetic attitude for the life. Further, he asked to take a pledge from the participant that make practice of performing Yoga everyday. He further insisted to Prof. D. P. Pathak, Officiating Registrar, DPSRU that it should be scheduled in day-to- day academic time table for the healthy and stress free life of students and staff. There were more than 100 participants performed the Yoga under the supervision of professional trainer for more than 2 hours. Further, Sh. Anil Goel requested participant to continue the practice of Yoga and he

appreciated the efforts taken by officials of DPSRU for opening the permanent Yoga and Fitness Centre at DPSRU campus. He congratulated and thanked to IREDA officials for sponsoring the centre. All the participants were facilitated with Yoga-Comfort T-shirts to spread the awareness for practising Yoga and refreshment was provided at the end.



Participation at various events outside the campus

Following are the activities and their respective winners:

A) IPGA:
Play Event: Fitoor Drama Society – 1st prize
Group dance: Adwitiya Dance Society – 2nd prize
Solo Dance: Sanskriti Bisht - 2nd prize

B) **K R MANGALAM UNIVERSITY:**
Play Event: Fitoor Drama Society – 2nd prize

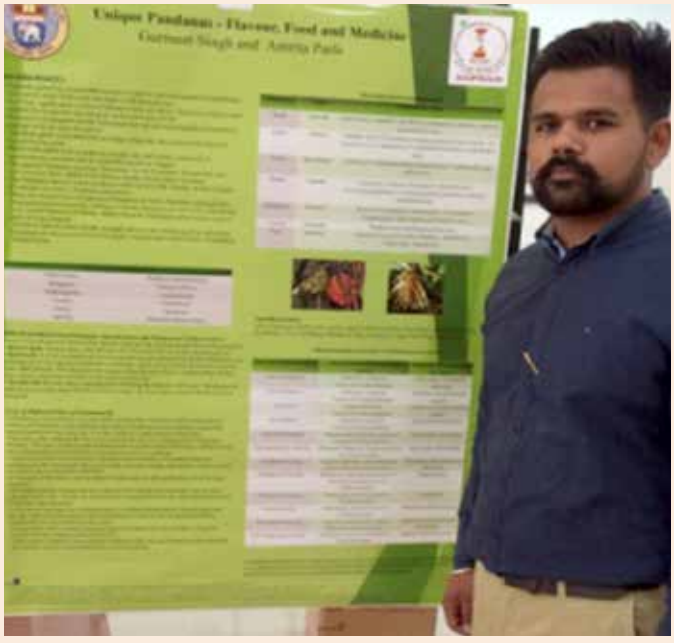
C) **MAMC:**

Badminton singles: Ajay Nagar (D.Pharm 2nd year) – 2nd position

D) **SGGSCC:**
Photojournalism competition: Taniya Ganweriwal, Hardik Bhatia, Parvinder singh (Pridrishya photography society) – 1st prize

E) **College Of Vocational studies:**
Photo hunt: Paridrishya photography society – 3rd prize
On the spot: Taniya Ganeriwal – 3rd

F) Gurmeet Singh and Amrita Parle, presented



research paper at one day national conference on "Recent trends in health care" held on 14 March 2016 at Guru Jambheshwar University of science and Technology, Hisar.

G) Tejpal and Amrita Parle, Presented oral paper at IPGA sponsored national conference on "Perspectives and challenges in pharmaceutical sciences" held on 5 March, 2016 at Shree Ganpati institute of technology.

H) Tanvi Rajput and Meenakshi Chauhan presented poster on Quality by Design: current trends in pharmaceutical research at Jamia Hamdard conference on Quality by Design held on 17th april 2016.

I) Mohit Hans, Ashish Sharma and Prof S.K Gupta **had attended "38th Annual Meeting Of Representative Of National Pharmacovigilance Centers Participating In The Who Programme For International Drug Monitoring",** New Delhi, India

J) Prof S.K Gupta along with M.Pharm Clinical Research scholars attended Workshop on **"WHO ATC/DDD methodology & drug utilization research"** conducted by WHO Collaborating Centre for Drug Statistics Methodology, Oslo and National Centre for Pharmacovigilance India.

K) Mohit Hans. Ashish Sharma, Arnab Chakraborty, Prashant Soni and Prof S.K Gupta attended Workshop on "**LET'S TALK PV!**" conducted by Uppsala Monitoring Centre, National Centre for Pharmacovigilance India and World Health Organization, New Delhi.

SPORTS MEET

Cricket boys

Winner: B.Pharm 4th year

1.	Vipin Choudhary (captain)
2.	Aman Jain
3.	Abhishek Gandhi
4.	Gaurav Chauhan
5.	Rajeev Shah
6.	Sanjeev Kumar
7.	Ritesh Gallion
8.	Nitish
9.	Diwakar
10.	Harman
11.	Prafull
12.	Ritik Aggarwal

Runner Up: D.Pharm 1st year

1.	Manish Dagar (captian)
2.	Sandeep Sharma
3.	Manish Pandey
4.	Md. Danish
5.	Prince Singhania
6.	Hridesh Tiwari
7.	Ketan
8.	Shashank
9.	Mohit Kumar
10.	Rahul Mourya
11.	Prabhakar
12.	Virender

Volley ball boys

First position

1.	Vikrant Anjna (captain)
2.	Anil Meena
3.	Ajay Nagar
4.	Harish
5.	Keshav
6.	Parmod Narwariya
7.	Ankit Saxena

Runner up

1.	Akshay (captain)
2.	Tejbir
3.	Ankit
4.	Nihal
5.	Anindya
6.	Guru

Cricket girls

Winner

1.	Ekta rani (captain)
2.	Rajni
3.	Nisha
4.	Renu
5.	Rashmi
6.	Kavita
7.	Shivani
8.	Rinkey
9.	Meenakshi
10.	Richa
11.	Sanya
12.	Vinita

Runner up

1.	Ankita
2.	Anu
3.	Kirti
4.	Nishika
5.	Vandana
6.	Divya Sharma
7.	Sushma
8.	Palak
9.	Shweta
10.	Mona
11.	Deeksha
12.	Sameen

Carrom boys singles

Gold	Harish
Silver	Shubham Pratap Singh
Bronze	Ajay Nagar

Carrom boys doubles

Gold	Monirul and Ashish
Silver	Hitesh and Tejpal
Bronze	Tushar and Ajay

Carrom girls singles

Gold	Shaima
Silver	Divya

Carom girls doubles

Gold	Shaima and Divya
Silver	Ankita and Mona

Carom mix

Gold	Jyoti and Harish
Silver	Lavanya and Prashant
Bronze	Ekta rani and Ajay

Badminton boys singles

Gold	Akshay
Silver	Ajay Nagar
Bronze	Hitesh

Badminton boys doubles

Gold	Anurag and Aashrey
Silver	Deepak and Guru
Bronze	Ashish and Ajay

Badminton girls singles

Gold	Ankita
Silver	Divya

Badminton girls doubles

Gold	Jyotsana and Lavanya
Silver	Rashi and Bhavleen

Badminton mix

Gold	Rashi and Aashrey
Silver	Lavanya and Harish

Chess boys

Gold	MD. Danish
Silver	Tejbir
Bronze	Vipin choudhary

Chess girls

Gold	Namita
Silver	
Bronze	

100 Mtr race boys

Gold	jai Prakash
Silver	Nadeem
Bronze	Rohit

200 Mtr race boys

Gold	Udai Prakash
Silver	Ankit
Bronze	Monirul

400 Mtr race boys

Gold	Udai Prakash
Silver	Tushar
Bronze	Inamul Haque

1600 Mtr race boys

Gold	Udai Prakash
Silver	Yudhister
Bronze	Guru

100 Mtr race girls

Gold	Priyanka
Silver	Garima
Bronze	Annu

200 Mtr race girls

Gold	Pooja
Silver	Archana
Bronze	Garima

400 Mts race girls

Gold	Archana
Silver	Pooja
Bronze	Ekta rani

Javelin throw boys

Gold	Manish
Silver	Vipin choudhary
Bronze	Vikrant anjna

Long jump boys

Gold	Vipin choudhary
Silver	Manish
Bronze	Rohit

Long jump girls

Gold	Tanu shree
Silver	Pooja
Bronze	Garima

Discus throw boys

Gold	Vipin choudhary
Silver	Aashrey
Bronze	Pankaj

Discus throw girls

Gold	Richa
Silver	Rajni
Bronze	Palak

Shotput boys

Gold	Nishant
Silver	Vikrant
bronze	Ankit

Shotput girls

Gold	Pooja
Silver	Annu
Bronze	Palak

Tug of war boys winners

1.	Gurmeet Singh
2.	Manish
3.	Keshav
4.	Harish
5.	Anil
6.	Vikrant Anjna
7.	Harshit
8.	Prashant
9.	Sharfaraz
10.	Nishant
11.	Md. Najibullah

Tug of war Girls winner

1.	Akansha
2.	Palak
3.	Anu
4.	Nitu
5.	Diksha
6.	Rashi
7.	Ooshmita
8.	Pooja
9.	Devanshi
10.	Archana
11.	Richa

DIPSAR FACULTY AND STAFF

Race 50 Mtr men

Gold	Dr. D.P Pathak
Silver	Mr. K.N Neogi
Bronze	Mr. Sukhbir Singh

Race 50 Mtr ladies

Gold	Ms. Bimla
Silver	Ms. Jyoti
Bronze	Ms. Namrata

Shotput men

Gold	Mr. Vishnu
Silver	Mr. Robin
Bronze	Mr. Dinesh

Shotput ladies

Gold	Ms. Neeta
Silver	Mrs. Amrita Parle
Bronze	Ms. Amita

EVENTS

MTNL HEALTH MELA

University in association with Heart Care Foundation of India (HCFI) organized Inter- college festival at MTNL Perfect Health Mela between 6th – 8th November, 2015 at Talkatora Stadium.

Following are the events and their respective winners:

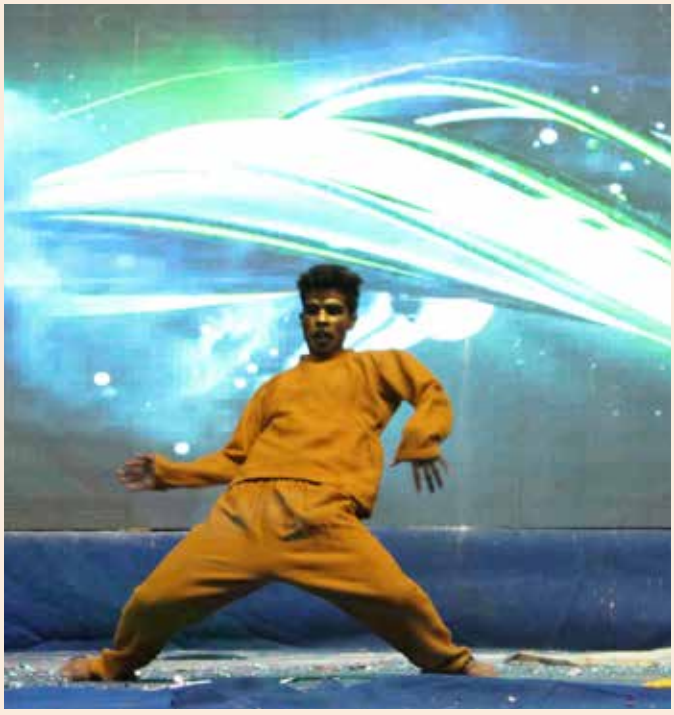
Western dance solo: Sanskriti Bisht (b. pharm 4th year) -1st prize

Fashion show: Fashion Society -2nd prize

Choreography event : D Flying Dance crew- 3rd prize

Poster making: Manavi Kapur (B.pharm 3rd year) - 4th prize

Slogan writing: Neekita Sharma (B.pharm 3rd year) - 4th prize




HEART CARE
FOUNDATION OF INDIA
IMA


presents

STUDENT'S UNION ELECTION

Union Office Bearers (Pharma Nexus) were elected unanimously on 16th sept 2015 for current Academic Session (2015-2016).

1. President,
2. Vice-President,
3. Cultural Secretary
4. Sports Secretary,
5. M. Ph. Representative,
6. B. Ph. Representative
7. D.Ph. Representative,
8. Girl's Representative,
9. B.Pt representative.

TEACHER'S DAY CELEBRATION

Students used the opportunity of Teachers Day to the fullest by expressing their respect, adoration and lovefor their teachers by organizing a function on 5th Sep 2015. Teachers enjoyed the show while students performed and gave away titles and gifts to their beloved mentors.


Paridrishya


30th Annual Conference
of
INDIAN PHARMACY GRADUATES' ASSOCIATION
31st October 2015, Air Force Auditorium,
Subroto Park, New Delhi
© Paridrishya -The Photography Society of Dipsar

L. G. TROPHY WINNER

Taniya Ganeriwal was awarded L.G. Trophy on Annual Day

EDITORIAL BOARD

Prof. (Dr.) D.P. Pathak
Chief Editor

Dr. (Mrs.) Meenakshi K. Chauhan
Editor

Mr. Satish Manchanda
Member

Mrs. Sakshi Bajaj
Member

Mohit Hans
Member

Tanvi Rajput
Member

Taniya Ganeriwal
Member