

Quality Improvement Programmes at MCOPS, 1st to 14th June 2010

The bustle of the academic activities at MCOPS had hardly died down before the start of the AICTE-sponsored, month-long Quality Improvement Programme began in right earnest. Holding QIP during the month of June has become an annual feature. This is the time when teachers get a break from their regular academic work, allowing them to make use of the QIP to update their knowledge. Teachers from pharmacy colleges from different states of India travel to Manipal in order to participate in the programmes. Two QIPs were held, the first from 1 -14 June and, the second from 16 to 28 June 2010.

The inauguration was held on 1 June in the presence of Dr. Gopalakrishna Prabhu, Registrar of Manipal University. Dr. N Udupa (Principal) delivered the welcome address in which he set forth the aims of the QIP. He also spoke of the continued support from AICTE, New Delhi for conducting workshops and QIPs at MCOPS. Dr. Prabhu complimented the college for holding such programmes regularly. He felt that the faculty and PG students derive great benefit by participating in such activities. Dr. K G Rajendran, who was the Guest of Honour for the inaugural function, also spoke on the occasion. The vice principal, Dr. C Mallikarjuna Rao proposed a vote of thanks.

The top officers of Manipal University- Pro-Chancellor, Vice Chancellor and Registrar- took time off from their work and delivered inspiring lectures (on different days during the QIP) to benefit the young faculty of the college as well as those who came from other institutions. The Pro-Chancellor, **Dr. H S Ballal's** talk was on "Radiology for the benefit of Common Man". **Dr. Ram Narayan**, the Vice Chancellor demonstrated how an effective presentation could be made in his talk, "Death by Power point". The Registrar, **Dr. G K Prabhu**, spoke on "4Is", namely, Idea, Innovation, Invention and Incubation. All the three lectures elicited tremendous response from the participants and faculty alike.

The first QIP had the title, "**New Frontiers in Drug Discovery and Development**" and was coordinated by the departments of pharmaceuticals, pharmaceutical chemistry, pharmacology and pharmacognosy. Each department got to conduct programmes for 3 days.

The first three days programmes were held under the aegis of the **Department of Pharmaceutics**.

Day 1: After inauguration **Dr. Usha Y Nayak**, MCOPS, Manipal delivered talk on “Chronotherapeutic drug delivery systems”. Since pharmaceutical companies are experiencing obstacles in discovering new medications because of time and cost involved in it, thrust of industries is development of alternative dosage forms of existing drugs which encourage adherence to treatment. She described various possible formulation approaches for the existing drugs available in the market in order to treat circadian rhythm dependent diseases. There was a **demonstration** experiment on Supercritical Particle Generator in the afternoon.

Day 2: **Dr. K Pushkala** delivered a talk on “Dark side of light”, she discussed on various aspects of exposing our body to night-light and its adverse effects. **Mr. S.G.Biligiri**, Juggat Pharma Bangalore delivered talk on “New era in Pharmaceutical Industry” and discussed about the status of pharmaceutical industries in India and in globe in the current scenario. Morning session was ended with a **demonstration** on Zeta sizer series.

Mr. Vamshikrishna T, MCOPS, Manipal delivered a talk on “Protein and peptide drug delivery” and discussed on characteristics of protein pharmaceuticals, various problems associated with protein and peptide delivery, and possible approaches to be taken to deliver these drugs. **Dr. R. Nagaraju**, Professor, Tirupathi delivered talk on “Chronopharmacokinetic in the design and drug delivery systems” and discussed on circadian rhythms and its influence on pharmacokinetics of drugs and measures to be taken into consideration while developing any new dosage forms and timing of drug administration.

Day 3: **Dr. Raghuvir Pai**, MIT, Manipal talked on TRIZ, various theories for solving any problem. **Dr. Vinayak Sarode** delivered talk on “Quality Assurance in GLP” and shared his experience of Serum Institute, Pune on good laboratory practices. He discussed about the common practices to follow while working in the lab and interacted with participants. **Mr. Shivanand D. Athanimath** representative of BUCHI India Pvt. Ltd. explained their new equipment BUCHI Nano spray dryer B90 and its various applications. **Mr. Anup Naha**, MCOPS, Manipal shared his knowledge on “Self emulsifying drug delivery systems” and its importance in developing new dosage forms. **Dr. KVSRRG Prasad**, Professor, Tirupathi discussed about “Guidelines and regulations for probiotics”, delivery of probiotics, probiotic

food products, world scenario of regulatory approaches of probiotics and FAO/ WHO-guidelines for the assessment of probiotics. **Dr. R. Nagaraju**, Professor, Tirupathi delivered talk on “Lymphatic drug delivery system” and emphasized on targeting the lymphatic system for delivering the drug and pharmaceutical aspects of intestinal lymphatic drug transport.

It was the turn of the **Department of Pharmaceutical Chemistry** from 4 – 7 June

Day 1: The day’s proceedings began with a talk from **Dr. P D Gupta** (Jaipur and adjunct Professor, MCOPS) on the topic, “Gravitational Biology”. The next speaker was **Dr. Agasimuddin**, a professor from Gulbarga. He gave two lectures. The first was on “Drug Discovery- a case study”. He gave a detailed account of the prospects and problems in drug discovery from a chemist’s point of view. His second lecture was on phase transfer catalysis.

Day 2: The first speaker of the day was **Dr. Ravindran**. His talk was on “Application of stem cells in industry”. **Dr. Suvarna G Kini** (Associate Professor, Pharm Chemistry, MCOPS) who was the next speaker of the day gave an “Update on newer enzyme targets in new drug discovery”. **Mr. Vijaya Bhaskar** (Senior Lecturer) spoke on artemisinin and its derivatives as antimalarial drugs. These drugs play crucial roles in the treatment of falciparum malaria now as plasmodia have become resistant to chloroquine and quinine.

Day 3: **Professor M K Unnikrishnan** (HOD Pharmacy Practice, MCOPS) gave a very interesting lecture on “Face Recognition”. **Dr. Alex Joseph** (Assistant Professor, Pharma Chemistry, MCOPS) delivered a talk on development of anticancer drugs, particularly the recent advances. His colleague, **Mr. Jeyaprakash** dealt with antiviral drug discovery.

The **Department of Pharmacology** took the responsibility for the programmes on 8, 9 and 10 June.

Day 1: The day began with a talk from **Dr. Pramod Kumar** (HOD Plastic Surgery at Kasturba Hospital, Manipal). He talked about Leadership Qualities. **Dr. Meera Sumanth** (Professor of Pharmacology, VV Puram Institute of Pharmacy, Bangalore) delivered two lectures. Her first lecture was on monoclonal antibodies, their production and application. Later, she spoke on the role Ethno pharmacology on drug development. **Dr. N Gopalan Kutty** (Professor of Pharmacology, MCOPS) gave a talk on “Rodent models for metabolic syndrome”. **Mr. Jayesh Mudgal** (Lecturer, Pharmacology, MCOPS) gave a demonstration on models for neuropathic pain.

Day 2: The first to deliver a talk was **Dr. Rama Varma** (IIT, Madras) on “Stem cell history, role and application in regenerative medicine”. Following this, **Dr. C Mallikarjuna Rao** (Professor of Head, Pharmacology, MCOPS) dealt with apoptosis or programmed cell death in his lecture. He described the methods to assess cell death. **Dr. K Sreedhara R Pai** (Associate Professor) gave a talk on the models for screening anticancer drugs. **Ms. Rekha Arun** (Senior Lecturer) gave a demonstration on wound healing studies. How cafeteria diet could be employed to produce models for metabolic was demonstrated by **Mr. Yogendra Nayak** (Senior Lecturer).

Day 3:**Dr. Anantha Nagappa Naik** (Professor, Pharmacy Management, MCOPS) delivered a talk on “Surface activity in drug action”. **Mr. Arun T S** (Lecturer, Pharmacology) made an exhaustive presentation on PK/PD modelling. This is a topic of great interest, both in new drug development and drug treatment. **Dr. Nanda Kumar** (Associate Professor) spoke on “Besides PK/PD”. He talked about biomarkers in both kinetics and dynamics and their application. **Ms. Piya Paul** (Research scholar) gave a demonstration for screening anticancer drugs, employing *in vitro* methods. Two other research scholars- **Mr. Punit Bansal** and **Pawan G Nayak**- showed *in vitro* and *in vivo* models for screening antihypertensive drugs.

Department of Pharmacognosy co-ordinated the programmes for 11, 12 and 14 June

Day 1: **Dr. K Satyamoorthy** (Director, Manipal Life Sciences Center) was the first speaker. He spoke on “Immunology of cancer”. **Dr. T Venkatesh** (Professor, St John’s Medical College,

Bangalore) delivered a talk on “Lead in our environment and its impact on health- policies and programmes for its abatement”. **Dr. Smitha Hegde** from St. Aloysius College (Mangalore) delivered a talk on “The role of biotechnology in drug discovery”. The scope of biotechnology as a tool for discovery is tremendous, she said.

Day 2: Dr. Shrishailappa Badami (Director, Sree Siddhaganga College of Pharmacy, Tumkur), who was the first speaker of the day, stressed the importance of plants for healthy living. His lecture was titled, “Medicinal plants, the need of the hour”. “Challenges and emerging research opportunities in herbal sector” was the title of **Dr. M Deepak’s** lecture. Dr. Deepak is a scientist from Natural Remedies, Bangalore, and a company that specialises in research on herbal drugs.

Day 3: Dr. G K Prabhu (Registrar, Manipal University) gave an inspiring lecture on “4Is”, namely, Idea, Innovation, Invention and Incubation. Two lectures from faculty of the host department marked the third day’s programme. **Dr. C S Sreedhara** (Professor and HOD) delivered the first talk, which was titled, “Role of extraction methods in drug discovery”. He explained the ways to get the best results from herbal drugs through newer extraction techniques. **Mr. Saleemulla Khan** (Lecturer) gave an overview of chromatographic techniques used in drug discovery.

On each day, the afternoon session was set apart for experimental demonstration with a view to familiarising the participants with the use of sophisticated techniques. **Dr. Richard Lobo** monitored the demonstration of HPLC and HPTLC. **Ms. Shanthi**, a technician showed the working of the autoanalyser.

The feedback was elicited from the participants at the conclusion of the programme at the valedictory function on 14 June 2010. Certificates were distributed to the participants.