

The Controlled Release Society Indian Chapter organizes
16th International Symposium on “**Advances in Technology and Business Potential of New
Drug Delivery Systems**”, in Mumbai, on 23rd & 24th Feb 2018

Symposium Report

The Indian Chapter of Controlled Release Society (CRS IC) organized its 16th International Symposium on “Advances in Technology and Business Potential of New Drug Delivery Systems” in Mumbai 23-24 February, 2018. The symposium received an overwhelming response with more than 200 delegates from major pharmaceutical companies and research institutions from around the country and 100+ poster presentations.

Dr. Anisha Pargal, President of CRS IC, welcomed the audience on day 1 of the symposium, followed by an inaugural address by Mr. Ajit Singh, President of ACG Worldwide and Chairman of the CRS IC Organizing Committee. The ninth issue of the CRS IC newsletter was also released on the occasion. Dr. Sudesh Shetty, Partner Risk Consulting, KPMG, India and Dr. Per Falk, Executive Vice President and Chief Scientific Officer, Ferring Pharmaceuticals, Switzerland were invited as keynote speakers in the inauguration session. Mr. Shetty focused on the key challenges and opportunities faced by the Indian Pharmaceutical Sector, with a brief overview on cGMP compliance, particularly data integrity, and, Uniform Code of Pharmaceutical Practice (UCPMP). He also threw light on ‘**KPMG’s Pharma Outlook 2030**’ which dwells into the key trends that will revolutionize the pharmaceutical industry and will be driven by advancements in technology, ground breaking therapies and increased access to data by patients.

Dr. Falk, on the other hand, spoke of the global evolution and business opportunities associated with Novel Drug Delivery Systems. He also presented on other macro trends such as a paradigm shift to larger molecules and new modalities, i.e. cell based and gene therapy, necessitating rise of technology in the pharmaceutical sector together with personalized care and digital applications. The other speakers featured on day 1 included Dr. Vinod Labhasetwar, Lerner Research Institute, USA; Prof. Kannan Rangaramanujan, Centre of Nanomedicine, Wilmer Eye Institute, John Hopkins School of Medicine, USA and Dr. Matthias Wacker, Goethe University, Institute of Pharmaceutical Technology, Germany. Dr. Labhasetwar emphasized with numerous examples

how ‘Simple is Better in Nanomedicine’ wherein he stated how a seemingly simple nanoformulation developed with a strong rationale can be efficiently used to treat a host of complex conditions. The presentation also defined the challenges in moving complex nanoparticles through regulatory pathways and the scale-up process toward eventual commercialization. Prof. Kannan presented the rationale and development of systemically delivered hydroxyl-terminal poly(amidoamine) dendrimers directed to neuroinflammation which plays a key role in cerebral palsy, autism and various other CNS disorders. Selective localization of these dendrimers has been validated in preclinical models with clinical applications ranging from pediatric brain injury to age-related macular degeneration. Dr. Wacker discussed the technologies available to investigate the in vitro release of drugs from next-generation nanotherapeutics. An outline of the current methodologies and applications in formulation development and quality control was also presented.

Day 2 of the symposium featured lectures by Prof. Hamid Ghandehari, Departments of Pharmaceutics & Pharmaceutical Chemistry & Bioengineering, University of Utah, USA; Dr. Yogeshwar Bachhav, Associate Director Pharmaceutical Development, AiCuris GmbH, Germany; Mr. Henning Falck, Neuhaus Neotec, Germany; while Dr. Wacker presented his second lecture of the symposium. Prof. Ghandehari spoke of his research involving the development of recombinant polymers for localized drug and gene delivery and as liquid embolics, the use of external triggers such as the plasmonic photothermal effect and high intensity focused ultrasound to improve delivery of polymer therapeutics to prostate tumors, and investigation of the influence of structural features of silica nanoparticles on their cellular uptake and toxicity. Dr. Wacker presented the unexpected risks and side effects associated with a rising use of nanoscale formulations, posing a threat to human health and the environment. Regulatory authorities all over the world are constantly striving to find a balance between consumer safety and the interests of the industry. Recent progress in the regulatory framework and safety considerations relevant to product development were presented. Dr. Bacchav’s lecture involved the formulation of complex NCEs. His lecture covered case studies on the use of enabled technologies such as solid dispersions, mesoporous silica particles, nanosuspensions, cosolvent and lipid based formulations for efficient delivery of poorly water-soluble NCEs. His talk also covered case studies to develop IV and topical formulations of poorly soluble and unstable anti-infective compounds under development. In the concluding lecture of the symposium, Mr. Falck explained the different aspects of batch and

continuous fluid bed processing options. The lecture emphasized how the choice of the correct processing mode depends on the individual situation and set targets. Most of the challenges of the pharmaceutical production which are very well addressed with batch type equipment can also be matched with continuous plants; however, there are differences which are worth knowing.

The symposium also included a poster presentation competition in which over 130 posters representing wide areas of research relevant to Novel Drug Delivery Systems were presented over the two days of the symposium. CRS IC announced the three best posters awards as selected by a panel of independent judges. The award winners were Ms. Isha Naik, Bombay College of Pharmacy, Mumbai; Mr. Nisith Rawal, Nirma University, Ahmedabad; Ms. Viral Patel, Nirma University, Ahmedabad. CRS IC has also announced the travel grant to the CRS Annual Meeting in July 2018 following acceptance of the poster for presentation. The event was sponsored by Ideal Cures as platinum sponsors. BASF, Colorcon, Microfluidics, STEERLife and Associated Capsules Group participated with technology showcase presentations and table exhibits.

The CRS Indian Chapter will celebrate its 'Silver Jubilee' 1-2 February 2019 in Mumbai. For further details on activities and membership kindly visit the official website www.crsic.org or contact secretary.crsic@gmail.com.



From left to right; Dr. Parizad Elchidana (Co-Chair Scientific Committee & EC Member CRS IC), Mr. Ajit Singh (Chairman Organising Committee), Dr. Per Falk (Ferring Pharmaceuticals), Mr. Sudesh Shetty (KPMG, Mumbai), Dr. Anisha Pargal (President CRS IC), Dr. Vinod Labhashetwar (International Coordinator) and Dr. Vandana Patravale (Chair Scientific Committee & EC Member CRS IC) releasing the ninth volume of the CRS IC Newsletter, at the 16th International Symposium by CRS IC, Mumbai, February 2018.



Poster Session in Progress



Ms. Isha Naik (Bombay College of Pharmacy, Mumbai) won the first prize at the poster presentation competition.



The CRS Indian Chapter Executive Committee along with the Speakers at the International Symposium, Mumbai, February 2018.