

An International Symposium “2nd PharmSci@India” of American Association of Pharmaceutical Scientists - National University of Singapore Student Chapter (ANSC) was conducted by NIPER-Hyderabad in association with National University of Singapore on 3rd - 4th September, 2011 at NIPER – Hyderabad campus.



About NIPER Hyderabad: National Institute of Pharmaceutical Education and Research (NIPER) is an autonomous body and established under the aegis of Ministry of Chemicals & Fertilizers at Hyderabad as a centre of excellence for higher education, research and development in pharmaceutical sciences. The institute has been declared as an “Institute of National Importance” by Government of India through an Act of Parliament (NIPER ACT 1998 & NIPER Amendment ACT 2007). This institute offers M.S (Pharm) programmes in 4 disciplines viz. Medicinal Chemistry, Pharmaceutical Analysis, Pharmacology & Toxicology and Pharmaceutics. Ph.D. programme in three disciplines viz. Medicinal Chemistry, Pharmacology & Toxicology and Pharmaceutics has been commenced from the academic year 2011-12. NIPER-Hyderabad is mentored by Indian Institute of Chemical Technology, Hyderabad.



About ANSC: American Association of Pharmaceutical Scientists-National University of Singapore Student Chapter (ANSC) is a non-profit student organization which aims to facilitate local student participation in the activities of AAPS, and increase student awareness of career opportunities and latest advances and discoveries in the pharmaceutical sciences. As part of their activities, 1st PharmSci@India

2010 was conducted in Mumbai and this year, 2nd PharmSci@India 2011 is organized in association with NIPER-Hyderabad which is a student-initiated joint symposium.

The objective of 2nd PharmSci@India 2011 is to promote professional/scientific interactions between research students and experts from academics/industries of India and Singapore with an aim to be informed of the state-of-affairs and latest developments in pharmaceutical research. This symposium also targets to foster relationship and to create awareness of possible collaboration between universities from India and Singapore. In this, enlightening talks from eminent speakers, keynote lectures and oral/poster presentations by research students are



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scheduled. About 240 participants were registered for the symposium apart from the organizers from NIPER-Hyderabad and NUS. Most of the participants are Faculty, Research scholars/ Ph.D. students and Master students from about 50 institutes/universities in India.



The symposium was inaugurated by Dr. Ahmed Kamal, Project Director; Prof. N Satyanarayana, Registrar; Dr. Kolupula Srinivas, convener and Prof. Paul Heng Wan Sia, from NUS by lightening the lamp. Prof. N Satyanarayana welcomed the gathering and in his welcome address, highlighted the usefulness of such

symposia and workshops in building students’ career. He also gave a brief note on the various other conferences conducted by NIPER-Hyderabad. Dr. Kolupula Srinivas, Convener of PharmSci@India2011 briefed about the response they received for the symposium and also explained the scheduled activities during the symposia. He also stated that this conference has got overwhelming response. Prof. Paul Heng, in the inaugural session, explained about the NUS academic and research activities. He mentioned that NUS is welcoming foreign collaborations in particular from India in the area of Pharmaceutical Sciences as the Indian pharmaceutical industry growing enormously. Dr. Ahmed Kamal, in his address, stated that NIPER-Hyderabad is welcoming the NUS interest for collaborations with them. He also mentioned about the IICT encouragement and involvement in the development of NIPER Hyderabad.

Mr. Dasai Parind, Project Coordinator, ANSC India; gave a brief about the activities of ANSC. In the inaugural session, Dr. R. Srinivas, Dr. S. Ramakrishna, Course Coordinators; Faculty of NIPER-Hyderabad,

invitees from academics and industry and NUS delegates were present.

Dr Bhaskar K. Arumugam, CEO, Granules India Limited, Hyderabad, India has delivered a talk on” High Throughput Manufacturing (HTM): Attributes for Success”.

He covered various aspects related to challenges in manufacturing and suggested approaches to HTM. He also discussed a case study using the Lean, TOC, and Six Sigma concepts in pharmaceutical manufacturing.

Prof. Paul W S HENG, NUS has given a fascinating lecture on “MUPS: Impact and Compact”. He explained that, the design of variety of control released products becomes easier with introduction of Losec MUPS technology. He also discussed about the critical steps to be considered in the tableting process using MUUPS technology.

Dr Ahmed Kamal, Project director NIPER-Hyderabad and Scientist, IICT; has delivered a talk on” Recent Advances



in Medicinal Chemistry: Development of Cancer Therapeutics”. The development of agents that target genes involved in cancer pathogenesis is a potential area of cancer drug discovery and a number of the anticancer drugs employed clinically exert their antitumour effect by inhibiting nucleic acid (DNA or RNA) or protein synthesis was discussed. He also said that researchers should explore innovative ways to address the effective treatment of cancer.



Dr Rachel P.L. Ee Department of Pharmacy, NUS; has delivered a talk on “Nanostructured Synthetic Hydrogels as Scaffolds for Cell And Gene Delivery.” She explained the different mechanism for the preparation of Hydrogels and evaluation of their mechanical properties. She said that the use of Michael addition chemistry allows for in situ hydrogel formation under the physiological conditions. The mechanical property analysis

of the nanostructured hydrogels revealed a correlation between the content of micelles and the storage modulus of the hydrogels. Prof. Nalini Shastri, NIPER-Hyderabad has delivered a talk on” Quality by Design – Concept, Design and Control”. She discussed the stages involved in implementation of QbD like, defining target product quality, designing processes to achieve the target product, identifying critical quality attributes and critical process parameters, determination of design space, DOE methodology, model building, evaluation, optimization and control. Critical process parameters, determination of design space, DOE methodology, model building, evaluation, optimization and control.



The second day of the symposium started with a provocative lecture by Dr Swaroop Kumar, CEO, Incogen Therapeutics Private LTD, Hyderabad, India on “New Drug Targets in Cancer”. In his lecture he explained about the cancer disease and changes that occurs during the development of tumors and how Cancer therapy has undergone significant changes in the last two decades with genetic diversity playing a major

role. He also discussed about new mechanism and solutions based pharmaceutical technologies in the areas of drug discovery and targeted delivery. Prof. Wai Keung CHUI, NUS delivered a talk on “Developing Fused 1, 3, 5-Triazines in to Bioactive Agents with Potential Therapeutic Value”. Mr. Wai Keung has focused on developing nitrogen-containing heterocycles into pharmacologically active agents. In particular, he gave a brief overview of the design, synthesis, lead optimization and pharmacological evaluation of different libraries of fused 1,3,5-triazines.



After the tea break, the session was started with the lecture by Dr Sistla Ramakrishna Course coordinator, NIPER-Hyderabad and Scientist, IICT, on “Carnosic Acid Attenuates Renal Injury in an Experimental Model of Rat Cisplatin induced Nephrotoxicity”. He said that Nephrotoxicity is one of the serious dose limiting side

effects of cisplatin when used in the treatment of various malignant conditions. He covered in his talk about the the effect of carnosic acid, a potent antioxidant, against cisplatin induced oxidative stress and nephrotoxicity in rats.



Dr Christine Teng, Department of Pharmacy, NUS has given a talk on “Pharmacists Improving Outcomes in the Management of Infectious Diseases”. She said that antimicrobial resistance is a global issue which should be considered. She explained Antimicrobial Stewardship Program (ASP), a program which utilizes various strategies to promote appropriate selection, dosing, route, and duration of antimicrobial therapy which are widely recommended to address this crisis. Dr Krishnam Raju

Atcha, NIPER-Hyderabad has delivered a lecture on the topic entitled “An Introduction to Process of Drug Discovery and Development Today”. Dr. Raju said that pharmacist/medicinal chemist plays an important role in the design, discovery and development of novel drugs with improved efficacy and safety profile with affordable prices. He also covered an outline overview of today’s drug discovery and development process.



The students from NIPER-Hyderabad and NUS gave oral presentation during these two days of symposium. Faculty, research scholars and students from various institutes were presented their contributions in the form posters. The participants expressed that this is a rare opportunity for them to get exposed to this kind of platform where they can interact with the people from different parts of the country and also international delegates and to

know about the latest advancements that are taking place in the field of pharmaceutical sciences.

In this Symposium, NUS Faculty and ANSC members; Course Coordinators NIPER-Hyderabad, Dr R. Srinivas, Dr S. Ramakrishna, Dr A. Krishnam Raju; faculty members, Dr Bathini Nagendra Babu, Dr Shankaraiah, Dr S. Sunitha, Mr. T. Venu, Dr Narendra Kumar Talluri, Dr S. Ganadam, Dr Satish Kumar, Mr. Naveen Kumar, Dr. Md. Arifuddin; senior faculty members Prof. V. Peesapati, Prof. Nalini Shastri and Shri M.S.N. Murthy and other staff members were involved actively and made this symposium as another successful event of NIPER-Hyderabad.



NIPER-Hyderabad

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