

## Trendys Meeting Report 2014

*Trendys in Biochemistry* 21<sup>st</sup> Annual meeting was organized by the Department of Biochemistry, Acharya Nagarjuna University, Guntur on October 17-18, 2014. The meeting discussed the recent emerging trends in molecular biology, biochemistry, immunology, infectious diseases, clinical diagnosis and nano-formulations. The organizing team comprised of Prof. K R S Sambasiva Rao, Dr. P Kiranmayi and Dr. Rajeswari Jinka from Acharya Nagarjuna University and Prof. N Siva Kumar and Prof. Anand K Kondapi from University of Hyderabad. About 300 members, including master students, young researchers and staff from different universities have participated in this event.

The programme was inaugurated by Prof. K Viyyanna Rao, Vice-Chancellor of the University along with the founder members of *Trendys*, Prof. K Subba Rao, University of Hyderabad and Prof. T Ramasarma, Indian Institute of Sciences (IISc), Bangalore. After welcome address, Prof. K Subba Rao explained how the *Trendys* meeting was emerged from the informal meetings of a group of scientists from the Department of Biochemistry at IISc, Bangalore to a National forum and how successfully it has been organized at various parts of the country. He also depicted the slides and photographs of successive meetings enlightening the participants how such a scientific organization started and blossomed. The *Trendys* forum is set to discuss on the new developments in the discipline of life sciences to cover a broad area of research to provoke the interest, curiosity, thinking ability of the youngsters and create an atmosphere to interact with the eminent scientists freely. Prof. K Viyyanna Rao, Vice-Chancellor of the University appreciated the efforts and insisted upon the need of research towards the betterment of life by solving the problem of poverty. Prof. T. Ramasarma in his 'Commentary to *Trendys*', commented "On discoveries in scientific research" by pointing out the delay in recognizing the scientist and his discoveries towards the benefit of mankind. The inaugural session was concluded with vote of thanks by Dr. S K Jaffer.



Prof. K Viyyanna Rao, Vice-Chancellor of Acharya Nagarjuna University presenting *Trendys* oration lecture award to Prof. A. Jagannatha Rao, IISc, Bangalore.

The *Trendys* meeting was held for two days and constituted about six sessions, including a poster session. The meeting, as is the practice, started with *Trendys* oration lecture, where a scientist, whose contribution in life sciences is recognized is invited to speak and is awarded with *Trendys* oration award. In *Trendys*-2014, the oration lecture entitled, "Is population control going to be only a dream in India" was given by Prof. A Jagannatha Rao, IISc, Bangalore. His critical review and scientific approach on loss of reproductive memory due to hormonal imbalance, discussion on merits and demerits in controlling the population provided an insight and future direction to the audience to solve the problem.

Session 1 was chaired by Prof. K Subba Rao (University of Hyderabad) and Prof. K R S Sambasiva Rao (Acharya Nagarjuna University, Guntur). Dr. N Siva Kumar (UoH, Hyderabad) delivered a talk on "Mannose 6-phosphate receptors (MPR 300 and 46): Some new insights into the evolution of these proteins", where he hypothesized that MPR46 is the most ancient receptor, whereas MPR300 is evolved by gene duplication. The second lecture entitled "HIV integrase-human LEDGF/p75 interface: A potential drug target" was given by Dr. N K Raghendra (IIT, Hyderabad). His approach to design the small

molecules that disrupt HIV integrase and human lens epithelium-derived growth factor (LEDGF)/p75 interaction may provide the significant efficiency in HIV therapy.

Session 2 was chaired by Dr. Gopal Pande (CCMB, Hyderabad). In this session, Prof. P. Kondaiah (IISc, Bangalore) discussed about the role of circulating tumor cells (CTC) in the talk entitled "*Cancer metastasis: Working in groups*". He discussed about several attributes to the metastatic cells proposed during "Epithelial to Mesenchymal Transition (EMT)", showing wonderful results by a group of CTC in the development of metastatic lesions. Prof. Dhanunjay Bhattacharya in his talk entitled "*Stacking interactions in RNA: Theoretical analysis and prediction*" depicted the algorithms developed to quantitatively determine the nature of stacking between the base pairs in DNA or RNA based on burial of exposed surface area of two base pairs and found even in non-Watson-Crick base pairs good stacking interactions. This type of theoretical stacking energy calculation can guide in modeling RNA structure for better accuracy.

In Prof. A J Rao chaired session 3, Dr. Gopal Pande (CCMB, Hyderabad) in the talk entitled "*Synthesis and functional characterization of a fluorescent peptide probe for non invasive imaging of collagen in live tissues*" introduced the methodology for coupling of 5-(4-carboxy phenyl)-10,15,20 triphenyl porphyrin (C-TPP) to the N-terminal of collagen or to another mutant protein to evaluate the efficiency of fluorescent peptides in the detection of collagen deposition in live normal and abnormal tissues.

At the end of the first day, there was an interaction session in session 4, where many of the young researchers displayed their posters and had stimulating discussions with the eminent scientists present in the meeting.

On the second day, the session 5 was chaired by A K Kondaiah (IISc, Bangalore), where Prof. V Prakash (JSS Technical Institution campus, Mysore) in his talk entitled "*Pivotal role of chemistry in science and society*" focused on integration of fundamental chemistry to improvise the quality of life and left the audience to think till the next TRendys meeting to get the answers for his questions. Dr. K. Sridhar Rao (CCMB, Hyderabad) in his talk entitled "*Development of DNA based diagnostic chips for pathogen identification*" envisaged about rapid, sensitive and affordable DNA-based platform



A group photo with delegates and participants

technology in the development of a diagnostic kit in identification of infectious agents that cause eye diseases. US patent is granted towards this work.

The sixth session was chaired by Dr. K Sridhar Rao (CCMB, Hyderabad), where Prof. A K Kondapi (UoH, Hyderabad) presented a picture of topoisomerase II beta isoform association or interaction with transcriptional regulations of HIV genes and also in promoting transcription of viral genes in his talk entitled "*Functional activities of topoisomerase II beta*". Dr. Anil Kumar (UoH, Hyderabad) in his presentation entitled "*Non-enzymatic glycation mediated nephropathy: The dark side of sugars*" discussed about the action of N-carboxymethyl-lysine (CML) on podocytes in diabetic renal diseases.

The meeting ended with the closing ceremony by vote of thanks by Prof. K R S Sambasiva Rao, Prof. N Sivakumar and Prof. A Kondapi. All the steering committee members and invited speakers appreciated the active participation of students, young researchers and all staff members for making 21st Annual Meeting of TRendys as one of the best and most successful one. Steering committee decided to organize the next 22<sup>nd</sup> Annual meeting at Annamalai university, Chidambaram.

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