

❖ Name & Designation	: Ms. Mamta Singla, Ph.D Student(ICMR JRF)
❖ Address	: Dept. of Biophysics, PGIMER, Chandigarh-1600012
❖ Name of the International Conference/ Seminar/Symposium/ Workshop	: International Biophysics Congress-2014
❖ Title of the abstract accepted	: Cellular characteristics and phenotypic changes during epithelial to mesenchymal transition in renal carcinoma cell.
❖ Venue & Date	: Brisbane, Australia, 3-7th August 2014.
❖ Money sanctioned	: ₹ 1,00,000/-
❖ Money reimbursed	: ₹ 1,00,000/-

### Participation Report

#### • Highlights of conference:

IUPAB 2014 was jointly organized by the Australian society of Biophysics(ASB) and the international union of pure and applied biophysics. IUPAB congress in Brisbane was both scientifically rewarding and provided a unique opportunity to experience the friendly and easy going outdoors lifestyle of Australia. On the very first day of the conference there was a overwhelming lecture of the noble laureate 'Brian Kobilka' on Structural insights into G protein coupled receptor signaling.

#### New things learnt:

Participants were able to describe proper use of new Biophysical – related technologies and Techniques and deploy the appropriate use of X-ray crystallography utilizing the last treatment paradigms, technologies and procedural techniques. Participants were able to learn about the public health impact of hepatitis and practical steps to diagnose and treatment patients in their communities. We also learnt how to use the new protease inhibitors in practice. We were able to examine the latest recommendations for screening and structure of the various proteins involved in various diseases. We are able to understand about molecular chaperones, principles of antibody folding and association, as well as their evolution. We learnt the explanation that how the expression of intestinal ion channels are regulated and identify critical mechanisms that regulated gastrointestinal epithelial transport. We learnt to determine prescribing patterns and efficacy of proton pump inhibitors on gastric pH, to evaluate the survival impact of adenocarcinoma of the esophagus and efficacy of radiofrequency ablation for Barrett's esophagus and review the importance of H.pylori eradication on development of metachronous adenocarcinoma of the stomach. It has been shown that IL-17 is critically involved in the gut hypermotility following resolution of T-cell mediated inflammation. It has also been shown that IL-17 suppresses RGS5 translocation in primary cultured intestinal smooth muscle cells via 1KB signaling. The role of genetic instability in the development of GI cancer has also been learnt. Novel proteomic techniques for analyzing the microbiota were learnt. Evaluation and incorporation of newly developed information about the regulation of energy balance and metabolic function and utilization of new understanding of regulation of energy balance to enhance communication without treatment of patients with obesity was learnt. Recent developments in the elucidation of the structural basis of the Ca/calmodulin- dependent kinase activation and cadherin/ catenin dependent cell-cell interaction mechanism. They had shown how to elucidate molecular and structural mechanisms underlying cancer associated signaling processes, in order to better understand tumorigenesis and to develop better therapeutics against the life threatening disease. I also got knowledge to recognize the mechanism of the structure and function of membrane proteins involved in nutrient uptake, cellular communication, water uptake and homeostasis. I am also able to see various studies about ATP synthase, as well as their membrane protein involved in infectious diseases.

### **Annexure 3**

#### **8. Participant's contribution to the conference**

Poster presentation of the research work entitled "Cellular Characteristics and Phenotypic Changes During Epithelial To Mesenchymal Transition In Renal Carcinoma Cells" was done in Research Forum of Poster presentation session.

- Participated in the discussion of research work presented by scientists from other countries.
- Visited the stalls in exhibition hall related to scientific research work.
- Discussed our research work with various scientists from other countries.

I believe that this conference was an added bonus to my career. I would again like to thank the ICMR for providing me the financial support for attending this conference.

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PhD Scholar

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