

❖ Name & Designation	: Ms. Anitha Jagadesh, Research Scientist-I.
❖ Address	: Manipal Centre for Virus Research, Manipal University.
❖ Name of the International Conference/ Seminar/Symposium/Workshop	: 16 th International Congress of Virology-2014.
❖ Title of the abstract accepted	: Molecular characterization of influenza. A (H1N1)pdm09 virus neuraminidase (NA) gene.
❖ Date & Venue	: 27 th July-1 st August 2014. Montreal, Canada.
❖ Money sanctioned	: Rs 1,00,000/-
❖ Money reimbursed	: Rs 43,129/-

Participation Report

a. About the conference

The International Union of Microbiological Societies Congresses (IUMS)- 2014 was hosted by the Canadian Society of Microbiologists, and organized with the help of National Research Council of Canada from July 27 – August 1 2014 at Montreal, Canada. IUMS had organized 3 congresses (Bacteriology and Applied Microbiology, Mycology and Eukaryotic Microbiology, and Virology at the same venue so as to favor bridging disciplines and hence foster a modern outlook on microbiology in the 21st century. The conference brought together a large group of ~2000 delegates from 85 countries to promote international sharing, cooperation and open discussions on recent advances and perspectives in microbiology research. IUMS scientific program was well organized with keynote plenary lectures, bridging sessions, oral and poster presentations concurrently for the 3 divisions of microbiology.

b. Academic highlights of the conference

IUMS conference began with welcome remarks from eminent scientists in microbiology John McDougall- President of National Research Council Canada, Remi Quirion- Quebec Chief Scientist, Geoffrey L.smith- President of IUMS, Daniel Dubreuil-President of Canadian Society of Microbiologists, Pierre Talbot- President of Congress National Organizing Committee. Keynote presentation- Living in a microbial universe was by Prof.

Julian Davies. Prof Julian one of the greatest scientist believes that 21st century is a great time to be a microbiologist and we young scientist are very lucky.

i) New development presented at the conference

Delegates presented work on epidemiology and manifestations of newer pathogenic viruses such as severe fever with thrombocytopenia syndrome virus and inkoo virus, novel diagnostic methods for detection of pathogens, mechanisms of host-virus interaction, newer drugs and vaccines to control some of the emerging life threatening viruses like ebola, MERS, avian influenza. Separate sessions were organized on plant viruses, insect viruses, vaccines, metagenomics, oncolytic viruses, antivirals, and fungal viruses. Sessions on plant viruses, animal viruses, and viruses found in the sea were a inspiration that research on such viruses should be carried out in India and given equal importance like human viruses as such research will provide more insights in understanding the viral mechanisms.

ii) New development resulting from conference

IUMS was a major event that brought together scientists from around the world at a single gathering. Scientists from industry, academics and research institutes presented their latest research work in the area of pathogen discovery, disease diagnosis, emergence and surveillance of new viruses, treatment, and development of vaccines. Conference provided a great platform for updating knowledge on recent advances in virology research. The Congress of virology included 20 plenary lectures, 15 bridging lectures, 256 oral presentations and 315 poster presentations. Bridging sessions gave an opportunity to meet and interact with scientist working in bacteriology and mycology. Scientific sessions on Influenza virus provided an opportunity to meet experts in field of influenza research. Since our centre is part of influenza surveillance network and my research is also on influenza, this conference provided a platform to present my work and gain valuable feedback from experts in the field that will help in future research work. In countries like China and Japan influenza is of a serious concern and thus major developments are made in research. Some of the very interesting topics presented were predicting of future strains of influenza, detailed studies on influenza proteins and their role in pathogenicity of virus, development of vaccines that can induce cross-protective immunity.

iii) Name of the publication: Nil

8. Participant's contribution to the Conference

I had a poster presentation entitled "Molecular characterization of Influenza A(H1N1) pdm09 virus neuraminidase (NA) gene" on the 31 July, 2014. Detailed studies on variability of neuraminidase are sparse and such studies are important for designing drugs as well as vaccines. As an outcome of this study we were able to conduct detailed sequence analysis of 24 strains. Out of the 24 strains 3 strains were found to have mutations in the catalytic site. Catalytic sites are usually conserved among all influenza isolates and thus structural analysis was carried out. Structural analysis of the 3 mutated strains showed some significant changes in the orientation of the drug and residues which can contribute towards drug resistance. Further neuraminidase inhibition assay will be carried out to confirm the mutations found. The poster dragged attention of many researchers. Some very useful discussions were made and also valuable suggestions were given to improve the study. It also gave an opportunity to develop contacts with scientist working in the same field.