

❖ Name & Designation	: Dr. Anita Desai, Additional Professor.
❖ Address	: Dept. of Neurovirology, NIMHANS, Bangalore-560029.
❖ Name of the International Conference/ Seminar/Symposium/ Workshop	: 4 th World Congress of Virology 2014.
❖ Title of the abstract accepted	: Molecular mimicry between chikungunya virus manifestations.
❖ Date & Venue	: 6-8 th October 2014. San Antonio, USA.
❖ Money sanctioned	: ₹ 1,00,000/-
❖ Money reimbursed	: ₹ 84,977/-

Participation Report

Organisation of the Conference: Scientists and students from 32 countries both from research institutes and the industry were present at this congress organized by the OMICS group. Scientific session on Day 1 started with four key note lectures. Other lectures during the day were organized into various scientific tracks including general viral science, viral breakout prevention and measures (6 lectures), human viral diseases affecting Afro-Asian continents (3), HIV and other retroviral diseases (11), and organ specific cancers and tumor virology(6). There were 2 key note lectures on Day 2 followed by scientific tracks on therapeutic approaches and targets for viral infections (11) and viral hepatitis and viral immunology(6). A parallel poster session with 25 presentations was conducted. The scientific tracks on Day 3 included neurological infections with viral etiology, plant virology, recent advances in drug discovery (6) and animal viruses (7).

Academic highlights of the Conference : The research topics presented covered important current aspects in virology. Key note lectures by eminent scientists John Edward Connolly (Inst of Cellular and Molecular Biology, USA), Ralph Tripp (University of Georgia, USA), Neal Rote (Case Western University, USA), Sita Awasthi (University of Pennsylvania, USA), James Mahony (Mc Master university, Canada) and Julia Hillard (Georgia State University, USA) were stimulating and therefore an academically enriching experience.

New Developments presented at the Conference : Presentations included novel approaches and strategies mainly (1) to treat genital herpes infection by blocking virus mediated evasion of host immunity and (2) next generation vaccine strategies using RNA interference technology for influenza.

A lecture on cure for HIV using a novel CD4 based chimeric antigen receptor by Dr. Barna Dey (Laboratory of Viral Diseases, NIAID/NIH, USA) was very interesting. A functional cure for HIV has been attempted using chimeric antigen receptor modified T cells with extracellular moieties and the association between molecular binding affinity and target killing potency has been examined. They have found that cell killing is most effective when the effector/target affinity is sufficiently low to enable serial triggering.

Amanda Brown (John Hopkins University) discussed the role of inflammation in neuropathogenesis of HIV. Proinflammatory cytokine osteopontin is elevated in HIV associated neurocognitive disorders (HAND). As most of the cases she studied were infected with HIV-1 Clade B, it would be interesting to explore if similar findings are obtained with HIV-1 Clade C infected cases (most of the infections in India are caused by Clade C and the number of HAND is relatively low with Clade C infected individuals).

Neal Rote's talk on obligatory role of endogenous retroviruses in human pregnancy was equally stimulating. Approximately 8% of the human genome is of apparent retroviral origin. The placenta is one organ that expresses ERV proteins under physiologic conditions.

Julia Hilliard discussed on host pathogen relation in zoonotic B virus infections providing better understanding of why and how this neurovirulent simplex virus behaves differently in foreign hosts versus natural hosts and how innate defense re-direction could be used as a mechanism to control such deadly zoonotic viral infections.

Participant's contribution to the Congress : My presentation on 'Molecular mimicry between Chikungunya virus and host components: a possible mechanism for arthritic manifestations' at the congress on day 2 was received with interest. The abstract has been published in the *Journal of Antivirals and antiretrovirals* (October 2014, Volume 6, Issue 2, page 136 Photocopy enclosed)

There were questions from the audience regarding the reemergence of Chikungunya virus and public health programmes to contain the outbreaks in India. The significance of using C57BL/6 mice in the study was explained. Further discussions on this subject continued during the tea break that followed.

I acknowledge the travel support and assistance received from the Indian Council of Medical Research, New Delhi and my own Institute NIMHANS. It gave me a wonderful opportunity to present my work on an international platform and meet scientific fraternity in virology from across the world. Attending this congress provided me an opportunity to interact with scientists particularly Dr. Amanda Brown (HIV) and Dr. Sita Awasthi (HSV) to explore future collaborative research projects of mutual interests.