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Introduction

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The role of HHV-6 in disease is an underrepresented area of research that has recently gained new importance based on developments in several areas, including the recent resurgence of interest in viruses in the central nervous system (CNS). The 6th International Conference on HHV-6 & 7, held in Baltimore, MD in June 2008, provided a forum for original research pertaining to both basic and clinical aspects of HHV-6. An important goal of this meeting was to stimulate international collaboration and promote interdisciplinary interactions between basic scientists, epidemiologists, pathologists, neurologists, infectious disease specialists, young investigators, graduate students, commercial laboratories, non-profit foundations and clinical researchers in an effort to foster “bench to bedside” research and improve communications. Nine presentations from this meeting were selected by the conference organizers to be developed into full papers for the *Journal of Clinical Virology* and the articles are published as a Special Section in this issue. They highlight some important topics in emerging HHV-6 research.

From the work described in these papers and from other presentations at the meeting, we can highlight several areas of special interest. These include cutting edge studies of herpesvirus maturation and egress, plus new data regarding HHV-6 interaction with and manipulation of important cell regulatory pathways, and linkages of this manipulation to oligodendrocyte biology. HHV-6 can target a wide range of organs and can be chronically active, leading to diverse clinical manifestations. The meeting highlighted the role of these infections in disease, with a special emphasis on HHV-6 in CNS disease, including further evidence that this highly cell associated virus plays a far greater role in encephalitis, status epilepticus and transplant-related CNS disorders than was previously realized. Conference presentations from Yale University, New Haven, CT, and the National Institute of Neurological Disorders and Stroke (NINDS) Bethesda, MD, added support to the possibility that HHV-6B infection may serve as a trigger for mesial temporal lobe epilepsy by altering glutamate transport.

Other emerging areas of interest include the possible role of HHV-6 in various cancers, cardiomyopathy, drug induced hypersensitivity disorder (DRESS), and autoimmune disease. Further, chromosomally integrated HHV-6, which is integrated at the chromosomal

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telomeres and transmitted through the germ line, was shown to be biologically active; clinical consequences of this activity remain to be determined.

On the diagnostic front, steps are being taken for enhanced validation and standardization of HHV-6 testing. Exciting evidence was presented that useful variant-specific serology is now possible. Interesting results were obtained from studies of T cell responses in stem cell transplant recipients and from simply changing the denominator in how viral loads are expressed from per ml to per cell.

We hope this series will serve to inform and stimulate the readers of the *Journal of Clinical Virology*.