

Vol. 3(1) Summer 2003

HIV Molecular and Clinical NeuroScience Workshop

Avindra Nath, M.D., Baltimore, MD, USA

Welcome to the inaugural HIV Molecular and Clinical Workshop, to be held on September 2-4 at the Renaissance Harborplace Hotel in Baltimore. Maryland, USA. This workshop will precede the 5th International Symposium of NeuroVirology. It will provide a rich environment for basic and clinical scientists from around the world to focus on aspects of the molecular and clinical neuroscience relevant to HIV-associated neurologic dysfunc-

tion. There will be five scientific sessions, and each session will have a plenary speaker followed by a series of oral presentations. Three scientific sessions are devoted to advances made in the pathophysiology of HIV dementia and one to the treatment of neurological complications of HIV infection. One of the sessions is devoted to drug therapy of NeuroAIDS. The final scientific session on the impact of aging and other neurologic disorders on viral-associated CNS disease is shared with the symposium that follows. Highlights of the workshop include two sessions devoted to International NeuroAIDS with special emphasis on regions where antiretroviral therapy is not readily available. These sessions will demonstrate the regional differences and challenges faced in management of neurological manifestations of HIV infection in various geographical regions. The panel of discussants and presenters represents all the continents of the world. All attendees at the symposium are



Dr NeuroVirology Editorial Board: Walter Atwood, Ph.D., Fred Krebs, Ph.D. Steven Jacobson, Ph.D., Ehud Lavi, M.D.

5th International Symposium on NeuroVirology

Janice Clements, Ph.D., Baltimore, MD, USA

On behalf of the international organizing committee, I would like to welcome you to the 5th International Symposium on NeuroVirology, to be held September 4th through September 6th at the Renaissance Harborplace Hotel in Baltimore, Maryland, USA. This year's symposium will be held immediately following the HIV Molecular and Clinical NeuroScience Workshop and will share a conjoint session with the Workshop.

This symposium, like the preceding meetings, promises to be an exciting venue for promoting understanding, discovery, collabo-

ration, and friendship among investigators in the field of neurovirology. The 2003 Symposium will feature sessions on the relationships between aging and virus-associated central nervous system (CNS) disease, the impact of host genetics on neurovirology, the role of the innate immune response in controlling viral infections of the CNS, and the use of gene therapy and cellular approaches to target CNS infections. Another particularly timely session will focus on bioterrorism and emerging infections in the context of neurotropic viruses. We will again include an "Investigators-in-training" session, during which young investigators will have the opportunity to present their fresh approaches to problems relating to viral infections of the nervous system. And of course, the highlight of the Symposium will be the Reception and Gala Dinner on Friday evening, which will include the presentation of the 2003 Pioneer in NeuroVirology Award to a leader in the field of neurovirology.

This meeting, which will include eight plenary sessions, presentations by many young investiga-

continued on back page

BOARD OF DIRECTORS

ADRIANO AGUZZI, SWITZERLAND JOSEPH BERGER, USA **BRUCE BREW, AUSTRALIA PASQUALE FERRANTE, ITALY ROBERT S. FUJINAMI, USA** SUZANNE GARTNER, USA ALAN C. JACKSON, CANADA STEVEN JACOBSON, USA PETER KENNEDY, UK KAMEL KHALILI, USA DAVID KNIPE, USA **KRISTER KRISTENSSON, SWEDEN** EUGENE O. MAJOR, USA MITSUHIRO OSAME, JAPAN LYNN PULLIAM, USA VOLKER ter MEULEN, GERMANY DAVID VOLSKY, USA THOMAS WEBER, GERMANY BRIAN WIGDAHL, USA

IN THIS ISSUE

- Baltimore 2003 Overview
- Presidential Message
- NIH Meeting Support
- Featured Investigator-Howard Fox, M.D., Ph.D.
 JNV Highlights
- JINV IIIghtights
- Featured Investigator -Paola Cinque, M.D, Ph.D
- New ISNV Leadership

continued on back page

Message from the President

Brian Wigdahl, Ph.D., Philadelphia, PA, USA

The Society has now completed the fifth year of operation since its foundation in mid-1998. Based on our initial membership drive during 1998/99, the Founding Membership reached a total of 210 with members representing more than 20 countries. As a reminder, the complete list of Founding Members is available on the ISNV website (www.isnv.org). We are now completing our membership renewal drive for the year 2003. We are very pleased to report that membership for this year will surpass 300 with membership stemming from more than 30 countries worldwide. To continue our efforts to establish an international forum for the field of neurovirology, we would like to invite you to renew your ISNV membership, which can include a subscription to the Journal of NeuroVirology for the year 2004. The Journal and Society have proven to be a winning combination for research scientists and clinicians working toward the understanding, treatment, and prevention of viral diseases of the human nervous system. We want to emphasize the importance of your membership renewal as we head into the sixth year of society activities. We would also like to request that you continue your efforts to encourage other scientists and investigators in training to

become ISNV members. Your assistance in this regard is critical to the long-term success of the Society. The Journal of NeuroVirology



(JNV) continues to be the flagship of ISNV with an ever-expanding presence in the scientific community. During the first five years of the Society's activities many objectives have been realized that have placed the Society on a firm foundation. With the help of the ISNV Board of Directors and Society membership, the year 2003 has led to further accomplishments and will culminate in the 5th International Symposium for NeuroVirology in Baltimore, Maryland (September 4-6, 2003) organized by Dr. Janice Clements. This year's Symposium will be preceded by the HIV Molecular and Clinical NeuroScience Workshop. As in the past, ISNV MEMBERS received SPECIAL REGIS-**TRATION RATES** for the 5th International Symposium for NeuroVirology and the preceding Workshop. We are now in the midst of an exciting annual meeting that will include the presentation of the Pioneer in NeuroVirology Award for the year 2003. Past awardees include Richard Johnson. Volker ter Meulen, and Neal Nathanson.

NIH Institutes Fund Investigators from Developing Countries and Investigators-in-training to attend the 5th ISNV and HIV NeuroScience Workshop

Lynn Pulliam, Ph.D., San Francisco, CA, USA



The National Institute of Mental Health (NIMH) and National Institute of Neurological Disorders and Stroke (NINDS) provided support to the organizing committee of the 5th International Symposium on NeuroVirology and HIV Molecular and Clinical NeuroScience Workshop held September 2-6, 2003, in Baltimore, Maryland. Based on the quality of submitted abstracts and verification of training status, the International Organizing Committee was able to provide partial support for 15 trainees to attend the Symposium and present their research in the special Investigators-in-Training Session and

in the poster session workshops. As a reminder, ISNV plans to provide funding to defray the costs of a number of investigators-in-training to participate in the 6th International Symposium on NeuroVirology scheduled for 2004 in Sardinia, Italy. The National Institutes of Mental Health also provided funding to investigators from developing countries around the world to attend and present their research findings in two special sessions of the HIV Molecular and Clinical NeuroScience Workshop. These funds have been critical to the success of the Symposium and Workshop. The support provided by NIMH and NINDS has been critical with respect to expanding the number of junior and established investigators working in the areas of neurovirology and related disciplines.

ISNV Focus - Howard S. Fox, M.D., Ph.D., Scripps Research Institute

Ehud Lavi, M.D., Philadelphia, PA

Dr. Fox obtained his undergraduate training at Johns Hopkins University in Baltimore, Maryland and his Ph.D. (1985) and M.D. (1987) from the University of California in San Francisco. His Ph.D. research in the Department of Anatomy at UCSF resulted in a publication in Cell: "Molecular probes define different regions of the mouse t complex". From 1985 to 1986 he was a post-doctoral research fellow at the Cold Spring Harbor Laboratories in New York. He then stayed at UCSF to train in Pathology (1987 - 1990) and became Board Certified in Anatomic Pathology in 1991. In 1990 Dr. Fox joined the Department of Neuropharmacology at the Scripps Institute as Assistant Member, was promoted to Associate Professor in 1996, and received Tenure in 2000.

At the Scripps Institute Dr. Fox is directing a highly prolific laboratory interested in various aspects of neurovirology. He is the principal investigator of several NIH grants and is the Institute's Director of the NeuroAIDS Preclinical Studies Center. The activities of the lab are posted on the web site http://www.scripps.edu/np/fox. Dr. Fox's studies include the immunologic response to viral CNS infection, prevention and treatment modalities to CNS infection, and the molecular biol-

ogy of the blood brain barrier (BBB). The main experimental model in the lab is SIV-induced encephalopathy in rhesus monkeys as a model system for AIDS, but additional models studied in the lab include FIV encephalopathy and coronavirus infection in mice. Currently the lab is focusing on the relationship between peripheral viral load and CNS dysfunction, and the nature of CNS CTL response in SIV encephalopathy. The lab is also investigating the effect of early and late antiviral treatment on the immune response to SIV and on the development of CNS abnormalities and on established CNS lesions. Another branch of the lab is exploring the role of a particular protein, MBEC1, in the formation of tight endothelial cell junctions in the CNS and the development of the BBB.

Dr. Fox's working hypothesis is that viral infection of the brain, occurring via a "Trojan horse" mechanism of infected macrophages trafficking to the brain, initiates a sequence of events leading to neuronal dysfunction. He believes that the virus-induced pathological cascade does not irreversibly damage neurons, at least not early in the course of infection. Thus HIVinduced CNS damage may be amenable to timely therapy to prevent the chronic consequence of CNS dysfunction. Sequence analysis indicated that the serial passage of SIV in resulted microglia in an enrichment/selection of a viral guasispecies, which correlated with the neuroinvasiveness of the virus and neuropathology. Furthermore, the tropism of the viral strain was altered in that it was now capable of infecting brain microvascular endothelial cells, primary components of the BBB. Studying host factors in SIV infection, the lab found an acute peak elevation of monocyte chemotactic protein 1 (MCP-1) in the CSF (and greatly increased CSF to plasma ratios of MCP-1) following SIV inoculation. They have also demonstrated that a cellular immune response, consisting of CTL specifically reactive against SIV, is present in the cerebrospinal fluid as early as oneweek post-viral inoculation. In studies of the BBB the group found that brain capillary endothelial cells express MBEC1, a protein that is related to the Clostridium perfringens enterotoxin receptors.

Dr. Fox exemplifies a unique combination of talents in many areas of research including morphological, physiological, molecular and cellular aspects. This combination is especially powerful in solving questions related to viral pathogenesis.

Highlights from the Journal of NeuroVirology

Kamel Khalili, Ph.D., Philadelphia, PA, USA

The Journal of NeuroVirology (JNV) continues to provide a forum for the dissemination of research in the field and an important resource for the community. In 2004, our publisher, Taylor & Francis, will begin production of Volume 10 of JNV. We are pleased to announce several big changes in store for the journal this year. In celebration of our 10 year anniversary, a CD containing volumes 1 through 9 of the journal will be provided to each ISNV member subscriber. In addition, all ISNV members will receive a 25% discount on color page costs for any articles published in JNV. We also expect to launch a web-based abstract submission system that will be available for upcoming ISNV meetings. Perhaps our most exciting news, JNV will begin the move toward on-line manuscript submission and review, which will speed the review process as well as production time, allowing authors more timely publication of their manuscripts. We look forward to another great year.

Planning is now underway for the 6th International Symposium on NeuroVirology, which will be held in Sardinia, Italy. The meeting has tentatively been scheduled for October, 2004. Conference Chairs Antonina Dolei (Sassari, Italy), Pasquale Ferrante (Milan, Italy), and Kamel Khalili (Philadelphia, USA) will work with the ISNV President and Board of Directors to assemble the Organizing Committee to begin work on the Scientific Program. As was done for the 2003



Symposium in Baltimore, many of the speakers will be selected from submitted abstracts. Any suggestions for possible workshops or special sessions should be directed to isnv2004@jneurovirol.com.

ISNV Focus - Paola Cinque, M.D., Ph.D., San Raffaele University

Ehud Lavi, M.D., Philadelphia, PA

Dr. Paola Cinque was born and still resides with her husband and two children -Ivan and Martina - in the town of Sesto San Giovanni, near Milan, Italy. Dr. Cinque obtained her M.D. in 1987 from the University of Milan in Italy, submitting a thesis on the prevalence of anti-HIV-2 antibodies in patients with AIDS and related syndromes. From 1987 to 1991 Dr. Cinque did a fellowship at the Clinic of Infectious Diseases, Luigi Sacco Hospital in Milan, Italy and specialized in infectious diseases (1991) from the University of Milan. From 1991 to 1993 Dr. Cinque studied at the Swedish Institute for Infectious Disease Control at the Karolinska Institute in Stockholm Sweden, where she obtained her Ph.D. in 1995. Her Ph.D. thesis was on the diagnosis of central nervous system diseases in AIDS patients. In 1993 Dr. Cinque was appointed as faculty member of the Infectious Disease Clinic at San Raffaele University Hospital, and in 2000 Dr. Cinque was appointed as Head of the Clinical Neurovirology Research Group and Professor, at San Raffaele University in Milan, Italy.

During the past 10 years, Dr. Cinque's

research has focused on molecular studies of cerebrospinal fluid for diagnosis and clinical management of HIV-associated opportunistic infections of the central nervous system. In particular, together with her Swedish and Italian collaborators, she described the application of nucleic acid amplification techniques in patients with CNS infections caused by herpesviruses, primary CNS lymphoma or progressive multifocal leukoencephalopathy. For these studies she was awarded the Italian Award in memory of Prof. G.B. Rossi (1994) and the European Murex Award (1997). Her CSF studies are currently focusing on CSF analysis in patients with HIV infection of the CNS and PML, and on the effects induced by HAART on these diseases. She is the principal investigator of several grants related to these subjects and lectures frequently both in Italy and in the United States on clinical neuroAIDS. Dr. Cinque is part of the Italian consortium on neuroAIDS and serves on its steering committee. Dr. Cinque has published extensively on opportunistic infections of neuroAIDS. Her studies are always conducted on a large cohort of patients and use a thorough statistical analysis.

HIV Molecular and Clinical NeuroScience Workshop

continued from front page

encouraged to participate in the round table discussion.

We feel confident that the coordinated scheduling of the Workshop and Symposium will promote the free exchange of basic/clinical science concepts relevant to the neurovirology of HIV and other pathogens. Please join us in Baltimore for what promises to be a truly worthwhile exploration of HIV-associated neuropathogenesis.

5th International Symposium on NeuroVirology

continued from front page

tors, and poster presentations by researchers from around the world, will offer numerous opportunities to learn about concepts central to neurovirology, to renew longstanding collaborations and friendships, and to establish new ties with colleagues. We look forward to seeing you in Baltimore!

New Officers to Lead ISNV

Steve Jacobson, Ph.D., Bethesda, MD, USA

Dr. Brian Wigdahl and Steve Jacobson will complete their second three-year terms as President and Vice-President, respectively, of the International Society for NeuroVirology at the end of December 2003. Drs. Wigdahl and Jacobson served as the Society's Founding President and Vice-President and were appointed to second terms by the ISNV Board of Directors during the annual meeting in San Francisco in September of 2000. As a result of the general election of the Society membership in April of 2002, Drs. Peter G. E. Kennedy and Robert S. Fujinami have been elected as the next President and Vice-President of the Society. Their terms of office began on January 1, 2003 as Officers-Elect and, beginning January 1, 2004, they will each serve a three-year term of office. In addition, the Board of Directors has appointed Dr. Walter Atwood to serve a three year term as Secretary effective January 1, 2004. Dr. Atwood will replace Dr. Kennedy in this position. We would like to thank Drs. Wigdahl and Jacobson for their service to the Society, and we look forward to the new leadership provided by Drs. Kennedy and Fujinami.

REQUEST FOR NOMINATIONS

2004 PIONEER IN NEUROVIROLOGY AWARD

Awardee to be announced at the

6th International Symposium on NeuroVirology

to be held in Sardinia, Italy, October 2004

Nominations should be forwarded to: Peter G. E. Kennedy, M.D., Ph.D., President, International Society for NeuroVirology University of Glasgow Institute of Neurological Science Southern General Hospital Glasgow, Scotland G51 4TF, UNITED KINGDOM

For additional information and/or questions, Tel: 44-141-201-2474 • Fax: 44-141-201-2993 E-mail: P.G.Kennedy@clinmed.gla.ac.uk