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## Message from the President and ISNV Meetings Committee Chair


Peter G. E. Kennedy, M.D., Ph.D. • Glasgow, UK

Brian Wigdahl, Ph.D. • Philadelphia, PA


As President of the International Society for NeuroVirology (ISNV) and Chair of the ISNV Meetings Committee, we would like to welcome you to the 9th International Symposium on NeuroVirology here at the Eden Roc Hotel in beautiful Miami Beach. The Chairs (Mahendra Kumar and Micheline McCarthy) and Co-Chairs (Steve Jacobson, Ehud Lavi, Eugene Major, and David Volsky), particularly Mahendra and Micheline, have all played important parts in the preparation for what promises to be a great Symposium.

We hope you enjoy the eight scientific sessions, the Special Lectures, and the newly formatted afternoon parallel Workshops. This year we have a record number of Investigators-in-Training presentations and an intense poster session that promises to be brimming with exciting experimental findings to push the frontiers of neurovirology forward. We actually now have several of our early Trainees presenting talks as faculty members at various Institutions. It is great to see that a growing number of our trainees are remaining in or returning to this exciting field. And yes, we will celebrate the presentation of the 2009 Pioneer in NeuroVirology Award.

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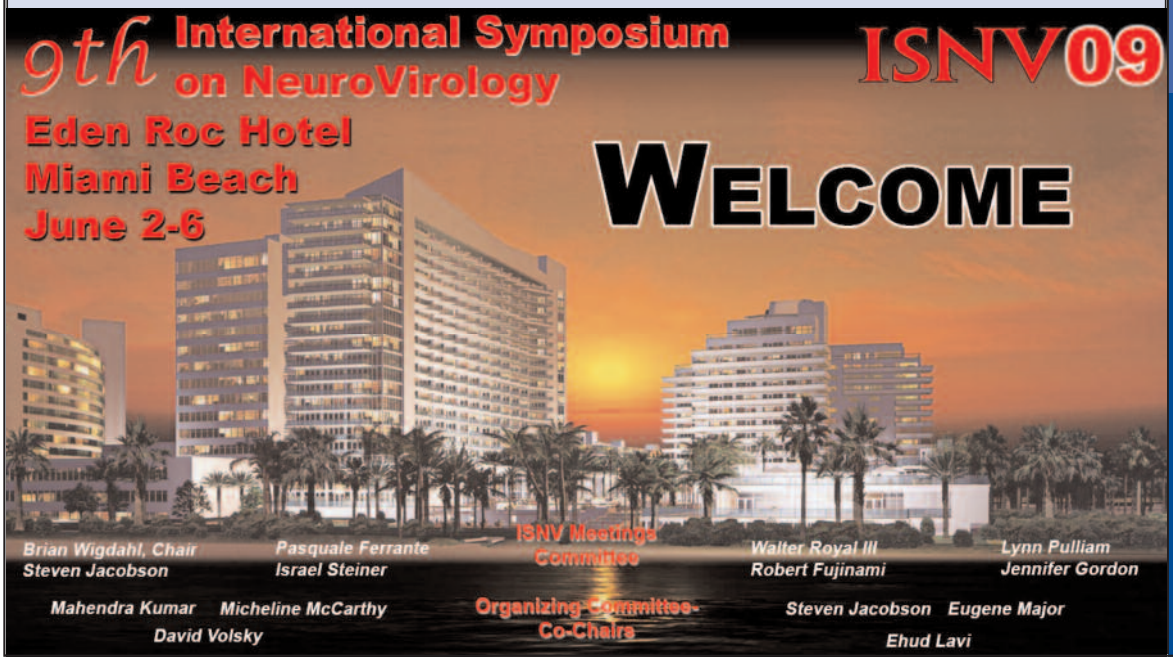




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## ISNV Highlight - Dr. Micheline McCarthy's Lab

Dianne Langford, Ph.D. • Philadelphia, PA

Dr. Micheline McCarthy has joint appointments with the Department of Neurology, at the University of Miami and in the Neurology Service at the Miami VA Medical Center. Dr. McCarthy spends about half of her time in the laboratory where she and her research team [pictured left to right: Irving Vidaurre (senior research associate), Micheline, and Ricardo Martinez (research technician)] address how chronic viral infection affects neurogenesis and neuronal survival. Specifically, MicheIine believes that studying chronic viral infection which is a likely trigger for chronic inflammation, will teach us about the pathogenic mechanisms at play in neurodegenerative diseases and the long-term consequences of brain injury. After receiving a PhD in Biochemistry at Harvard in 1977, Micheline joined Johns Hopkins University for postdoctoral training, and medical school (1985). In 1992, Dr. McCarthy joined the Faculty of Neurology at the University of Miami.

In addition to research, Dr. McCarthy attends to patients at the Miami VAMC and teaches medical students and neurology residents. She also serves as the Associate Chief of Neurology and as the Director of the Multiple Sclerosis Center of Excellence at the Miami VA where her clinical sub-specialty is neuroimmunology. Over the years the McCarthy lab's interest has gravitated from studies involving viral-viral interactions towards how neurotropic viruses could affect neural progenitor cells. Studies from her lab show that by depressing neuronal microtubule and neurofilament protein expression, HIV-1 can compromise the potential for post-mitotic neuronal dendrite and axon development (McCarthy et al., 2006 J. NeuroVirology). Another area of focus in Micheline's lab in collaboration with Dr. Carol Petito, investigates how cytotoxic T-cells and infiltrating lymphocytes could mediate neuronal injury during HIV-1 infection. These studies illustrate the presence of cytotoxic T cells in the brains of HIVE patients. Consequently, CD8+ T cells and cytotoxic T cells could mediate brain injury in HIVE and may represent an important biomarker for productive brain infection by HIV-1 (Petito et al., 2006 J. NeuroVirology).

In preparing to co-host the ISNV Conference in 2009, Micheline describes South Florida's cultural diversity as "paralleling the diverse and expanding interests of the ISNV and the upcoming meeting." She adds, "We hope that the white sands and blue waters of South Florida's beaches will provide an inviting backdrop for meeting and re-connecting with colleagues and friends."

## ISNV Highlight - Georgette Kanmogne, Ph.D.

Dianne Langford, Ph.D. • Philadelphia, PA

Dr. Georgette Kanmogne received her PhD in Molecular Biology in 1996 from the University of Bristol, England. After completing post-doctoral training at the University of Cambridge in England and the University of Oklahoma Health Sciences Center, Georgette received a Master's of Public Health from the Oklahoma Health Sciences Center in 2002. Dr. Kanmogne joined the Department of Pharmacology and Experimental Neuroscience as an Assistant Professor in 2005 where she focuses on HIV neuropathogenesis and the vascular biology of HIV infection. Specifically, she investigates HIV interactions with the blood-brain barrier (BBB), and how virus-tissue interactions affect BBB immune responses in neuroAIDS. Her work has shown that HIV-1 gp120 proteins alter the biology and function of the brain endothelium (Kanmogne et al., J Cereb Blood Flow Metab, 2007). Important findings from Dr. Kanmogne's lab include studies showing that the proximity of infected macrophages to the brain endothelium induce an autocrine and paracrine inflammatory cascade which alter the structure, function and barrier properties of the BBB, and facilitates leukocyte transendothelial migration via the JAK/STAT pathways (Chaudhuri et al., J Cereb Blood Flow Metab, 2008; Chaudhuri et al., Blood 2008). Understanding the mechanisms underlying BBB dysregulations during HIV infection will contribute to the development of strategies in preventing BBB compromise in neuroAIDS, and preventing the infiltration of virus and infected cells into the brain.

Georgette's interest in endothelial cell dysfunction during HIV-1 infection also encompasses lung injury/virus-associated alveolitis *in vitro* and *in vivo* in animal models of human disease where her studies suggest that gp120 may induce lung endothelial cell injury and could contribute to the development of HIV-associated pulmonary hypertension (Kanmogne et al., Biochem Biophys Res Commun, 2005).

Recently, Dr. Kanmogne has expanded her research to the international arena. With funding from the NIMH, Dr. Kanmogne and her collaborators are currently investigating the neurological impact of HIV in infected individuals in Cameroon, West Africa, in correlation with the high viral genetic diversity observed in that area.

Dr. Kanmogne has over 20 peer-reviewed publications and has been honored with a number of achievement awards, including the 2006 Nicholas Badami Fellowship Award for Excellence in HIV/AIDS research. In addition, Dr. Kanmogne has a strong commitment to teaching, mentoring students and working with the community, especially minority communities that are most affected by diseases such as HIV/AIDS.

## ISNV Highlight - Edmundo Kraiselburd, Ph.D.

Dianne Langford, Ph.D. • Philadelphia, PA

Dr. Edmundo Kraiselburd attended the University of Buenos Aires where he received a Master's degree in Physics. He then received a second Master's in Molecular Biology and a PhD in Virology, both from State University of New York at Buffalo. After completing post-doctoral training at Roche Institute of Molecular Biology and Hershey Medical School, he completed an EMBO Fellowship at Service Physiologie des Virus in Villejuif, France. Following a year as Research Associate at Yale University School of Medicine, Dr. Kraiselburd accepted an Assistant Professorship in 1977 with the University of Puerto Rico School of Medicine. Recently, Dr. Kraiselburd was featured in SCIENCE Magazine (Science 313: 476, 2006) and was described by Science writer Jon Cohen as, "helping to build an internationally recognized HIV/AIDS research community."

Edmundo's research focuses in large part on the development of HIV-vaccines using the Rhesus monkey model. With the support of NIAID, his laboratory isolated and characterized replication-defective SIV particles that were used to ascertain protection in monkeys against pathogenic SIV challenge. Priming with SIV DNA and a rhesus IL-12 expression vector followed by boosting with defective SIV particles, resulted in significantly reduced viral loads in vaccinated animals compared to controls after pathogenic virus challenge (Kraiselburd et al, 1997 Cell Mol Biol; Ellenberger et al., 2006 Virology; Aidoo et al., 2007 Vaccine). Taken together, these studies suggest that a T-cell based vaccine may provide some protection from infection in the multiple-exposure SHIV model of HIV. Another recent study by Kraiselburd's group described transcriptional and cytokine expression profiles in monkeys infected with Dengue virus to show activation of interferon-stimulated genes but not of cytokine genes (Sariol et al., 2007 Clinical Vaccine Development).

Since joining the University of Puerto Rico (UPR) School of Medicine over 31 years ago, Dr. Edmundo Kraiselburd has organized international research workshops under the sponsorship of WHO (PAHO) and NIH to train several Latin American scientists in virus research. He received the Glaxo Wellcome Investigator Award (1997) and has contributed to the establishment of one of the most impressive and well-funded primate centers in the world. Dr. Kraiselburd is the director of the Unit of Comparative Medicine at UPR that works to integrate various research resources using animal models to facilitate local, national and international collaborative efforts.

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## ISNV Highlight - Mahendra Kumar, Ph.D.

Dianne Langford, Ph.D. • Philadelphia, PA

Mahendra Kumar, M.Sc; Ph.D., is Professor of Psychiatry and Behavioral Sciences, at the Miller School of Medicine, University of Miami, Miami, Florida where he serves as director of Molecular Endocrinology and Neurotransmitter Laboratories. Professor Kumar received his doctorate in India and completed post-doctoral training at the University of California and the University of Pittsburgh. After returning to India, Mahendra served on the faculty at the Post-Graduate Institute of Medical Education and Research at Chandigarh. Dr. Kumar returned to the U.S. and joined the faculty of Albert Einstein College of Medicine before moving to Miami where he initiated a multi-disciplinary HIV research laboratory. Dr. Kumar is a pioneer in investigating autonomic activity in HIV infection, particularly catecholamine responses to alpha-adrenergic challenges. He also investigates endocrine responses to various pharmacological challenges. A significant amount of his research investigates neurocognitive functions in HIV infection in India where the infecting strain is mostly clade C. The first American investigator to receive an R01 by NINDS to study HIV in India, Dr. Kumar encouraged NIMH to sponsor an HIV-related Symposium at the Defense Research and Development Organization of the Government of India. This symposium facilitated HIV research for U.S. Investigators in India. Dr. Kumar continues to secure NIH funds to investigate neuroAIDS, host genetics and neurological complications in India.

Studies conducted by Dr. Kumar in South India have resulted in a number of important findings related to HIV-1 clade C. One such study from Kumar's group (Gupta et al., 2007 J. Neurovirology) highlights the value of neuropsychological testing in regions of the world most affected by HIV. Dr. Kumar explains, "It has been suggested that clade C in India may not lead to neurocognitive deficits since the structure of HIV Tat in C is different from Tat in clade B. This could be true if Tat's interaction in the brain is the only mechanism that leads to neuronal loss." To test this assumption, Dr. Kumar and colleagues studied 119 antiretroviral therapy-naïve adults infected with clade C in Bangalore, South India using validated and well-established neuropsychological batteries to assess all seven of the domains of memory. Studies from Dr. Kumar's group showed that almost 60% of HIV infected individuals had mild to moderate cognitive deficits.

Dr. Kumar is a member of various learned societies, NIH study sections and has been on the advisory board of numerous graduate students. Looking forward to co-hosting the 2009 ISNV Conference, Dr. Kumar describes Miami as a "gateway for scientific research and trade. Apart from the outstanding scientific programs, Miami is sure to provide outlets for families accompanying scientists to the meeting."

## Message from the President and ISNV Meetings Committee Chair (continued)

There are now a number of named Lectureships that are starting to develop their own histories and several new ones are getting off the ground. I hope you visit the new and continually changing ISNV website for the on-line 9th Symposium Agenda and Brochure. It has been a busy year at the ISNV with many exciting changes. The new President- and Vice President-Elect will be announced at the 9th Symposium as we head toward the end of Dr. Kennedy's two three-year terms as the second ISNV President.

The environment within the Eden Roc Hotel should greatly facilitate our interactions and we look forward to great scientific discussions and some fun. We want to encourage all speakers to stay within their allotted presentation time. This will leave time for discussion that is often as informative as the talks. It also gives other who are not presenting time to participate in the scientific dialog. Please be courteous to others and help us stay on time.

We want to remind you that within the Small 9th Symposium Program Booklet are forms to complete to provide us with feedback concerning the symposium. We hope you take the time to provide us with your thoughts, suggestions, and constructive critiques. This is an important component to help us improve the Symposium Series and to help in the submission of our next NIH R13 meeting grant.

We want to close by thanking all of our sponsors, including the National Institute of Mental Health, National Institute on Alcohol Abuse and Alcoholism, National Institute on Drug Abuse, National Institute of Neurological Disorders and Stroke, the Department of Microbiology and Immunology and the Institute for Molecular Medicine and Infectious Disease at Drexel University College of Medicine, the Department of Neuroscience at Temple University School of Medicine, Sbarro Institute for Cancer Research and Molecular Medicine, and the Journal of NeuroVirology.

International ISNV Society for NeuroVirology

# 10th International Symposium on NeuroVirology

# Fall 2010

## European Destination to be announced

## ISNV Highlight - Edmundo Kraiselburd, Ph.D. (continued)

Under the umbrella of the Unit of Comparative Medicine, the Caribbean Primate Research Center (CPRC) serves the national and international research community by providing Indian-origin rhesus macaques with known backgrounds and a common genetic pool for use in studies of diseases that affect humans. Dr. Kraiselburd has served as the Director of the CPRC since 2001 describes the experience thus far as, "Very challenging but extremely rewarding. We have an excellent group of people who are dedicated researchers and great team players. This makes the difference." Also under the direction of Dr. Kraiselburd, the NINDS-funded NeuroAIDS program based at UPR focuses on health disparities in minority populations suffering from HIV and HIV-associated nervous system disorders. In this context, studies by Dr. Kraiselburd and colleagues have validated a HIV dementia scale whereby Spanish-speaking Hispanic women suffering from HIV may be evaluated for neuropsychological changes related to infection (Wojna et al., AIDS Patient Care STDS, 2007). Moreover, they report a 77% prevalence of HIV–associated cognitive impairment in a group of 49 HIV-infected Hispanic women, 29% of whom had HIV-associated dementia (Wojna et al., J. NeuroVirology, 2006). As a long-time supporter of the ISNV, Dr. Kraiselburd is commended for his dedication to the development of HIV vaccines by improving the non-human primate model of disease.

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