Proceedings

4th International Symposium on NeuroVirology
10th International Conference on Neuroscience of HIV Infection

The conjoint meeting of the 4th International Symposium on NeuroVirology and the 10th International Conference on Neuroscience of HIV Infection (19–22 June 2002, Düsseldorf, Germany) was an enormous success, drawing participants from over 21 countries. The meeting consisted of 10 plenary sessions, 5 sessions each in the basic and clinical sciences, as well as workshops and ongoing poster sessions. The plenary sessions covered a wide variety of topics, including epidemiology, antiretroviral therapeutics, diagnostic imaging, animal models for acquired immunodeficiency syndrome (AIDS) research, molecular biology of human immunodeficiency virus (HIV)-induced CNS disease, neuroimmunology, neuropathogenesis, viral vectors, viral latency, the role of the blood-brain barrier, and the neuropsychological and neuropharmacological issues associated with NeuroAIDS. The workshops focused on HIV-1 associated excitotoxicity, expression of chemokines, and mechanisms of neuronal injury, including apoptosis. The program also included a workshop on Borna virus.

The support provided by the National Institute of Mental Health (NIMH) and National Institute of Neurological Disorders and Stroke (NINDS) for the conjoint meeting as well as the publication of this supplement is particularly relevant and timely because the NeuroVirology and NeuroAIDS research areas funded by the two institutes were strongly represented at the conference. Below is a general description of research in these areas that these two institutes currently support. It is hoped that this information will be beneficial to members of the NeuroAIDS and NeuroVirology scientific communities and will help foster continued growth and development of these fields.

NIMH and NINDS currently fund research on the etiology and pathogenesis of HIV-associated neurological, neurocognitive, and neurobehavioral disorders, neuroimaging, and design of therapeutic strategies aimed at ameliorating central nervous system (CNS) complications of HIV infection. These two institutes’ diverse portfolios of grants build upon the basic-science foundations of virology, immunology, and neurobiology to address complex questions relating to the mechanisms of HIV-1 neuropathogenesis. NIMH and NINDS also support research programs on other neurotropic viruses, including emerging new viruses that infect the nervous system.

NIMH and NINDS jointly support programs that provide resources for NeuroAIDS research. The National NeuroAIDS Tissue Consortium (NNTC) is such a resource that banks CNS tissue samples from HIV-infected patients for whom comprehensive neuromedical and neuropsychiatric data were gathered antemortem. Tissue samples (brain, cerebrospinal fluid, peripheral nerves, and blood) are available to qualified investigators for research projects in NeuroAIDS and other areas.

Two novel NIMH and NINDS initiatives are currently underway. One relates to using genetic approaches to study mechanisms of HIV-induced disease of the nervous system. Areas of interest include mechanisms underlying specific, cell-type compartmentalization of virus in the CNS, diversity of viral strains and their functional consequences, and evolution of drug resistance. The Viral Genetics initiative is particularly timely given the current interest in the potential role of latent CNS reservoirs in reseeding peripheral compartments with drug-resistant strains of virus.

A second joint NIMH and NINDS initiative currently will assess the long-term effects of highly active antiretroviral therapy (HAART) on HIV-induced nervous system disease. This multisite project will involve cross-sectional and longitudinal studies that will evaluate the incidence and prevalence of HIV-associated dementia, minor cognitive motor disorders, and neuropsychological impairments, including depression and anxiety. The efforts under this initiative will also include neuroimaging studies, evaluation of drug interactions, and assessments of metabolic (lipodystrophy) and toxic effects (peripheral neuropathy) of HAART.
The NIMH and NINDS continue to develop timely and innovative research initiatives in NeuroAIDS and NeuroVirology, and recognize the importance of supporting meritorious research in these areas. In supporting the publication of this supplement, NIMH and NINDS strive to preserve and disseminate critical information presented at the recent conjoint conference held in Düsseldorf, Germany.

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