

International Meeting on Borreliosis, Prague, Czech Republic

Approximately 150 participants from 10 countries gathered in Prague, the Czech Republic, August 27-29, 1997, to discuss research topics related to the theme of the meeting, "Lyme Borreliosis—Basic Science and Clinical Approaches." The meeting was organized by the National Institute of Public Health (Centre of Epidemiology and Microbiology); the World Health Organization Collaborating Center for Reference and Research on Borreliosis; the Second School of Medicine, Charles University (Prague); and the Czech Medical Association J.E. Purkyně. Meeting sessions focused on topics including epidemiology, clinical treatment, dermatology, diagnosis and treatment, neurology, and laboratory diagnosis.

The session on epidemiology presented surveillance data on the incidence of Lyme borreliosis (LB) in the Czech Republic (incidence rates were 61.8/100,000 in 1995 and 41.2/100,000 in 1996) and in Slovakia, Austria, and Slovenia. Data underscored the high risk for transmission of LB in central and eastern Europe. The results of vaccine trials using the recombinant outer surface protein (Osp)A antigen of *Borrelia burgdorferi* were also presented; more detailed studies are needed to examine intraspecies variability of OspA antigens in Europe.

The session on clinical approaches and treatment reviewed research conducted in the United States and discussed the diagnostic importance of organism-specific biologic markers, e.g., *Borrelia*-specific antigens or DNA, as well as pleocytosis in cerebrospinal or synovial fluid. Experience with the diagnosis and treatment of LB in the hyperendemic-disease regions of west Bohemia underscored the importance of accurate diagnosis in avoiding overtreatment.

The use of nonhuman primates as models for studying neuroborreliosis was examined in the session on neurology. Problems related to the diagnosis and treatment of chronic disease, and their economic consequences, were identified. Several methods to assist clinicians in making a correct diagnosis were presented and discussed. The persistence of *B. burgdorferi* DNA in patients with Lyme arthritis was considered in the rheumatology session. Ultrastructural evidence for the intracellular location of *B. burgdorferi* in synovium also was presented.

The session on laboratory diagnosis focused on the genomic sequence of the linear chromosome of *B. burgdorferi* (B31 strain) and the crystal structure of OspA; both apply to the laboratory diagnosis of LB. Other studies affirmed the importance of standardizing diagnostic methods to ensure reproducibility and uniformity of the results from different laboratories. The influence of certain in vivo-expressed antigens (virulence antigens) on invasiveness and the ability of *B. burgdorferi* to adapt to the host environment were noted. Other topics were the sensitivity and reproducibility of polymerase chain reaction and the importance of the primers selected for the assay.

The studies presented in the poster session addressed a wide array of themes: among them, epidemiology and population awareness, reactivity of *B. burgdorferi* antigens in immunoblot procedures when specimens derived from humans or animals are used, and incidence of ticks and their association with disease in different regions.

The importance of apoptosis in the morphology of LB, the role of Langerhans cells in the skin reactions, and the role of integrin CR3 in the interaction of *B. burgdorferi* with host cells were discussed. The sensitivity and the selection of the primers used for polymerase chain reaction to detect *B. burgdorferi* in ticks were considered. Aspects of vector biology and ecology were investigated (e.g., habitats, the tick as LB's major vector, vector capacity). Other diseases transmitted by *Ixodes ricinus* ticks in Europe (e.g., tick-borne encephalitis, babesiosis, ehrlichiosis) as well as human ehrlichiosis in Europe were reviewed.

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Workshop on Climate Change and Vector-Borne and Other Infectious Diseases

Climate changes may affect human health through a myriad of pathways; of particular interest are pathways affecting the geographic ranges and incidence of vector- and water-borne diseases. As society chooses how to deal with projections of long-term climate change, decisions must be based on scientific knowledge. A 2-day

workshop¹ was convened in September 1997 to discuss what is known about the relationship between projected climate changes and the incidence of water-borne diseases (e.g., cholera) and vector-borne diseases, including those typically considered tropical (malaria, dengue fever, yellow fever, and schistosomiasis), plus subtropical or temperate-zone diseases whose vectors are likely to be affected by projected climate changes.

The workshop participants discussed the systems involved in potential climate changes, from the global ocean-atmosphere-landmass system that drives climate to the regional ecologic and human socioeconomic systems where disease dynamics occur. These systems are extremely complex, as are the interactions among them, which underscores the need for more research before accurate projections can be made. Major research gaps were identified, and an agenda was framed for a sound scientific basis for public policy debates and decisions. The proposed agenda included the following items: climate modeling; ecosystem and habitat dynamics; disease surveillance; technologies for disease prevention and mitigation; disease transmission dynamics; data sets for empirical studies; integrated assessments; and detecting, understanding, and responding to unexpected events. Further discussion and implementation of this research agenda is encouraged. A summary of the workshop is available from the Electric Power Research Institute, TR-109516, EPRI Distribution Center, 207 Coggins Drive, P.O. Box 23205, Pleasant Hill, CA 94523; Telephone: 510-934-4212.

¹The workshop was commissioned by the Electric Power Research Institute, with additional sponsorship from the Department of Energy, the National Institute of Allergy and Infectious Disease, the National Institute of Environmental Health Sciences, and the National Aeronautics and Space Administration. The workshop was organized and conducted by the Washington Advisory Group. The 28 participants included representatives from agencies and institutions that conduct or fund research and experts in the fields of climatology and global climate modeling, public health, and the biology and ecology of vectors, pathogens, and the ecosystems they inhabit.

The Fourth International Conference on HFRS and Hantaviruses

Atlanta, Georgia, USA, March 5–7, 1998

The Centers for Disease Control and Prevention and other cosponsors will host the Fourth International Conference on HFRS and Hantaviruses to facilitate the exchange of scientific information in the following areas: 1) clinical aspects, 2) laboratory diagnostics, 3) pathogenesis and immune response, 4) hantavirus ecology, 5) hantavirus epidemiology, 6) molecular biology and cell interactions, 7) health education and prevention, and 8) antiviral and vaccine development. The meeting will offer plenary sessions with invited speakers, as well as oral and poster sessions based on accepted abstracts.

For further information, contact Amy Corneli, Centers for Disease Control and Prevention, 1600 Clifton Road, MS A26, Atlanta, GA 30333, USA; fax: 404-639-1509; e-mail: akc8@cdc.gov; URL: <http://www.cdc.gov/ncidod/diseases/hanta/hantconf.htm>.



Third International Congress on Tropical Neurology

November 30–December 2, 1998

Organized by the Groupe Francophone d'Etude et de Recherche en Neurologie Tropicale, the Third International Congress on Tropical Neurology will convene in Fort de France, Martinique, from November 30 to December 2, 1998. The four main themes of the congress are central nervous system inflammatory, neurodegenerative, epileptic, and cerebrovascular disorders in tropical environments; however, presentations on other themes are welcome.

A symposium on epilepsy in tropical zones will be held during the congress.

For additional information, contact Professor M. Dumas (phone: 33-5-55-43-58-20, fax: 33-5-55-43-58-21) or Professor J.C. Vernant (phone: 33-5-96-55-22-61, fax: 33-5-96-75-45-90).