

ISNV

International Society for NeuroVirology

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2015 Neurological Infections Lectureship Diane Griffin

Authored by Amanda Brown



The ISNV is honored to have Dr. Diane E. Griffin present the 2015 Neurological Infections Lectureship at the 13th International Symposium on NeuroVirology. Dr. Griffin completed her MD degree, internship, and residency at Stanford University where she also conducted research on immunoglobulins and earned a PhD degree. She realized that research was her true passion and subsequently pursued postdoctoral studies with the renowned neurologist Dr. Richard T. Johnson, who was joining the first Department of Neurology at Johns Hopkins University School of Medicine. It was during this time that Dr. Griffin became very interested in viral infections of the central nervous system.

The alphavirus Sindbis, which is transmitted by mosquitoes, causes severe encephalitis in mice and became, for Dr. Griffin, a focal point of investigation. Over the course of her illustrious career, she identified and generated novel insights that have led to a better understanding of the viral and host cell determinants governing the development of encephalitis, resolution of the infection, and the development of immunity. Specifically, Dr. Griffin showed that while Sindbis virus causes neuronal

apoptosis in young animals, the virus persists in mature neurons and decays in distinct phases that are controlled largely by antibodies, which are able to clear virally infected cells through a non-cytolytic mechanism that is not yet fully understood. Additional clearance mechanisms include T-cells that produce interferon gamma.

Measles virus, which infects monocytes, lymphocytes, epithelial, and endothelial cells and can also cause neurological complications, is the second pathogen that caught Dr. Griffin's scientific curiosity. Humans are the only known reservoir of measles virus and of particular interest to Dr. Griffin is its ability to cause profound immunosuppression, autoimmune encephalomyelitis, and the late disease subacute sclerosing panencephalitis (SSPE). Years ago she initiated studies with collaborators in Peru and more recently at the University Teaching Hospital in Lusaka, Zambia to better understand measles pathogenesis and development of protective immunity. Infants are immunized against measles at 9-15 months of age, leaving a window of vulnerability, particularly for those living in

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highly populated areas where vaccine coverage is low. Such infants, if infected, can develop long-term complications and even die. Dr. Griffin has been working with a rhesus macaque model for studies of pathogenesis and to develop a vaccine that could be safely administered to infants at an earlier age.

Dr. Griffin is the University Distinguished Service Professor of Molecular Microbiology and Immunology, Medicine and Neurology at the Johns Hopkins University Schools of Public Health and Medicine and Vice President of the National Academy of Sciences. She served as the Alfred and Jill Sommer Chair for the W. Harry Feinstone Department of Molecular Microbiology and Immunology, Johns Hopkins Bloomberg School of Public Health, from 1994-2014 and as the founding Director of the Center for Malaria Research from 2001-2007.

Dr. Griffin's valuable contributions to our understanding of the molecular neuropathogenic and immunological mechanisms involved in Sindbis and measles virus infections have been recognized through numerous honors and awards, including the election as President of the American Society for Microbiology and President of the American Society for Virology. She has been elected to the US National Academy of Sciences, American Academy of Microbiology, the Institute of Medicine, and the Maryland Women's Hall of Fame, and has received the ISNV Pioneer Award, Rudolf Virchow Medal, University of Wurzburg, the Wallace Sterling Lifetime Alumni Achievement Award, Stanford University, and the Gilman Scholar from Johns Hopkins University.

Dr. Griffin has published over 300 articles and reviews, edited 7 books, taught microbiology and immunology courses, mentored countless trainees, served as guest lecturer, promoted science, informed the general public through volunteer work, and with her husband Jack raised two children. Her professional and personal accomplishments serve as a truly inspirational example to us all.

The Neurological Infections Lectureship

The Neurological Infections Lectureship features prominent investigators who study viral and non-viral pathogens that infect and damage the human peripheral and central nervous systems. Established at the 7th International Symposium on NeuroVirology held in Philadelphia, PA, USA, this will be the seventh Neurological Infections Lectureship. The International Society for NeuroVirology will accept nominations for the 14th International Symposium on NeuroVirology for the Fall of 2016. Please send all inquiries and nominations to mail@isnv.org.



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