

# ISNV

*International Society for NeuroVirology*

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## 2015 Paradigm Builder Lectureship Steven Douglas

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**D**r. Steven D. Douglas, Professor of Pediatrics at the Perelman School of Medicine, University of Pennsylvania, and Chief of the Section of Immunology, Children's Hospital of Philadelphia, is the recipient of the 2015 ISNV Paradigm Builder Lectureship award. Dr. Douglas is recognized for his seminal and continuous contributions to the field of leukocyte biology, with emphasis on monocyte/macrophage biology in HIV infection. He was the first to establish and characterize human blood lymphocyte transformation response to pokeweed mitogen, as well as characterization of the morphological and functional aspects of leukocyte subsets in health and in several disease states. In the late 70s, Dr. Douglas established classical culture methods for the isolation, cultivation, and differentiation of blood monocytes into macrophages. These methods have been essential not only for progress in Dr. Douglas's laboratory, but have also enabled advances by investigators worldwide. Moreover, Dr. Douglas was one of the first investigators to discover the ability of HIV-1 to infect monocyte-derived macrophages. His research

has identified a number of receptors on monocytes and macrophages involved in innate immune function, including the action of complement, and opsonization via immunoglobulin receptors. Over the past 20 years, his work has investigated the function of the neurokinin 1 receptor (NK1R), and the action of its physiologic ligand, Substance P (SP). Dr. Douglas was the first to demonstrate the presence of SP on human monocyte-macrophages, allowing further investigation into the NK1R/SP axis in the brain in the setting of HIV infection. His studies demonstrated NK1R/SP's role in the neuropathogenesis of AIDS, and further identified this pathway as a target for therapeutic intervention. Dr. Douglas's research has intersected the disciplines of psychiatry, immunology, neurology, and AIDS, utilizing the antiemetic drug Aprepitant (an NK1R/SP antagonist) as a potential therapeutic agent for HIV infection in in vitro and ex vivo human cell studies, animal model studies, and recently in human clinical trials in HIV-infected adults.

Dr. Douglas has been at the forefront of research in immunology where he has been continuously funded for over 40 years. He has been supported during this time by grants from several NIH institutes, including NIMH, NIAID, NICHD

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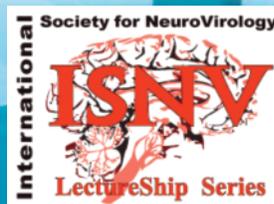
and NIAAA, under various mechanisms including individual investigator (R01 and R21), as well as programmatic (U01 and P01) grants. Most recently, he conducted a clinical trial in HIV-infected adults demonstrating the effect of Aprepitant in reducing levels of the inflammatory markers SP and soluble CD163, both of which are associated with CNS injury. Supported by NIMH, he is currently PI of a U01 and a multiple principal investigator (MPI) of a U19 grant titled "Novel NeuroAIDS Therapies: Integrated Preclinical/Clinical Program (IPCP)." In collaboration with colleagues at Temple University, he is further investigating the role of the NK1R/SP axis in macrophage polarization and other potential targets for therapy.

Dr. Douglas received his M.D. from Cornell University Medical College in 1963. He completed internships and residencies at Mount Sinai Hospital, New York, the National Institute of Arthritis and Metabolic Disease (Laboratory of Experimental Pathology) at NIH, and was an Immunology-Hematology post-doctoral trainee at the University of California San Francisco in the Department of Medicine. He has held faculty appointments at Mount Sinai School of Medicine (Assistant and Associate Professor) and the University of Minnesota Medical School (Professor). For the last 35 years, he has served as Professor of Pediatrics at the Perelman School of Medicine, University of Pennsylvania, where, in addition to his own pioneering research, he has established Core Laboratories at Children's Hospital and the University of Pennsylvania that have proven vital to studies conducted by the HIV/AIDS Clinical Trials Networks for adults, adolescents and children. He has served as Chair of the Transfusion Committee at Children's Hospital of Philadelphia and is Director of the Philadelphia Pediatric AIDS Clinical Trials Unit, Director of the Clinical Immunology Laboratory, and a Core leader and leadership member of the Penn Mental Health AIDS Research Center (PMHARC). He is a member of the Scientific Oversight Leadership Committee for the International Maternal Pediatric Adolescent AIDS Clinical Trials (IMPAACT), and has served on an External Review Committee for the NIH Office of AIDS Research. He has received numerous awards for his research, service, and mentorship. These include: NIH RCDA (1969), Emil Conason Award (1970), ASM Abbott Laboratory Immunology Award (1997), and the Erwin Neter Award for Medical Laboratory Immunology (2000). He is a Member of the American Society for Clinical Investigation, a Fellow of the American Academy of Microbiology, a Fellow of the American Association of the Advancement of Science, and a member of the Henry Kunkel Society. His commitment to fostering career development of his trainees in clinical and translational science was recognized by the Children's Hospital of Philadelphia Mentor Award in 2008. He has served as President of the Society for Leukocyte Biology and is an elected Honorary Life Member in 2001. Dr. Douglas has also served as Chair of the Veterans Administration Committee for Research Centers of AIDS and HIV Infection, and is a member of the FDA Blood Products Advisory Committee. He has served as Chair of the AIDS Immunology and Pathogenesis NIH Study Section, and as a member and/or Chair of numerous NIH special emphasis panels for basic and translational AIDS related studies. Dr. Douglas belongs to numerous professional and scientific societies and national scientific committees. He has served as editor for several scientific journals and on many editorial boards.

The ISNV is honored to recognize Dr. Steven D. Douglas as the 2015 recipient of the Paradigm Builder Lectureship.

## THE PARADIGM BUILDER LECTURESHIP

The Paradigm Builder Lectureship has been developed to recognize established investigators working the area of neurovirology or a related discipline for their scientific achievements. Specifically, the Lectureship has been developed to highlight the establishment of well-defined scientific frameworks within which theories, laws, generalizations, and supporting experiments are formulated and planned. Initiated in 2006 at the 7th International Symposium on NeuroVirology, this will be the seventh Paradigm Builder Lectureship to feature a leading investigator in the field of neurovirology. 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](mailto:mail@isnv.org).



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