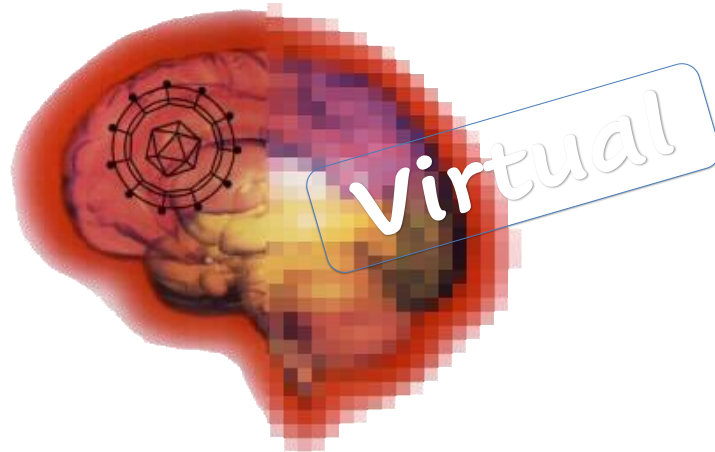


## Meeting Agenda

# 18<sup>th</sup> International Symposium on **NeuroVirology**

Held jointly with the  
**2022 Conference on  
HIV in the Nervous System**



## October 11-14, 2022

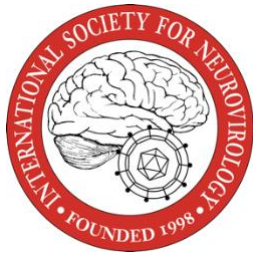


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Brian Wigdahl (Co-Chair)

Lena Al-Harathi  
Bruce Brew  
Michael Nonnemacher

Avindra Nath  
Chris Power  
Valerie Wojna



## Agenda for the 18<sup>th</sup> International Symposium on NeuroVirology and 2022 Conference on HIV in the Nervous System

The 18<sup>th</sup> International Symposium on NeuroVirology and 2022 Conference on HIV in the Central Nervous System will be held virtually on October 11-14, 2022. Offered as an abbreviated version of our traditional symposium, this year's virtual symposium will showcase leaders in the field of neurovirology as well as top investigators and clinicians from around the world who are on the leading edges of basic, translational, and clinical

research.

### Preliminary Agenda as of August 15, 2022

Current Session titles and confirmed plenary speakers are shown below. Additional talks will be selected for each session from submitted abstracts. All abstracts submitted and approved will be presented as posters and available for viewing on all days.

#### Tuesday, October 11<sup>th</sup>

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##### Venue and Poster viewing

All days

##### Welcome and Opening Remarks

12:00 pm (ET) Bruce Brew, President, International Society for NeuroVirology (ISNV)  
Lynn Pulliam, Co-Chair, ISNV Meetings Committee

##### NIH/NIMH session: Epigenetic Mechanisms Regulating HIV/CNS Latency

12:15 pm Jeymohan Joseph: NIMH, Bethesda, MD  
*Meeting Goals and Welcome Remarks*

12:20 pm Ron Collman: University of Pennsylvania, Philadelphia, PA  
*Epigenetic Landscape of HIV-1 Infection in Primary Human Macrophage: Plenary Talk*

12:40 pm Lena Al-Harhi: Rush University, Medical Center, Chicago, IL  
*Beta-catenin regulates HIV latency and reactivation in glial cells and resting CD4+ T cells*

12:55 pm Jonathan Karn: Case Western Reserve University, Cleveland, OH  
*Orchestration of epigenetic silencing of HIV in microglia by Nurr1 and related nuclear receptors*

1:10 pm Tariq Rana: University of California, San Diego  
*Epigenetic and Epitranscriptomic Regulation of HIV Infection*

1:25 pm Haitao Hu: University of Texas Medical Branch, Galveston, Texas  
*Epigenetic Suppression of HIV in Myeloid Cells by the BRD4-Selective Small Molecule Modulator ZL0580*

1:40 pm Susana Valente: UF Scripps Biomedical Research, Jupiter, FL

*The Block-and-Lock Strategy for Human Immunodeficiency Virus Cure: Lessons Learned from Didehydro-Cortistatin A*

1:55 pm Lish Ndhlovu: Weil Cornell Medical Center, New York, NY

*Host epigenetic marks as predictors of HIV persistence: Implications for HIV Cure Trials*

2:10 pm Session Chairs

*Q & A and Research Priorities Discussion*

**Session I: COVID and the Brain**  
Session Chairs: TBN

2:30 pm **Plenary**

E. Wesley Ely, M.D., MPH (Vanderbilt University)

*Rebuilding After COVID: Saving the Injured Brain*

3:05 pm **Plenary**

Gwenaëlle Douaud, Ph.D. (University of Oxford)

*SARS-CoV-2 is associated with changes in brain structure in UK Biobank*

3:40 pm **Plenary**

Bruce James Brew AM, MBBS, DMedSci, DSc, FRACP, FAAN (University of New South Wales and University of Notre Dame Sydney)

*Long covid cognitive impairment: natural history and potential pathogenesis - brake failure?*

**Special Event: Mentorship/Diversity Event – Career exploration**  
Moderator: Maria Nagle

4:15 pm **Roundtable discussion of career experts**

Archana Gupta – Staff Scientist, Product Applications, ThermoFisher

Barbara Liepe – Account Manager, Meso Scale Discovery

Laura Yaeger – Associate Director, Office of New Drug Research, FDA

Diane Rausch – Director, NIMH Division of AIDS Research

Nirzari Parikh – Editorial Business Director, Fishawack Health

4:45 pm **Open discussion**

**Wednesday, October 12<sup>th</sup>**

**Session II: HIV and Co-morbidities**  
Session Chairs: TBN

12:00 pm  
(ET)

**Plenary**

Navneet Dhillon, Ph.D. (Kansas University Medical Center)

*Extracellular Vesicles as Biomarkers and Purveyors of Virus associated Cardio-pulmonary complications*

12:35 pm

**Selected abstract talks**

**Session III: HERVS**  
Session Chairs: TBN

1:35 pm

**Plenary**

Hervé Perron, Ph.D. (GeNeuro SA, Geneva)

*Human Endogenous retroviruses (HERVs) express neuropathogenic proteins, which can be activated by environmental pathogens: a post-infectious HERV-driven disease concept*

2:10 pm

**Plenary**

Renee Douville, Ph.D. (University of Winnipeg)

*Antivirals for ALS*

**Session IV: Global Neurovirology/Emerging Pathogens**  
Session Chairs: TBN

2:45 pm

**Plenary**

Thiravat Hemachudha, M.D. (Chulalongkorn University, Hong Kong)

*A Plausible Leap Towards Rabies Palliation and Treatment*

3:20 pm

**Plenary**

CT Tan, M.D. (University Malaya)

*An update on the emerging neuro-viral infection in Asia: Henipavirus, EV71 and dengue virus encephalitis*

**Special event: Rapid fire presentations**

3:55 pm

**Selected abstract talks**

**Thursday, October 13<sup>th</sup>**

**Session V: HIV/Cure Eradication**  
Session Chairs: TBN

12:00 pm  
(ET)

**Plenary**

David Margolis, M.D. (University of North Carolina at Chapel Hill)

*Addressing challenges to HIV eradication*

12:35 pm

**Selected abstract talks**

**Special event: Investigator-in-Training talks**

1:35 pm **Selected abstract talks**

**Session VI: Vaccine and Therapeutic Initiatives**

Session Chairs: TBN

3:10 pm **Plenary**

Galit Alter, Ph.D. (Ragon Institute of MGH, MIT and Harvard)

3:45 pm **Selected abstract talks**

**Friday, October 14<sup>th</sup>**

**Session VII: Extracellular vesicles/neuroinflammation**

Session Chairs: TBN

12:00 pm  
(ET) **Plenary**

Ashok K. Shetty, Ph.D. (College of Medicine, Texas A&M University)

*Promise of Human MSC-derived EVs for Preventing TBI-Induce Chronic Neuroinflammation*

12:35 pm **Selected abstract talks**

**Session IX: Special Topics in Neurovirology**

Session Chairs: TBN

1:40 pm **Selected abstract talks**

**Special event: Rapid fire presentations**

3:05 pm **Selected abstract talks**

**Closing Remarks and Meeting Adjournment**

4:15 pm Bruce Brew, President, International Society for NeuroVirology (ISNV)

## Plenary Speaker:



E. Wesley Ely, M.D., M.P.H.  
Department of Medicine  
Vanderbilt University Medical Center

Tennessee Valley Veteran's Affairs Geriatric Research  
Education Clinical Center (GRECC)

*Rebuilding After COVID: Saving the Injured Brain*

Session I: COVID and the brain  
2:25 pm, Tuesday, October 11<sup>th</sup>

E. Wesley Ely, MD, MPH, is an internist, pulmonologist, and critical care physician. Dr. Ely earned his MD and MPH at Tulane University School of Medicine and the Tulane School of Public Health and Tropical Medicine. He serves as the Grant W. Liddle endowed chair in medicine and is a physician-scientist and tenured Professor at Vanderbilt University Medical Center. He is also the Associate Director of aging research for the Tennessee Valley Veteran's Affairs Geriatric Research Education Clinical Center (GRECC) in Nashville, TN. Dr. Ely founded and is the codirector of the Critical Illness, Brain Dysfunction, and Survivorship (CIBS) Center. He has spent over 25 years designing and conducting NIH and VA funded clinical trials and cohort studies in the areas of delirium and acquired-dementia, including Alzheimer's Disease and Related Dementias (ADRD), sepsis, and most recently COVID-19. Dr. Ely is the author of a book of narrative non-fiction entitled *Every Deep-Drawn Breath*, from which he is donating 100% net proceeds to establish an endowment to help ICU and COVID survivors and their family members rebuild their lives.



Gwenaëlle Douaud, Ph.D.  
University of Oxford

*SARS-CoV-2 is associated with changes in brain structure in UK Biobank*

Session I: COVID and the brain  
3:05 pm, Tuesday, October 11<sup>th</sup>

Professor Douaud's body of work is at the interface between basic neuroscience, methodological imaging development and clinical application. It focuses on translational research from imaging methods to applied human neuroscience, such as brain maturation and ageing, and with a

particular emphasis on neurodegenerative disorders (Alzheimer's disease, movement disorders and motor neuron disease). Her group pursues two main lines of research, first by investigating the basal ganglia in health and movement disorders using high resolution MRI at 7T, second by working on (very) large imaging datasets to identify - and make sense of - relevant clinical information. As part of the team who have developed the brain imaging pipeline of UK Biobank, this has also led the group more recently to study the effects on the brain associated with COVID-19.



Bruce James Brew, AM, MBBS, DMedSci, DSc, FRACP, FAAN

University of New South Wales and  
University of Notre Dame Sydney

*Long covid cognitive impairment: natural history and potential pathogenesis - brake failure?*

Session I: COVID and the brain  
3:40 pm, Tuesday, October 11<sup>th</sup>

Bruce Brew is a neurologist-researcher with a longstanding interest in viral infections (especially HIV) and their effects on the brain. He is particularly interested in the intersection of viral neuropathogenesis, immunology and the kynurenine pathway. He became interested in whether covid could be associated with brain disease at the beginning of the pandemic when he noticed that non-hospitalized patients were complaining of cognitive difficulties. He is Professor of Medicine (Neurology) University of New South Wales and University of Notre Dame, Director of the Peter Duncan Neurosciences Unit St Vincent's Centre for Applied Medical Research and neurologist at St Vincent's Hospital Sydney Australia.



Navneet Kaur Dhillon, Ph.D.  
Division of Pulmonary and Critical  
University of Kansas Medical Center

*Extracellular Vesicles as Biomarkers and Purveyors of Virus associated Cardio-pulmonary complications*

Session II: HIV and co-morbidities  
12:00 pm, Wednesday, October 12<sup>th</sup>

Dr. Navneet Kaur Dhillon, Ph.D. is a Professor and Director of Pulmonary research in the Division of Pulmonary and Critical at the University of Kansas Medical Center. She is an international leader in studying disorders of the pulmonary circulation, including the cellular and molecular pathogenesis of pulmonary hypertension in the setting of HIV infection, and illicit drug use. Primary research efforts are aimed at understanding mechanistically how HIV-1 and drugs of abuse contribute alone and in concert to the vascular dysfunction associated with pulmonary hypertension. The other focus of the lab is to unravel the interplay of macrophages, T cells, cytokines and chemokines in lung pathology associated with viral infections. Current research is aimed at elucidating the role of non-coding RNAs in the regulation of proliferative and anti-proliferative cascades in pulmonary smooth muscle cells and investigating the role of inflammatory cell-derived extracellular vesicles in pulmonary vascular remodeling. Dr Dhillon recently also began to question the relationship of alterations in the circulating extracellular vesicles with the severity of illness in patients infected with SARS-CoV-2; and how these changes damage the endothelial cells resulting in exacerbated pulmonary vascular injury in COVID19 disease.



Herve Perron, Ph.D.  
GeNeuro SA, Geneva

*Human Endogenous retroviruses (HERVs) express neuropathogenic proteins, which can be activated by environmental pathogens: a post-infectious HERV-driven disease concept*

Session III: HERVs  
1:35 pm, Wednesday, October 12<sup>th</sup>

During his PhD, Professor Perron isolated and characterized a novel retroviral element from Multiple Sclerosis (MSRV), itself defining a novel family of human endogenous elements (HERV-W) that now appears to be implicated in other autoimmune diseases such as chronic inflammatory demyelinating polyradiculoneuropathy or type 1 diabetes. Presently, as Chief Scientific Officer of Geneuro, a Swiss-French Biotech, Professor Perron is actively involved in the research and therapeutic development for diseases involving HERVs such as Multiple Sclerosis, Amyotrophic lateral Sclerosis in collaboration with the NIH/NINDS (USA) and psychoses displaying both systemic and brain inflammation in collaboration with FondaMental Foundation (France and Switzerland). More recently, he launched a new collaborative program on COVID-19 and HERV activation in severe or post-COVID forms, for which he is now PI in an EU-granted program (HERVCOV).





Dr. Renée N Douville, Ph.D.  
Department of Biology  
University of Winnipeg

Division of Neurodegenerative Disorders  
St. Boniface Hospital Research Centre

*Antivirals for ALS*

Session III: HERVs  
2:10 pm, Wednesday, October 12<sup>th</sup>

Dr. Renée N Douville is a Professor in the Department of Biology at the University of Winnipeg (since 2011) and a Principal Investigator in the Division of Neurodegenerative Disorders at the St. Boniface Hospital Research Centre (since 2021). She is best known for her expertise on human endogenous retroviruses and their potential roles in neurological disease. She obtained her Ph.D. in Immunology from the University of Manitoba in 2007. Her first postdoctoral fellowship was at Johns Hopkins University in Neurology with Dr. Avindra Nath's team, where she published a seminal report on endogenous retrovirus-K (ERV-K) in Amyotrophic Lateral Sclerosis (ALS). During that time, she also completed the Leadership and Management in the Life Sciences program at the Johns Hopkins University Carey Business School. She then went on to work as a postdoctoral fellow with Dr. John Hiscott and Dr. Rongtuan Lin at the Lady Davis Institute at McGill University. Over the last few years, her work has been largely focused on the discovery of a new viral protein in ERVK called conotoxin-like protein (CTXLP) found to be strongly expressed in ALS. Recently, the Douville lab has also shown the potential benefit of therapeutically targeting the ERVK integrase enzyme as a strategy to treat motor neuron disease. It is our continued mission to investigate whether antiviral drugs targeting ERVK could be used to treat neurodegenerative diseases like ALS, and other ERVK-associated conditions.



Thiravat Hemachudha, M.D., FACP  
Department of Medicine and Neurology  
Faculty of Medicine  
Chulalongkorn University

*A Plausible Leap Towards Rabies Palliation and Treatment*

Session IV: Global Neurovirology/Emerging Pathogens  
2:45 pm, Wednesday, October 12<sup>th</sup>

Thiravat Hemachudha, is a Professor of Medicine and Neurology specializing in clinical, virological, and immunological studies in encephalitis. He serves on the WHO Expert Advisory

Panel on Rabies. He established WHO-CC on Rabies Pathogenesis and Prevention at Queen Saovabha Memorial Institute, and WHO-CC on research and training on viral zoonosis and TRC EID-health science centre at Faculty of Medicine with the aim to increasing preparedness and improving diagnostics for zoonotic pathogens. He has been engaging in the management of rabies patients and in the rabies pathophysiologic studies in patients and animal model and development of novel therapeutics for more than 3 decades.



Chong-Tin TAN, M.D.  
Department of Neurology  
University of Malaya

*An update on the emerging neuro-viral infection in Asia:  
Henipavirus, EV71 and dengue virus encephalitis*

Session IV: Global Neurovirology/Emerging Pathogens  
3:20 pm, Wednesday, October 12<sup>th</sup>

CT Tan is the Emeritus Professor of Neurology, University of Malaya. He is the Leader of the Nipah virus encephalitis investigating team in the University of Malaya, that discovered the virus and characterised the clinical disease. He has also been involved in the investigations of other central nervous system and muscles infections, including TB meningitis, cryptococcal meningitis, neuro-melioidosis, and Sarcocystis nesbitti. He is the Editor-in-Chief of Neurology Asia, the official journal of the ASEAN Neurological Association and Asian and Oceanian Association of Neurology.



David Margolis, M.D.  
Department of Medicine, Microbiology & Immunology, and  
Epidemiology  
University of North Carolina at Chapel Hill

*Addressing challenges to HIV eradication*

Session V: HIV/Cure Eradication  
12:00 pm, Thursday, October 13<sup>th</sup>

David Margolis became interested in HIV as the pandemic emerged during his medical training. He has cared for people with HIV and studied the interactions between HIV and the host cell on the molecular level for his entire career. For more than 2 decades, he and many collaborators have begun to understand the molecular basis of HIV latency, develop drug and immunotherapy

approaches to target persistent HIV, to develop the tools needed to cure HIV infection. He is the director of the UNC HIV Cure Center, principal investigator for the NIH-sponsored Collaboratory of AIDS Researchers for Eradication (<http://www.delaneycare.org>), and a Sarah Graham Keenan Distinguished Professor of Medicine, Microbiology & Immunology, and Epidemiology at the University of North Carolina at Chapel Hill.



Ashok K. Shetty, Ph.D.  
Department of Molecular and Cellular Medicine  
Texas A&M University College of Medicine

*Promise of Human MSC-derived EVs for Preventing  
TBI-Induce Chronic Neuroinflammation*

Session VII: Extracellular vesicles/neuroinflammation  
12:00 pm, Friday, October 14<sup>th</sup>

Dr. Ashok K. Shetty is a tenured Professor in the Department of Molecular and Cellular Medicine at the Texas A&M University College of Medicine. He is also the Associate Director at the TAMU Institute for Regenerative Medicine. Dr. Shetty has received worldwide recognition for his pioneering work in stem cell- and stem cell-derived extracellular vesicle therapy for brain disorders. His current research studies are focused on testing the efficacy of human MSC- and NSC-derived extracellular vesicles for improving brain function in conditions such as TBI, aging, and Alzheimer's disease. He has also made seminal contributions to Gulf War Illness research. Two of his preclinical study results have served as the basis for ongoing clinical trials in Gulf War veterans. His work has appeared in many high-impact journals in the fields of stem cells, extracellular vesicles, and neuroscience. Dr. Shetty has received >16,900 citations with an h-index of 64. He is among the top 1% of researchers across all fields for the total number of citations received. Dr. Shetty has served on two NIH study sections and one VA study section as a Chartered Member. Besides, he has served as a member of >70 other study section panels. Dr. Shetty is the founding editor and *Co-Editor-in-Chief* of the journal, *Aging & Disease* and Associate Editor of six Neuroscience journals. He is also a member of the Editorial Board of *The Journal of Extracellular Vesicles*, *Aging Cell*, and *Stem Cells*. Dr. Shetty is a Fellow of the American Society for Neural Transplantation and Repair.

**Thank you to our sponsors!**



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