

# International Symposium on NeuroVirology 10<sup>th</sup>



ISNV

2010

Conference on HIV in  
the Nervous System

University of Milan  
Milan, Italy

October 12-16, 2010

## Local Organizing Committee

Pasquale Ferrante (Chair)    Enrico Marchion    Anna Teresa Palamara  
Rossana Cavallo            Roberto Mattina        Valeria Pietropaolo  
Serena Delbue              Giulia Morace            Sara Tremolada  
Antonina Dolei

## International Leadership Committee

Lynn Pulliam                Brian Wigdahl  
Avindra Nath                Kamel Khalili  
Pasquale Ferrante         Giorgio Palu

## AGENDA

### 10<sup>TH</sup> INTERNATIONAL SYMPOSIUM ON NEUROVIROLOGY & 2010 CONFERENCE ON HIV IN THE NERVOUS SYSTEM



The 10<sup>th</sup> International Symposium on NeuroVirology and 2010 Conference on HIV in the Nervous System will be held jointly at the University of Milan in Milan, Italy. The overall goal of these concurrent events will be to provide investigators working in the field of neurovirology and related areas with leading edge information so that important gaps in knowledge can continue to be identified. Armed with this information, attendees of both events will work toward formulating questions and experimental directions that will

enhance the development of new preventative and therapeutic strategies effective against neurologic diseases associated with prions, HIV, and other viral and non-viral pathogens.

Shading indicates presentations associated specifically with the 2010 Conference on HIV in the Nervous System. For more information about both meetings, visit the ISNV web site ([www.isnv.org/milan10/index.php](http://www.isnv.org/milan10/index.php)).

Symposium/Conference Sessions I through XII and the Poster Session/Reception will take place in the Aula Magna Conference Hall at the University of Milan (via Festa del Perdono 7). The locations of other events will be as indicated on the agenda.

#### Tuesday, October 12, 2010

<b>8:30 am - 6:45 pm</b>	<b>Satellite Workshop: Clinical and Diagnostic Topics on CNS and Inflammation</b> (an independent event structured to complement the Conference and Symposium) <i>Aula Magna Conference Hall, University of Milan</i>
<b>8:30 am</b>	<b>Registration</b>
<b>9:00 am</b>	<b>Introduction by P. Ferrante</b>
<b>9:15 am - 11:00 am</b>	<b>Session I</b>
	<b>Neurological complications in immunodepression</b> Session chairs: L. Minoli and C. Mariani
9:15 am	A. Antinori <i>Update on HIV-related leukoencephalopathies</i>
9:35 am	P. Grossi <i>Infectious/parainfectious neurological complications in organ transplants</i>
9:55 am	A. Colombo <i>Infectious/parainfectious neurological complications in bone marrow transplants</i>
10:15 am	I. J. Koranik <i>Monoclonal antibodies-associated progressive multifocal leukoencephalopathy</i>
10:35 am	Discussion
<b>11:00 am - 11:30 am</b>	<b>Coffee Break</b>
<b>11:00 am - 1:10 pm</b>	<b>Session II</b>
	<b>Neuroinflammation: State of the art in some prototypical diseases</b> Session chairs: G. Bono and M. Galli
11:30 am	E. Marchioni <i>Para/postinfectious diseases of the CNS</i>
11:50 am	J. Rappaport <i>HIV-associated immune perturbations in CNS</i>
12:10 pm	E. Tavazzi <i>Multiple sclerosis: The role of inflammation in the disease evolution</i>
12:30 pm	G. Minoja <i>SIRS: Physiopathology, clinical management, and therapy</i>
12:50 pm	Discussion

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<b>1:10 pm - 2:00 pm</b>	<b>Lunch Break / Networking</b>	
<b>2:00 pm - 3:00 pm</b>	<b>Poster Session</b>	
<b>3:00 pm - 4:10 pm</b>	<b>Session III</b>	<b>The conflicting interaction between viruses and the nervous system</b>
		Session chairs: P. Ferrante and K. Khalili
3:00 pm	V. Sambri	<i>New and emerging viruses and the CNS</i>
3:20 pm	M. Ceroni	<i>HCV-related neurological complications</i>
3:40 pm	S. Bonora	<i>Brain penetration and activity of antiviral drugs</i>
4:00 pm	Discussion	
<b>4:10 pm - 4:30 pm</b>	<b>Coffee Break</b>	
<b>4:30 pm - 6:10 pm</b>	<b>Session IV</b>	<b>Nervous system and inflammation: a multidisciplinary assessment</b>
		Session chairs: S. Bastianello and E. Magliano
4:30 pm	C. Andreula	<i>The role of neuroradiology: Basic and advanced MRI techniques</i>
4:50 pm	B. Viviani	<i>The role of pro-inflammatory cytokines and the glutamatergic system in the progression of neurodegenerative diseases</i>
5:10 pm	G. Vago	<i>The importance of anatomopathology in the diagnostic process</i>
5:30 pm	G. Bono	<i>Problem based learning</i>
5:50 pm	Discussion	
<b>6:10 pm - 6:30 pm</b>	<b>ECM Customer Satisfaction</b>	
<b>6:30 pm - 6:45 pm</b>	<b>Closing Remarks</b>	
<b>5:00 pm - 7:00 pm</b>	<b>Registration for the 10<sup>th</sup> International Symposium on NeuroVirology</b>	
<b>7:00 pm - 9:00 pm</b>	<b>Opening Reception</b>	<i>Courtyard, University of Milan</i>

**Wednesday, October 13, 2010**

<b>8:30 am - 9:00 am</b>	<b>Welcoming Remarks</b>	Brian Wigdahl, Lynn Pulliam, Jeymohan Joseph, and Pasquale Ferrante
<b>9:00 am - 10:30 am</b>	<b>Session I</b>	<b>Brain as a reservoir for HIV</b>
		Session chairs: Richard Johnson and Peter G.E. Kennedy
9:00 am	Melissa Churchill (plenary)	<i>Viral reservoir in brain</i>
9:30 am	Ruth Brack-Werner	<i>Mechanisms for cellular control of HIV replication in HIV reservoirs of the brain</i>
9:45 am	Joan Berman	<i>Characterization of stages of monocyte maturation/differentiation that facilitate their transmigration across the blood brain barrier and infection by HIV: Implications for NeuroAIDS</i>
10:00 am	Joseph Mankowski	<i>SIV Gag escape from CD8+ T cell control in the CNS during anti-retroviral treatment</i>
10:15 am	Alfredo Garzino-Demo	<i>Human beta-defensins and chemokine receptors in the central nervous system: potential factors in HIV infection</i>
<b>10:30 am - 11:00 am</b>	<b>Coffee Break</b>	
<b>11:00 am - 12:30 pm</b>	<b>Session II</b>	<b>Surrogate markers for neuroglial injury</b>
		Session chairs: Brian Wigdahl and Don Gilden
11:00 am	Richard Price (plenary)	<i>CSF biomarkers in evaluating HIV CNS disease activity and therapy</i>
11:30 am	Armine Darbinyan	<i>Role of JCV induced disbalance of chemokines in neuron-glia interaction</i>
11:45 am	Tricia Burdo	<i>Soluble CD163 as a plasma marker of HIV disease activation: Implications of macrophage-mediated immune responses</i>
12:00 pm	Ronald Ellis	<i>Predictors of incident distal neuropathic pain in HIV-infected individuals in the era of combination antiretroviral therapy</i>
12:15 pm	Lynn Pulliam	<i>Activated type 1 IFN monocyte phenotype correlates with MRS changes in HIV infection</i>
<b>12:30 pm - 2:00 pm</b>	<b>Lunch Break / Networking</b>	
<b>2:00 pm - 3:30 pm</b>	<b>Session III</b>	<b>Therapeutic advances in CNS infections</b>
		Session chairs: Dana Gabuzda and Johnny He
2:00 pm	David Clifford (plenary)	<i>Therapeutic challenges in HAND</i>
2:30 pm	Giovanni Schifitto (plenary)	<i>HIV-associated fatigue: Mechanisms and potential therapeutic interventions</i>
3:00 pm	Carlo-Federico Perno (plenary)	<i>Different evolution of HIV in CNS versus immunological compartment: Is it still clinically relevant?</i>
<b>3:30 pm - 4:00 pm</b>	<b>Coffee Break</b>	

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<b>4:00 pm - 5:30 pm</b>	<b>Session IV</b>	<b>Viral latency and molecular pathogenesis</b>
		Session chairs: Anna Teresa Palamara and Ravi Mahalingam
4:00 pm	Israel Steiner (plenary)	<i>Herpes simplex virus type 1 and rabies virus neurotropism and spread in the CNS</i>
4:30 pm	Avindra Nath	<i>Identification of active loci of a human endogenous retrovirus in neurons of patients with amyotrophic lateral sclerosis</i>
4:45 pm	Mineki Saito	<i>Enhanced expression of OX40 by HTLV-1 Tax and its roles in the pathogenesis of HTLV-1-associated myelopathy/tropical spastic paraparesis (HAM/TSP)</i>
5:00 pm	Giovanna De Chiara	<i>Herpes simplex virus type 1 (HSV-1) induces multiple cleavages of amyloid precursor protein (APP) and Abeta accumulation in human and rat neuronal cells</i>
5:15 pm	Barbara Krynska	<i>Bone marrow-derived mesenchymal stem cell infection and transformation by JC virus in in vitro and in vivo models</i>
<b>5:30 pm - 6:00 pm</b>	<b>Special Lecture</b>	<b>2010 Paradigm Builder Lectureship</b>
		Introduction: Kamel Khalili
	Joseph Glorioso	<i>Design strategies for HSV neuro-therapeutics</i>
<b>6:00 pm - 7:30 pm</b>	<b>Special Lectures</b>	<b>International NeuroAIDS Research</b>
	Session Chairs	Mahendra Kumar and Jeymohan Joseph
6:00 pm	Bruce Shiramizu	<i>CD14/CD16 and its HIV associated DNA viral load as marker of NeuroAIDS</i>
6:30 pm	Robert Paul	<i>Use of diffusion tensor imaging in the diagnosis of NeuroAIDS</i>
7:00 pm	Ravi Vasanthapuram	<i>CSF viral load as a marker of progression in HIV -1 C clade infection</i>
<b>7:45 pm - 9:00 pm</b>	<b>Special Activity</b>	<b>Women in NeuroVirology Reception</b>
		<i>Hotel Dei Cavalieri, 1st Floor, Gonzaga Room</i>

**Thursday, October 14, 2010**

<b>7:00 am - 8:30 am</b>	<b>ISNV Board of Directors Meeting</b> <i>Hotel Dei Cavalieri, 1st Floor, Malatesta Hall</i>	
<b>8:30 am - 10:00 am</b>	<b>Session V</b>	<b>Co-morbidities in HIV CNS disease</b>
		Session chairs: Loyda Melendez and Kevin Robertson
8:30 am	Cristian L. Achim (plenary)	<i>The aging brain and HAART</i>
9:00 am	Kurt Hauser (plenary)	<i>Glia as architects of accelerated CNS inflammation and injury with opioid abuse in NeuroAIDS</i>
9:30 am	Raphael P. Viscidi	<i>JC virus antibody and viremia as predictors of PML in HIV-1 infected individuals</i>
9:45 am	Edward M. Johnson	<i>A mechanism of viral regulation of cellular gene expression in the CNS based on interferon control of multiple promoters of the PURA gene generating unique non-coding RNAs</i>
<b>10:00 am - 10:30 am</b>	<b>Coffee Break</b>	
<b>10:30 am - 12:00 pm</b>	<b>Session VI</b>	<b>Immunopathogenesis of viral infection</b>
		Session chairs: Valeria Pietropaolo and Bruce Brew
10:30 am	Monique Lafon (plenary)	<i>Rabies virus as an Ariane's thread to unravel pathways committing neurons towards death or survival</i>
11:00 am	Robert Fujinami (plenary)	<i>Innate immunity contributes to seizures and epilepsy following viral encephalitis</i>
11:30 am	Adriano Boasso (plenary)	<i>Chronic innate immune activation in the immunopathogenesis of HIV infection</i>
<b>12:00 pm - 1:15 pm</b>	<b>Lunch Break / Networking</b>	
<b>1:15 pm - 3:15 pm</b>	<b>Special Activity</b>	<b>Investigators-in-Training</b>
		Session Chairs: Robert Fujinami and Ruth Brack-Werner
1:15 pm	Linda E. Rivera	<i>Inhibition of interferon response by Cystatin B: A proposed mechanism for HIV persistence in macrophage reservoirs</i>
1:30 pm	Evan Noch	<i>Downregulation of JCV T-antigen by hypoxia and glucose deprivation in medulloblastoma</i>
1:45 pm	Tory Johnson	<i>T cell receptor-independent activation of Th-17 cells by HIV Tat protein: Role in HAND and IRIS</i>
2:00 pm	Haniah Abdullah	<i>The effect of rhinovirus infection on cough receptors on airway sensory nerves</i>
2:15 pm	Leslie J. Marshall	<i>The transcription factor Spi-B binds unique sequences present in the tandem repeat promoter/enhancer of JC virus and supports viral activity</i>
2:30 pm	Julianne Bayliss	<i>Immunosuppression increases latent infection of brain by JC polyomavirus</i>
2:45 pm	Sharron L. Manuel	<i>Presentation of human T-cell leukemia virus type 1 (HTLV-1) Tax protein by dendritic cells: The underlying mechanism of HTLV-1-associated neuroinflammatory disease</i>

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3:00 pm	Anna Bellizzi	<i>Risk of JC virus reactivation in pediatric patients with Crohn's Disease</i>
<b>3:15 pm - 3:45 pm</b>	<b>Coffee Break</b>	
<b>3:45 pm - 5:15 pm</b>	<b>Session VII</b>	<b>Neuro-restoration after injury</b>
		Session chairs: Scott Letendre and Norman Haughey
3:45 pm	Zheng Gang Zhang (plenary)	<i>Neurogenesis and oligodendrogenesis in the ischemic brain</i>
4:15 pm	Maxim C.-J. Cheeran	<i>Activated CD8 lymphocytes inhibit neural stem cell proliferation: Role of interferon gamma</i>
4:30 pm	Muriel Coulpier	<i>Borna disease virus infects human primary neural stem cells and impairs neurogenesis</i>
4:45 pm	T. Dianne Langford	<i>Role of PINCH protein in neuronal response in HIV infection of the CNS</i>
5:00 pm	Subbiah Pugazhenth	<i>Infection of differentiated human neural stem cells with varicella zoster virus</i>
<b>5:15 pm - 5:45 pm</b>	<b>Special Lecture</b>	<b>2010 Women in Neuroscience Lectureship</b>
		Introduction: Joan Berman
	Janice E. Clements	<i>Lentivirus infection of brain: Plasticity of virus-immune interactions</i>
<b>5:45 pm - 7:45 pm</b>	<b>Poster Session / Reception</b>	

**Friday, October 15, 2010**

<b>8:30 am - 10:00 am</b>	<b>Session VIII</b>	<b>Animal models</b>
		Session chairs: Jennifer Gordon and Joseph Mankowski
8:30 am	Italo Mocchetti (plenary)	<i>Role of neurotrophins in neuroAIDS</i>
9:00 am	Rosemarie Booze (plenary)	<i>Molecular neuropathology of the dopaminergic system in NeuroAIDS</i>
9:30 am	Sulie L. Chang	<i>Cytokine/chemokine expression in the brain of the HIV-1 transgenic rat during endotoxin tolerance</i>
9:45 am	Michael Kleines	<i>MHV-68, a model virus for Epstein-Barr virus infections, enters the brain independent of functional B-lymphocytes via vessel endothelial cells and causes immune-mediated damage as well as chronic tissue infection</i>
<b>10:00 am - 10:30 am</b>	<b>Coffee Break</b>	
<b>10:30 am - 11:45 am</b>	<b>Session IX</b>	<b>Emerging CNS infections</b>
		Session chairs: Antonina Dolei and Randall Cohrs
10:30 am	Philippe Gasque (plenary)	<i>Pathological mechanisms associated with chikungunya neuroinfection</i>
11:00 am	Igor Koralnik	<i>A novel deletion in JC virus agnoprotein causes productive infection of cortical pyramidal neurons</i>
11:15 am	Alan C. Jackson	<i>Rabies virus infection injures neurons by inducing oxidative stress</i>
11:30 am	Tadaki Suzuki	<i>Disruption of intracellular vesicular trafficking by agnoprotein is essential for viroporin activity and JC virus replication</i>
<b>11:45 am - 12:15 pm</b>	<b>Special Lecture</b>	<b>Bill Narayan Lectureship</b>
		Introduction: Janice Clements
	Susan Weiss	<i>Pathogenesis of murine coronavirus infection: Virus-host interaction</i>
<b>12:15 pm - 2:00 pm</b>	<b>Lunch Break / Networking</b>	
<b>12:30 pm - 2:00 pm</b>	<b>Special Activity</b>	<b>NeuroAIDS Trainee Networking Luncheon</b>
		<i>Aula Lauree Facoltà di Medicina e Chirurgia</i>
12:30 pm		Opening Remarks: Jeymohan Joseph and David Stoff
12:40 pm	Avindra Nath	<i>T25 – Translational Research in Neuro-AIDS and Mental Health</i>
12:45 pm	Jay Rappaport and Brian Wigdahl	<i>T32 – Interdisciplinary and Translational Research Training in NeuroAIDS</i>
12:50 pm	Richard Price	<i>T32 – Central Nervous System HIV Translational Research Training Program</i>
12:55 pm	Susan Weiss	<i>T32 – Training in NeuroVirology</i>
1:00 pm		Trainee short talks
1:25 pm		Network roundtable discussions

<b>2:00 pm - 4:00 pm</b>	<b>Session X</b>	<b>HIV-associated neurocognitive disorders: Past and present</b>
		Session chairs: Elyse Singer and Jay Rappaport
2:00 pm	Robert Heaton (plenary)	<i>Prevalence and HIV disease correlates of HAND in the pre-CART and CART eras</i>
2:30 pm	Ned Sacktor (plenary)	<i>Aging + cognition in HIV infection</i>
3:00 pm	Jose W. Rodriguez	<i>Modulation of HIV-1 replication, inflammation, and neurotoxicity by a tobacco cembranoid 4R: Therapeutic implications for HIV-associated neurocognitive disorders</i>
3:15 pm	Gabriel Gras	<i>Different correlates suggest different pathogenic pathways for HIV-associated minor neurocognitive impairment versus HIV-associated dementia</i>
3:30 pm	Valerie Wojna	<i>Soluble and cell-associated insulin receptor dysfunction correlates with severity of HAND in HIV-infected women</i>
3:45 pm	Adarsh M. Kumar	<i>Human immunodeficiency virus &amp; decreased dopamine availability in the CNS: Relationship with neuropsychological performance</i>
<b>4:00 pm - 5:30 pm</b>	<b>Workshop</b>	<b>Substance abuse and HIV</b>
		Workshop chairs: Sulie Chang and Shilpa Buch
4:00 pm	Shilpa J. Buch	<i>Cocaine/sigma receptor-mediated induction of ALCAM: Implication for increased monocyte adhesion and migration in HAND</i>
4:15 pm	Rajnish S. Dave	<i>Morphine induces inflammation and oxidative stress without influencing HIV-1 viral replication in human brain-derived cells</i>
4:30 pm	Olimpia Meucci	<i>Opiates and CXCR4: New effectors and regulatory pathways relevant to HIV neuropathology</i>
4:45 pm	Katherine Conant	<i>HIV Tat, methamphetamine, and MMP-dependent activation of microglia</i>
5:00 pm	Pawel Ciborowski	<i>Short and long term effect of methamphetamine withdrawal: Proteomic profiling of plasma from HIV-infected patients</i>
5:15 pm	Loreto Carvallo	<i>The role of buprenorphine and CCL2 on monocytes and the blood-brain barrier</i>
<b>7:00 pm - 8:00 pm</b>	<b>Pioneer Reception</b>	
		<i>Palazzo dei Giureconsulti</i>
<b>8:00 pm - 11:00 pm</b>	<b>ISNV Pioneer in NeuroVirology Gala Dinner</b>	
		<i>Palazzo dei Giureconsulti</i>

**Saturday, October 16, 2010**

<b>8:30 am - 10:00 am</b>	<b>Session XI</b>	<b>Prion diseases</b>
		Session chairs: Amanda Brown and Giorgio Palu
8:30 am	Adriano Aguzzi (plenary)	<i>Molecular biology of mammalian prions</i>
9:00 am	Giorgio Palu (plenary)	<i>A Drosophila melanogaster model for human inherited prion diseases</i>
9:30 am	Laura Manuelidis	<i>Prion protein appears to function in neuron differentiation, nanotube contacts, and cell-to-cell transmission of TSE agents</i>
<b>10:00 am - 10:30 am</b>	<b>Special Lecture</b>	<b>Neurological Infections Lectureship</b>
		Introduction: Avindra Nath
10:00 am	James Kronstad	<i>Cryptococcus neoformans and C. gattii: Sugar-coated agents of fungal meningitis</i>
<b>10:30 am - 11:00 am</b>	<b>Coffee Break</b>	
<b>11:00 am - 12:00 pm</b>	<b>Workshop</b>	<b>Multiple sclerosis</b>
		Workshop Chairs: Pasquale Ferrante and Steven Jacobson
11:00 am	Antonio Uccelli	<i>Stem cell transplantation in neurodegeneration</i>
11:30 am	Bjorn Nexø	<i>Involvement of the endogenous HERV-F(c)I retroviral locus on the human X chromosome in the etiology of multiple sclerosis</i>
11:45 am	Enrico Fainardi	<i>Relevance of intrathecal oligoclonal anti-EBV antibodies in multiple sclerosis</i>
<b>12:00 pm - 1:15 pm</b>	<b>Session XII</b>	<b>Molecular therapeutics</b>
		Session chairs: Lena Al-Harhi and Joseph Steiner
12:00 pm	Premlata Shankar (plenary)	<i>RNAi as a molecular weapon against HIV</i>
12:30 pm	Samantha S. Soldan	<i>La Crosse Virus replication and LACV-induced neuronal damage is decreased in minocycline treated primary rat neuronal cultures</i>
12:45 pm	Jessica L. Reynolds	<i>Targeted nanoparticles for gene silencing: HIV-1 and drugs of abuse</i>
1:00 pm	Sara Louise Cosby	<i>Measles virus regulation of suppressors of cytokine signaling (SOCS) proteins in the CNS</i>
<b>1:15 pm</b>	<b>Closing Remarks</b>	

## Registration

Registrations for the 10th International Symposium on NeuroVirology and 2010 Conference on HIV in the Nervous System are still being accepted. Attendees can register for both meetings by using the online registration system, which can be accessed through the ISNV Shop ([www.isnv.org/shop/](http://www.isnv.org/shop/)). A discounted registration rate is available to ISNV members in good standing, as well as individuals choosing to join the Society and register for the Symposium and Conference concurrently. Please visit the Society membership page for membership forms, information, and benefits. Registrations received after **Monday, September 27th** (including on-site registrations) will be subject to a surcharge of 15%. Registration fees (US dollars), based on ISNV membership status, are as follows:

ISNV Member:	\$590
ISNV Non-member:	\$890
Postdoc/Student Member:	\$300
Postdoc/Student Non-member:	\$430

## Abstracts

A supplemental issue of the Journal of NeuroVirology, which will feature abstracts accepted for poster and oral presentations, will be distributed at the meeting.

## Oral Presentations

Most speakers at the Symposium and Conference were selected by the Scientific Committee from submitted abstracts. Sessions typically feature one or more plenary speakers and three to five oral presentations. Plenary presentations are allotted 30 minutes each, while other oral presentations are scheduled for fifteen minutes each (including time for questions and discussion).

## Poster Presentations

Posters for the Symposium and Conference will be presented at the Poster Session to be held in the evening of Thursday, October 14<sup>th</sup>.

## Audiovisual

Please note that Microsoft PowerPoint and LCD computer projection systems will be available for oral presentations. Equipment necessary for the projection of 35 mm slides will not be available. Please contact the ISNV Administrative Office if you will require alternative audiovisual capabilities.

## Pioneer Award Gala Dinner

The Pioneer in NeuroVirology award is presented periodically in recognition of outstanding achievement in the field of neurovirology. The 2010 Pioneer in NeuroVirology Award will be presented at a Gala Dinner to be held on Friday, October 15<sup>th</sup>, 2010. Attendance at the Gala Dinner is included in the Symposium and Conference registration fee. All accompanying persons are invited to attend the banquet for a nominal fee. Please contact the ISNV if you wish to bring a guest to the Gala Dinner. Please visit the Society web site ([www.isnv.org/pioneer/current.php](http://www.isnv.org/pioneer/current.php)) for more information about the award and a list of previous recipients.

## Investigators-in-Training Travel Grants

The meeting organizers have awarded a limited number of travel awards for junior investigators to attend and present their abstracts in special sessions. Travel grants cover the cost of lodging and help to defray the cost of airfare. Per diem expenses are not included. Trainees will be reimbursed after submission of expenses following the meeting. Students and postdoctoral fellows who are ISNV members and presenting authors on submitted abstracts were eligible to apply for a travel grant. Trainees who become ISNV members at the time of meeting registration and abstract submission were also considered eligible.

## Individuals with Special Needs

Should you require special services while in attendance at the Symposium, please contact the ISNV Administrative Office before the meeting so that we can arrange for any such accommodations.

## Cancellation Policy

Requests for cancellation of meeting registration made before the meeting will be refunded in full minus a \$20 handling fee. There will be no refund for cancellation requests received after the meeting has begun. The cancellation policy does not apply to hotel room reservations. Please contact your chosen hotel directly for information regarding their respective cancellation and refund policies.

## Venue

The Symposium and Conference will be held in beautiful and historic Milan, which is located in northern Italy. The meeting will be held on the grounds of the University of Milan. The Symposium and Conference will take place in the Main Hall (Aula Magna) on the campus of the University of Milan in via Festa del Perdono 7, 20122 Milan.

The meeting venue is very close to downtown Milan and is within walking distance of the Duomo (cathedral) in the heart of the city. The safe and clean public transportation system can be used to travel around the city. The Piazza Missori stop on the Yellow Line (Linea 3) is the closest subway stop to the University campus. The Piazza Duomo stop on the Red Line (Linea 1) is also convenient for travel around the city by subway. There are also several bus and trolley lines that have stops close to the meeting venue.

In mid-October, the temperatures in Milan typically range from an average high of 18°C (64°F) to an average low of 8°C (47°F). For more information about current conditions and area forecasts, visit the Weather Channel web site or other online resources.

## Getting to Milan

### Arriving by air

For meeting participants who will be arriving by air, three major airports serve the Milan area. Because of its proximity to Milan, Linate Airport is the recommended arrival point.

Linate Airport is approximately 8 km (5 mi) east of Milan. Flights into Linate Airport from all major cities are available. Bus service from the airport to the city (approximately 1€) is available as part of the ATM (public transportation system). Bus #73 leaves from just outside the arrival area and stops downtown at San Babila Square, which is within walking distance of the University and Duomo. The University and nearby hotels are also only 15-30 minutes away by taxi (approximately 25-30€).

Malpensa Airport, which is located 40 km (25 mi) northwest of Milan, is approximately one hour away. From Malpensa, two travel options are available. The Malpensa Shuttle bus departs Terminal 1 (the international terminal) every 20 minutes and arrives at the Milan Central Station (Stazione Centrale). A one-way ticket costs 7€. The University can then be reached from the Central Station by the subway (1€) on the Yellow Line (Linea 3), or by taxi (approximately 20-25€). Alternatively, the Malpensa Express (11€ for a one-way ticket) departs every 30 minutes later at Milano Cadorna station. From the Caldorna station, the downtown area can be reached via the subway (1€) on the Red Line (Linea 1) or by taxi (approximately 15-20€). Transportation to Milan from Malpensa Airport will be considerably more expensive (approximately 85€).

Orio al Serio Airport (Bergamo) is approximately 45 km (28 mi) northeast of Milan. The Orio Shuttle Bus departs the airport for the Milan Central Station, where transportation to the downtown area is available (see above). A taxi from the airport will cost approximately 40-50€.

Rental cars are available at all airports. Routes from each airport to Milan are clearly marked and easily followed. However, traffic congestion in Milan is frequently encountered, and parking in the downtown area is very limited.

### Arriving by rail

Meeting participants traveling by rail will arrive at the Milan Central Station (Stazione Centrale), where transportation to the downtown area is available (see above).

**Hotels near the University of Milan**

Meeting participants can choose to stay at one of several nearby hotels. These hotels, which provide 3- and 4-star accommodations, are within walking distance of the University and are also served by public transportation (subway). Room rates at these hotels range from 100 to 340 Euros per night (approximately 135 to 459 US Dollars at the 4-1-10 exchange rate). Lodging will not be available on campus. The following hotels around the University of Milan are recommended for all meeting participants. Reservations can be made online through the web sites of the respective hotels. Room rates are set by each hotel; meeting rates and block room reservations are not available.

Map #	Hotel	Address	Travel time to venue		Web site	Rating
			Walking	Subway		
1	Star Hotels Rosa Grand	Piazza Fontana	5 min	-	www.starhotels.it	★★★★
2	Hotel Dei Cavalieri	Piazza Missori, 1	10 min	-	www.hoteldeicavalieri.com	★★★★
3	Canada	Via Santa Sofia, 16	10 min	-	www.canadahotel.it	★★★
4	(Not used)					
5	Carrobbio	Via Medici, 3	20 min	10 min	www.hotelcarrobbiomilano.com	★★★★
6	Galles (Best Western)	Piazza Lima, 2	30 min	10 min	www.galles.it	★★★★
7	Ritz (Star Hotel)	Via Spallanzani, 40	30 min	10 min	www.starhotels.it	★★★★



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## ABOUT THE SPONSORS



The 2010 Conference was supported by a Public Health Service grant titled “Conference on HIV and the Nervous System” (1R13MH092200-01, Avindra Nath, M.D., Principal Investigator). This grant was sponsored by the **National Institute of Mental Health (NIMH)** and **National Institute of Neurological Disorders and Stroke (NINDS)** at the **National Institutes of Health** (Bethesda, MD USA).



**Biogen Idec** ([www.biogenidec.com](http://www.biogenidec.com)) is among the world's leading global biotechnology companies. They are a Fortune 500 company with over \$4 billion in revenue. Patients in more than 90 countries benefit from their products, which include Tysabri and Avonex for the treatment of multiple sclerosis, and Rituxan for non-Hodgkins lymphoma.



Financial support for this meeting was provided by the Laboratory of Molecular Medicine and Neuroscience, Division of Intramural Research, in the **National Institute of Neurological Disorders and Stroke (NINDS)** at the **National Institutes of Health** (Bethesda, MD USA). The mission of the NINDS ([www.ninds.nih.gov](http://www.ninds.nih.gov)) is to reduce the burden of neurological disease - a burden borne by every age group, by every segment of society, by people all over the world. To support this mission, NINDS (i) conducts, fosters, coordinates, and guides research on the causes, prevention, diagnosis, and treatment of neurological disorders and stroke, and supports basic research in related scientific areas, (ii) provides grants-in-aid to public and private institutions and individuals in fields related to its areas of interest, including research project, program project, and research center grants, (iii) operates a program of contracts for the funding of research and research support efforts in selected areas of institute need, (iv) provides individual and institutional fellowships to increase scientific expertise in neurological fields, (v) conducts a diversified program of intramural and collaborative research in its own laboratories, branches, and clinics, and (vi) collects and disseminates research information related to neurological disorders.



The 10<sup>th</sup> International Symposium on NeuroVirology and 2010 Conference on HIV in the Nervous System are supported by an educational grant from **Tibotec Therapeutics**. Tibotec Pharmaceuticals is a pharmaceutical research and development company that aims to discover and develop innovative HIV/AIDS drugs and anti-infectives for diseases of high unmet medical need.



The 10<sup>th</sup> International Symposium on NeuroVirology is supported by a grant from **Gilead Sciences, Inc.** Gilead Sciences, Inc. is a research-based biopharmaceutical company that discovers, develops, and commercializes innovative medicines in areas of unmet need. With each new discovery and experimental drug candidate, they seek to improve the care of patients suffering from life-threatening diseases. Gilead's primary areas of focus include HIV/AIDS, liver disease, and serious cardiovascular/metabolic and respiratory conditions.



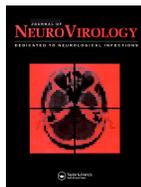
The **Department of Microbiology and Immunology** in the **Drexel University College of Medicine** (Philadelphia, Pennsylvania, USA) is involved on an annual basis in the education of more than 265 medical students, 60 graduate students, and more than 20 post-graduate scientists in training. Utilizing basic, translational, and clinical research strategies and cutting edge technologies, the faculty (totaling more than 90) are actively engaged in research and education in the areas of virology, malarial, bacterial, and fungal pathogenesis; emerging infectious disease and biodefense; opportunistic infections; drug discovery and development; immunology and vaccine science; molecular and human genetics; biomarkers and diagnostics; neuro-infectious disease; as well as cancer biology.



The **Institute for Molecular Medicine and Infectious Disease** in the **Drexel University College of Medicine** (Philadelphia, Pennsylvania, USA) is a collaborative inter-campus enterprise focused on research, diagnosis, treatment, prevention, and clinical management of infectious, inflammatory, oncogenic, metabolic and genetic disorders. The Institute facilitates the development and expansion of 14 Research Centers of Excellence (RCEs) and the training and development of graduate students, postdoctoral fellows, residents, and junior faculty within an organized framework to guide the development of inter-campus, inter-college, and inter-unit research initiatives across the University as well as with other academic, industrial, and governmental organizations at the regional, national, and international levels.



The **Department of Neuroscience in the Temple University School of Medicine** (Philadelphia, PA) is a state-of-the-art multidisciplinary research and education entity. Our mission is to foster a collaborative environment that enables superior research leading to an understanding of the mechanisms of disorders of the central nervous system. This, in turn, leads to novel therapeutic strategies directed against relevant diseases. The variety and intensity of approaches provide an integrative graduate and postgraduate program that trains first-rate scientists in the field of neuroscience who will successfully contribute new and innovative ideas and technologies well into the future.



The **Journal of NeuroVirology** ([www.jneurovirol.com](http://www.jneurovirol.com)) is the official journal of the ISNV. This bi-monthly journal provides a unique platform for the publication of high-quality basic science and clinical studies on the molecular biology and pathogenesis of viral infections of the nervous system, and for reporting on the development of novel therapeutic strategies using neurotropic viral vectors. The Journal also emphasizes publication of non-viral infections that affect the central nervous system. The Journal publishes original research articles, reviews, case reports, coverage of various scientific meetings, along with supplements and special issues on selected subjects.



The **University of Milan**, established in 1924, is a public multidisciplinary teaching and research institution, with 9 faculties, 134 study courses, 19 Doctoral Schools and 92 Specialization Schools, 58 departments, 48 institutes, and a teaching staff of 2,500 professors distinguished by their wide variety of disciplinary fields. It is one of the largest universities in Italy, with approximately 65,000 enrolled students. It is a leading institute in Italy and Europe for scientific productivity. The **School of Medicine and Surgery** provides higher training in the biomedical and health fields, integrating research with clinical care.



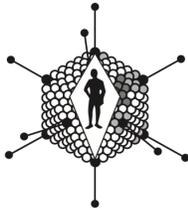
Research carried out at the **Casimiro Mondino National Institute of Neurology Foundation** has evolved over a period now spanning almost a century. In 1973, the Italian Health Ministry officially recognized the "Casimiro Mondino Institute of Neurology" Foundation as a Scientific Institute for Research, Hospitalization and Health Care (IRCCS), a designation that confirmed its dual role as a centre both for the treatment of nervous system disorders and, at the same time, for applied research in the field of neurology. Research work, closely tied in with healthcare provision, is thus the fundamental mission of the institute, which is an independent organization of national renown and a private legal entity. The Mondino Foundation conducts, in accordance with standards of excellence, mainly clinical and translational research in the biomedical field and in the field of healthcare service organization and management, as well as providing highly specialized inpatient and outpatient diagnostic and healthcare services through a broad-ranging approach which extends from clinical, epidemiological, and social-healthcare research to translational-type preclinical research.



The **Istituto Clinico Città Studi**, located in Milano, is a private hospital and also part of the Italian public health system. Hospital facilities include an emergency room, an intensive care unit, a stroke unit, and several surgery units.



Founded in 1907, the **Italian Neurological Society (SIN)** aims to promote institutional Italian neurological studies focused on the development of scientific research and training, upgrading of specialists, and improving the quality of professional assistance to patients with diseases of the nervous system. The SIN and 'society' are neurological specialists, whether they work in public or in private, territory, or in University Hospitals.



The **Italian Society of Medical Virology (www.sivim.org)** is a scientific non-profit organization whose aim is mainly to promote virological studies in the field of clinical medicine. This society gathers experts from the main virological field, that may be directly or indirectly aimed to the safeguard of health.



Founded in 1962, the **Italian Society of Microbiology (SIM)** is a nonprofit organization that gathers experts from the main fields of microbiology. The aims of this society are the follows: (i) to encourage and promote the study of the microbiology science, (ii) to organize conferences and symposium about the main microbiology fields, (iii) to favour national and international relations between microbiologists, (iv) to develop relations with other national or international Organizations that work on similar topics, and (v) to give support to different potential promising fields of study, such as biotechnology or the use of microbiology for advanced diagnostic purposes. For more information, visit the SIM web site ([www.societasim.org](http://www.societasim.org)).



The **Italian Society of Virology (Società Italiana di Virologia or SIV)** is a non-profit Association founded in September 2001. The SIV ([www.siv-virologia.it](http://www.siv-virologia.it)) is a multidisciplinary organization that merges the scientific and teaching interests of general, medical, pharmaceutical, veterinary, and vegetal virologists. The aims of the SIV are to promote the knowledge and progress in virological research, to organize meetings and courses, and to expand and connect the experience in virology to other related fields, with particular regard to biotechnology. The SIV was acknowledged by several other National Societies of Virology and will become a member of the Federation of the European Societies of Virology.



**Merck Serono (www.merckserono.com)** combines leading-edge expertise in two different areas of drug development and manufacturing: new chemical entities (NCEs) and new biological entities (NBEs). This broadens the research base and helps bring innovative pharmaceuticals to patients as quickly and efficiently as possible. Merck Serono is committed to taking full advantage of the opportunities presented by biotechnology and the human genome. At the same time, Merck Serono creates a link between innovative biotechnology and established pharmaceutical science -- and creates a unique force in drug research.



**Sanofi-Aventis (www.sanofi-aventis.us)** is part of a leading global pharmaceutical company that discovers, develops, produces, and markets innovative therapies that enhance people's lives. Extensive research and development efforts are focused on health care challenges in cardiology, oncology, and internal medicine, as well as metabolic diseases, central nervous system disorders, and vaccines.



The **Italian Consortium of Translational Research on Neuroinflammation (ICTRN)** is a scientific research group devoted to the study of neurological diseases with an inflammatory and dysimmune component. The principal aim of ICTRN is to merge the basic science with the clinical studies in the field of neuroinflammation, to create a translational model of research that could contribute in advancing the knowledge and the management of neuroinflammatory diseases useful both for the scientific community and in the clinical practice.