

Con l'adesione del Presidente della Repubblica



# CN Workshop

**Scientific Programme**

Chairmen:

A. d'Arminio Monforte (Milan, I)

A. Lazzarin (Milan, I)

C.F. Perno (Rome, I)

## HIV cure and eradication: a feasible option?

Milan, Italy Palazzo delle Stelline

January 24-25, 2013



## Endorsements

- Ministero della Salute
- Istituto Superiore di Sanità
- Agenzia Italiana del Farmaco
- Università degli Studi, Milan
- Università Vita-Salute San Raffaele, Milan
- Università degli Studi Tor Vergata, Rome
- National Institute for Infectious Diseases  
L. Spallanzani, Rome
- Azienda Ospedaliera San Paolo,  
Polo Universitario, Milan
  
- Regione Lombardia
- Provincia di Milano
  
- Fondazione AVIRALIA
- Fondazione ICONA
- SIV, Società Italiana di Virologia
- SIVIM, Società Italiana di Virologia Medica
  
- ANLAIDS, Associazione Nazionale  
per la lotta contro l'AIDS
- ARCIGAY
- Associazione NADIR
- LILA, Lega Italiana per la Lotta  
contro l'AIDS
- NPS Italia, Network Persone Sieropositive

## Scientific Coordinators

**Antonella d'Arminio Monforte** (Milan, I)  
**Adriano Lazzarin** (Milan, I),  
**Carlo Federico Perno** (Rome, I)

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**Massimo Galli** (Milan, I),  
**Giuliano Rizzardini** (Milan, I)

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- Andrea Antinori** National Institute for Infectious Diseases L. Spallanzani, Rome, Italy
- Guido Antonelli** La Sapienza University - Policlinico Umberto I, Rome, Italy - SIVIM (Italian Society of Medical Virology) President
- Brigitte Autran** University Pierre et Marie Curie, Pitié-Salpêtrière Hospital, Paris, France
- Mara Biasin** University of Milan, Italy
- Stefano Bonora** Amedeo di Savoia Hospital, Turin, Italy
- Jason Branchley** National Institute of Allergy and Infectious Diseases, Bethesda, USA
- Raffaele Bruno** University of Pavia, Italy
- Antonella Castagna** San Raffaele Scientific Institute, Milan, Italy
- Roberto Cauda** University of Sacro Cuore, Rome, Italy
- Francesca Ceccherini-Silberstein** University of Tor Vergata, Rome, Italy
- Paola Cinque** San Raffaele Scientific Institute, Milan, Italy
- Massimo Clementi** University Vita-Salute San Raffaele, Milan, Italy
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- Andrea Gori** San Gerardo Hospital, Monza, Italy
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- Javier Martinez-Picado** AIDS Research Institute-IrsiCaixa, Autonomous University of Barcelona, Spain
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- Mauro Moroni** Vice-President National Commission to Fight HIV, Rome, Italy
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- Rafick-Pierre Sékaly** Vaccine & Gene Therapy Institute of Florida, Port St. Lucie, USA
- Guido Silvestri** Emory University School of Medicine, Division of Microbiology and Immunology, Yerkes National Primate Research Center, Atlanta, USA
- Valentina Svicher** University of Tor Vergata, Rome, Italy
- Giuseppe Tambussi** San Raffaele Scientific Institute, Milan, Italy
- Maurizio Zazzi** University of Siena, Italy

## Scientific Programme January 24, 2013

- 10.45-11.00 **Welcome addresses** M. Moroni (Milan, I)
- 11.00-11.15 **Rationale and presentation of workshop** A. d'Arminio Monforte (Milan, I),  
A. Lazzarin (Milan, I), C.F. Perno (Rome, I)
- 11.15-11.30 **OPENING LECTURE**  
**Convener** A. Lazzarin (Milan, I)  
**The issue of HIV cure: immunological highlights and perspectives** B. Autran (Paris, F)
- 11.30-11.45 **Discussant** G. Poli (Milan, I)
- 11.45-15.00 SESSION 1 The virus hideaways**  
**Conveners** G. Antonelli (Rome, I), C. Rouzioux (Paris, F)
- 11.45-12.25 **STATE OF THE ART**  
■ **Host-virus interactions: how do retroviruses establish and maintain latency?** J. Martinez-Picado (Barcelona, E)  
■ **HIV pathogenesis and treatment: systems biology perspectives** R.P. Sékaly (Port St. Lucie, USA)
- 12.25-12.40 **Discussant** M. Zazzi (Siena, I)
- 12.40-13.40 Lunch and poster display
- 13.40-14.40 **LECTURES**  
■ **The CNS as reservoir of HIV** P. Cinque (Milan, I)  
■ **The gut as reservoir of HIV** G. Marchetti (Milan, I)  
■ **Sources of residual viremia** V. Svicher (Rome, I)
- 14.40-15.00 **Discussants** M.C. Re (Bologna, I), S. Rusconi (Milan, I)

15.00-16.30

## **ORAL PRESENTATIONS BASED ON SELECTED ABSTRACTS**

**Conveners** G. Marchetti (Milan, I), S. Nozza (Milan, I), V. Svicher (Rome, I)

15.00-15.20

### **Reservoir pathogenesis**

**Convener** V. Svicher (Rome, I)

**Eradication of HIV: what we can learn from infants**

A. De Rossi (Padua, I)

In heavily pretreated patients HIV-DNA concentrations in PBLs are higher in the presence of HIV residual viremia than in the presence of <1 HIV-RNA copy/mL in plasma

N. Gianotti (Milan, I)

T-lymphocyte/macrophage activation and HIV production upon microbial stimulation in naïve and HAART-treated HIV+ patients according to CD4 Lymphopenia

E. Merlini (Milan, I)

Quasispecies tropism of gut associated HIV, virus compartmentalization and immune activation in early infected patients

G. Rozera (Rome, I)

15.20-15.45

### **Eradication therapeutic approaches**

**Convener** S. Nozza (Milan, I)

**Potential role of anti-3S antibodies in an HIV medical cure strategy?**

J. Crouzet (Evry, F)

**HIV-DNA kinetic and CXCR4 and CCR5 cell surface dynamic following HAART simplification to a raltegravir (RAL) containing regimen**

P. Cicconi (Rome, I)

**Pro-oxidant drug auranofin is able to reduce the lifespan of the central and transitional memory CD4+ T cells, thus targeting the viral reservoir in SIV-mac251 infected macaques**

B. Chirullo (Rome, I)

**Kinetic of peripheral T cells subsets and HIV-DNA in HIV-positive naïve patients treated with maraviroc based therapy**

S. Chiappetta (Milan, I)

**Immune-modulating AV-HALTs target both viral reservoirs and immune system hyperactivation**

F. Lori (Parma, I)

# January 24, 2013

15.45-16.05

## **Immunology**

**Convener** G. Marchetti (Milan, I)

**Preliminary evaluation of renal function in HIV naïve patients**

P. Di Carlo (Palermo, I)

**Lymphocyte CD4+ T cell count alone are still a reliable marker for monitoring the evolution of HIV infection?**

F. Bisio (Genoa, I)

**Expression of CD38 on monocytes of HIV infected people is indicative of the number of these cells undergoing senescence**

M. Tarkowski (Milan, I)

**In naïve HIV patients, T-cell homeostasis and polyfunctional anti-HIV CD8 response are associated to CD4 recovery level after cART**

G. De Simone (Rome, I)

16.05-16.30

Discussion

16.30-16.45

Coffee break

## **16.45-19.15 SESSION 2 The weapons of the immune system: how does the immunity cope with HIV reservoirs?**

**Conveners** G. Ippolito (Rome, I), G. Palù (Padua, I)

16.45-17.25

### **STATE OF THE ART**

**Host-virus interactions: how do the immune system control viral infections quoad vitam?**

- **Immunological approaches to cure AIDS: role of animal models** G. Silvestri (Atlanta, USA)
- **Understanding the viral reservoir in vivo: HIV-infected humans** J. Brenchley (Bethesda, USA)

17.25-17.45

**Discussant** A. De Maria (Genoa, I)

**Convener** R. Cauda (Rome, I)

17.45-18.45

### **LECTURES**

- **Exposed-non-infected individuals** M. Biasin (Milan, I)
- **Elite controllers and LTNP** A. Cossarizza (Modena, I)
- **Host genetic, pathogenesis and eradication** A. Riva (Milan, I)

18.45-19.15

**Discussants** A. Gori (Monza, I), C. Mussini (Modena, I)

## January 25, 2013

### 09.00-12.30 **SESSION 3** Clinical issues: toward an effective therapeutic approach

**Conveners** G. Di Perri (Turin, I), M. Galli (Milan, I)

#### 09.00-10.00 **STATE OF THE ART**

- **The clinical implications of HIV persistence during HAART**  
C. Katlama (Paris, F)
- **Therapeutic targeting of HIV** A. Antinori (Rome, I)
- **HIV cure: current therapeutic approaches**  
S. Deeks (San Francisco, USA)

10.00-10.30 **Discussant** A. Castagna (Milan, I)

10.30-11.00 Coffee break

**Convener** M. Clementi (Milan, I)

#### 11.00-12.00 **LECTURES**

- **What is the role of therapeutic intensification on HIV reservoir?**  
C.F. Perno (Rome, I)
- **What is the role of immunotherapy?** G. Tambussi (Milan, I)
- **What is the role of clinical pharmacology for optimizing therapy?** S. Bonora (Turin, I)

12.00-12.30 **Discussants** A. De Luca (Siena, I), G. Rizzardini (Milan, I)

12.30-13.30 Lunch and poster display

# January 25, 2013

## 13.30-17.00 **SESSION 4** Clinical issues: eradication and prevention

**Convener** A. d'Arminio Monforte (Milan, I)

### 13.30-13.50 **STATE OF THE ART**

- **HIV prevention through immunization**  
M.M. Lederman (Cleveland, USA)

13.50-14.10 **Discussant** D. Mavilio (Milan, I)

### 14.10-14.50 **LECTURES**

- **Eradicating HCV and HBV: twin models of HIV?**  
F. Ceccherini-Silberstein (Rome, I)
- **Treatment of hepatitis coinfection in HIV: today and tomorrow**  
M. Puoti (Milan, I)

14.50-15.05 **Discussant** R. Bruno (Pavia, I)

### 15.05-15.45 **LECTURES**

- **Functional cure of the simian lentivirus SIVmac251 in rhesus macaques in the late chronic phase of the infection** A. Savarino (Rome, I)
- **Cure of HIV infection by CCR5 deficient stem cell transplantation?** G. Hütter (Mannheim, D)

15.45-16.15 **Discussants** M. Lichtner (Rome, I), G. Scarlatti (Milan, I)

16.15-16.45 **Rapporteurs of the Workshop** G. Marchetti (Milan, I), V. Svicher (Rome, I)

16.45-17.00 **Awards of young investigator prizes and closing consideration**  
A. d'Arminio Monforte (Milan, I), A. Lazzarin (Milan, I), C.F. Perno (Rome, I)



# Selected Abstracts

## 1. Eradication of HIV: what we can learn from infants

*A. De Rossi*

AIDS Reference Center, Section of Oncology and Immunology-DiSCOG, University of Padua, Italy

## 2. In heavily pretreated patients HIV-DNA concentrations in PBLs are higher in the presence of HIV residual viremia than in the presence of <1 HIV RNA copy/mL in plasma

*N. Gianotti, F. Cossarini, L. Galli, S. Salpietro, C. Vinci, E. Carini, M. Clementi<sup>\*</sup>, <sup>\*\*</sup>, S. Racca<sup>\*</sup>, A. Lazzarin<sup>\*\*</sup>, A. Castagna*

Infectious Diseases, San Raffaele Scientific Institute, Milan, Italy, <sup>\*</sup>LABORAF, Milan, Italy. <sup>\*\*</sup>University Vita-Salute San Raffaele, Milan, Italy

## 3. T-lymphocyte/macrophage activation and HIV production upon microbial stimulation in naïve and HAART-treated HIV+ patients according to CD4 Lymphopenia

*E. Merlini, C. Tincati, G.M. Bellistri, J.S. Martinez, G. Ancona, A. d'Arminio Monforte, G. Marchetti*

University of Milan, Department of Health Sciences, Clinic of Infectious Diseases, San Paolo Hospital, Milan, Italy

## 4. Quasispecies tropism of gut associated HIV, virus compartmentalization and immune activation in early infected patients

*G. Rozera, I. Abbate, E. Giombini, C. Vlassi<sup>\*</sup>, G. D'Offizi<sup>\*</sup>, A. Corpolongo<sup>\*</sup>, R. Lionetti<sup>\*</sup>, M. Selleri, B. Bartolini, A. Baiocchini <sup>\*\*</sup>, F. Del Nonno<sup>\*\*</sup>, M.R. Capobianchi*

Laboratory of Virology of INMI L. Spallanzani, Rome, Italy, <sup>\*</sup>Clinical Department of INMI L. Spallanzani, Rome, Italy, <sup>\*\*</sup>Anatomia Patologica Unit of INMI L. Spallanzani, Rome, Italy

## 5. Potential role of anti-3S antibodies in an HIV medical cure strategy?

*J. Crouzet, V. Vieillard<sup>\*</sup>, P. Debré <sup>\*,\*\*,\*</sup>, C. Katlama<sup>\*\*</sup>, O. Launay<sup>°</sup>, R. Ho Tsong Fang, D. Desfontaines-Batéjat, M. Marcu, S. Gharakhanian<sup>oo</sup>*

InnaVirVax, Evry France, <sup>\*</sup>Inserm UMR -S 945 Paris, France, <sup>\*\*</sup>UPMC Paris-6 University, Paris, France, <sup>\*\*\*</sup>AP-HP Pitié-Salpêtrière Hospital, Paris, France, <sup>°</sup>AP-HP Cochin Hospital & Inserm CIC BT505, Paris, France, <sup>oo</sup>Cambridge MA, USA

## 6. HIV-DNA kinetic and CXCR4 and CCR5 cell surface dynamic following HAART simplification to a raltegravir (RAL) containing regimen

*P. Cicconi, A. Casabianca<sup>\*</sup>, G. Marchetti, S. Carta<sup>\*\*</sup>, M. Montano<sup>\*\*\*</sup>, C. Orlandi<sup>\*</sup>, M. Magnani<sup>\*</sup>, M. Andreoni<sup>\*\*\*</sup>, C.F. Perno<sup>\*\*\*, °</sup>, A. d'Arminio Monforte*

Clinic of Infectious Diseases and Tropical Medicine San Paolo University Hospital, Milan Italy, <sup>\*</sup>Department of Biomolecular Science University of Urbino Carlo Bo, Urbino (PU) Italy, <sup>\*\*</sup>Antiretroviral Therapy Monitoring Unit, L. Spallanzani Hospital, Rome Italy, <sup>\*\*\*</sup>Department of Public Health and Cell Biology, School of Medicine University of Rome Tor Vergata, Rome, Italy, <sup>°</sup>Department of Experimental Medicine and Surgery, University of Rome Tor Vergata, Rome Italy

- 7. Pro-oxidant drug auranofin is able to reduce the lifespan of the central and transitional memory CD4+ T cells, thus targeting the viral reservoir in SIVmac251 infected macaques**  
*B. Chirullo, R. Sgarbanti\**, *I.L. Shytaj, S. Norelli, A. Boe, D. Limongi\*\**, *A. Della Corte, M.G. Lewis\*\*\**, *A.T. Palamara\*,<sup>o</sup>*, *E. Garaci<sup>oo</sup>*, *A. Savarino*  
 Department of Infectious, Parasitic and Immune-mediated Diseases, Istituto Superiore di Sanità, Rome, Italy, \*San Raffaele Pisana Scientific Institute for Research, Hospitalization and Health Care, Rome, Italy, \*\*Department of Experimental Medicine and Surgery, University of Rome Tor Vergata, Rome, Italy, \*\*\*BIOQUAL, Inc. 9600 Medical Center Drive, Rockville, MD 20850, USA, <sup>o</sup>Department of Public Health and Infectious Diseases, Institute Pasteur, Cenci-Bolognetti Foundation, Rome, Italy, <sup>oo</sup>Istituto Superiore di Sanità, Rome, Italy
- 8. Kinetic of peripheral T cells subsets and HIV-DNA in HIV-positive naïve patients treated with maraviroc based therapy**  
*S. Chiappetta ,\**, *M. Ripa ,\**, *L. Galli, D. De Battista, M. Malnati, G. Tambussi, A. Galli, A. Lazzarin ,\**, *S. Nozza*  
 San Raffaele Scientific Institute, Milan, Italy, \*University Vita-Salute San Raffaele Scientific Institute, Milan, Italy
- 9. Immune-modulating AV-HALTs target both viral reservoirs and immune system hyperactivation**  
*D. De Forni, R. Maserati\*, B. Poddesu, D.V. Baev, E. Katabira\*\**, *P. Cahn\*\*\**, *M.R. Stevens<sup>o</sup>*, *F. Lori*  
 ViroStatics, Alghero, Italy, \*Fondazione IRCCS Policlinico San Matteo, Infectious Diseases Unit, Pavia, Italy, \*\*Makerere Medical School, Kampala, Uganda, \*\*\*Fundación Huesped, Buenos Aires, Argentina, <sup>o</sup>ViroStatics, Princeton, USA
- 10. Preliminary evaluation of renal function in HIV naïve patients**  
*S. Madonia, P. Colletti, M. Scognamillo, I. Alongi, I.D. Amico, S. Bonura, P. Di Carlo*  
 Department of Sciences for Health Promotion, University Hospital P. Giaccone, Palermo, Italy
- 11. Lymphocyte CD4+ T cell count alone are still a reliable marker for monitoring the evolution of HIV infection?**  
*F. Bisio, F. Bozzano\*, F. Marras, C. Viscoli\*\**, *\*\*\**, *A. Di Biagio\*\*\**, *L. Moretta, A. De Maria\*,\*\**, *\*\*\**  
 Giannina Gaslini Institute, Genoa, Italy, \*Centre of Excellence for Biomedical Research, Genoa, Italy, \*\*University of Genoa, Italy, \*\*\* IRCCS A.O.U. San Martino-IST, Genoa, Italy
- 12. Expression of CD38 on monocytes of HIV infected people is indicative of the number of these cells undergoing senescence**  
*M. Tarkowski, D. Misciagna, F. Strambio de Castillia, C. Gervasoni, C. Resnati, L. Ferraris, M. Galli, A. Riva*  
 University of Milan, Department of Biomedical and Clinical Sciences, Italy
- 13. In naïve HIV patients, T-cell homeostasis and polyfunctional anti-HIV CD8 response are associated to CD4 recovery level after cART**  
*R. Casetti, V. Bordoni, C. Agrati, A. Ammassari\**, *G. De Simone, P. Pierro\*, A. Amendola\*\**, *M.R. Capobianchi\*\**, *A. Antinori\**, *F. Martini*  
 Cellular Immunology Laboratory, \*Clinical Division, \*\*Virology Laboratory, National Institute for Infectious Diseases L.Spallanzani IRCCS, Rome, Italy

# Workshop CN HIV cure and eradication: a feasible option?

Chairmen: A. d'Arminio Monforte (Milan, I), A. Lazzarin (Milan, I), C.F. Perno (Rome, I)

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# Workshop CN HIV cure and eradication: a feasible option?

Chairmen: A. d'Arminio Monforte (Milan, I), A. Lazzarin (Milan, I), C.F. Perno (Rome, I)

Congress web site: **[www.eradication2013.com](http://www.eradication2013.com)**

## Workshop Venue

### Palazzo delle Stelline

Corso Magenta, 61 - 20123 Milan, Italy - [www.stelline.it](http://www.stelline.it)

## Official Language

**English.** No simultaneous translation provided

## CME Accreditation

The Workshop has obtained **7 CME credits** (ID Number 150-47841) from Italian Health Ministry for the following professionals: Medical Doctor, Biologist, Territory and Hospital Pharmacist, Nurse, Medical Laboratory Technician and Psychologist. Medical specialties include: Infectious and Tropical Diseases, Hygiene, Epidemiology and Public Health, Microbiology and Virology, Allergology and Clinical Immunology, Internal Medicine and Gastroenterology. Credits will be given only if a participant attends 100% of the teaching event and provides correct answers to at least 75% of the questions included in the final assessment questionnaire. Participants are also required to wear the identification badge during working sessions, to provide their signature for attendance tracking purposes and to complete the satisfaction questionnaire.

## CME Provider and Organizing Secretariat

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