



Istituto Veneto
di Scienze Lettere
ed Arti

Welcome to the International Workshop on Viruses, Genes and Cancer - 2010. This is the second edition of the workshop whose title and content reflect the wealth of knowledge that is continuously being mined from investigations of the interactions between human retroviruses and host cells. The program includes a series of keynote lectures that provide a foundation for brief presentations addressing the pathogenesis of the human T-cell leukemia viruses (HTLV) and human immunodeficiency virus (HIV), and the molecular mechanisms of cancer. To foster further collaborative research in the fields of viral and molecular oncology, this year's edition also includes a poster session (fuelled by traditional Venetian 'cicchetti').

We wish to thank all of the participants for contributing to the workshop, and hope you will enjoy an intellectually stimulating scientific experience and pleasant stay in Venice.

The organizing committee

Genoveffa Franchini, Donna D'Agostino,
Umberto Bertazzoni, Vincenzo Ciminale,
Luigi Chieco-Bianchi



Photo kindly provided by F. Ferruzzi

VIRUSES, GENES AND CANCER - 2010

September 29 - October 1, 2010

Istituto Veneto di Scienze, Lettere ed Arti

Palazzo Cavalli Franchetti

Campo Santo Stefano, Venezia

promosso da



National Institutes
of Health



National Cancer
Institute



Istituto Veneto
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Istituto Oncologico
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dei trapianti d'organo
e di tessuti



Consorzio per la ricerca
sul trapianto di organi,
tessuti, cellule e medicina
rigenerativa

con il sostegno di



CASSA DI RISPARMIO
DI VENEZIA

WEDNESDAY - SEPTEMBER 29, 2010

13.00 - 14.00 REGISTRATION

14.00 - 14.30 OPENING REMARKS

Luigi Chieco-Bianchi
University of Padova, Italy

Gian Antonio Danieli
President, Istituto Veneto di Scienze, Lettere ed Arti, Venezia

14.30 - 17.15 STATE OF THE ART LECTURES

chairs Alberto Amadori
Istituto Oncologico Veneto-IRCCS, Padova, Italy

Umberto Bertazzoni
University of Verona, Italy

lectures Robert C. Gallo
Institute of Human Virology, University of Maryland School of Medicine, Baltimore, USA

Concepts and progress report on an antibody-based vaccine for HIV

Stephen P. Goff
Columbia University, New York, USA

XMRV replication in prostate cell lines: Transcription and restriction

Neal S. Young
National Heart, Lung and Blood Institute, Bethesda, USA
Telomerase genes in human diseases

BREAK

Carlo M. Croce
Ohio State University, Columbus, USA
Causes and consequences of microRNA dysregulation in cancer

Paolo M. Comoglio
Institute for Cancer Research and Treatment, Candiolo, Italy
Invasive growth: a genetic program driven by the MET oncogene

WORKSHOP: HTLV REGULATION AND PATHOGENESIS

17.20 - 18.00 SESSION I - TAXONOMY OF THE HTLV FAMILY

chair Genoveffa Franchini
National Cancer Institute, Bethesda, USA

Luiz Alcantara
National Cancer Institute, Bethesda, USA

presentations Antoine Gessain
Institut Pasteur, Paris, France
HTLV: an expanding virus family
William M. Switzer
Centers for Disease Control and Prevention, Atlanta, USA
Doubling the Diversity of HTLV:
Discovery and distribution of HTLV-3 and HTLV-4

20.30 - 23.00 SOCIAL DINNER

THURSDAY - SEPTEMBER 30, 2010

09.00 - 10.15 **SESSION II - VIRUS ENTRY**

- chairs William M. Switzer
Centers for Disease Control and Prevention, Atlanta, USA
- Luc Willems
University of Liège, Belgium
- presentations Marc Sitbon
Institut de Génétique Moléculaire, Montpellier, France
Retroviral receptor binding domains as new surface markers of cell metabolism
- Kathryn S. Jones
National Cancer Institute, SAIC-Frederick, USA
Dendritic cells in HTLV-1 transmission and pathogenesis
- Charles R. Bangham
Imperial College School of Medicine, London, UK
HTLV-1: Mechanisms of persistence and cell-to-cell spread in the host
- Maria-Isabel Thoulouze
Institut Pasteur, Paris, France
HTLV-1 transmission at the virological synapse: Key role of 'viral biofilms'
- Genoveffa Franchini
National Cancer Institute, Bethesda, USA
The HTLV-I orf-I gene regulates virus transmission and persistence

10.15 - 11.30 **SESSION III STRUCTURAL PROTEINS / CELLULAR RESTRICTION FACTORS**

- chairs Kathryn S. Jones
National Cancer Institute, SAIC-Frederick, USA
- Claudine Pique
Institut Cochin, Paris, France
- presentations Hung Y. Fan
University of California - Irvine, USA
MuLV glycosylated gag facilitates MuLV and HIV release through lipid rafts"

David W. Brighty
University of Dundee, UK
Charge-surrounded pockets and electrostatic interactions with small ions modulate the activity of retroviral fusion proteins

Alexander Wlodawer
National Cancer Institute, Frederick, USA
Structural studies of the complexes of HTLV-1 protease with inhibitors

Gisela Fanning- Heidecker
National Cancer Institute, Frederick, USA
Evolution in action: Diverse mechanisms for retrovirus resistance to APOBEC3 restriction

Giovanna Tosi
University of Insubria, Varese, Italy
The MHC-II transactivator CIITA, a viral restriction factor inhibiting the replication of HTLV-1

11.30 - 11.45 **BREAK**

11.45 - 12.30 **SESSION IV - VIRAL ACCESSORY GENES**

- chairs Vincenzo Ciminale, *University of Padova, Italy*
- Paolo Bernardi, *University of Padova, Italy*
- presentations Anna Hryniewicz, *University of Bialystok, Poland*
Requirement of the HTLV p12 and p30 genes for infectivity of human dendritic cells and macaques but not rabbits
- Vibeke Andresen, *University of Bergen, Norway*
Suppression of HTLV-I replication by Tax –mediated re-routing of the p13 viral protein to the nuclear speckles
- Izabela Bialuk
Medical University of Bialystok Mickiewicza, Poland
Orf I polymorphism and virus level in HTLV-I infected patients

12.30 - 13.15	SESSION V - THE HBZ GENE
chairs	Donna M. D'Agostino <i>University of Padova, Italy</i> Renaud Mahieux <i>Ecole Normale Supérieure de Lyon, France</i>
presentations	Jean-Michel Mesnard <i>Université Montpellier, France</i> What sense can we make out of antisense transcription in complex retroviruses? Masao Matsuoka <i>Institute for Virus Research, Kyoto University, Japan</i> Molecular pathogenesis by the HTLV-1 bZIP factor gene Isabelle Lemasson <i>East Carolina University, Greenville, USA</i> Transcriptional regulation by the HTLV-1-encoded protein HBZ
13.15 - 14.15	LUNCH
14.15 - 15.00	SESSION VI - THE TAX PROTEIN (1)
chairs	Franco Buonaguro <i>Istituto Nazionale Tumori, Naples, Italy</i> Claudio Casoli <i>University of Milan, Italy</i>
presentations	Claudine Pique <i>Institut Cochin, Paris, France</i> Cellular factors that modulate Tax post-translational modifications and NF-kappaB activation Susan J. Marriott <i>Baylor College of Medicine, Houston, USA</i> Disruption of the cellular response to DNA damage by the HTLV-1 Tax oncoprotein Jennifer K. Nyborg <i>Colorado State University, Fort Collins, USA</i> Tax promotes acetylation-dependent nucleosome eviction from the HTLV-1 promoter

15.00 - 16.00	SESSION VII - THE TAX PROTEIN (2)
chairs	Susan J. Marriott <i>Baylor College of Medicine, Houston, USA</i> Daniela Saggioro <i>Istituto Oncologico Veneto-IRCCS, Padova, Italy</i>
presentations	Chou-Zen Giam <i>Uniformed Services University of the Health Sciences, Bethesda, USA</i> Too much of a good thing: HTLV-1 Tax, NF-kappa B activation, and cellular senescence Françoise Bex <i>Université Libre de Bruxelles, Belgium</i> Move or die: the fate of the Tax protein of human T-cell leukemia virus Umberto Bertazzoni <i>University of Verona, Italy</i> Mechanisms of HTLV-1 and HTLV-2 Tax protein regulation of signal transduction Masahiro Fujii <i>Niigata University, Japan</i> Functional differences between Tax1 and Tax2 play key roles in HTLV-1 pathogenesis
16.00 - 16.15	BREAK
16.15 - 17.15	SESSION VIII - VIRAL EXPRESSION AND PATHOGENESIS (1)
chairs	Toshiki Watanabe <i>University of Tokyo, Japan</i> Roberto S. Accolla <i>University of Insubria, Varese, Italy</i>
presentations	Donna M. D'Agostino <i>University of Padova, Italy</i> MicroRNA expression in HTLV-1-transformed T-cells Vincenzo Ciminale <i>University of Padova, Italy</i> Control of ROS production and T-cell turnover by the p13 protein of HTLV-1

Arnold Rabson
UMDNJ-Robert Wood Johnson Medical School, New Brunswick, USA
Activation of HTLV-1 expression in chronically-infected CD4+ T-cells: Mechanisms and implications for pathogenesis

Andrea Kress
Friedrich Alexander-Universität Erlangen, Germany
Specific up-regulation of the tumor marker Fascin by Tax

17.15 - 18.15 SESSION IX - VIRAL EXPRESSION AND PATHOGENESIS (2)

chairs Cynthia A. Pise-Masison
National Cancer Institute, Bethesda, USA

Emanuele Cozzi
Consortium for Research in Organ Transplantation and Padova General Hospital, Padova, Italy

presentations Eric Wattel
CNRS, Center Léon Bérard, Lyon, France
Clonal persistence of HTLV-1 in vivo

Luc Willems
University of Liège, Belgium
Influence of viral expression on the fate of BLV-infected cells in sheep

Ali Bazarbachi
American University of Beirut Medical Center, Lebanon
Targeting Tax and leukemia initiating cells in ATL

Lee Ratner
Washington University School of Medicine, St. Louis, USA
Transgenic models of HTLV-1-associated neoplasia

18.35 - 21.00 POSTER SESSION WITH LIGHT REFRESHMENTS AT THE HOTEL ARTIGIANELLI

FRIDAY - OCTOBER 1, 2010

08.30 - 09.30 SESSION X - VIRAL EXPRESSION AND PATHOGENESIS (3)

chairs Graham P. Taylor
Imperial College Healthcare, London, UK

Rüdiger Hehlmann
Universität Heidelberg, Germany

presentations Madeleine Duc Dodon
INSERM U758 Virologie Humaine, Ecole Normale Supérieure de Lyon, France
Human T cell development in the thymus of HTLV-1 infected HIS (Human Immune System) mice

Gerold Feuer
SUNY Upstate Medical University, Buffalo, USA
Evaluating HTLV leukemogenesis and accessory gene functions in humanized SCID mice

Renaud Mahieux
Ecole Normale Supérieure de Lyon, France
Highly active antiretroviral treatment against STLV-1 infection combining reverse transcriptase and HDAC inhibitors

Olivier Hermine
Hôpital Necker-Enfants Malades, Paris, France
Treatment of HTLV-1- related lymphoproliferation

09.30 - 10.30 SESSION XI - VIRAL EXPRESSION AND PATHOGENESIS (4)

chairs Steven Jacobson
National Institute of Neurological Disorders and Stroke, Bethesda, USA

Beatrice Macchi
University of Rome Tor Vergata, Italy

presentations Yoshihisa Yamano
St. Marianna University School of Medicine, Kawasaki, Japan
HTLV-1 infected CD4+CD25+CCR4+ T-cells dysregulate balance of inflammation and tolerance in HTLV-1 associated neuroinflammatory disease

Steven Jacobson
National Institute of Neurological Disorders and Stroke, Bethesda, USA
**Inhibition of immune activation as a therapeutic strategy
 in HTLV-I associated myelopathy / tropical spastic paraparesis:
 From bench to bedside**

Becca Asquith
Imperial College, London, UK
What determines CD8+ T cell efficiency?

Edward L. Murphy
University of California - San Francisco, USA
Increased all-cause and cancer mortality in HTLV-II infection

WORKSHOP: HIV PATHOGENESIS

10.30 - 11.00 SPECIAL LECTURE

chair Mauro Bendinelli
University of Pisa, Italy

lecture Max Essex
Harvard University, Boston, USA
**The Mochudi Project: Prevention of HIV infection
 in the absence of a vaccine**

11.00 - 11.15 BREAK

11.15 - 12.15 SESSION I

chairs Mauro Pistello
University of Pisa, Italy

Nancy Miller
Division of AIDS, NIH, Bethesda, USA

presentations Mario Stevenson
University of Massachusetts Medical School, Boston, USA
Cellular antagonists of HIV replication

Anna Aldovini
Harvard Medical School, Boston, USA
**HIV-mediated modulation of cell death pathways
 in primary CD4+ T cells**

Barbara Felber
National Cancer Institute at Frederick, USA
**Posttranscriptional regulation is essential for retrovirus
 and retroelement expression**

Anna Cereseto
Università di Trento, Italy
A cellular factor that binds the HIV-1 integrase

12.15 - 13.30 SESSION II

chairs Arnaldo Caruso
University of Brescia, Italy

Luigi Chieco-Bianchi
University of Padova, Italy

presentations Andrea Cerutti
Cornell University, New York, USA
**Nef-trafficking intercellular highways for HIV evasion
 of antibody production**

Olivier Schwartz
Institut Pasteur, Paris, France
**Immunological & virological aspects of HIV
 cell-to-cell transmission**

Anita De Rossi
University of Padova, Italy
What children can teach us about HIV

Volker Erfle
National Research Center of Environment & Health, Munich, Germany
**Does HIV-1 harbour an oncogene?: The example of HIV
 nef and astrocytes**

Guido Poli
San Raffaele Scientific Institute, Milan, Italy
**Transcriptional control of HIV latency and replication
 in monocytic cells**

13.30 - 14.30 LUNCH

14.30 - 15.30 SESSION III

chairs

Paola Zanovello
University of Padova, Italy

Gene M. Shearer
National Cancer Institute, Bethesda, USA

presentations

Mario Clerici
University of Milan, Italy

Immune correlates of protection to HIV infection

Alan Landay
Rush University Medical Center, Chicago, USA

Immune activation inflammation and aging in HIV pathogenesis

Guido Silvestri
University of Pennsylvania, Philadelphia, USA

AIDS pathogenesis: a matter of target cell restriction?

Leonid Margolis
*Eunice Kennedy Shriver National Institute of Child Health
and Human Development, Bethesda, USA*

HIV interactions with other viruses in human tissues**WORKSHOP: MOLECULAR GENETICS AND THERAPY OF CANCER****15.30 - 16.45 SESSION I**

chairs

Eva Klein
Karolinska Institute, Stockholm, Sweden

Giancarlo Vecchio
Università 'Federico II', Naples, Italy

presentations

Riccardo Dalla-Favera
Columbia University, New York, USA

The genome of B cell lymphoma

Pier Giuseppe Pelicci
IFOM-IEO Campus, Milan, Italy

Regulation of self renewal in cancer stem cells

Stefano Piccolo
University of Padova, Italy

MicroRNAs and metastasis**16.45 - 17.00 BREAK****17.00 - 18.40 SESSION II**

chairs

Riccardo Dalla-Favera
Columbia University, New York, USA

Corrado Tarella
Ospedale S. Giovanni Battista, University of Turin, Italy

presentations

Vincenzo Bronte
Istituto Oncologico Veneto-IRCCS, Padova, Italy

Tumor-induced tolerance and immune suppression depend on C/EBP β transcription factor

Stefano Indraccolo
Istituto Oncologico Veneto-IRCCS, Padova, Italy

The Notch pathway in the regulation of tumor dormancy

George Klein
Karolinska Institute, Stockholm, Sweden

Awakening of dormant tumor cells by inflammation

Marco A. Pierotti
Istituto Nazionale di Tumori, Milan, Italy

Target mutation: The dark side of the targeted therapies**18.40 - 18.50 CLOSING REMARKS**

Vincenzo Ciminale
University of Padova, Italy

Adjourn

Dinner on your own



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