



**1° Symposium of the
International Society for Proton Dynamics in Cancer
September 27-28, 2010 - Rome, Italy**



SCIENTIFIC PROGRAMME

27th September

09:00-10:00 Opening and Welcome

- Prof. Enrico Garaci, President ISS.
- Dr. Stefano Vella, Director Dept. Therapeutic Research and Medicine Evaluation
- Dr. Stefano Fais, Director Antitumor Drugs Unit, ISPDC President

Session I. Cancer Metabolism and pH

Chair: Jacques Pouysségur, Pierre Sonveaux

10:00-10:30 J. Pouysségur

Novel Anticancer approaches by targeting hypoxia-regulated pHi-regulating systems

10:30-11:00 Angela Otto

Effect of extracellular pH on tumor cell growth and metabolism under limiting microenvironmental conditions

11:00-11:30 Coffee break

Session I. Cancer Metabolism and pH

11:30-11:45 Hofmann P

High Intensity Exercise and Tumor Metabolism Lessons from the Lactate Shuttle Theory

11:45-12:00 Chiche J

Inhibition of the hypoxia-induced pHi-regulating system CAIX and CAXII compromises tumor progression in combination with ionizing radiation

12:00-12:15 Lagadic-Gossmann D

GSK3 α is a new target for NHE1 in carcinogen-induced cell death

12:15-12:30 Sonveaux P

Lactic acid in tumors: metabolic fuel and signaling agent

12:30-12:45 Jen-Tsan Ashley Chi

The integrative frameworks for analysis of the influence of hypoxia and lactic acidosis in human cancers

12:45-13:00 Barbara Seliger

Changes in the expression of proteins involved in the metabolism of renal cell carcinoma and their use as potential targets for T cell-based immunotherapies

13:00-14:30 Lunch break

Session II. Proton dynamics and pH homeostasis

Chair: Angelo De Milito, Dominique Lagadic-Gossmann

14:30-15:00 M.G. Palmgren

Plasma membrane H⁺ pumps as pacemakers of plant growth

15:00-15:30 C. Supuran

Carbonic Anhydrases IX and XII as antitumor targets

15:30-16:15 Swietach P

The role of transporters, buffers and enzymes in spatial pH regulation, studied in multi-cellular tumour models

16:15-16:45 Coffee break

Session II. Proton dynamics and pH homeostasis

16:45-17:00 Parks SK

Investigating the role of hypoxia-inducible bicarbonate transporters in tumor cell pH regulation and survival

17:00-17:15 Counillon L

The Na⁺/H⁺ exchanger NHE-1, a crucial cellular integrator controlled by its membrane environment

17:15-17:30 **Brisson L**

Voltage-gated sodium channel activity promotes cysteine cathepsins-dependent invasiveness of breast cancer cells through the regulation of the sodium-proton exchanger NHE1

17:30-17:45 **Hernandez A**

Vacuo-lysosomal abnormal sterol accumulation induces cell death through inhibition of V-ATPase function. A study using yeast as a model system

17:45-18:00 **De Milito A**

Rationale for the use of proton pump inhibitors in antitumor therapies

18:00-19:00 **ISPDC assembly**

20:30 **social dinner**

28th September

Session III. Tumor acidity and malignancy

Chair: Stefano Fais, Robert A. Gatenby

09:00-09:30 R.A. Gatenby

Extracellular pH in cancer biology, from mathematical models to clinical trials

9:30-10:00 S. Reshkin

NHE1-dependent extracellular acidification is necessary for protease-dependent invadopodia ECM proteolysis and this is regulated by a phospho-ezrin signaling axis

10:00-10:30 Stock CM

Decorin and chondroitin-6 sulfate hinder melanoma cell migration and invasion by inducing cellular acidification

10:30-11:00 Coffee break

Session III. Tumor acidity and malignancy

11:00-11:30 Pedersen SF

NBCn1 and NHE1 expression and activity in \square NErbB2 receptor-expressing MCF-7 breast cancer cells: Contributions to pH regulation and chemotherapy resistance

11:30-12:00 Rauch C

On the role of the Universe's dimensions in pH & Pgp mediated multidrug resistance in cancer

12:00-12:15 Lozupone F

Characterization of TM9SF4 a new protein associated with tumor cannibalism and pH alteration of metastatic melanoma

12:15-12:30 Pérez Sayáns M

Measurement of ATP6V1C1 expression in brush cytology samples as a diagnostic and prognostic marker in oral squamous cell carcinoma

12:30-12:45 Marino ML

Proton pump inhibition induces autophagy as a survival mechanism following oxidative stress in human melanoma cells

12:45-13:00 Hosogi S

Na⁺/H⁺ exchanger isoform 1 (NHE-1)-dependent proliferation of gastric cancer cells

13:00-14:30 Lunch break

Session IV. Translational research on proton transport in cancer

Chair: Stephan Reshkin, Salvador Harguindey

14:30-15:00 Kusuzaki K

Translational research of photodynamic therapy with acridine orange which targets acidic vesicles and environment of cancer cells

15:00-15:30 S. Harguindey

Towards a clinical protocol to treat cancer patients with the concerted use of proton transport inhibitors (PTIs)

15:30-16:00 S. Fais

Some results on the use of PPI as chemosensitizers in patients with melanoma and osteosarcoma

16:00-16:30 Coffee break

Session IV. Translational research on proton transport in cancer

16:30-16:45 Matsubara T

Acridine orange used for photodynamic therapy accumulates in malignant musculoskeletal tumors depending on extracellular pH: association with treatment outcome

16:45-17:00 Spugnini E

Proton pump inhibitors as anti vacuolar-ATPases drugs: preliminary findings in companion animals with spontaneous neoplasms

17:00-17:15 **Clement MV**

The pH regulator, NHE-1: a possible new target for more efficient and specific anticancer treatment

17:15-17:30 **To be defined**

17:30-18:00 **Round table, final discussion and conference closing**

THE SYMPOSIUM

Participation to the 1° Symposium of the International Society for Proton Dynamics in Cancer is reserved to ISPDC members. Therefore subscription to ISPDC is necessary to participate to the Symposium. Subscription to the ISPDC and registration to the Symposium can be done by filling in the attached form (last page of this leaflet) and e-mail or fax it back (Fax: +39 045 7112533), by connecting with ISPDC website (www.ispdc.net) or by contacting the Organizing Secretariat. Registration to the Symposium is free of charge. Deadline for the online registration is September 15th, 2010.

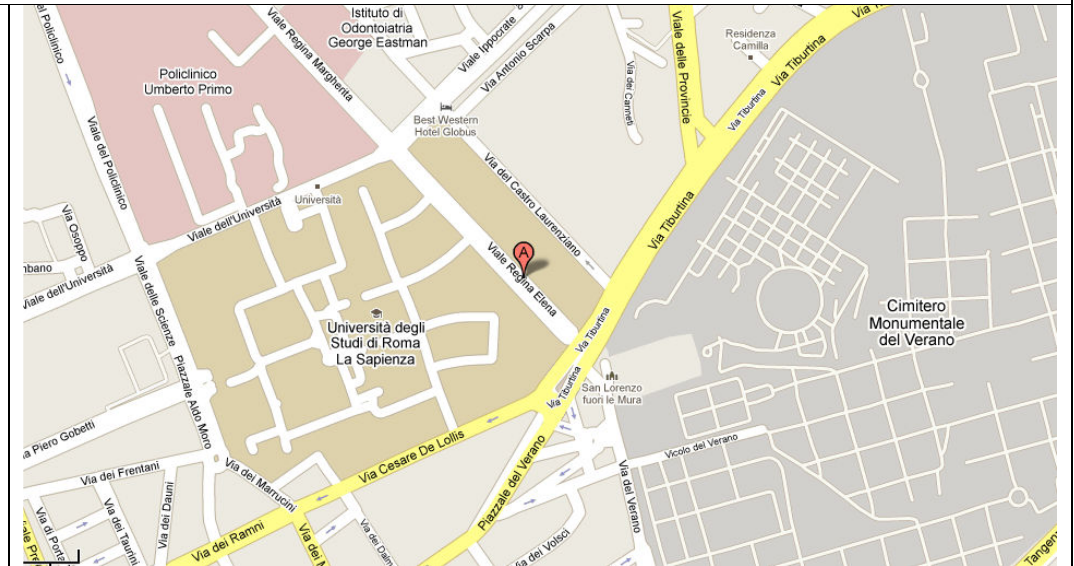
Abstracts

Abstract should be structured as follows: title, authors and affiliations, aims, methods, results, conclusions. Poster size should be 80 cm (width) and 100 cm (height). Deadline for abstract submission is July 25th, 2010.

Submit the abstracts to angelo.demilito@iss.it and Veronica.Huber@istitutotumori.mi.it

THE VENUE

The Symposium will be hosted by the Istituto Superiore di Sanità (the Italian National Institute of Health) located in Roma, Via Regina Elena 299, close to the University area, to the railway station and to the center of the town.



ACCOMMODATION

The following hotels are available at special price reserved for members attending the ISPDC Symposium

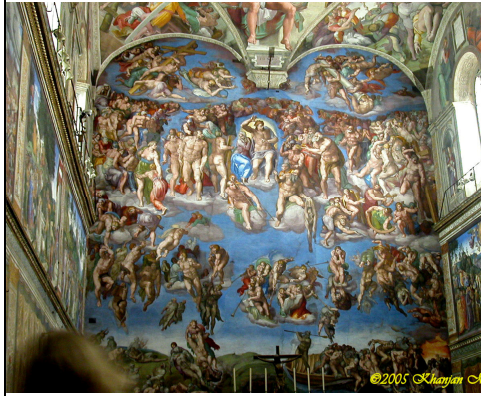
<p>Prime Hotel Villa Torlonia Via Bartolomeo Eustachio, 3/5/7 00161 Roma Tel.: +39 06 44 02 630 Fax: +39 06 44 02 637 info.villatorlonia@primegroup.it www.primehotels.it Price per night: € 109/139 Distance from Venue: 1,5 km Distance from Centre: 2 km</p>	<p>Hotel delle Provincie Via delle Provincie 103 00162 Roma - Italy Tel: +39 0644292670 Fax: +39 0644292606 book@hoteldelleprovinche.it www.hoteldelleprovinche.it Price per night: € 139/149 Distance from Venue: 200 mt Distance from Centre: 3 km</p>
<p>Best Western Hotel Globus Viale Ippocrate 119, 00161 Roma info@globushotel.com www.globushotel.com tel. +39 06 4457001 fax. +39 06 4941062 Price per night: € 105/125 Distance from Venue: 200 mt Distance from Centre: 3 km</p>	<p>NH Vittorio Veneto Hotel Corso d'Italia 1 00198 Roma – Italy Tel +39 0684951 Fax +39 068841104 nhvittorioveneto@nh-hotels.com www.nh-hotels.com Price per night: € 175/230 Distance from Venue: 5 km Distance from Centre: 500 mt</p>

SOCIAL EVENTS

To be defined

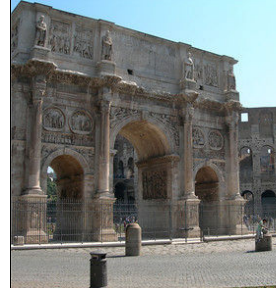
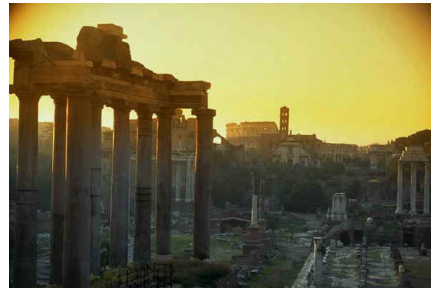


Visit to the Sistine Chapel (Vatican Museums)



**Dinner at the famous restaurant "La Rampa" at Spanish Steps Square
27 September h 19:30**

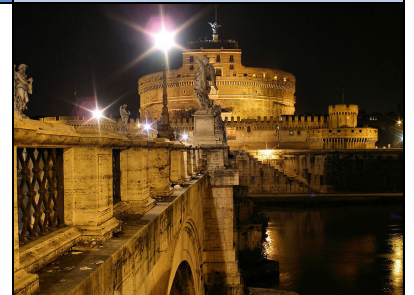
Visit to Colosseum and Imperial Fora



Roma by night walk with visit to Trevi fountain, Pantheon, Spanish Steps Square and Lungotevere and view of Castel S. Angelo and Vatican



**27 September
h 22:00**



SCIENTIFIC SECRETARIAT

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THE INTERNATIONAL SOCIETY FOR PROTON DYNAMICS IN CANCER

The International Society for Proton Dynamics in Cancer (ISPDC) is a non-profit scientific organization established in 2010. The objectives of the ISPDC are to improve communication and to foster collaborative activities and research programs between scientists engaged in acidity, alkalinity, pH changes and proton dynamics in cancer research.

Subscription to ISPDC

Registration to the Symposium is free of charge. Nevertheless, subscription to ISPDC is obligatory for participating to the 1° Symposium of the International Society for Proton Dynamics in Cancer, as this is an event reserved to ISPDC members.

Yearly subscription fee to ISPDC is of 100 €.

Scientists who are not already members must pay the ISPDC 2010 subscription fee at registration or at any time before the event.

How to subscribe to ISPDC

To become a member of the ISPDC you can fill in a form that will be sent to you ASAP. Once filled with your data please send it back to the ISPDC treasurer (Dr Antonio Chiesi) by e-mail (antonio.chiesi@ispdc.net) or fax (+39 045 7112533). Alternatively you can connect with the ISPDC website (www.ispdc.net) and fill in the 2010 ISPDC subscription form on line.

To pay the ISPDC 2010 subscription fee you can choose one of the following options:

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You can pay by credit card (Visa, Eurocard/Mastercard) using the Paypal service in the ISPDC website: www.ispdc.net

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2. BANK TRANSFER

You can pay with a bank transfer to the following co-ordinates:

Bank transfer to: ISPDC ONLUS

Address: Via Marco Polo 5, 37068 Vigasio (VR) - Italy

Bank: UniCredit

IBAN: IT65X0200859940000100894537

SWIFT code: UNCRITB1M51

Transaction details: your name, 2010 ISPDC membership fee

Deadline for the online registration to the Symposium is September 15th, 2010.

ISPDC FOUNDING MEMBERS AND TEMPORARY GOVERNANCE

<p><u>Temporary Governance:</u></p> <p>President: Stefano Fais Vice-President: Licia Rivoltini Treasurer: Antonio Chiesi Board member: Veronica Huber</p>	
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