

# MICROS 2013

## 16<sup>th</sup> International Symposium on Microdosimetry

*An Interdisciplinary Meeting on*  
Ionising Radiation Quality, Molecular Mechanisms,  
Cellular Effects, and Their Consequences for  
Low Level Risk Assessment and Radiation Therapy

**October 20-25, 2013**  
**Treviso – Italy**

### *First Announcement*

#### **PURPOSE**

Continuing in the spirit of its successful previous editions, the Symposium is intended to provide an exciting forum for scientists of different disciplines to exchange and discuss recent data and findings on relevant basic physical and biological mechanisms of radiation action and their consequences for risk assessment on Earth and in Space and for radiation therapy, including proton and carbon ion therapy.

Presentations and intensive interdisciplinary discussions of progress in radiation physics, radiation chemistry, molecular and cellular biology, modelling and radiation carcinogenesis and epidemiology are expected.

The Symposium will provide an opportunity to discuss the current status of topical low-dose non-linear phenomena, such as non-targeted and delayed effects, including radiation-induced bystander effects, genomic instability, adaptive response and hyper-radiosensitivity.

Emphasis will be laid on the recent technical developments in radiation detection, in particular in micro- and nano-dosimeters, as well as on novel irradiation techniques, in particular on the current state of the art of microbeam technology for single cell irradiation and of its biological applications.

Importance will also be given to reviewing the progress made in modelling the multi-step process of radiation induced cancer and its application to epidemiological data, in particular for the better quantification of low dose and low dose rate risk.

*In order to maximize interdisciplinary communication and discussion the Symposium will be structured as Invited, Oral and Posters presentations. Refresher courses by invited experts are also foreseen.*

*To encourage the attendance of young scientists as well as researchers from less-favoured-Countries, specific awards are foreseen.*

## **TOPICS**

The programme will include *Invited, Oral and Poster* presentations on the following main topics:

- Physical, chemical and biological aspects of radiation transport and particle track formation for various radiation fields including space radiation environments
- Processes leading to and repair of molecular, cellular and tissue radiation damage
- Computational biology for radiation induced modifications of biological targets at cellular, tissue and organism levels, including radiation carcinogenesis
- Novel techniques of radiation detection, dosimetry and microdosimetry
- Advances in microbeam technology
- Non-linear phenomena at low-doses such as radiation-induced bystander effects, genomic instability, adaptive response and hyper-radiosensitivity
- Advances in radiation therapy, including hadron therapy
- Dosimetry for incorporated radionuclides
- Radiation risk assessment

### ***Scientific Secretariat:***

Roberto Cherubini - *INFN-Laboratori Nazionali di Legnaro, Legnaro-Padova, Italy*

Francis A. Cucinotta - *NASA JSC-SK, Houston, Tx, USA*

Hans G. Menzel - *ICRU, International Commission on Radiation Units & Measurements*

Peter O'Neill - *Gray Institute for Radiation Oncology & Biology, University of Oxford, Oxford, UK*

### ***Scientific Committee:***

K. Ando, NIRS, Chiba, Japan

E. Azzam, UMDNJ – New Jersey Medical School, Newark, USA

M. Barcellos-Hoff, New York University, New York, USA

M. Belli, Istituto Superiore di Sanità and INFN, Rome, Italy

L. Braby, Texas A&M University, College Station, USA

D. Brenner, Columbia University, USA

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S. Salomaa, STUK, Helsinki, Finland  
M. Spothem-Marizot, CNRS, Orleans, France  
B. Stenerlow, Uppsala University, Sweden  
A.J. Waker, University of Ontario Institute of Technology, Oshawa, Canada  
M. Waligorski, Centrum Onkologii Oddzial, Krakow, Poland  
M. Weinfeld, Cross Cancer Institute, Edmonton, Canada

***Conference Secretariat Contacts:***

**MICROS2013 Symposium**

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***Conference Logistics Support:***

Agenzia Leonardi-Viaggi, Padova, Italy

***Conference Venue***

The Symposium will be held at the “Centro Congressi” of the Hotel “B4 Treviso Maggiore Consiglio”, Treviso – Italy.

The fascinating city of Treviso dates back to the Roman Empire, and its historical evolution pass through the Middle Ages and is closely linked to the Venetian Republic (“La Serenissima”).

It is an attractive combination of landscapes, history, art, and excellent cuisine.

Located just a few kilometres from Venezia (Venice) city and not far from Belluno, Cortina d’Ampezzo and the amazing Dolomites, Treviso city is surrounded by harmonious plains, the foothills of the Alps, the scenic Prosecco vineyards hills, and small towns and villages of its province.

Treviso has an international airport (Aeroporto Treviso “Canova”) and is very well connected by road and rail to many other international airports in Northern Italy (Venezia “Marco Polo”, being the nearest; Verona; Bologna; Brescia; Bergamo; Milano Linate; Milano Malpensa).

***MICROS 2013 Proceedings***

Symposium proceedings will be published as a special issue of a peer-reviewed journal. Further details will be provided in the Second Announcement and Call for paper

***Pre-Registration***

People who are interested in receiving the Second announcement and updates are kindly requested to fill in the Pre-Registration form available on the Symposium website.

***Financial Assistance for Young Scientists***

Limited funds will be available to assist young scientists attending the Symposium with the partial reimbursement of travel and/or living expenses. Further details will be provided in the Second Announcement.

Interest in applying can be indicated on the Pre-Registration Form available on the Symposium website.