



ICTR-PHE 2012

<http://cern.ch/ICTR-PHE12>

International Conference
on Translational Research
in Radiation Oncology

Physics for
Health in Europe

First Announcement



February 27 – March 2, 2012

Centre International de Conférences de Genève (CICG)

International Conference Centre

Geneva, Switzerland

Organised in Collaboration with

ESO | ESTRO | EANM | EFOMP | ENLIGHT

ESA | ESF | ESR | ESRF | EU | EuCARD | ILL | PARTNER

Important dates:

Abstract submission and early registration deadline

October 3, 2011

Late registration

January 15, 2012



ICTR-PHE 2012



First ICTR-PHE 2012 Conference: Uniting Biology, Medicine and Physics to fight cancer

Dear Colleague,

On behalf of the Organizing Committee it is our privilege to invite you to attend ICTR-PHE 2012 (International Conference on Translational Research in Radio-Oncology and Physics for Health in Europe), which will take place in Geneva on February 27 – March 2, 2012.

This conference represents a new reality in Oncology, as it brings together two major events in the interdisciplinary field at the intersection of Medicine, Biology and Physics: the ICTR conference and CERN's Physics for Health workshop.

The ICTR conferences started in 2000 with the objective to update the radiation oncology community on the most recent advances in translational research, reinforce the synergies among clinicians, biologists and medical physicists, and, last but not least, trigger personal and institutional contacts favouring a more efficient collaboration between laboratories worldwide.

The first edition of the Physics for Health workshop was organised by CERN in February 2010 with the objective of reviewing the progress in the domain of physics applications in life sciences, stimulating the exchange between different teams and indicating the subjects most suitable for further studies in diagnosis and therapy. The workshop, which was the first of its kind, brought together some 400 healthcare professionals, biologists and physicists to examine the increasingly important interface between physics and health.

One of the main reasons to merge ICTR and PHE is to develop new strategies to treat cancer, by uniting biology and physics with clinics. These novel synergies will be the "red thread" that ICTR-PHE 2012 will follow during this 5-day conference. In order to catalyse stimulating exchanges and interactions between experts and young researchers, top-ranked abstracts will be included in the Forum Workshop and Meet the Professor sessions. ICTR-PHE 2012 will also pay a tribute to those institutions and individuals who significantly contribute to the development of translational research in oncology. Last, but not least, we hope to foster a friendly atmosphere which will result in positive exchange throughout the conference.

This Conference will develop further expansion of our partnership with industry, with concerted efforts in Research & Development and a common approach to emerging educational modalities in translational research. All this will be formalised through the publication of the Conference abstracts in a Supplement of "Radiotherapy and Oncology" fully dedicated to ICTR-PHE 2012.

Setting up the stage of a new international conference is always a challenge, requiring an optimal coordination between all the components of the enterprise. But we are strongly convinced that the efforts we will put forth for a better integration along tracks where radiation physics, biology and medicine intertwine, will be key to success.

The Organizing Committee of ICTR-PHE 2012 is looking forward to welcoming you to Geneva so soon February 27 – March 2, 2012 in your agenda now!



Jacques Bernier and Manjit Dosanjh,
Conference Chairs

Kian K. Ang , Ugo Amaldi, Michael Baumann,
Soeren M. Bentzen, Jacques Bernier, Sergio Bertolucci, Jean Bourhis , Jean-François Chatal, Alberto Del Guerra, Manjit Dosanjh, Marco Durante, Wolfgang Enghardt, Zvi Fuks, Ulli Köster, W. Gillies McKenna, R. Mohan, Steve Myers, Ken Peach, and Brad Wouters

Advisory Board



ICTR-PHE 2012

ICTR-PHE 2012 Scientific Committee (as of February 2011)

Advisory Board

Kian K. Ang (Pre-Clinical Strategies)
Ugo Amaldi (New Technologies)
Michael Baumann (Pre-Clinical Strategies)
Soeren M. Bentzen (Radiotherapy)
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Sergio Bertolucci
Jean Bourhis (Clinical Perspectives)
Jean-François Chatal (Nuclear Medicine)
Alberto Del Guerra (Detectors and Imaging)
Manjit Dosanjh
Marco Durante (Biology)
Wolfgang Enghardt (Detectors and Imaging)
Zvi Fuks (Clinical Perspectives)
Ulli Köster (Nuclear Medicine)
W. Gillies McKenna (Biology)
Rahde Mohan (Radiotherapy)
Steve Myers
Ken Peach (New Technologies)
Brad Wouters

Sections:

Biology

M. Durante, Darmstadt
W. G. Mc Kenna, Oxford
J.M. Brown, Stanford
B. Jones, Oxford
B. Wouters, Toronto

New Technologies

U. Amaldi, Novara
K. Peach, Oxford
S. Rossi, Milano
T. Haberer, Heidelberg

Pre-Clinical Strategies

K.K. Ang, Houston
M. Baumann, Dresden
M. Verheij, Amsterdam

Radiotherapy

S.M. Bentzen, Madison
R. Mohan, Houston
D.R. Olsen, Oslo
S. Korreman, Copenhagen

Nuclear Medicine

J.F. Chatal, Nantes
U. Köster, Grenoble
D. Lewis, CERN

Clinical Perspectives

J. Bourhis, Villejuif
Z. Fuks, New-York
J. Bernier, Genolier and Geneva
D. Brizel, Durham

Detectors and Imaging

W. Enghardt, Dresden
A. Del Guerra, Pisa
S. Bertolucci, CERN
P. Lecoq, CERN
D. Townsend, Singapore

ICTR-PHE 2012 Executive Committee

Jacques Bernier, Genolier and Geneva
Sergio Bertolucci, CERN
Alberto Costa, Milano

Manjit Dosanjh, CERN
Raymond Miralbell, Geneva
Steve Myers, CERN



SUPPORTING INSTITUTIONS

In collaboration with
The European School
of Oncology



CERN
European Organization
for Nuclear Research



European Society for Therapeutic
Radiology and Oncology



European Society for Therapeutic Radiology and Oncology

Under the auspices of the
European Organisation for
Research and Treatment of Cancer



Fondazione FARO, Geneva



Fondazione TERA, Novara



University of Geneva,
and Geneva University Hospital





Conference Arrangements and Organization

Venue

All sessions will be held at the Centre International de Conférences de Genève - International Conference Center of Geneva (CICG), conveniently located near the International Airport and major highways, the railway station, Lake Geneva and the historic old town. A vast choice of hotels offers the delegates first-rate hospitality just a stone's throw from the conference centre.

Conference Environment and Climate

Distinguished by its unique geographical position in the heart of Europe, state-of-the-art technology, and high-quality services, Geneva is the ideal venue for international events and a top conference centre where the cross-fertilization of ideas encourages an open mind and objective view of the world. Located between the Alps and the Jura mountains, at the extreme south-west of Switzerland and the Lake Léman, Geneva is the central cross-roads of Western Europe. Geneva is situated at a 373-meter altitude, which together with the lake, tempers the prevailing continental climate. In March temperatures usually range between 8 and 15°. Snow falls in the nearby Alps are frequent at this period of the year.

Registration

Registration will open on June 1st. Information will be available on the website <http://cern.ch/ICTR-PHE12>

Registration Fee

Early registration	Swiss Francs	400	(deadline: October 3, 2011)
Late registration	Swiss Francs	700	(deadline: January 15, 2012)
On site registration	Swiss Francs	1'000	

The registration fee covers access to the Conference, a copy of the final programme and abstract book, coffee breaks and lunches during the Conference. Fees transferred later than February 1, 2012 may not be credited to the Conference account prior to the Congress registration. Therefore, it is mandatory to provide the registration desk personnel with a copy of the transfer order as proof of payment. Registration fees (less a CHF 80.00 administrative charge) will be refunded only if notification of cancellation will have reached the Conference Secretariat before January 15, 2012. No refunds will be issued after this date and no-shows are not eligible for a refund. All refunds will be made within 3-4 weeks after the Conference. If you register but cannot attend the Conference, you may elect to pass on your registration to another person with your Organization.

Language

The language of the Conference will be English. No simultaneous translation is foreseen.

Conference Abstracts

The Conference abstracts will be published as a supplement to Radiotherapy and Oncology (Green Journal).

Accreditation, travel grants

A list of accreditations (European Accreditation Council for Continuing Medical Education (EACCME) and American Medical Association (AMA)) will be regularly updated on the Conference website.



Projection facilities

Powerpoint and PDF files will be used.

Posters

All posters will be on continuous display throughout the Conference.

Technical Exhibition

An exhibition will take place in the Conference Center Main Hall, close to the lecture and poster presentation halls.



Swiss International Air Lines is proud to be the Official Carrier for the **ICTR-PHE 2012** and is offering special Congress Fares to all participants. These Congress Fares offer reductions of up to 25% depending on the fare type, route and space availability. Congress Fares are valid on the entire SWISS route network for flights to Switzerland, including flights operated by partner airlines under an LX flight number. These fares are now bookable for the travel period 14 days prior to and 14 days after the event.

To take advantage of this offer, book easily and conveniently through SWISS.COM via the following link: www.swiss.com/event

Please enter your email address and the following **event code: 4004-3632-4041-9268**. The special SWISS congress fare is marked with a "C". It may not necessarily be the lowest fare but it offers flexibility in the event of rebooking or cancellation. SWISS looks forward to pampering you on board with typical Swiss hospitality.

Conference Executive Office

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Scientific Programme

In the Arena

General Research Areas

- Functional Imaging
- Developmental Radiation Physics
- Molecular Pathology and Oncology
- Structural Biology
- Human Cancer Genetics
- Pre-Clinical Data
- Experimental Therapeutics
- Early clinical testing
- Radiobiology in therapy and space science
- Radioisotopes in diagnostics and therapy
- Prospects in medical imaging
- Novel technologies in radiation therapy

Specific Topics (non exhaustive list)

- Molecular imaging
- Positron emission tomography
- New markers in CT/PET
- Targeted imaging including hypoxia markers
- Brachytherapy
- Radio-surgery
- Navigation systems
- Single-Cell Microbeams
- Microbeam probes of cellular radiation response
- Magnetic field research
- Intensity modulated radiation therapy (IMRT)
- Tomotherapy
- Particle radiotherapy, hadrontherapy
- Image-guided radiotherapy, tissue motion
- Sparing normal tissues and critical organs
- Novel approaches in Quality Assurance
- Telematics
- Biologic and physical optimization in treatment planning
- Bio-mathematical approaches for experimental data
- Novel approaches in fractionation alteration
- Gene expression profiling
- Predictive assays
- Cell cycle and response to treatment
- Mechanisms of radiation induced cell death
- How to develop a successful cancer drug (chemo-radiation approaches)?
- Pitfalls in developing cancer treatment agents
- Applications of proteomics and genomics in drug discovery
- Mechanistic combinations
- Practical issues in tissue research
- Tumor vaccines
- AKT/PTEN/Survival pathways
- New targeting strategies: basic mechanisms and clinical outcome
- Drug radioresistance
- Molecular targeting
- Receptors
- Structure-activity relationships
- Tumor hypoxia
- Hypoxic cytotoxins
- Micro-environmental determinants of response to radiation
- Tumor vasculature
- Vascular disrupting agents
- Tumor endothelial cell interactions
- Angiogenesis and metastasis inhibitors
- Radiation effects on angiogenesis
- Apoptosis pathway targeting agents
- Proteasome inhibitors
- Stress pathway inhibitors
- Chromatin modifying agents
- Cellular therapies and cytokines
- Monoclonal antibodies and target toxins/nuclides
- Radiosensitizers: in vitro and in vivo models
- Radioprotectors
- Genetic control of cancer cell and normal tissue Radiosensitivity
- Intra- and inter-cellular signaling cascades induced by radiation
- Signal transduction modulators
- Cyclins and CDKs
- Telomerase-targeting agents
- Gene therapy and antisense approaches
- Optimising targets for angiogenic inhibition
- Stroma as a target
- DNA, protein, and membrane chemistry
- DNA damage recognition
- DNA repair in tumor and normal tissues
- DNA adducts
- Normal tissue radiobiology
- Antimetabolites
- Bioreductive agents
- Topoisomerase I / II inhibitors
- Tubulin-interacting agents
- DNA-interactive agents
- Prodrugs
- Drug delivery
- Drug resistance and modifiers
- Radiation interactive agents
- Immunotherapy and ionizing radiation
- Hormonal agents
- Tumor tissue banks
- Track structure applications
- Oxidative stress
- Bystander effects and radiotherapy
- Microdosimetry
- Genomic instability
- Tumor susceptibility genes
- Radiation carcinogenesis
- Epigenetics
- Genomics
- Proteomics
- Histones and response to radiation
- Ubiquitin system in cancer therapy
- Novel organisms for studying radiation response
- Stem cells (tumor response and normal tissue damage)
- Hyperthermia
- Photodynamic Therapy
- Radiobiology
- Radiation oncology
- Particle therapy
- Radiation therapy
- Treatment plans in radiotherapy
- Radioisotopes
- Nuclear medicine
- Medical imaging
- Challenges for simultaneous PET-MRI
- Time of Flight PET
- Treatment of moving targets
- Scanned ion beam therapy
- Linac
- Cyclotron
- Technology in emerging markets
- Comprehensive engineering in radiotherapy

ICTR-PHE 2012



SCIENTIFIC PROGRAMME AT A GLANCE

Monday 27 February	Tuesday 28 February	Wednesday 29 February	Thursday 1 March	Friday 2 March
Opening Ceremony	Keynote Lecture (ESTRO: Physics)	Keynote Lecture (G.H. Fletcher)	Proffered papers <ul style="list-style-type: none"> • Biology, Physics, Clinics. 	Proffered papers <ul style="list-style-type: none"> • Biology, Physics, Clinics.
Radiobiology in therapy and space science <ul style="list-style-type: none"> • Missing data in radiation effects in deep space. • Missing data for Treatment Planning Systems in ion therapy. • Radiobiological research for improving particle therapy. • Treatment of radiation-resistant tumours. • Future needs. 	Prospects in detectors and medical imaging <ul style="list-style-type: none"> • Position-sensitive detectors. • Compton cameras. • New methods of photon detection. • Time-of-Flight for PET. • Challenges of hybrid PET/MRI. • Fast image reconstruction algorithms for in-situ treatment planning. 	Plenary lectures (1 speaker/topic) <ul style="list-style-type: none"> • Physics meet Biology. • Physics meet Clinics. • In-room Imaging. 	Forum <ul style="list-style-type: none"> • Predictive tools: new algorithms. • Tumor micro-environment. • Physics. 	Symposium <ul style="list-style-type: none"> • Cancer stem cells. • Tumor radiosensitivity modulation. • Physics.
LUNCH	LUNCH	Plenary lectures (1 speaker/topic) <ul style="list-style-type: none"> • Radio-isotopes in therapy. • Biological adaptive radiotherapy. • Improving precision in imaging and treatment. 	Forum <ul style="list-style-type: none"> • EORTC session. • Oral Poster Presentation. • Oral Poster Presentation. 	Forum <ul style="list-style-type: none"> • Repair mechanisms in tumor and normal cells. • Drug-radiation interactions. • Radiosensitization and radioprotection.
Radioisotopes in diagnostics and therapy <ul style="list-style-type: none"> • $^{99}\text{Mo}/^{99\text{m}}\text{Tc}$ supply and ^{99}Mo production. • Therapy of metastases and systemic tumours with radioisotopes. • Clinical experience with commercial beta-radioisotopes coupled to antibodies. • Role of radiotracers in drug development. 	Novel Technologies and therapy <ul style="list-style-type: none"> • New accelerators for medical applications. • Gantries for ions. • Scanning beams and moving targets. • Future developments. 	Symposium (3 speakers/session) <ul style="list-style-type: none"> • Tumor targeting and normal tissue protection. • Image-guided prescription and planning of RT. • Long-term perspectives in Hadrontherapy. 	LUNCH	LUNCH
LUNCH	LUNCH	Symposium (3 speakers/session) <ul style="list-style-type: none"> • New algorithms in treatment planning and delivery. • Montecarlo in treatment planning. • Status and perspectives in radiology. 	Keynote Lecture: (G. Adams: Biology).	Workshops <ul style="list-style-type: none"> • Tumor vascularization. • Targeted therapies: from bench to bedside. • Physics.
LUNCH	LUNCH	Symposium (3 speakers/session)	Workshops <ul style="list-style-type: none"> • Targeting signaling pathways. • Normal tissues: from prediction to facts. • Physics. 	Proffered papers <ul style="list-style-type: none"> • Biology, Physics, Clinics.
Proffered papers	Proffered papers <ul style="list-style-type: none"> • Biology, Physics, Clinics. 	Proffered papers <ul style="list-style-type: none"> • Biology, Physics, Clinics. 	Proffered papers <ul style="list-style-type: none"> • Biology, Physics, Clinics. 	ESD Plenary Session <ul style="list-style-type: none"> • 2 Lectures. • E. van der Schueren Award • 1 Lecture.