Ettore Majorana Foundation and Centre for Scientific Culture
Prof. Antonino Zichichi, *President and Director*

INTERNATIONAL SCHOOL OF MEDICAL SCIENCES
EXPERIMENTAL ONCOLOGY AND ITS CLINICAL APPLICATION SERIES

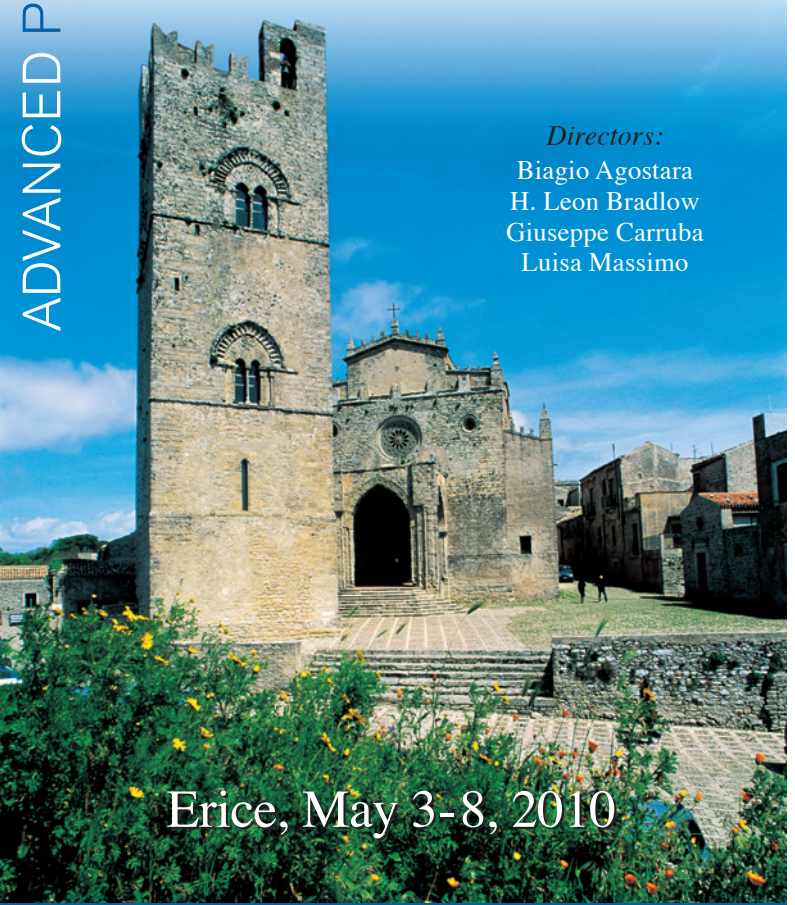
10th Advanced Meeting on:

CANCER OMICS

From Bedside to Desktop
Cancer Medicine and Backwards:
the Implementation of Omic Sciences in the
Prevention and Treatment of Human Tumors.

ADVANCED PROGRAM

Directors:
Biagio Agostara
H. Leon Bradlow
Giuseppe Carruba
Luisa Massimo



Erice, May 3-8, 2010

www.EriceCancerMeeting.com/2010/

Purpose of the Meeting

Welcome to our Erice 2010 meeting on Cancer Omics "From bedside to desktop cancer medicine and backwards: the implementation of omic sciences in the prevention and treatment of human tumors".

High-throughput omic technologies are being established and validated in cancer research aiming to create better predictive models for diagnosis, prognosis and therapy, to identify and characterize key signaling networks and to find new targets for drug development.

This tenth Advanced Meeting of the series on Experimental Oncology and its Clinical Application is addressed to combine and integrate theoretical approaches and resulting data in omic research aiming to:

(a) identify healthy subjects at risk of developing cancer;
(b) define novel nosological cancer entities that could not be revealed by pathological examination;
(c) recognize new independent prognostic indicators in cancer patients;
(d) assess the probability of response of patients to treatment;
(e) ultimately pinpoint potential molecular pathways as a basis to develop personalized measures for prevention and/or therapy.

A large room will be allocated for interactive discussion, aiming to favor the cross-fertilization process between the faculty and the audience. Furthermore, younger scientists will be allowed to present their own experimental data orally in specifically designed Sessions, to provide a close interaction with major experts in the field and to discuss, also informally, technical and methodological aspects.

Topics

- Diet and cancer omics
- DNA methylation, histone modification and disease
- MS, NMR and other methods in epigenetics
- Animal models in epigenetics
- Comparative oncology
- Epigenetic mechanisms in human tumors
- Microarray analysis, tumor profiling and cancer diversities
- miRNA and cancer taxonomy
- Genome-based in silico biology
- Translational implications of cancer genomics
- Proteomic dissection of cell signaling networks
- Proteomic approaches for cancer biomarkers
- Proteomic signatures in human tumors
- GWA studies and cancer metabolomics
- Metabolomics and tumor biomarker discovery
- Xenobiotic metabolomics
- Metabolomic profiles in human tumors
- Cancer as a systems biology disease
- Computational approaches to genomics
- Design and analysis issues in cancer genomic studies
- Omic data integration

Monday, May 3

Arrival

Welcome Address

The Directors of the Course

Plenary Lecture

John Milner, *Rockville, MD, USA*
Nutrition and Cancer Omics

Luisa Massimo, **Franco Prefumo**, & **Thomas J Wiley**
Sicily: a fascinating planet

Tuesday, May 4

Session I — Epigenomics

Session Leaders **Miguel Beato**, *Barcelona, Spain*
Udo Opperman, *Oxford, UK*

Miguel Beato, *Barcelona, Spain* – Epigenomics of Hormone Action

Moshe Szyf, *Montreal, Canada*
Methylation, molecular mechanisms, disease

Benedikt Kessler, *Oxford, UK*
Mass spectrometry for epigenetic modifications

Ulrich L Günther, *Birmingham, UK*
NMR spectroscopy for epigenetic modifications

Rob Klose, *Oxford, UK* – Molecular biology of histone modifications

Francis Stewart, *Dresden, Germany* – Animal models for epigenetics

Gioacchino Natoli, *Milan, Italy*
Epigenetic mechanisms in inflammation and cancer

Mark Bedford, *Smithville, TX, USA* – Recognition mechanisms in epigenetics

Roland Schuele, *Freiburg, Germany*
Demethylation, transcriptional regulation, and prostate cancer

Thea Tlsty, *San Francisco, CA, USA*
Epigenetic mechanisms in breast cancer

Chris Schofield, *Oxford, UK* – Chemical biology of epigenetics

Antonis Kirmizis, *Cambridge, UK/Nicosia, Cyprus*
Genomic profiling of epigenetic modifications

Erice - the Pepoli Castle *(ph arch. AAPIT Tràpani)*

Wednesday, May 5

Session II — Genomics & Transcriptomics

Session Leaders **Barbara Dunn**, *Bethesda, MD, USA*
Colin P Smith, *Guildford, UK*

Michael R Stratton, *Cambridge, UK* – The Cancer Genome

John Quackenbush, *Boston, MA, USA* - Microarray analysis and tumor classification

Ken Buetow, *Bethesda, MD, USA* – In silico biology using genomic resources

Giovanni Blandino, *Rome, Italy*
The advent of miRNAs in the molecular taxonomy of human cancers

Yosef Yarden, *Rehovot, Israel*
Transcriptome analysis in search for signal transduction defects in cancer

Stefan Ambs, *Bethesda, MD, USA*
Profiling of tumors to identify factors that contribute to cancer health disparities

John Witte, *San Francisco, CA, USA* - Genomics of cancer development and progression

Seong-Jin Kim, *Incheon, South Korea/Cleveland, OH, USA*
Systematic functional approaches to identify gastric cancer targets

James R Downing, *Memphis, TN, USA*
Genome-wide analysis of genetic and epigenetic lesions involved in leukemogenesis

Gian Paolo Tonini, *Genoa, Italy*
Risk prediction for neuroblastoma and medulloblastoma patients using omic analysis

Kenneth Aldape, *Houston, TX, USA*
Genomic characterization of glioblastoma multiforme

Shiuan Chen, *City of Hope, CA, USA*
Genomic basis for endocrine resistance in human breast cancer

Jessica Zucman-Rossi, *Paris, France*
Molecular diversity of hepatocellular carcinomas: translational implications

Thursday, May 6

Session III — Proteomics

Session Leaders **Rudi Aebersold**, *Zurich, Switzerland*
Giuseppe Carruba, *Palermo, Italy*

Rudi Aebersold, *Zurich, Switzerland* – The Cancer Proteome

Emanuel Petricoin III, *Manassas, VA, USA*
High content protein network mapping: personalized therapy for cancer

Walter Kolch, *Glasgow, UK* – Proteomic mapping of cell signaling

Samir Hanash, *Seattle, WA, USA* – Mining the plasma proteome for cancer biomarkers

Richard M Caprioli, *Nashville, TN, USA*
Image mass spectrometry in cancer proteomics

Debashis Ghosh, *University Park, PA, USA*
Proteomic signatures: levels of evidence to develop clinical assays

Tony Whetton, *Manchester, UK*
A proteomic approach to study biology of normal and leukemic stem cells

Richard R Drake, *Norfolk, VA, USA* – Proteomic approach to breast cancer

John Masters, *London, UK* – Proteomics in prostate cancer

John M Luk, *Hong Kong, China* – HCC proteomics

Friday, May 7

Session IV — Metabolomics

Session Leader — **Jerzy Adamski**, *Munich, Germany*

Jerzy Adamski, *Munich, Germany*
Introduction: technologies, challenges and perspectives

Karsten Suhre, *Munich, Germany*
Progress in genome wide association studies and metabolomics

Roy Goodacre, *Manchester, UK* – The normal serum metabolome and beyond: biomarker discovery for cancer diagnostics and therapy

Michael Milburn, *Durham, NC, USA*
Metabolomic profiles delineate potential role for sarcosine in prostate cancer progression

Trevor M Penning, *Philadelphia, PA, USA*
Steroid hormone and xenobiotic metabolomics

Ulrich L Günther, *Birmingham, UK*
Early stage diagnosis of oral cancer using 1h NMR-based metabolomics

Robert H Weiss, *Davis, CA, USA*
Urine metabolomics analysis for kidney cancer detection and biomarker discovery

Andrew Lane, *Louisville, KY, USA* – Clinical applications of Stable Isotope-Resolved Metabolomics (SIRM) in non small cell lung cancer

Saturday, May 8

Session V — Data analysis and integration

Session Leaders — **John Quackenbush**, *Boston, MA, USA*; **Colin P Smith**, *Guildford, UK*

Mariano Bizzarri, *Rome, Italy*
An integrated understanding of cancer as a systems biology disease

John Quackenbush, *Boston, MA, USA*
Gene expression state space models and cell fate transitions

Giovanni Parmigiani, *Baltimore, MD, USA*
Design and analysis issues in genome-wide somatic mutation studies of cancer

Michael B Major, *Chapel Hill, NC, USA*
Omic data integration for translational cancer medicine

Concluding Remarks

The Directors of the Course

Depart

Erice - the main square at night *(ph arch. AAPIT Tràpani)*

Abstracts **& P**osters

Each registrant wishing to present his or her work at the conference may submit one abstract electronically at: lucashbl@unipa.it.
Only those abstracts that have been reviewed and accepted by the Conference Chairpersons will be presented as posters.
A few abstracts will also be selected for oral presentation in specific sessions. Successful applicants will receive an acceptance letter, along with more detailed meeting information.

The abstract submission deadline is, **February 28th, 2010**.
All presenters must register to attend the meeting.
If an abstract is accepted and the presenter does not register, the abstract will be withdrawn.

Abstracts should be prepared according to the template (www.ericecancermeeting.com/2010/AbstractTemplate.doc) and must be no longer than 300 words.
Each abstract should contain:
(a) an introductory sentence indicating the purposes of the study;
(b) a brief description of relevant experimental procedures;
(c) a summary of results;
(d) a concluding statement.

A permanent poster session will be set up throughout the meeting. Poster boards of 120 x 80 cm (47,2" x 31,5") will be made available to poster presenters.
All presenters are required to attend their posters during specific coffee breaks or as otherwise indicated in the program.

Grants

Thanks to the generosity of the sponsors, a limited number of grants, covering registration expenses, will be awarded to students or younger researchers.
Individuals who wish to apply for a grant should email or fax to the Scientific Secretariat an application letter including:
(a) full name, email address and contact numbers (telephone, fax);
(b) a CV;
(c) a list of publications, if any.

The deadline for grant applications is **December 31st, 2009**.
Grant applicants will be notified of the outcome of their application by email before January 11th, 2010.

Erice (Marsala) - the salt-works *(ph A. Garozzo, arch. AAPIT Tràpani)*

Program Committee

J. Adamski, *Neuherberg, Germany*
M. Beato, *Barcelona, Spain*
B. Dunn, *Bethesda, MD, USA*
P. Muti, *Rome, Italy*
R. Nassiri, *East Lansing, MI, USA*
U. Opperman, *Oxford, UK*
C. P. Smith, *Guildford, UK*

How to Register

Any individual wishing to attend the meeting must register online or by returning the registration form (www.ericecancermeeting.com/2010/RegistrationFormErice.doc) to the Organizing Secretariat. Places at the conference are on a first-come, first-served basis, according to date of registration. Registration forms will not be processed without full payment. Online registrations will be confirmed immediately by e-mail. All other registrations will be confirmed within two weeks of receipt.

Registration Fee (VAT included)

Until January 31	February 1 - March 31	After March 31
€ 625	€ 730	€ 800

Registration fee is all-inclusive, covering admission to all lecture and poster sessions, meeting material, accommodation, meals, transportation from/to Falcone-Borsellino Palermo Airport, Gala Dinner and social program. Space permitting, onsite registration will be available. All registrations are intended for the full conference.

Cancellations/Refunds

Requests for refund must be submitted in writing to the Organizing Secretariat at: info@bgeventi.com. There will be a € 50 processing fee for cancellations until March 31st, 2010. From April 1st no refunds can be given.

UNDER THE AUSPICIES OF

Assessorato Regionale all'Agricoltura
Assessorato Regionale della Sanità
Assessorato Regionale al Turismo
A.R.N.A.S. Civico, Di Cristina, Benfratelli, Palermo
Dipartimento Oncologico A.R.N.A.S. Ospedale Civico Palermo
Provincia Regionale di Palermo
Università degli Studi di Palermo

PARTNER INSTITUTIONS

SGC Structural Genomics Consortium
University of Surrey
HelmholtzZentrum münchen — German Research Center for Environmental Health
ROC, Rome Oncogenomic Center
Istituto Regina Elena, Direzione Scientifica, Rome
CRG Centre de Regulació Genòmica
Institute of International Health, MSU
Fondazione Giuseppe Alazio
Progetto Amazzone Palermo
Fondazione Gaia

AWARD SUPPORTERS

AIRC - Associazione Italiana per la Ricerca sul Cancro
LILT - Lega Italiana per la Lotta contro i Tumori

MEETING VENUE

Ettore Majorana Foundation and Centre for Scientific Culture
Via Guarnotta, 26 - 91016 Erice (Sicily), Italy
Ph: +39.0923.869133 Fax: +39.0923.869226
Email: hq@emcsc.ccsem.infn.it Internet: www.ccsem.infn.it/

SCIENTIFIC SECRETARIAT

Experimental Oncology, Dept. of Oncology, ARNAS-Civico
90127 Palermo, Italy Ph: +39.091.6664346
Fax +39.091.6664352 Email: lucashbl@unipa.it
Internet: www.EriceCancerMeeting.com/2010/
Contact Person: Lucia Polito Ph: +39.091.6664346
Web Master: Maurizio Zarcone Ph: +39.091.6667110

ORGANIZING SECRETARIAT

BGE Eventi & Congressi
90143 Palermo, Italy - Via G. Bonanno, 61 Ph.: +39.091.306887
Fax: +39.091.6260945 Internet: www.bgeventi.com
Email: info@bgeventi.com – guarino@bgeventi.com
Contact Person: Valentina Guarino - Mob.: +39.339.3452770
Valentina Borgese - Mob.: +39.349.7648082

Cover: Erice - Cathedral, 14th century *(ph Alfio Garozzo - arch. AAPIT Tràpani, 2006)*