



European
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*SEMM – European School of Molecular Medicine
University of Milan*

*IFOM – FIRC Institute for Molecular Oncology
IEO – European Institute of Oncology*

GENES AND TUMOURS: SECOND INTERNATIONAL IFOM-IEO CANCER MEETING

From May 5th to 8th, scientists from all over the world will gather in Milan to attend the 2nd IFOM-IEO Campus Meeting on Cancer. Topics will include the development of new research frontiers from laboratory to clinic.

From genome instability to novel technologies; from transcriptional regulation mechanisms to the identification of therapeutic targets. These will be some of the “hot topics”, at the forefront of top level research, to be addressed and discussed by scientists attending the 2nd IFOM-IEO Campus Meeting on Cancer, promoted by the European School of Molecular Medicine (SEMM) and by the University of Milan, in collaboration with IFOM (The FIRC Institute of Molecular Oncology Foundation) and IEO (European Institute of Oncology). The Meeting – which will be held from May 5th to 8th 2006, at the IFOM-IEO Campus (Via Adamello 16, Milan) – will attract eminent cancer researchers from all over the world. The major sponsor of the event is the Umberto Veronesi Foundation (FUV).

With 200 participants, 34 oral presentations (24 by invitation and 10 selected by the Scientific and Organizing Committee from the proposals sent by the participants) and 86 “posters”, the Meeting offers the possibility of a “full immersion” in the field, with presentations of the latest and most relevant findings in molecular oncology. Six scheduled sessions will host different topics: genome instability and mechanisms of cell cycle control; the influence of microenvironment on cancer (interactions between cancer cells and their surrounding tissues); animal models; cancer epigenetics (functional alterations in the genome which contribute to tumour onset); imaging systems and high-throughput technologies (technologies that allow the rapid and simultaneous analysis of tens of thousands of genes and proteins); identification of therapeutic targets. “We chose these topics – explains Ugo Cavallaro, Director of the “Cell Adhesion in Neoplastic Progression and Angiogenesis” research programme at IFOM, and member of the Meeting’s Scientific and Organizing Committee – to emphasize the importance of translational research, that is, to favour the transfer of basic research results to clinical settings as quickly as possible. We have high expectations for the clinical applicability of the research areas discussed at the Meeting; we hope they will soon provide novel ideas to set up diagnostic as well as therapeutic strategies, that will considerably improve the treatment of patients suffering from a wide variety of neoplastic diseases”.

“Actually, the molecular approach seems to be a very promising tool both in diagnostics and therapeutics”, commented Inder Verma, from the Salk Institute in La Jolla, who will give the opening lecture. “After deciphering many molecular events involved in the cell regulation processes we gained a deep insight into cell physiology and behaviour. Now we have many powerful tools available: intelligent drugs for novel clinical strategies, monoclonal antibodies as therapeutic bullets, new anti-angiogenic molecules (*which can selectively inhibit blood vessel growth within the tumour, thus preventing oxygen and nutrients from reaching the malignant process, writer’s note*), inhibitors of uncontrolled cell proliferation and protein degradation, to name a few”.

Among the attending speakers, there will be **David M. Sabatini**, from the Whitehead Institute in Cambridge (USA), who set up a specific gene platform allowing the selective inactivation of single genes within an organism. This technique is leading to the understanding of what happens when a particular gene is unable to work properly. **Alberto Mantovani**, from the Istituto Clinico Humanitas (Rozzano) and the University of Milan will present his studies linking cancer and inflammation; **Carlo M. Croce**, from the Comprehensive Cancer Center (Ohio State University, USA), will refer to his recent analysis of the role of micro RNAs in tumorigenesis. RNA (ribonucleic acid) is best known for being a molecule that contains

'transcribed' information from within the DNA, that is then 'translated' into proteins. Carlo Croce will instead talk about so-called microRNAs, unusual tiny bits of RNA that regulate the expression of genes potentially involved in tumour formation. **William C. Hahn**, from the Dana-Farber Cancer Institute in Boston (USA), in a collaborative effort with David Sabatini, has been investigating the role of oncogenes and tumour suppressor genes, and has created a number of tumour model systems with a well-defined genetic background. This approach is proving to be a critical tool to understand the genetics of cancer.

Giulio F. Draetta from the Merck Research Laboratories in Boston (USA), **Pier Paolo Di Fiore**, IFOM Scientific Director, **Olivera J. Finn**, from the University of Pittsburgh (USA), and **David M. Livingston** from the Dana Farber Cancer Institute in Boston (USA) will give their presentations in the session dedicated to the identification of new therapeutic targets and the intelligent drug design. Dr. Finn, in particular, will talk about tumour vaccines and immunotherapy. Dr. Livingston, who is also a member of the Advisory Board at IEO, will give the closing lecture presenting recent results obtained in breast and ovarian tumours.

Given the high scientific level of the presentations, the Meeting is likely to become a real opportunity for scientists to exchange expertise and ideas, as well as a trigger for translational research. The meeting will also be an excellent exhibition of Italian science. "This is really a tremendous chance – comments Fabrizio d'Adda di Fagagna, Director of the IFOM research programme "Telomeres and cellular senescence" and member of the Scientific and Organizing Committee of the Meeting – to bring together the best molecular oncologists in the world, but also to highlight the excellent qualities of Italian research and the collaborative ability of the Institutes that are actively involved in the organisation of the Meeting."

Besides Ugo Cavallaro and Fabrizio d'Adda di Fagagna, other members of the Scientific and Organising Committee of the Second International IFOM-IEO Campus Meeting on Cancer are: Susanna Chiocca, Director of the IEO research programme "Viral control of cellular pathways and biology of tumorigenesis"; and Fraser McBlane, Director of the IEO research programme "Molecular mechanisms of leukemogenesis".

During the Meeting a pavilion will be set up to host the scientific posters. An exhibit area will also be established for the presentation of consumables and specific equipments for the biomedical research.

The IFOM-IEO Campus

More research and better research, but also more competitiveness at the international level. With these ambitious goals in mind, IFOM and IEO have set out to integrate their scientific activities. The IFOM-IEO Campus, which will cover an area of some 22.000 square meters by the end of 2006, will host both the research activities and the technical facilities of the two Institutes. When these operations are completed, the Campus will rely on the work of about 600 scientists from 30 research groups, investigating the most advanced frontiers of cancer-related research with a marked focus on the transferability of research. Transfer-research aims to rapidly employ basic research results in clinical and therapeutic settings.

The basic idea behind the Campus is to create an active scientific-technological cluster, headed by IFOM and IEO, where eminent experts take part in the scientific training and technology transfer process.

Both the University of Milan and the European School of Molecular Medicine are deeply involved in the training programmes. In the technology transfer sector, and thanks to Genextra (a holding company which is active in the pharmacogenomics and biotechnology fields), the Campus has already given the kick-off to two start-up companies, Congenia and Dac, whose mission is the identification and development of novel anti-tumour drugs as well as other drugs against aging-related cell degeneration pathologies. The Campus is also home to the Biopolo, a non-profit company involved in technology transfer and in establishing factual cooperation with Industry. The technological infrastructure of the cluster is represented by the IFOM-IEO Consortium for Oncogenomics, which manages and coordinates several facilities such as DNA sequencing, and facilities within the sectors of Nanotechnologies, Molecular Pathology, Immunology, Protein Analysis, Model Organisms and Bioinformatics.

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