Concepts and Molecular Mechanisms of Multistage Carcinogenesis
First Joint Conference of the American Association for Cancer Research and the European Association for Cancer Research immediately following EACR-XI in Genoa

Additional Support from the Istituto Nazionale per la Ricerca sul Cancro

Grand Hotel Miramare, Santa Margherita, Italy
November 6-9, 1991

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SCIENTIFIC PROGRAM

Welcoming Remarks
LEONARDO SANTI / Genoa, Italy

Opening Address
PETER BANNASCH / Heidelberg, Germany

Epidemiological and Experimental Evidence for the Multistage Process
HENRY C. PITOT / Madison, USA
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FRANCO MERLETTI / Turin, Italy
FRIEDRICH MARKS / Heidelberg, Germany
FRANCIS V. CHISARI / La Jolla, USA

DNA Replication, Damage, and Repair
MARCEL ROBERFROID / Brussels, Belgium
DEZIDER GRUNBERGER / New York, USA
HARTMUT M. RABES / Munich, Germany
ARTHUR P. GROLLMAN / Stony Brook, USA
PHILIP C. HANAWALT / Stanford, USA
TOMAS LINDAHL / Herts, England
SARASWATI SUKUMAR / San Diego, USA

Multiple Genetic Changes during Tumor Development
LANCE A. LIOTTA / Bethesda, USA
JAN SVOBODA / Prague, Czechoslovakia
ALLAN BALMAIN / Glasgow, Scotland
ANTON BERNS / Amsterdam, The Netherlands
TERRY H. RABBITTS / Cambridge, England
WEBSTER K. CAVENEY / Montreal, Canada

Genetic Aspects of Tumor Suppression
GEORGE KLEIN / Stockholm, Sweden
ERIC J. STANBRIDGE / Irvine, USA
MARY WEISS / Paris, France
DAVID P. LANE / Herts, England
NICHOLAS HASTIE / Edinburgh, Scotland
EDWARD HARLOW / Charlottesville, USA

Growth Factors and Signal Transduction
HAROLD L. MOSES / Nashville, USA
GIUSEPPE DELLA PORTA / Milan, Italy
CHRISTOPHER J. MARSHALL / London, England
CARL-HENRIK HELDIN / Uppsala, Sweden
RIK DERYNCK / South San Francisco, USA

Overview and Future Directions
I. BERNARD WEINSTEIN / New York, USA

APPLICATION FORMS
(North and South America)
American Association for Cancer Research
Public Ledger Building
620 Chestnut Street, Suite 816
Philadelphia, PA 19106, USA
215-440-9300 215-440-9313 (FAX)

(Outside the Americas)
Italiana Congressi
Via Bensa 2
16124 Genoa, ITALY
10-202541 10-299382 (FAX)

The AACR and EACR invite the international community of cancer researchers to submit applications for this exciting conference.

A limited number of travel grants for graduate and medical students, postdoctoral fellows, and physicians in training will be available.
This issue of Cancer Research recognizes the pioneering contributions of Pietro M. Gullino, a pathologist and anatomist of Italian origin. After receiving the M.D. degree from the University of Torino and the diploma from the Italian Board of Pathology, he spent two years training in biochemistry at the Technische Hochschule in Munich with Professor Waldschmidt-Leitz. He then joined the National Cancer Institute first as a grantee of the Italian League against Cancer, 1954–1955, and later as a staff member in 1957. To evaluate physiological parameters in solid tumors growing in the host, he developed a tissue-isolated tumor preparation. By injecting tumor cells into the rat ovary, he obtained a tumor growing at the expense of the small 30-mg organ and resulting in its destruction and substitution by a neoplastic mass of several grams nourished by only one artery and one vein, i.e., the original ovarian vessels. This superb system made it possible to measure metabolite balances across the tumor bed and to study the effects of agents on an isolated tumor without interference by the normal tissue. The procedure is described in the Journal of the National Cancer Institute (27: 679–693, 1961) and Methods in Cancer Research (5: 45–91, 1970).

At the height of the Warburg controversy over his proposal that tumors exhibit anaerobic energy metabolism, Gullino clearly showed that in vivo (a) tumors avidly took up oxygen; (b) tumors produced lactic acid while consuming oxygen, thereby refuting glycolysis as a compensatory mechanism for lack of aerobic mechanisms; and (c) the notion that tumors with high lactic acid production had a growth advantage over low glycolytic activity (Cancer Res., 27: 1020–1030, 1031–1040, 1041–1052, 1967) was unjustified.


After retirement from the National Cancer Institute, he moved to the University of Torino, where he is currently Professor of Pathologic Anatomy. His latest work is concerned with tumor angiogenesis and aims at clarifying the events that control neovascularization of neoplastic emboli, an indispensable step in the formation of metastases. Original findings thus far indicate that copper ions and gangliosides of the host tissue modulate the angiogenic response of the local capillary endothelium (Cancer Res., 47: 4243–4247, 1987; Lab Invest., 61: 629–634, 1989; J. Cell. Physiol., 144: 505–510, 1990).

During the past six years, he has been teaching a course entitled "Critical Issues in Tumor Microcirculation, Angiogenesis and Metastasis" with his longtime collaborator, Rakesh K. Jain, who is the Andrew Werk Cook Professor of Tumor Biology in the Department of Radiation Oncology at Harvard Medical School. Photograph and information were kindly provided by Rakesh K. Jain.

Sidney Weinhouse