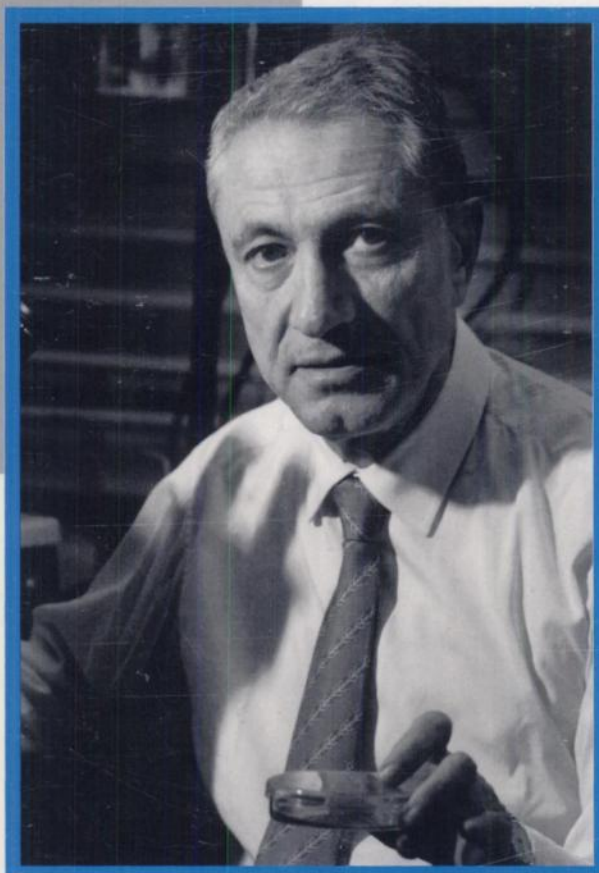




Cancer Research

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AACR SPECIAL CONFERENCE IN CANCER RESEARCH

Proteases and Protease Inhibitors



March 1-5, 1996
Marriott's Bay Point Resort
Panama City Beach, FL

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Structure/Function Relationships for Proteases and Inhibitors

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Function in Cellular Processes

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Nancy A. Thornberry / Rahway, NJ
Joseph A. Madri / New Haven, CT

Function in Multicellular Systems

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Cancer Invasion and Metastasis

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Clinical Applications

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Andrew P. Docherty / Slough, England
John A. Foekens / Rotterdam, The Netherlands

Application Deadline: December 15, 1995

Information and Application Forms:

American Association for Cancer Research
Public Ledger Building, Suite 816
150 South Independence Mall West
Philadelphia, PA 19106-3483
215-440-9300 215-440-9313 (FAX)

**DIRECTOR OF DIVISION OF
EXPERIMENTAL THERAPEUTICS AND PHARMACOLOGY
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The Johns Hopkins Oncology Center is seeking a Director of the Division of Experimental Therapeutics and Pharmacology. The Oncology Center is an NCI-designated Comprehensive Cancer Center housing ambulatory and inpatient, as well as radiation oncology, facilities for patients with hematologic malignancies and solid tumors. The Director of the Division of Experimental Therapeutics and Pharmacology will lead clinical and laboratory programs focused on innovative therapeutic research, while providing support for the development of clinical programs across the Center by facilitating the translation of basic science concepts to clinical trials, both prevention and intervention. Furthermore, this individual will facilitate the discovery of antineoplastics and the expansion of drug development and testing across the Johns Hopkins Medical Institutions.

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The Johns Hopkins University is an EO/AA/American Disabilities Act Employer. Qualified women and minority candidates are encouraged to apply. For further information regarding this opportunity, prospective candidates should contact:

Ross C. Donehower, M.D.
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Johns Hopkins Oncology Center
600 North Wolfe Street, Room 124
Baltimore, Maryland 21287-8936
Phone: (410) 955-8838
Fax: (410) 955-0125

THE SURGERY BRANCH, NATIONAL CANCER INSTITUTE, NIH, IS SEEKING PATIENTS FOR
ONGOING CLINICAL TREATMENT PROGRAMS.

PATIENTS WITH THE FOLLOWING MALIGNANCIES ARE BEING TREATED UNDER COMBINED
MODALITY OR INNOVATIVE IMMUNOTHERAPY PROGRAMS:

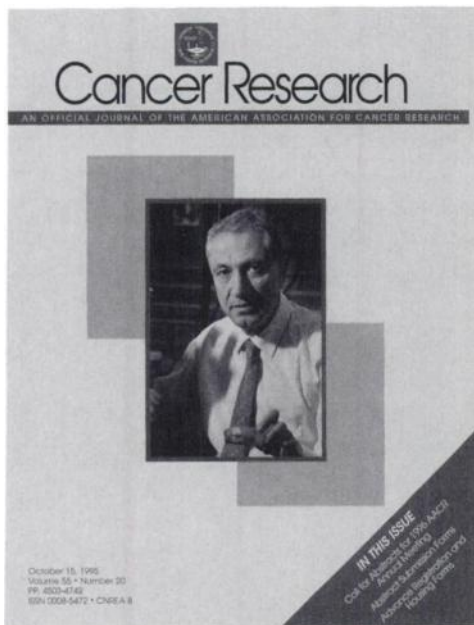
- METASTATIC MELANOMA AND KIDNEY CANCER •
- STAGE II OR LOCALLY ADVANCED BREAST CANCER •
- METASTATIC COLORECTAL CANCER TO THE LIVER •
- LOCOREGIONAL GASTRIC OR PANCREATIC CANCER •
- MESOTHELIOMA, PULMONARY METASTASES, STAGE IIIA, B LUNG CANCER
OR ESOPHAGEAL CANCER •
- LOCALIZED SOFT TISSUE SARCOMAS •
- PERITONEAL CARCINOMATOSIS•



CARE FOR ALL PATIENTS IS PROVIDED AT THE CLINICAL CENTER, NIH,
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FOR MORE INFORMATION ON CANCER PROGRAMS, PLEASE CALL
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COVER LEGEND



Renato Baserga (cover) was one of the early pioneers in the study of the cell cycle, along with a group of distinguished investigators that included Alma Howard, Steve Pelc, Eugene Cronkite, Henry Quastler, Len Lamerton, and Mortimer Mendelsohn. The original investigations date from the 1950s, when the cell cycle was largely based on autoradiography with tritiated thymidine and cell kinetic analysis. Dr. Baserga and his collaborators were the first to apply cell kinetic analysis to the study of tumors in mice (*Cancer Res.*, 20: 910, 1960) and to demonstrate that the cell cycle of tumor cells was not necessarily shorter than that of normal cells (*J. Natl. Cancer Inst.*, 28: 331, 1962). This was a far-reaching finding because it clearly indicated that other factors, besides the speed of cell proliferation, were involved in the growth of tumors, factors that were subsequently defined as the growth fraction (by Dr. Mendelsohn) and the rate of cell death (by Franco Bresciani and co-workers). In 1965, Dr. Baserga (*Cancer Res.*, 25: 581, 1965) pioneered the biochemical interpretation of the cell cycle, i.e., the first realization that beneath the terminologies of G_1 , S phase, G_2 , etc., was a complicated interaction of biochemical mechanisms. From that point, the cell cycle was firmly established as a biochemical entity, which inevitably became, in due time, an entity based on molecular biology.

During this time, Dr. Baserga made several major contributions to the saga of the cell cycle, including the definition of the G_0 phase (*Exp. Cell Res.*, 89: 255, 1974), originally conceptualized by Laszlo Lajtha. This concept, now generally accepted, initially found considerable resistance in the scientific community, and this opposition did not abate until molecular biology clearly showed that different events were taking place in G_0 versus G_1 , an area in which Dr. Baserga again made early important contributions (*Proc. Natl. Acad. Sci.*, 81: 6004, 1984). Dr. Baserga and his collaborators were also among the first to investigate the effects of viral proteins, especially the

SV40 T antigen, and the adenovirus early proteins on gene expression during stimulation of DNA synthesis (*Proc. Natl. Acad. Sci.*, 74: 3189, 1977; *Mol. Cell. Biol.*, 5: 2936, 1985), coming to the intriguing conclusion that the genes activated by adenovirus infection are a subset of those activated by serum.

A pioneer in using microinjection and antisense oligodeoxynucleotides in studying cell proliferation, Dr. Baserga has recently turned to another exciting topic, namely, the influence of growth factors and their receptors on cell cycle control. In a series of seminal papers, he and his collaborators have shown that the insulin-like growth factor I receptor (IGF-IR) is not an absolute requirement for cell growth, but that it is necessary for optimal growth and its activation is needed throughout the cell cycle; the IGF-IR is necessary for the establishment and maintenance of the transformed phenotype, at least for several cell types both *in vivo* and *in vitro*; in the IGF-IR, the mitogenic and the transforming domains can be separated (*Exp. Cell Res.*, 218: 370, 1995), indicating that different signaling pathways are involved in the two processes; and a loss of function of the IGF-IR causes massive apoptosis of tumor cells *in vivo*, the sensitivity to apoptosis being much more evident *in vivo* than *in vitro* (*Cancer Res.*, 55: 2463, 1995). These findings have also been discussed in a recent Perspectives in Cancer Research (*Cancer Res.*, 55: 249, 1995), in which the potential therapeutic applications of these findings have been pointed out.

Dr. Baserga obtained his M.D. degree from the University of Milan, Italy, in 1949. He came to the United States in 1952, and after training under Philippe Shubik and Hermann Lisco, he took a residency in pathology. He joined the Department of Pathology of Northwestern University in Chicago in 1958, and in 1965, he moved to the Fels Research Institute of Temple University Medical School in Philadelphia. He remained at Temple University, where he was Chairman of the Department of Pathology for 16 years, until 1991. In July 1991, he was appointed Professor of Microbiology and Immunology and Deputy Director of the Jefferson Cancer Center at Thomas Jefferson University, Philadelphia, where he is presently affiliated.

Dr. Baserga has received many awards and honors, including the Rous-Whipple Award, and he has served on many editorial boards and study sections throughout his long career. Dr. Baserga first served as an Associate Editor for *Cancer Research* from 1979–1981. His current term on the *Cancer Research* Editorial Board began in 1990, and his service in this capacity has been of inestimable value to Editor-in-Chief, Carlo M. Croce, in maintaining the journal's quality and timeliness. He has also been an active member of the AACR since 1954, serving with distinction on several key committees over the years, such as the Publications Committee, Program Committee, and Awards Committee.

We are indebted to Dr. Baserga and his staff for providing us with the information and photograph for this cover feature.

Sidney Weinhouse