Ut Cancrum Vincamus
# Predictive Oncology & Therapy

## Impact of Cancer Biotechnology

### Diagnostic & Prognostic Indicators

**Nice, France • October 26 - 28, 1996**

3rd International Symposium • Plenary Program • [http://www.ummed.edu/8000/dept/cancerprev](http://www.ummed.edu/8000/dept/cancerprev)

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### Predictive Markers

- **Systemic markers**
  - K FRENKEL, PHD (NYU, NY)

- **Site-specific markers**
  - WR BRUCE, MD (Ontario Cancer Inst, Toronto)

- **Preneoplastic p53 expression**
  - G SELIVANOVA, MD (Karolinska Inst, Stockholm)

- **Prognostic implications of heat shock proteins**
  - S FUQUA, MD (UTX, San Antonio)

- **DNA adducts of carcinogen exposure**
  - C WILD, MD (IARC, Lyon)

- **Prognostic oncogene expression**
  - Z RONAI, MD (American Health Frnd, Valhalla, NY)

### Details

**Deadline for abstracts** ~ June 28, 1996

Details from: HE Nieburgs MD • Fax: 508-856-1824 • Tel: 212-534-4991 • e-mail: CANCER@SANFAN.ummed.edu

Correspondence: Box 20, University of Massachusetts Medical Center, 55 Lake Ave N, Worcester, MA 01655 USA

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![Image of logos from various institutions]
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Joint Meeting Organized by the American Association for Cancer Research (AACR) and the International Agency for Research on Cancer (IARC)

With the Collaboration of the Hungarian Cancer Society

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SCIENTIFIC PROGRAM

Keynote Address
Curtis C. Harris / Bethesda, USA

Cancer incidence and Etiology
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Frederica Perera / New York, USA
J. Carl Barrett / Research Triangle Park, USA
Helmut Bartsch / Heidelberg, Germany

Air, Water, Food, and Soil Contamination
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Wieslaw Jedrychowski / Cracow, Poland
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Ambient, Environmental, and Occupation Exposure and Cancer Risk
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Stephen S. Hecht / Valhalla, USA
Krystyna Frenkel / New York, USA
Bernadette Schoket / Budapest, Hungary

Strategies for Prevention
Waun Ki Hong / Houston, USA
I. Bernard Weinstein / New York, USA
Anna Tompa / Budapest, Hungary

Roundtable Discussion
Paul Kleihues / Lyon, France
Hans-Olov Adami / Uppsala, Sweden
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Applicants are encouraged to submit abstracts for poster presentation.

Information and Application Forms

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A PUBLIC SERVICE ANNOUNCEMENT COURTESY OF THIS PUBLICATION
Marking the 25th Anniversary of the National Cancer Act: A New Call to Arms

In 1971 the U.S. Government declared war on cancer, but the term has been a great misnomer and has led to false expectations by everyone. Visualizing the fight against cancer as a war is an appropriate analogy, but the battle with this enemy is too often left to defenseless patients, and their casualties are unacceptable to all of us. To win this war, we desperately need new, modern weapons that have to be designed, developed, and tested in the field.

Unfortunately, a real war against cancer has never been mounted by the federal government. To date, available federal funds have supported only a small, intense skirmish by a limited number of investigators. The number of invading cancer cells and their effectiveness are difficult for one to realize. Each year, these marauding cells kill almost ten times as many U.S. citizens, more than 50,000, as were killed in the entire Vietnam conflict (58,150) that covered a period of nine years (1964–1973). From 1970 to 1995, roughly the same period as the National Cancer Act, our national defense budget increased 208% and rose from $81.7 billion to $252.2 billion. In part, this defense budget is considered necessary by policymakers to prevent us from dying from war, yet it is over 100 times the amount of the budget of the National Cancer Institute (NCI), which supports research to protect U.S. citizens and others around the world from the far more probable and menacing killer.

Stealth cancer cells will attack and ultimately kill 1 out of every 4 Americans who are alive today. The two fields of dots in the cover design connotate the nearly 1,550 deaths from cancer per day in the U.S. This death rate is steadily increasing every year. However, during the past 10 years, U.S. Government funding for cancer research, when adjusted for inflation, has increased only 1%. Total federal research funding per year for the two leading cancers diagnosed in the U.S. male (prostate and lung) would not represent enough money to purchase three new fighter planes. Obviously, this does not reflect a Congressional commitment to a “war against cancer.”

Somehow in politics, taxes, and budgets, the Nation seems to have lost a clear perspective on the important priorities. Maybe the advice of the news commentator Sam Donaldson was correct when he suggested to us at a recent summit in Washington on the cancer problem—“Never try to get Congress to see the light; rather, make them feel the heat.” To those of us who are busy with the battle, this seems to be a very sad commentary. Already we are called away from the field to write extensive grant applications proposing our ideas, with less than a 1 in 5 chance of their being armed by funding. Our time is already limited, so how can we find even more time to educate our own legislators and fellow voters about the value of cancer research? Equally alarming is a 1994 report by the National Research Council that the number of grant applications from young scientists under the age of 37 declined 54% between 1985 and 1993. We are losing over half of our new young warriors just when new weaknesses are being revealed in our enemy—the cancer cell. Why are we running training camps if the trainees will not be permitted to join the campaign? Furthermore, where will our replacements come from in the future? Everyone has to wake up and shake our leaders.

Congress and the public often ask us, “When are you going to cure cancer?” Thank goodness we have already cured some types of cancers, especially those that strike our young people. From 1973 to 1990, the death rate from cancer from birth to 19 years of age decreased 38.4%; from 20 to 44 years, 20.7%; and from 45 to 54 years, 10.5%. This is terrific news for young people who earlier would have had a fatal diagnosis if they had leukemia, Hodgkin’s disease, or testicular cancer. Today they can survive these previously devastating tumors thanks to the hard-won victories achieved primarily through federally supported medical research. A 17-year government investment of a total of $56 million in testicular cancer research yielded a 91% cure rate, with an increased life expectancy of 24 years and a savings of $166 million annually. This investment benefits the patients and a big bargain for the taxpayers. This type of victory is our proof of principle, but we have not yet won on the major fronts. Most of the cancers in America occur in the lung, colon, breast, and prostate, and the incidence, mortality, and cost of these cancers are steadily increasing. Unless these cellular invasions are halted by progress in research, they will continue to drive the suffering, death, and cost from cancer to an unprecedented level. In fact, by the turn of the century, cancer is expected to be the Nation’s #1 killer.

The research community cannot afford to be silent any longer. We must all be active leaders; let us draw up new battle plans. These must include: political campaigns, scientific campaigns, financial campaigns, industrial campaigns, media campaigns, whatever it takes. Let us focus on funding, which is always so critical to any campaign. The fiscal realities must be considered in these times of spending constraints. Today, cancer health care costs the American people $104 billion per year, a level that is over 50 times the NCI budget. Put another way, the NCI budget to help reduce this disease is equivalent to only 2% of this annual cancer health care cost. Any discovery that impacts cancer quickly returns the investment, and this does not even take into consideration reducing the potential for human suffering and personal loss due to cancer.

How can we restore our spirits? Even with the limited number of investigators and inadequate support, cancer researchers can take pride in the large number of new and exciting discoveries that they have generated since the passage of the National Cancer Act of 1971. Among those contributing to the many advances in the field have been the distinguished recipients of the AACR awards. The names of the award winners from 1971–1996 appear on the front cover below a list of some of the major discoveries and areas of activity in the field over the past 25 years. Each day these and other discoveries are illuminating our battlefield and are placing the cancer targets into sharper focus.

Are we short of questions that, if studied, might yield surprising new ideas and insights? Absolutely not. We all have favorite research questions we wish some young scientist would pursue and solve. A few of my own favorites are: (a.) Why is prostate cancer so common in the human and dog and yet totally absent from all other animal species such as cats, bulls, and horses? What is the molecular mechanism that protects these species? (b.) Why are some organs in the human totally resistant to developing cancers? For example, the seminal vesicles, epididymis, and bulbourethral gland are devoid of tumors, even though they share the same genes. (c.) Why does an inherited cancer mutation remain silent in some cells but highly active in others? How does the same gene yield different proteins in different cells? (d.) What sets and maintains the exquisite balance in the rates of cell gain and cell loss in our normal organs? Other investigators have even better and more timely questions in their own areas.

Today, there are a tremendous number of good ideas at both the clinical and basic levels that are not being studied. We urgently need a balanced attack of a much higher magnitude than is now available. The last five types of cancer cured came from both great clinical and great basic research; neither area of research has greater importance, nor should it have when it comes to funding.

What is on the immediate horizon? There are hundreds of good ideas that cannot be followed today because of limited funds. The chances for funding keep getting worse. The overall percentage of approved but unfunded investigator-initiated grants steadily increased from 40% in the 1970s to 85% in 1995. We are hopeful that it will come down to only 75% in 1996. If the President’s 1997 budget request for the NCI is approved, still about 3 out of 4 of all NCI research grants that have been approved following scientific peer review will lie silent and inactive without funding. This continues to represent lost opportunities in our important mission. To turn this trend around we ourselves must act first and then recruit help from a variety of sectors, from leaders in the community, and from the public at large.

As President Nixon stated when he signed the National Cancer Act almost 25 years ago on December 23, 1971, it is essential to have a "total commitment of Congress and the President . . . to provide the funds . . . for the conquest of cancer." This legislation was a contract with America with every patient, researcher, and potential victim is waiting to celebrate one day with a great sigh of relief. Cancer must and will be conquered. Whether it be through prevention, control, or cure it will be accomplished by good, well-funded research. It is past the time to declare the real World War II on cancer. Just reading this won’t make a hill of beans difference if we don’t all get up and do something about it, both as individuals and as a society. Godspeed in your efforts.

Donald S. Coffey
President-Elect, 1996–97
American Association for Cancer Research

April 15, 1996