Cancer Research

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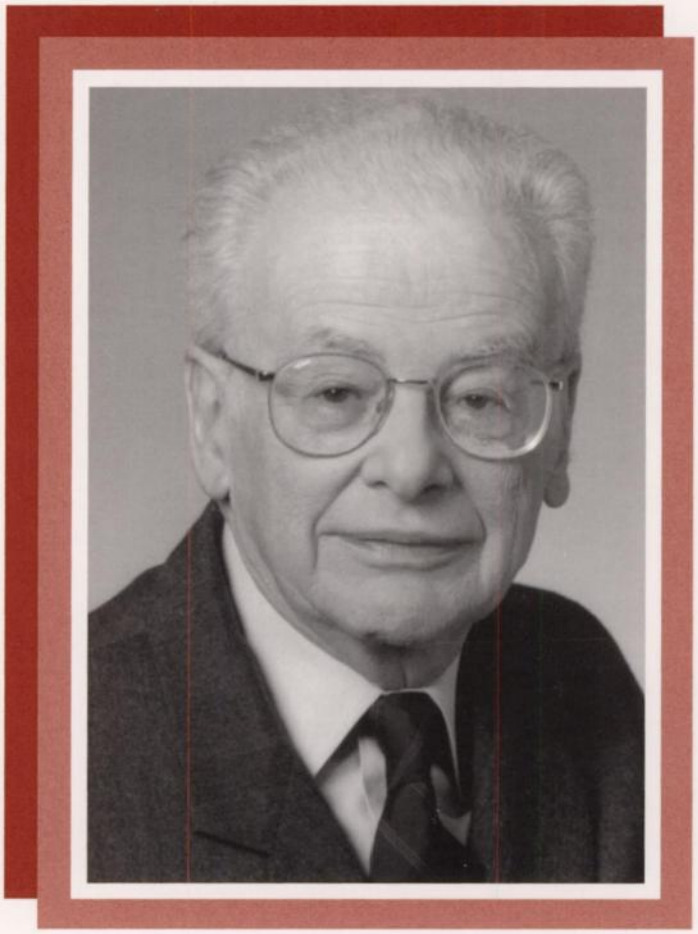

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PREDICTIVE ONCOLOGY & THERAPY

IMPACT of BIOTECHNOLOGY on CANCER

PROGNOSIS ◆ DETECTION ◆ PREVENTION

Nice, France ◆ 1998 ◆ October 24-27

4th International Symposium ◆ Plenary Program

MOLECULAR BIOLOGY

Molecular study of an environmental carcinogen
E Bresnick PhD UMass

Tumor suppressor genes & cell cycle
D Haber MD Mass General

Telomerase-diagnostic application
H Tahara MD Univ Hiroshima

Regulation of p53 stability
Z Ronai PhD Mt Sinai NY

Stromal-epithelial interactions
LWK Chung PhD Univ Virginia

Genetic predisposition & therapy
G Thomas MD St Antoine Paris

MOLECULAR MECHANISMS

Tumor promotion pathways & inhibitors
H Fujiki MD Saitama Cancer Inst

Genetic–epigenetic multistage oncogenesis
H Yamasaki PhD IARC Lyon

PAP1 modulates BRCA1 function
FJ Raushcer PhD Wistar, Phila

Disorders in cell cycle control proteins
IB Weinstein MD Columbia Presb

p53-induced apoptosis
TD Tlsty MD UC San Francisco

Matrix metalloproteinases & inhibitors
P Basset MD PhD Strassbourg

COFACTORIAL INFLUENCES

Environmental & genotoxic exposures
H Vainio MD IARC Lyon

Viral effects
G de Thé MD Pasteur Paris

Endocrine regulation of differentiation
M Gottardis MD Ligand

Nutrition-cancer relationship
HO Adami MD Karolinska Inst

Helicobacter pylori & stomach cancer
D Palli MD Careggi Fierenze

AIDS-assoc. tumors
H Ioachim MD Lenox Hill NY

MULTIFACTORIAL DIAGNOSIS

Genetic analysis on electronic microchips
M Nerenberg PhD Nanogen

Genetic susceptibility & DNA adducts
H Bartsch PhD DKZ Heidelberg

DNA methylation–chromosome aberr.
JM Trent PhD NCHGR Bethesda

Microsatellite analysis for early detection
L Mao MD UTX MDA

Prostate–precursor lesions & prognosis
DG Bostwick MD Mayo Clinic

Predictive assessment of multidrug resistance
P Sonneveld MD Rotterdam

MOLECULAR THERAPY

Gene therapy progress
WH Fridman MD Curie Paris

Advances in gene therapy vectors
B Huber MD Glaxo/Wellcome

Telomerase inhibition

Topoisomerase inhibition
A Harstrick MD Essen

Pancreas–farnesyl transferase inhibition
JB Gibbs Merck

Novel differentiation agents
S Waxman MD Mt Sinai NY

RISK ASSESSMENT

p53 in *normal* epithelium adjacent to h/n ca.
FX Bosch MD Univ Heidelberg

Telomerase in *normal* mucosa adjacent to ca.
NW Kim MD Geron

***k-ras* mutations in *normal* tissue: lung cancer**
T Minamoto MD Univ Kanazawa

DNA adducts in *normal* tissue adj. to breast ca.
D Li MD UTX MDA

DNA in *normal* tissue adjacent to colon ca.
P Beaune MD Necker Paris

LOH in *normal* tissue adj. to breast cancer
SH Dairkee, PhD San Francisco

PREDICTIVE MARKERS

Genetics of glioma progression
P Kleihues MD IARC Lyon

Cell cycle inhibitor protein p27
JM Slingerland MD Toronto

Prognostic oncogene expression
EMJJ Berns MD Rotterdam

Tumor angiogenesis & inhibition

Circadian rhythm chemotherapy
WJM Hrushesky MD Albany Med

Biotech. in cancer epidemiology studies
R Hayes MD NCI Bethesda

NOVEL IMMUNOTHERAPY

Novel human intra tumoral immunother.
T Tursz ScD MD IGR Villejuif

Cytotoxic T lympho cytes and IL-2
N Restifo MD NCI Bethesda

Dendritic cells in immunotherapy
H Bohlen MD Cologne

Breast–target-recognizing TIL
F Marincola MD NCI Bethesda

Clinical use of antisense strategies
AM Gewirtz MD Univ Pennsylvania

Xenotherapy
M Soulilou MD Univ Rennes

DEADLINE for ABSTRACTS - JULY 10, 1998

http://www.cancerprev.org

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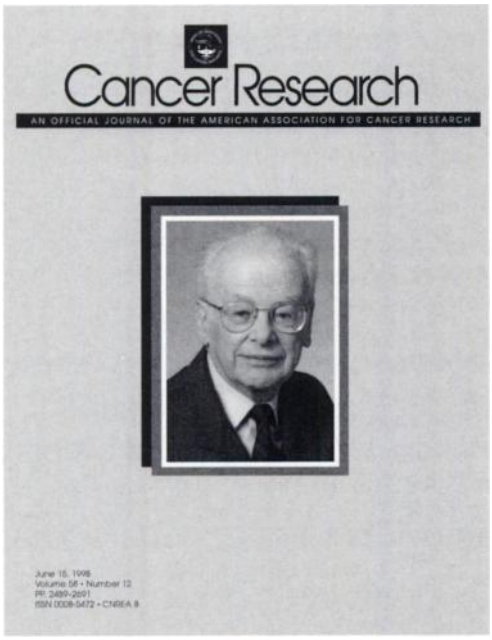
COVER LEGEND



This cover features Walter Troll, who is known for his many fundamental contributions to the chemical mechanisms bearing on cancer causation and development. Early in his career, Dr. Troll elucidated the proteolytic role of thrombin in blood clot formation and the mechanism whereby streptokinase lyses blood clots. The importance of proteases and their inhibitors to the maintenance of the normal physiological steady state emerged as a basic principle that would guide his research throughout his career. Dr. Troll demonstrated his biochemical versatility by conducting pioneering work on the mechanism of action of carcinogenic aromatic amines. He identified bis(2-amino-1-naphthyl)phosphate as a metabolite of 2-aminonaphthalene in humans and dogs. This novel metabolite was later demonstrated to be a bladder carcinogen. He also showed that benzidine dyes, widely used in industry, were metabolized *in vivo* to the carcinogen benzidine in the monkey. Importantly, this led to the cessation of the commercial production of benzidine dyes, with a consequent decreased risk of urinary bladder cancer in workers. Dr. Troll and his collaborators demonstrated that metabolites of aromatic amines bind to DNA, lower its thermal stability, and alter the priming ability of modified DNA. This early finding has been proven to be common to the carcinogen-DNA interactions. These fundamental studies have contributed to the acceptance of DNA as a genetic target for carcinogens.

Starting in the early 1970s, Dr. Troll and his collaborators conducted landmark studies on the then novel field of oxygen radicals and showed a role for protease inhibitors in attenuating their activity. Specifically, they presented evidence that the tumor promoter phorbol ester causes a release of oxidants from phagocytic cells. The phagocyte-derived oxidants cause oxidative modification of DNA bases, some of which are mutagenic. Specific protease inhibitors suppress tumor promoter-induced neutrophil activation. During the past decade, Dr. Troll has been most interested in the mechanism of action of the distinct antioxidant and anticarcinogenic effects of nicotinamide, tamoxifen, and polyphenols.

Dr. Troll also had a laboratory at the Marine Biological Laboratory in Woods Hole, MA, where he worked each summer. There, his major interest has involved the fertilization and embryogenesis of sea urchin eggs, which he believes involve mechanisms similar to those in mouse skin tumor promotion and carcinogenesis. The concomitant studies complemented each other and insights gained were easily transferable. For example, research indicating that proteases are involved in gene activation in sea urchin eggs was applied to experiments that showed protease inhibitors suppress tumor promotion in mouse skin.

Throughout his career, Dr. Troll has shown great versatility of thought and imagination to bring seemingly unrelated fields together. He also has challenged and motivated his collaborators to venture into areas of scientific endeavor far from their own. He is best known for his work on chemoprevention, having been instrumental in identifying some of the preventable processes in cancer development, which led him to believe that cancer is a disease that often can be prevented. Many scientists now share these beliefs, as exemplified by clinical trials of Bowman-Birk protease inhibitor, a product of soybeans, shown to prevent many types of cancer.

Born in Vienna in 1922, Dr. Troll emigrated to Chicago, where he obtained a B.S. from the University of Illinois in 1944. He received a M.S. from Pennsylvania State University in 1946 and a Ph.D. from New York University School of Medicine in 1951. In his postdoctoral years, Dr. Troll served as Assistant Director of Research at the May Institute for Medical Research in Cincinnati (1951–54) and as scientist at the Cancer Research Institute, New England Deaconess Hospital in Boston from 1954 to 1956. He proved you could come home again by returning to the Department of Environmental Medicine at NYU, where he spent his entire academic career until he retired recently as a full Professor.

In 1988, he spent a sabbatical leave as Visiting Professor at the National Cancer Research Institute in Tokyo, where he worked on the cancer chemopreventive properties of a variety of agents that are now receiving serious consideration for clinical trials. For two decades, he has been the U.S. representative of the U.S. - Japan Cooperative Cancer Research Program. In that capacity, he reviews Japanese grants for scientific merit. He has served on the editorial boards of several prestigious journals and as advisor to the National Institutes of Health on numerous Study Sections. The Clinical Nutrition Research Unit at Memorial Sloan-Kettering has sought his counsel since its inception.

Dr. Troll is a member of many scientific societies, including the American Association for the Advancement of Science, the American Society of Biochemistry and Molecular Biology, the American Chemical Society, the Harvey Society, the New York Academy of Science, and the American Association for Cancer Research (AACR). He has been a member of AACR since 1963 and has served on the American Cancer Society Awards Committee (1992) and the Program Committee (1987).

We are indebted to Krystyna Frenkel and Sidney Belman of the NYU Medical Center for providing the information and photograph for this cover feature.

John H. Weisburger