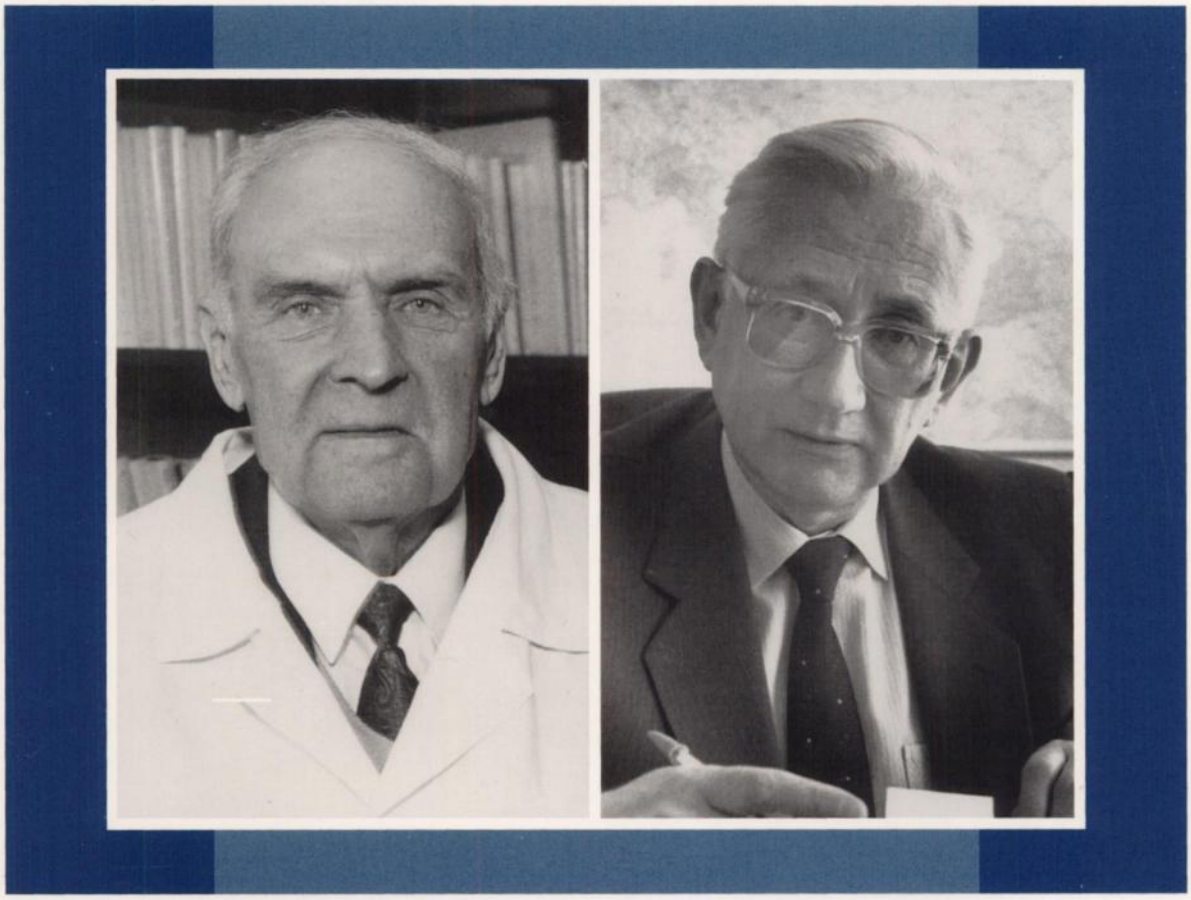
Cancer Research

AN OFFICIAL JOURNAL OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH



AACR Annual Meeting
Advance Registration and
Housing Forms Inside

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AMERICAN ASSOCIATION FOR CANCER RESEARCH

89th Annual Meeting

Frank J. Rauscher, III, Program Committee Chairperson

Morial Convention Center, New Orleans, Louisiana

March 28-April 1, 1998

Titles of Major Sessions

(Names of confirmed session organizers are in parentheses)

SPECIAL LECTURES

Presidential Address: Donald S. Coffey
Clowes Award
Burchenal Award: Bernard Fisher
Rosenthal Award
Cain Award: Bruce A. Chabner
Rhoads Award: Michael Dean
AACR-ACS Award
Goodman Lecture

PLENARY SESSION

New Horizons in Cancer Research (Frank J. Rauscher, III)

SYMPOSIA

Molecular Determinants of Cellular and Tumor Responses to Radiation (Michael B. Kastan)
Successes in Oncogene-based Drug Targeting: Selectivity and Specificity (Alex Matter)
Cancer Gene Therapy: New Concepts and Clinical Applications (Jack A. Roth)
Reconstruction of Human Tumorigenesis and Progression: Cancer Genetics In Model Organisms (Anthony Wynshaw-Boris)
Tumor Angiogenesis: An Integrated Approach (Rakesh K. Jain)
Signaling by wnt-1, β-catenin, and the APC Tumor Suppressor in Cancer (Paul Polakis)
Prostate Cancer: Basic Science and Clinical Aspects (Leland W.K. Chung)
The Molecular Basis of Immune Recognition: Basic Concepts with Therapeutic Implications (Giorgio Trinchieri)
The bcl-2 Family: Death Agonists and Antagonists (Stanley J. Korsmeyer)
Telomerase and Telomeres in Normal and Neoplastic Cells (Ronald A. DePinho)
Inherited Cancer Susceptibility Syndromes: Genetics, Genes, and Function (Daniel A. Haber)
New Concepts in Chemotherapeutics and Drug Resistance (Susan Band Horwitz)
Cell Death Signaling Pathways: Caspase Cascades and Effectors/Initiators of Apoptosis (Douglas R. Green)
p73/p53: An Emerging Gene Family (William G. Kaelin)
Breast Cancer: Basic Science and Clinical Aspects (Sofia D. Merajver)
Molecular Targets and Endpoints for Chemoprevention (Waun Ki Hong)
Cancer Biology in Context: Stromal, Cell-Cell, and Cell-ECM Interaction in Normal Development and Cancer (Mina J. Bissell)
Gastrointestinal Cancer: Basic Science and Clinical Aspects (Kenneth W. Kinzler)
Tumor Virology: Molecular Biology and Etiology (Karl Münger)
Advances in Cancer Vaccine Development (Dorothee Herlyn)
Molecular Diversity-based Approaches to Anti-Cancer Drug Design (Jack D. Keene)
New Mechanisms of Action of Viral and Cellular Oncogenes (Elizabeth Moran)
Genetic Approaches to Diagnosis: The Impact of Molecular Medicine on Early Detection and Diagnosis (David Sidransky)
Tobacco and Lung Carcinogenesis: Genetics, Biology, and Etiology (Adi F. Gazdar)
Transcriptional Regulation of the Neoplastic Phenotype (Frank J. Rauscher, III)
Restoring Drug Sensitivity to Tumors: New Concepts from Tumor Biology and Physiology (William N. Hait)
Emerging Issues for Individual Cancer Susceptibility and Risk Assessment (Fred F. Kadlubar)
Epigenetics and Cancer (Stephen B. Baylin and Peter A. Jones)

CONTROVERSY SESSIONS

Have We Improved the Treatment of Cancer?
Environmental Estrogens and Cancer (Nancy E. Davidson)
Will Multidrug Resistance Modulators Be Effective in the Clinic?

METHODS WORKSHOPS AND EDUCATIONAL SESSIONS

To Be Announced

"MEET-THE-EXPERT" SUNRISE SESSIONS

Cancer Genome Anatomy Project (CGAP): Update and Potential (Paul S. Meltzer)
JAK-STATs: Dedicated Cytokine Signaling Pathways (E. Premkumar Reddy)
Histone Acetylation and Transcriptional Regulation (Tony Kouzarides)
Molecular Genetics of Brain Tumors (Sandra H. Bigner)
Genetic Analysis of Tumor Suppression by COX-2 Inhibitors (Makoto M. Taketo)
Antisense-based Therapeutics: Basic and Clinical Studies (Thale Jarvis)
Gene Transfer to Hematopoietic Progenitors (Fulvio Mavilio)
Psychosocial Aspects of Genetic Diagnosis (Caryn E. Lerman)
Nuclear Hormone Receptors ain Development and Disease (Vincent Giguère)
B-Cell Lymphomas: Genetics and Biology (Riccardo Dalla-Favera)
Hormonal Regulation of Cell Proliferation and Differentiation (Lorraine J. Gudas)
Alterations of Cell Cycle Controls in Cancer (Giulio Draetta)
Proteases in Cancer: Clinical Significance and Mechanisms in Metastasis (Henri Rochefort)
Inherited Cancers of the Kidney: Family Studies, Genes, and Biochemistry (W. Marston Linehan)
Strategies for Combining Chemotherapy and Biotherapy (Antonio C. Buzaid)
New Concepts in Antimetabolites: Basic Science and Clinical Trials (Steven Grant)
Interleukin-12: Biological and Clinical Developments (Giorgio Trinchieri)
Chemoprevention Trials: Progress and Promise (Scott M. Lippman)
Growth Factor Signaling: The IGF-1, IGF-2 System in Cancer (Haim Werner)
Genetics and Biology of Hematologic Malignancies (Pier Pellici)
Radiation Sensitization: Basic and Clinical Aspects (Rupert Schmidt-Ullrich)
Advances in Mechanisms of Drug Resistance: Basic Science and Clinical Implications (Susan E. Bates)
Harnessing the Immune System in Tumor Therapy: Manipulation, Stimulatory and Inhibitory Signals in T Cell Activation (James P. Allison)
Integrin Signaling and Cell Growth Control: Consensus and Controversies (Rudolph L. Juliano)
Issues and Applications in Molecular Epidemiology (Barbara S. Hulka)
Familial Cancer Syndromes: DNA Testing and Clinical Approaches (Ken Yamaguchi)
Relevance of DNA Damage and Repair for Initiation and Progression of Carcinogens: Recent Advances (Jan H. J. Hoeijmakers)
Chromosomal Translocations: Genetics, Biology, and Protein Function (James R. Downing)
Advances in the Mechanisms of Invasion and Metastasis (Isaiah J. Fidler)
From Slave to Master: The Biological Events During Melanoma Development and Progression (Meenhard Herlyn)
Farnesyl Transferase Inhibitors (Ivan D. Horak)
Topoisomerases: Structure and Function (James Wang)
Progress in Antibody Therapy of Human Cancer (Nancy Hynes)
Animal Models for Chemoprevention (Michael N. Gould)

Further Information: AACR Office · Public Ledger Building · Suite 826 · 150 S. Independence Mall West · Philadelphia, PA 19106-3483 · **TELEPHONE:** (215) 440-9300 · **FAX:** (215) 440-9313
Email: meetings@aacr.org · For up-to-date information visit the AACR Website at **http://www.aacr.org**

AMERICAN ASSOCIATION FOR CANCER RESEARCH (AACR)

AACR-HBCU Faculty Award in Cancer Research

Supported by a generous grant provided by the Comprehensive Minority Biomedical Program of the National Cancer Institute

The American Association for Cancer Research (AACR) is extremely pleased to announce the availability of Awards in Cancer Research for full-time faculty members of Historically Black Colleges and Universities (HBCUs). Supported by a generous grant provided by the Comprehensive Minority Biomedical Program of the National Cancer Institute, AACR-HBCU Faculty Awards in Cancer Research will be presented annually by the American Association for Cancer Research to scientists at the level of Assistant Professor or above at an HBCU who are engaged in meritorious basic, clinical, or translational cancer research.

The purpose of this Award program is to increase the scientific knowledge base of faculty members at Historically Black Colleges and Universities, and to encourage them and their students to pursue careers in cancer research. Awardees will receive financial support for their participation in the 89th AACR Annual Meeting, March 28-April 1, 1998, in New Orleans, LA. The 1998 AACR Annual Meeting will attract approximately 7,500 scientists from around the world; will provide the latest findings in the most rapidly developing areas of basic, clinical, and translational cancer research; and will feature major presentations from prominent scientists who are making important advances in the field.

The American Association for Cancer Research, a scientific society of more than 13,500 researchers working in all subfields of basic, clinical and translational cancer research, is extremely pleased to sponsor this faculty award.

Application Deadline - January 30, 1998

For Further Information

If after reading the enclosed information you have any questions concerning the application process or Award criteria, or if you have not received the Official Application Form, contact: HBCU Award Coordinator, American Association for Cancer Research, Telephone: (215) 440-9300, FAX: (215) 440-9412, E-mail: felder@aacr.org.

NATIONAL CANCER INSTITUTE
DIVISION OF CANCER PREVENTION
ROCKVILLE, MARYLAND

Opening Date: January 5, 1998
Closing Date: March 2, 1998
Announcement Number: CA-97-2131

DIRECTOR, DIVISION OF CANCER PREVENTION

The National Cancer Institute is seeking a senior scientist with an MD or Ph.D. degree who possesses extensive experience in the conduct of cancer prevention research, and in the management of large, multidisciplinary programs. Candidates should be recognized as experts in the field of cancer prevention.

The Director, Division of Cancer Prevention, is responsible for the conduct and direction of the Division's research effort, with particular involvement in the national and international aspects of program operations and evaluating emerging areas for special consideration. The Division is comprised of extramural programs in cancer prevention; notably, chemoprevention drug discovery and development, prevention trials research and intervention strategies; dietary risk factor modification; molecular/genetic biomarker manipulation; research training and career development; studies in biostatistical and epidemiologic methodology, and mathematical modeling. These programs are implemented through extramural grants, contracts, cooperative agreements, collaborative projects and other activities as part of the National Cancer Program.

This is a Civil Service Position in the Senior Executive Service (SES) with annual salary compensation between $103,897 to $123,100 including locality pay. In addition, physicians may be eligible for a Physicians Comparability Allowance up to $20,000 per annum (if applicable). (Applicants alternatively may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.) The individual selected, if not presently in SES, must serve a one-year probationary period.

Applicants must meet the qualifications requirements. Applicants will be further evaluated on the degree to which they possess the additional desirable qualifications. A copy of the requirements may be obtained by contacting Ms. Toni McKeown in the Human Resources Management and Consulting Branch, NCI, at (301) 402-2812.

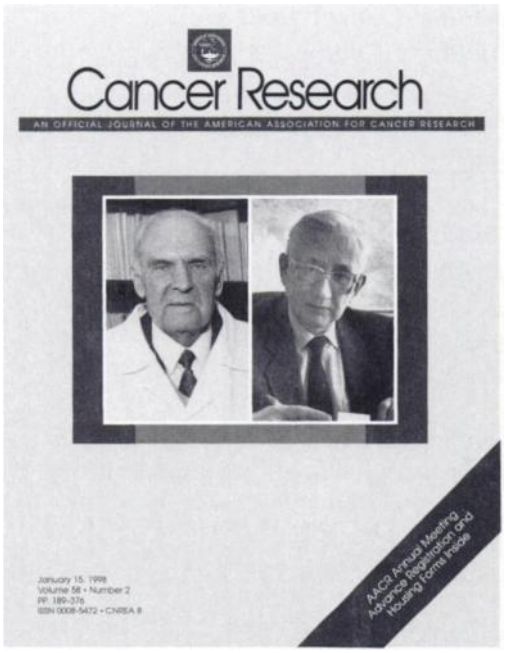
Applications/resumes are to be sent to the above individual at:

National Cancer Institute (2131)
Human Resources Management and Consulting Branch
6120 Executive Boulevard
EPS/Room 550
Rockville, Maryland 20852-7211

A current curriculum vitae and bibliography must accompany all applications/resumes. In addition, applicants are encouraged to complete the DHHS Applicant Background Survey Form (completion of this form is voluntary). You may contact Ms. McKeown on the above number to obtain a copy of this form. Applications will be accepted for a period of 60 days following the opening date of the announcement. All applicants will receive consideration without regard to race, color, gender, national origin, age, religion, disability or sexual orientation.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

COVER LEGEND



This cover features two distinguished scientists, Pavel P. Dikun (*left*) and Nikolai P. Napalkov (*right*),* who have contributed key research at the N. N. Petrov Research Institute of Oncology in St. Petersburg, Russia. The Institute was founded in 1926 by Professor Petrov in St. Petersburg, then called Leningrad, as a center for studies on the etiology, pathogenesis, detection, and therapy of cancer with emphasis on primary prevention through control of environmental carcinogens. Originally, the Institute had three clinical departments (two surgical and one gynecologic), an outpatient clinic, X-ray diagnosis and radiotherapy departments, and a laboratory of experimental tumors. In 1965, the Institute moved to new facilities in Pesochny, which is approximately 25 kilometers from St. Petersburg. Currently, it has over 25 clinical and experimental departments.

Dr. Dikun trained in physics at Leningrad University and in the early 1940s developed novel physical-chemical analytical techniques to monitor environmental carcinogens. Interrupted by military service during World War II, Dr. Dikun's studies at the University resumed in 1946. In 1952, he was invited by Leon Shabad to join his laboratory at the Institute of Oncology to work with phosphorescence techniques for the monitoring of carcinogenic polycyclic aromatic hydrocarbons (PAH) in the environment. Dr. Dikun and associates developed a new method of air sampling, based on vortex-induced absorption of the carcinogens, allowing entrapment of the carcinogens in both particulate and gaseous phases. Dr. Dikun introduced a spectrofluorescence method of quantification of PAH, including the analysis of fine structure fluorescence spectra.

Dr. Dikun was the first, together with Dr. Shabad, to apply screening of possible sources of carcinogenic PAH, such as benzo(a)pyrene (BP) emission in air, gasoline and diesel engine exhausts, tobacco smoke, water, soil, plants, food, and pharmaceuticals [Atmospheric Pollution by the Carcinogenic Hydrocarbon 3,4-Benzopyrene. 228 pp. Medgiz, Leningrad, 1959 (*in Russian*); Vopr. Onkol., *4*: 669, 1958; *7*: 42, 1961; *36*: 1333, 1990]. Later, he initiated investigations on the volatile nitrosamine (NA) content in environmental products and in smoked fish and other foods. He originated a method of analysis of endogenous NA formation in human stomach fluid and evaluated some new, efficient inhibitors (IARC Sci. Publ. No. 105, 1991). Dr. Dikun and his co-workers studied the mechanisms of PAH and NA formation and the fate of carcinogens in the organism, and Dr. Dikun was the first to detect BP in the lungs of smokers. Concentrations of BP, because of its extensive metabolism, were low but could be measured by a sensitive spectrofluorescence technique (Vopr. Onkol., *5*: 161, 1959). Also investigated was the transplacental transfer of PAH, and of NA, from pregnant animals to the fetal tissues (IARC Sci. Publ. No. 4, 1973, and No. 96, 1989).

Dr. Dikun, who was 81 years old in 1997, is the author of 330 publications, and remains full of enthusiasm and energy for his studies.

Dr. Napalkov graduated from the School of Medicine, Sanitation and Hygiene in St. Petersburg in 1954. After postgraduate training in pathology and cancer research with Dr. Shabad, he joined the Petrov Institute, where he obtained a Ph.D. in research on the histopathology of thyroid cancer, chemical carcinogenesis, and environmental approaches to cancer control. In 1962, he became head of the Laboratory of Experimental Tumors, the oldest research unit specially designed for experimental cancer studies in Russia. In the late 1950s and early 1960s, Dr. Napalkov concentrated on experimental thyroid carcinogenesis and contributed to a better understanding of the morphology and morphogenesis of thyroid cancer. He also found that the relatively rare squamous cell thyroid cancer in rats originated from the remnants of the *ductus thyreolingualis*, and he described in detail successive stages of initial precancerous and cancerous lesions in the rat thyroid. These findings were summarized, together with the classification of thyroid tumors, in *Pathology of Tumours in Laboratory Animals* (IARC Sci. Publ. No. 6, 1976).

In 1965–66, he pioneered in research on relationships between teratogenesis and carcinogenesis, and on transplacental and multigeneration carcinogenesis. These studies revealed dependence of a biological response of the embryo to carcinogenic exposure at the stage of embryonic development and species specific effects in transplacental carcinogenesis. Tumor induction due to prezygotic exposures and summation and mutual enhancement of effects of prenatal and postnatal exposures to the same and even different carcinogenic agents was also demonstrated. These studies by Dr. Napalkov and his associates in Russia, and independent investigations by H. Druckrey, complemented each other in the discovery of general principles of transplacental carcinogenesis (IARC Sci. Publ. No. 4, 1973, and No. 96, 1989).

Dr. Napalkov was Chief of the Cancer Unit of the World Health Organization (WHO) in Geneva, Switzerland, from 1971–74. Cancer prevention and epidemiology became his main areas of interest. In 1974, he returned to St. Petersburg to be Director of the Petrov Institute. His numerous and regular publications on cancer incidence, prevalence, and mortality, produced together with his co-workers, helped to stimulate the development of modern cancer epidemiology in Russia (IARC Sci. Publ. No. 48, 1983).

In 1990, Dr. Napalkov was appointed Assistant Director-General of WHO, a position from which he retired on August 1, 1997, at age 65. He was then named Senior Advisor to the Director-General. At WHO, his areas of responsibility have included programs on environmental health, mental health, health education, nutrition and health, occupational medicine, health of the elderly, health promotion, smoking and health, and cancer control. He served as senior liaison officer between the International Agency for Research on Cancer (IARC) in Lyon and numerous other activities of WHO related to the problems of preventive and therapeutic oncology.

Dr. Napalkov is a full member of the Russian Academy of Medical Sciences. For more than 10 years, he was Editor-in-Chief of the internationally recognized *Problems in Oncology* (*Voprosy Onkologii*), and he was President of the Oncological Society of the USSR. Since the early 1960s, he has been an active member of different committees of the International Union Against Cancer and was elected to its Council, as well as to the Scientific and Governing Councils of the IARC. He is author of more than 250 scientific publications and 3 monographs. The *Manual on General Oncology*, of which he was one of the co-authors and the editor, became a handbook for Russian cancer researchers and medical students.

Dr. Napalkov's family has a proud tradition of service in medicine. He is the son and grandson of surgeons, and his wife and two sons are also doctors of medicine.

We are indebted to A. J. Likhachev (deceased 1997) and M. Zabezhinski in St. Petersburg for some of the information and photographs used for this cover feature.

* Photo by T. Farkas.

John H. Weisburger