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American Association for Cancer Research
85th Annual Meeting
Karen S. H. Antman, Program Chairperson
Moscone Center, San Francisco, CA
April 10-13, 1994

Titles of Major Sessions

PleNary Session
The Biological and Clinical Roles of Genetic Markers

SyMposia
Recent Advances in Environmental Carcinogenesis
Apoptosis
Tumor Suppressor Genes and Cell Cycle Control
Solid Tumor Physiology and Therapeutic Approaches
Hematological Malignancies: Biology and Therapy
Genetic Basis for Tumor Cell Sensitivity to Radiation
Basic Science Approaches to Breast Cancer
Basic and Clinical Aspects of Prostate Cancer
Retinoids and Cancer
Potential Applications of Advances in Cell and Molecular Biology to New Therapies for Lung Cancer
Hormonal Carcinogenesis: Epidemiological and Mechanistic Studies
Signal Transduction and Cancer
Cell Adhesion in Invasion and Metastasis
New Approaches to Cancer Immunotherapy
Genetic Imprinting and Its Role in Cancer
AIDS-associated Malignancies
Integration of Cytokines and Radiation: Biological Basis and Preliminary Clinical Trials
Pharmacogenetics: Enzyme Polymorphisms and Drug Metabolism
Intermediate Endpoints in Cancer Prevention
Transcriptional Control of Cell Proliferation and Differentiation
Conducting Cancer Research Among Minority Populations in the United States
Topoisomerase I Inhibitors: Molecules to Medicine
New Strategies for Immunological Intervention
Mechanisms and Circumvention of Drug Resistance
Nutrition and Cancer: Basic and Epidemiological Research
Chemoprevention by Antioxidants

Workshops
Confocal Microscopy and Quantitative Image Analysis
FISH and Flow Cytometry

CONTroversies
Bone Marrow Transplantation
Is Multidrug Resistance an Important Factor in Therapeutic Outcome?
Diet and Cancer

Meet-the-expert Sunrise Sessions
To Be Announced

Abstract Deadline: October 25, 1993

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AACR SPECIAL CONFERENCE IN CANCER RESEARCH

Molecular Approaches to Cancer Immunotherapy

November 7-11, 1993
The Grove Park Inn, Asheville, North Carolina

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SCIENTIFIC PROGRAM

Keynote Address
Giorgio Trinchieri / Philadelphia, PA

Monoclonal Antibodies for Tumor Therapy
Alan N. Houghton / New York, NY
Albert F. LoBuglio / Birmingham, AL
Ira Pastan / Bethesda, MD
David A. Scheinberg / New York, NY

Genetically Engineered Antibodies
Stephen D. Gillies / Lexington, MA
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Richard P. Junghans / Boston, MA
Sherie L. Morrison / Los Angeles, CA
Clive Woodhouse / Mountain View, CA

Gene Therapy of Cancer
James J. Mulé / Palo Alto, CA
Drew M. Pardoll / Baltimore, MD
David T. Curiel / Chapel Hill, NC
Patrick Hwu / Bethesda, MD
Elizabeth Jaffee / Baltimore, MD

Cytokines in Tumor Therapy
Steven Gillis / Seattle, WA
Roland Mertelsmann / Freiburg, Germany
Ronald Levy / Stanford, CA
Terry Strom / Boston, MA

Tumor Antigens Recognized by T-Cells
Olivera J. Finn / Pittsburgh, PA
Per A. Peterson / La Jolla, CA
Martin A. Cheever / Seattle, WA
Michael T. Lotze / Pittsburgh, PA

Antibodies as Immunogens
Soldano Ferrone / Valhalla, NY
Dorothy Herlyn / Philadelphia, PA
Kenneth Foon / Lexington, KY
Alan N. Houghton / New York, NY

Future of Cancer Immunotherapy
Isaiah J. Fidler / Houston, TX
Paul M. Sondel / Madison, WI
Irwin D. Bernstein / Seattle, WA
Eugenie S. Kleinerman / Houston, TX

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RISK ASSESSMENT IN ENVIRONMENTAL CARCINOGENESIS

An AACR Special Conference in Cancer Research
Co-Sponsored by the Environmental Mutagen Society

Supported by a Generous Grant from the National Institute of Environmental Health Sciences

January 17-22, 1994
Whistler Resort and Conference Centre
Whistler, British Columbia, Canada

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Biologically Based Risk Assessment and Public Policy
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NOVEMBER 7-11, 1993
*Molecular Approaches to Cancer Immunotherapy*
Chairperson: Ralph A. Reisfeld, San Diego, CA
Grove Park Inn, Asheville, NC

NOVEMBER 9-13, 1993
*Interactions of Cancer Susceptibility Genes and Environmental Carcinogens*
Joint Meeting with International Agency for Research on Cancer (IARC)
Chairpersons: Frederick P. Li, Boston, MA, and Ruggero Montesano, Lyon, France
IARC, Lyon, France

DECEMBER 5-9, 1993
*Cell Signalling and Cancer Treatment*
Joint Meeting with British Association for Cancer Research and European Organisation for Research and Treatment of Cancer (PAMM Group)
Chairpersons: Garth Powis, Tucson, AZ; Paul Workman, Macclesfield, England
El San Juan Hotel, San Juan, PR

JANUARY 17-22, 1994
*Risk Assessment in Environmental Carcinogenesis*
Co-Sponsored by the Environmental Mutagen Society
Chairpersons: Philip C. Hanawalt, Stanford, CA; James A. Swenberg, Chapel Hill, NC
Whistler Resort and Conference Center, Whistler, B.C., Canada

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*Molecular Genetics of Progression and Metastasis*
Chairperson: Lance A. Liotta, Bethesda, MD
Big Sky Resort, Big Sky, MT

FEBRUARY 19-24, 1994
*Cancer: Perturbations in Cell Cycle Control and Genomic Integrity*
Chairpersons: Thea D. Tlsty, Chapel Hill, NC; Lawrence A. Loeb, Seattle, WA
Banff Springs Hotel, Banff, Alberta, Canada

MARCH 5-11, 1994
*Growth Factors, Development, and Cancer*
Joint Meeting with Friedrich-Miescher Institut
Chairpersons: Harold L. Moses, Nashville, TN; Bernd Groner, Basel, Switzerland
Congress Center, Interlaken, Switzerland

APRIL 10-13, 1994
*85th Annual Meeting*
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Moscone Convention Center, San Francisco, CA

OCTOBER 16-20, 1994
*Transcriptional Control of Cell Growth and Differentiation*
Chairpersons: Eric N. Olson, Houston, TX; Bruce M. Spiegelman, Boston, MA
Chatham Bars Inn, Chatham (Cape Cod), MA

NOVEMBER 7-11, 1994
*Modern Developments in Cancer Therapeutics*
Joint Meeting with Academia Sinica
Chairperson: Yung-chi Cheng, New Haven, CT
Academia Sinica, Taipei, Taiwan, R.O.C.

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Co-Sponsored by the Friedrich Miescher-Institut

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Congress Center, Interlaken, Switzerland

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SCIENTIFIC PROGRAM

Special Lectures
Harald zur Hausen / Heidelberg, Germany
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Positive and Negative Growth Factors and
Their Receptors
Rik Derynck / San Francisco, CA
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Signal Transduction Including Targets for
Therapy
George Thomas / Basel, Switzerland
Ulf R. Rapp / Frederick, MD
Frank P. McCormick / Richmond, CA

Transcription Factors and Homeobox Genes
Tom Curran / Nutley, NJ
Robert Eisenman / Seattle, WA
Frits Meijlink / Utrecht, The Netherlands

Tumor Suppressor Genes
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Bernard M. Mechler / Heidelberg, Germany
David P. Lane / Dundee, Scotland

Cell-Cell Interactions
Peter Herrlich / Eggenstein, Germany
Walter Birchmeier / Essen, Germany
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Cell-Matrix Interactions and Proteases
Jean Paul Thiery / Paris, France
Ruth Chiquet-Ehrismann / Basel, Switzerland
Lynn M. Matrisian / Nashville, TN

Targeted Therapy Including Immunotherapy
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Bernd Groner / Basel, Switzerland
Michael Blaese / Bethesda, MD
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November 9-13, 1993
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Opening Lectures
Lee W. Wattenberg / Minneapolis, USA
Lorenzo Tomatis / Lyon, France
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Manfred F. Rajewsky / Essen, Germany
Genetic Instability
Kari K. Alitalo / Helsinki, Finland
Thierry Heidmann / Paris, France
Thea D. Tlaty / Chapel Hill, USA
Experimental Models of Genetic Susceptibility
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DNA Damage and Repair
Dirk Bootsma / Rotterdam, The Netherlands
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Mutsuo Sekiguchi / Fukuoka, Japan
Mechanisms of Transgenerational Carcinogenesis
Carmen Sapienza / La Jolla, USA
John Cairns / Oxford, England
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Christopher J. Kemp / Glasgow, Scotland

Human Cancers
Frederick P. Li / Boston, USA
Valerie Beral / Oxford, England
Bruce A. J. Ponder / Cambridge, England
Neil E. Caporaso / Bethesda, USA
Gilbert M. Lenoir / Lyon, France

Markers of Individual Exposure
Ruggero Montesano / Lyon, France
Peter A. Cerutti / Epalinges, Switzerland

Opportunities for Prevention
I. Bernard Weinstein / New York, USA

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CELL SIGNALLING AND CANCER TREATMENT

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December 5-9, 1993
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SCIENTIFIC PROGRAM

Introduction
Garth Powis / Tucson, AZ
Allen I. Oliff / West Point, PA

Tyrosine Kinases and Inhibitors
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Alexander Levitzki / Jerusalem, Israel
Alex Matter / Basel, Switzerland

Serine/Threonine Kinases and Inhibitors
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Hans H. Grunicke / Innsbruck, Austria

GTP Binding Proteins
Alan K. Hall / London, England
Frank McCormick / Richmond, CA
Jay Gibbs / West Point, PA

Domain Binding and Inhibition
Sara A. Courtneidge / Heidelberg, Germany

Lipid Signalling
Lewis C. Cantley / Boston, MA
Alan P. Kozlikowski / Rochester, MN
Paul Workman / Macclesfield, England
Garth Powis / Tucson, AZ

Modulation of Signalling in Combination Chemotherapy
Thomas R. Tritton / Burlington, VT
John S. Lazo / Pittsburgh, PA
Stephen B. Howell / La Jolla, CA

Signalling and the Cell Cycle
Laurent Meijer / Roscoff, France
Caroline Dive / Manchester, England
Michael J. Morin / Groton, CT
Doris L. Slate / Palo Alto, CA
Adrian L. Harris / Oxford, England

Gene Targeting
Stanley T. Crooke / Carlsbad, CA
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Summary
Paul Workman / Macclesfield, England

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This issue’s cover features Richard H. Adamson, Director, Division of Cancer Etiology (DCE), National Cancer Institute (NCI), Bethesda, MD, with a distinguished scientific and administrative career for the past 32 years. His research has been concentrated in five areas: the metabolism of foreign compounds; toxicology; cancer chemotherapy; chemical carcinogenesis; and risk assessment.

Dr. Adamson received an M.S. from the University of Iowa in 1959 and his Ph.D. in Pharmacology at the age of 23 in 1961 from the same institution. He also holds an M.A. in International Law and International Affairs from the George Washington University, Washington, DC (1968). He has additional academic and practical training in management, the budget process, personnel management, operational research, and science and government from the University of London, the Foundation for Advanced Education in the Sciences, and the Department of Health and Human Services (DHHS).

His first publication, with James R. Fouts [Science (Washington DC), 129: 897–898, 1959], accounted for the greater sensitivity of newborns to foreign compounds through their decreased ability to metabolize drugs. He has published on the disposition of strychnine, the folic acid antagonists, hydroxyurea, cytoxane arabinoside, the nitrosoureas, cyclophosphamide, quinic acid, sulfadimethoxine, 1,1-bis(p-chlorophenyl)-2,2,2-trichloroethane (DDT), and other xenobiotics.

His toxicology research focused on the adverse effects of drugs, including the neuromuscular blocking properties of several antibiotics and the potentiating effect of this blockade by some anesthetic agents (in collaboration with Drs. John P. Long and Charles Pittinger), the embryotoxic effects of various agents, and the toxic effects of various solvents. He was instrumental in the development of several cancer chemotherapeutic compounds and performed studies on their anti-tumor activity, metabolic fate, and mechanism of action.

More recently, he has been involved in chemical carcinogenesis, including identification of carcinogens, formation of DNA adducts, metabolic activation, interspecies comparison, extrapopulation to risk to humans, and cancer prevention. He is especially known for his research on the mutagenic and carcinogenic effects of heterocyclic aromatic amine (HCAs) found in cooked foods.

The formation of mutagenic HCAs during the cooking process was first reported by T. Sugimura and colleagues in 1977. The isolation, identification, synthesis, and assessment of the carcinogenic potential of the HCAs in rodents has been carried out in Japan by T. Sugimura, S. Takayama, H. Kasai, H. Ohgaki, N. Ito, and others, and in the United States by J. Felton and associates at the Lawrence Livermore National Laboratory and J. Weisburger and colleagues at the American Health Foundation. Dr. Adamson undertook the systematic study of some HCAs in nonhuman primates to evaluate their risk for potential adverse effects in humans. Three compounds were selected, based on chemical structure, mutagenic activity in vitro, concentration in cooked foods (beef, poultry, and fish), carcinogenic activity in rodents, and availability. Thus, 2-amino-3-methylimidazo[4,5-f]quinoline (IQ), 2-amino-3,8-dimethylimidazo[4,5-f]quinoxaline, and 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine were evaluated for activation, metabolic processing, DNA adduct formation, carcinogenic potential, and other toxic effects in nonhuman primates, with the collaboration of T. Sugimura and S. Takayama in Japan and D. Dalgaard, C. Davis, H. Farb, E. Snyderwine, S. Thorgeirsson, and U. Thorgeirsson in the United States.

Thus far, IQ has been found to be highly carcinogenic, inducing hepatocellular carcinoma in 95% of the treated cynomolgus monkeys (Macaca fascicularis) at a dose of 20 mg/kg daily, five times/week. Both IQ and 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine were activated by hepatic microsomes from M. fascicularis and from humans and formed DNA adducts in various monkey tissues. Remarkably, not only were DNA adducts, following IQ administration, found in the target organ, the liver, but focal lesions were also observed in the heart. It will be important to ascertain whether HCAs are not only probable carcinogens for humans but may also be involved in adverse effects on the cardiovascular system.

In addition to successful research, particularly in nonhuman primates, Dr. Adamson has displayed outstanding managerial talents, especially through his scientific and administrative leadership as Director of the NCI’s DCE for the last 12 years. He has created new intramural laboratories and branches, he has encouraged interaction between the laboratory scientists and epidemiologists and between the viral oncolologists and scientists in chemical carcinogenesis research, and he has recruited key laboratory chiefs and younger scientists, including women and minorities. Dr. Adamson also has had an important role in guiding the National Cancer Program and various Federal agencies in the field of cancer causation and risk assessment.

Prior to becoming Director of DCE, Dr. Adamson was Chief of NCI’s Laboratory of Chemical Pharmacology and also served the entire Federal Government as senior policy analyst at the White House Office of Science and Technology Policy.

Dr. Adamson’s interactions with the extramural community, the DCE Board of Scientific Counselors, other Federal agencies, scientific societies, academia, and industry have been outstanding. He is the head of the NCI-Japan Cooperative Cancer Research Program and its component Etiology Area. His collaborations with Japanese scientists at the National Cancer Center Research Institute in Tokyo are well known.

Dr. Adamson has received numerous honors, including a Fulbright Award, the Public Health Service Superior Service Award, the DHHS EEO Special Achievement Award, the DHHS Management Award, and a Presidential Meritorious Executive Rank Award. The Society of Toxicology gave him the Arnold J. Lehman Award and The Toxicology Forum presented him with the Anderson Award for studies on chemical carcinogenesis and mechanisms of carcinogenesis.

The author of more than 200 scientific papers, Dr. Adamson has editorial appointments on six scientific journals and is an active member of scientific societies, including the AACR.

Dr. Adamson is also an avid reader of history, and Benjamin Franklin, Abraham Lincoln, and Winston Churchill are among his heroes. He is a student of current events, a poetry buff, an enthusiastic gardener, and a passionate Washington Redskins fan.