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Inducible Genomic Responses

June 8-12, 1996
Skamania Lodge
Stevenson (Columbia River Gorge), WA

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Application Deadline: April 8, 1996

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)
E-Mail: aacr@aol.com
FEBRUARY 19-25, 1996  
*Cancer Susceptibility Genes and Molecular Carcinogenesis*  
Chairpersons: Curtis C. Harris, Bethesda, MD; Allan Balmain, Glasgow, Scotland; Kenneth Olden, Research Triangle Park, NC  
Keystone Resort, Keystone, CO

MARCH 1-5, 1996  
*Proteases and Protease Inhibitors*  
Chairpersons: Lynn M. Matrisian, Nashville, TN; Bonnie F. Sloane, Detroit, MI  
Marriott's Bay Point Resort, Panama City Beach, FL

APRIL 20-24, 1996  
*87th Annual Meeting*  
Chairperson: Lorraine J. Gudas, New York, NY  
Washington D.C. Convention Center, Washington, D.C.  
Abstract Deadline: December 1, 1995

JUNE 8-12, 1996  
*Inducible Genomic Responses*  
Chairpersons: William T. Beck, Memphis, TN; John A. Hickman, Manchester, England; Richard I. Morimoto, Evanston, IL  
Skamania Lodge, Stevenson (Columbia River Gorge), WA

OCTOBER 2-6, 1996  
*Novel Approaches in Blood and Marrow Transplantation*  
Second Annual Meeting of the American Society for Blood and Marrow Transplantation  
Chairpersons: O. Michael Colvin, Durham, NC; Bruce R. Blazar, Minneapolis, MN  
Hotel Del Coronado, San Diego, CA

OCTOBER 6-9, 1996  
*Carcinogenesis from Environmental Pollution: Assessment of Human Risks and Strategies for Prevention*  
Joint Meeting with International Agency for Research on Cancer  
Chairpersons: Frederica Perera, New York, NY; Paul Kleihues, Lyon, France  
Hotel Gellért, Budapest, Hungary

OCTOBER 19-23, 1996  
*Programmed Cell Death*  
Chairperson: Stanley J. Korsmeyer, St. Louis, MO  
The Sagamore, Bolton Landing (Lake George), NY

JANUARY 10-14, 1997  
*Basic and Clinical Aspects of Lymphoma*  
Joint Meeting with the American Society of Clinical Oncology  
Chairpersons: Joseph R. Bertino, New York, NY; James O. Armitage, Omaha, NE  
Stouffer Renaissance Esmeralda Resort, Indian Wells (Palm Springs), CA

JANUARY 17-21, 1997  
*Disrupted Transcription Factors in Cancer*  
Chairpersons: Peter K. Vogt, La Jolla, CA; Frank J. Rauscher III, Philadelphia, PA  
Hotel Del Coronado, San Diego, CA

FEBRUARY 13-16, 1997  
*Growth Factors, Signaling, and Cancer*  
Joint Meeting with Lorne Cancer Congress  
Chairpersons: Antony Burgess, Parkville, Victoria, Australia; Robert S. Coffey, Nashville, TN; Ashley R. Dunn, Parkville, Victoria, Australia; Webster K. Cavenee, La Jolla, CA  
Erskine House, Lorne, Victoria, Australia
87th AACR Annual Meeting
Preliminary Program
(Names of session chairpersons are underlined.)

SATURDAY, APRIL 20, 1996
11:00 a.m.-8:00 p.m. Registration
12:00 noon-6:30 p.m. Educational Sessions
   ED1 Human Pharmacogenetics: Molecular Mechanisms and Clinical Relevance in Cancer Treatment, William E. Evans, Denis M. Grant, Robert B. Diasio
   ED3 The Cell Cycle, Michael B. Kastan, William G. Kaelin, Jr., Chi Van Dang
   ED4 Beyond the Human Genome Project: Technical Aspects of Genomic Characterization and Its Application to Cancer Research, Glen A. Evans
   ED5 Combinatorial Libraries, Sydney E. Salmon
2:00 p.m.-6:00 p.m. Methods Workshops (Separate registration required)
   WK1 Quantitative Biology and Pharmacodynamics, Robert C. Jackson, Robert L. Dedrick, Mark J. Ratain, William R. Greco
   WK2 Animal Models: Transgenic and Knockout Mice in Cancer Investigations, Terry Van Dyke
6:30 p.m.-8:00 p.m. Women in Cancer Research Guest Lecture Opening Reception
8:00 p.m.-10:00 p.m. Opening Mixer

1:00 p.m.-2:00 p.m. Controversy Session 2
1:00 p.m.-5:00 p.m. Poster Discussion Sessions
1:00 p.m.-5:00 p.m. Poster Sessions
1:45 p.m.-5:15 p.m. Minisymposia
2:15 p.m.-5:15 p.m. Symposia
   S1 Tumor Suppressor Genes, Bert Vogelstein, Yosef Shiloh, Todd Waldman, Alexander Kamb, Allan Bradley, Richard D. Klausner
   S2 Ovarian Cancer: From the Laboratory to the Clinic, Robert F. Ozols, Thomas C. Hamilton, Steven A. Narod, E.G. Elisabeth de Vries, David T. Curiel
   S4 Monoclonal Antibodies: Clinical Effectiveness, Ellen S. Vitetta, Mark Siwowski, Pamela A. Trail, Dana C. Matthews
5:30 p.m.-6:30 p.m. Joseph H. Burchenal/AACR Clinical Research Award Lecture
6:30 p.m.-9:00 p.m. Minority Issues Careers Symposium
8:00 p.m.-10:30 p.m. Annual Reception

SUNDAY, APRIL 21, 1996
7:00 a.m.-4:00 p.m. Registration
7:00 a.m.-8:00 a.m. Sunrise Sessions
   SUN1 Diane F. Birt: Mechanisms of Dietary Prevention of Cancer
   SUN2 William S. Dalton: Challenges in Bone Marrow Transplantation
   SUN3 Ronald B. Herberman: Natural Killer Cells
   SUN4 Rakesh K. Jain: Tumor Pathophysiology: Role in Delivery of Molecules, Particles, and Cells
   SUN5 Lovell A. Jones: Estrogens and Breast Cancer
   SUN6 Stanley J. Korsmeyer: Bcl and Cell Death
   SUN7 Funmi I. Olopade: Chromosomal Deletions and Cancer: Recent Advances in Vanishing Techniques
8:00 a.m.-12:00 noon Poster Discussion Sessions
8:00 a.m.-12:00 noon Poster Sessions
8:15 a.m.-11:45 a.m. Minisymposia
8:15 a.m.-11:30 a.m. Plenary Session
Twenty-fifth Anniversary of the National Cancer Act: Progress and Promise, Joseph R. Bertino, Harold E. Varmus, Arnold J. Levine, Susan Band Horwitz, Paul Talalay, James F. Holland, Lloyd J. Old
11:45 a.m.-12:45 p.m. 35th Clowes Award Lecture: Robert A. Weinberg
12:30 p.m.-5:00 p.m. Commercial Exhibit Show
1:00 p.m.-2:00 p.m. Controversy Session 1
   Is Beta-Carotene Useful in Cancer Prevention? Waun Ki Hong, Frank L. Meyskens, Jr., E. Robert Greenberg

1:00 p.m.-2:00 p.m. Symposium
   S6 Steroid Hormones: Breast and Prostate Cancer, Myles A. Brown, Donald P. McDonnell, Benita S. Katzenellenbogen, Roger L. Miesfeld, Norman M. Greenberg
   S7 Matrix Metalloproteinases and Their Inhibitors, Lynn M. Matrisian, Ruth J. Muschel, Mototaru Seiki, Yves DeClerck, Peter Brown
   S8 Recent Developments in Gene Therapy, Drew M. Pardoll, Inder M. Verma, Philip D. Greenberg, Arthur Bank
   S9 Viral Mechanisms of Carcinogenesis, Harald zur Hausen, Robert W. Livingston, William Robinson, Yuan Chang, Kathleen R. Cho
7:00 a.m.-8:00 a.m. WICR Networking Session
8:00 a.m.-11:00 a.m. Symposium
   S6 Steroid Hormones: Breast and Prostate Cancer, Myles A. Brown, Donald P. McDonnell, Benita S. Katzenellenbogen, Roger L. Miesfeld, Norman M. Greenberg
   S7 Matrix Metalloproteinases and Their Inhibitors, Lynn M. Matrisian, Ruth J. Muschel, Mototaru Seiki, Yves DeClerck, Peter Brown
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   S9 Viral Mechanisms of Carcinogenesis, Harald zur Hausen, Robert W. Livingston, William Robinson, Yuan Chang, Kathleen R. Cho
7:00 a.m.-4:00 p.m. Registration
7:00 a.m.-8:00 a.m. Sunrise Sessions
   SUN8 Peggy J. Farnham: Nuclear Oncogenes: Effects on Cell Cycle Regulation and Neoplastic Transformation
   SUN9 John Gibbins: Quantitative PCR as a Tool to Detect Minimal Residual Disease in Lymphoma and Leukemia
   SUN10 Stephen S. Hecht: Chemoprevention of Cancers Associated with Tobacco Use
   SUN11 V. Craig Jordan: Antiestrogens
   SUN12 Philip Livingston: Specific Immunotherapy of Melanoma
   SUN13 John A. McLachlan: Environmental Carcinogens: Their Impact in Cancer
   SUN14 Daniel Medina: Mammary Carcinogenesis
7:00 a.m.-8:00 a.m. WICR Networking Session
8:00 a.m.-11:00 a.m. Symposium
   S6 Steroid Hormones: Breast and Prostate Cancer, Myles A. Brown, Donald P. McDonnell, Benita S. Katzenellenbogen, Roger L. Miesfeld, Norman M. Greenberg
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   S9 Viral Mechanisms of Carcinogenesis, Harald zur Hausen, Robert W. Livingston, William Robinson, Yuan Chang, Kathleen R. Cho

10:00 a.m.-4:00 p.m. Commercial Exhibit Show
11:45 a.m.-12:45 p.m. Presidential Address: Joseph E. Bertino
1:00 p.m.-2:00 p.m. Fifth American Cancer Society Award Lecture: Lee W. Wattenberg
1:00 p.m.-2:00 p.m. Controversy Session 3
Does Regional Chemotherapy Work? David S. Alberts, Maurie Markman, Michael J. O'Connell
1:00 p.m.-5:00 p.m. Poster Discussion Sessions
1:00 p.m.-5:00 p.m. Poster Sessions
1:45 p.m.-5:15 p.m. Minisymposia
2:15 p.m.-5:15 p.m. Minisymposium
S10 Cell Responses to DNA Damaging Agents, Nathan A. Berger, Mark T. Muller, Joseph Avruch, George R. Stark, William F. Morgan
S11 Drug Resistance: Transcriptional and Translational Mechanisms, Kathleen W. Scott, Jane Clifford Azizkhan, Jim A. Wright, Edward Chu, Ian D. Hickson
S12 Melanoma as a Clinical Model, Alan N. Houghton, Jane W. Fountain, Steven A. Rosenberg, Pierre van der Bruggen, John M. Kirkwood
5:30 p.m.-6:00 p.m. Presentation by NCI Director: Richard D. Klausner
6:00 p.m.-7:00 p.m. Business Meeting

TUESDAY, APRIL 23, 1996

7:00 a.m.-4:00 p.m. Registration
7:00 a.m.-8:00 a.m. Sunrise Sessions
SUN15 Robert L. Comis: Lung Cancer: A Primer
SUN16 Jerry D. Glickson: NMR As a Prognosticator of Tumor Therapeutic Response
SUN18 Susan Jaken: Protein Kinase C in Cell Transformation
SUN18 Jay A. Levy: Immunologic Features of AIDS Pathogenesis
SUN19 Yves G. Pommier: DNA Topoisomerases and Their Inhibitors
SUN20 Barrett J. Rollins: Chemokines and Leukocyte-specific Chemotactic and Activating Factors
SUN21 Stephen E. Sallan: Childhood Leukemias: The Latest in Treatment
7:00 a.m.-8:00 a.m. NIH Grants Session
8:00 a.m.-11:00 a.m. Symposia
S14 Endogenous DNA Damage: Detection and Biological Significance, John M. Essigmann, Leona D. Samson, B. Singer, Lawrence J. Marnett, Lawrence A. Loeb
S15 Targeting Growth Factor Receptors for Therapy, John Mendelsohn, Thomas A. Waldmann, David W. Golde, Ira Pastan, Alexander Levitizki
S16 Aberrant Transcription Factors and Malignancy, Lorraine J. Gudas, A. Thomas Look, Anne Dejean, Christopher T. Denny, Terry H. Rabbitts
S17 Thy midylate Synthase and Its Inhibitors, Frank Maley, Carmen Allegra, Gary K. Smith, William R. Montfort, Bruce J. Dolnick
8:00 a.m.-12:00 noon Poster Discussion Sessions
8:00 a.m.-12:00 noon Poster Sessions
8:15 a.m.-11:45 a.m. Minisymposia
11:00 a.m.-5:00 p.m. Commercial Exhibit Show
11:45 a.m.-12:45 p.m. 20th Rosenthal Award Lecture: James O. Armitage
1:00 p.m.-2:00 p.m. Late-breaking Research Session
1:00 p.m.-5:00 p.m. Poster Discussion Sessions
1:00 p.m.-5:00 p.m. Poster Sessions
1:45 p.m.-5:15 p.m. Minisymposia
2:15 p.m.-5:15 p.m. Symposia
S18 Cell Signaling, Channing Der and Deborah Morrison, Ann Marie Pendergast, Melanie Cobb
S19 Cancer Chemoprevention in Humans, Thomas W. Kensler, Gary J. Kelloff, Michael N. Gould, Alberto F. Costa, Francis M. Giardiello
S20 Neuroblastoma: Recent Advances in Biology and Treatment, Garrett M. Brodeur, Susan L. Cohn, Robert C. Seege, Nai-Kong V. Cheung, Katherine K. Matthy, Robert P. Castleberry
S21 Telomerase, Cell Senescence, and Cancer, Calvin B. Harley, J. Carl Barrett, Maria Blasco, Jerry W. Shay, Karen Prowse
4:45 p.m.-5:30 p.m. DeWitt Goodman Lecture: David J. Mangelsdorf
5:30 p.m.-6:30 p.m. 15th Rhoads Award Lecture: Carol W. Greider, Telomerase Function and Regulation in Normal and Cancer Cells
6:30 p.m.-8:00 p.m. WICR Business Meeting

WEDNESDAY, APRIL 24, 1996

7:00 a.m.-2:00 p.m. Registration
7:00 a.m.-8:00 a.m. Sunrise Sessions
SUN22 Ernest C. Borden: Interferons in Cancer
SUN23 Richard A. Heyman: Transcription Factors As Therapeutic Targets
SUN24 Theodore S. Lawrence: Radiation Sensitization
SUN25 Eric K. Rowinsky: Drugs Which Interact with Microtubules: An Update
SUN26 Jeffrey Schlom: Tumor Vaccines
SUN27 Peter D. Senter: Prodrugs for Cancer Chemotherapy
SUN28 Martha R. Stamper: Culturing Normal and Neoplastically Transformed Human Epithelial Cells
8:00 a.m.-11:00 a.m. Symposia
S22 Cell Adhesion Molecules and the Cytoskeleton, Jun-Lin Guan and Rudolph L. Juliano, Thomas P. Stossel, Paul Polakis, Eva Ann Turley
S23 Drug Metabolizing Enzymes in Cancer Prevention and Therapy, Cecil B. Pickett, F. Peter Guengerich, Frank J. Gonzalez, Chung S. Yang
S24 The Cell Cycle and Damage Response Pathways: Potential Targets for Therapy, Stephen H. Friend, Frank McCormick, David Beach, James M. Roberts, Nick J. Dyson, Paul A. Marks
8:00 a.m.-12:00 noon Poster Discussion Sessions
8:00 a.m.-12:00 noon Poster Sessions
8:15 a.m.-11:45 a.m. Minisymposia
11:45 a.m.-12:45 p.m. 15th Cain Award Lecture: Kurt W. Kohn, Beyond DNA Crosslinking
1:00 p.m.-2:00 p.m. Controversy Session 4
Is p53/Rb Important for Therapeutic Outcome? William F. Benedict, Carlos Cordon-Cardo, David Sidransky
Controversy Session 5
Should Genetic Testing Be Done on Patients to Assess Cancer Risk? Judy E. Garber
1:00 p.m.-5:00 p.m. Poster Discussion Sessions
1:00 p.m.-5:00 p.m. Poster Sessions
1:45 p.m.-5:15 p.m. Minisymposia
2:15 p.m.-5:15 p.m. Symposia
S26 Genetic Predisposition to Cancer, Mark H. Skolnick, Francis S. Collins, Richard D. Kolodner, William B. Isaacs, Sean Tavitgian

Lawrence A. Loeb’s career in cancer research has been focused on understanding the mechanisms that generate human somatic mutations and determining the role of these mutations in human cancer. His central approach has been to alter DNA in vitro and then to analyze the mutagenic consequences of these alterations in genetically defined systems. Major questions he has been attempting to answer include: how normal cells can replicate the six billion nucleotides in their genomes with less than one error per generation; whether errors in DNA replication are a major cause of spontaneous mutations; whether spontaneous mutations have the same potential for causing human cancers as environmental chemicals; and, most importantly, whether tumor progression is the result of multiple mutations and whether it is driven by a mutator phenotype. Dr. Loeb’s early seminal hypothesis on mutator genes in cancer is illustrated in the chart on the cover (top left) (Cancer Res., 34: 2331, 1974). His concept that a mutator phenotype might be required for multistage carcinogenesis (Cancer Res., 51: 3075, 1991) has recently received strong experimental support with the discoveries of microsatellite instability in a variety of human cancers.

Dr. Loeb’s research can be divided into three areas of investigation, each of which concerns mechanisms of mutagenesis and the relationship of mutations to cancer. The first area is the replicational fidelity of DNA and RNA polymerases. These studies are founded on a fidelity assay developed in Dr. Loeb’s laboratory (Proc. Natl. Acad. Sci. USA, 78: 1924, 1978), which involves copying mutant DNA in vitro, transfecting the copied DNA into bacteria, and then measuring the reversion of the mutant DNA to wild type. Most recently, concurrent work in his laboratory and that of Thomas Kunkel, a former postdoctoral fellow, has shown that the AIDS virus reverse transcriptase is among the most error prone polymerases known. The error rate of this enzyme is adequate to account for the high mutation rate of the virus.

A second area of investigation is the molecular basis of mutagenesis by environmental carcinogens, including metal ions, oxygen radicals, and agents that damage DNA to yield apurinic sites. Studies on mutagenesis by metal ions provided the first documentation of metal-induced misincorporation by DNA polymerases [Science (Washington DC), 194: 1434, 1976]. Studies on alkylating agents have led to the hypothesis that apurinic sites in DNA may be a key intermediate in mutagenesis by diverse agents. In parallel studies, misincorporation by DNA polymerase has been used to position nucleotide adducts at designated sites within DNA, providing a rigorous method for measuring the types of mutations produced by different DNA alterations. The studies of Dr. Loeb and associates on mutagenic spectra have shown that, in addition to UV irradiation, tandem CC→TT mutations are produced by oxygen-free radicals. These mutations could provide a signature to determine the contribution of oxygen-free radicals to mutations produced during tumor progression.

Third, Dr. Loeb’s laboratory has been a pioneer in the creation of a new area of biotechnology, applied molecular evolution (Proc. Natl. Acad. Sci. USA, 83: 7405, 1986). This work is based on the concept that among random sequences of amino acids there are rare species that can code for new, functionally active molecules. From vast libraries of herpes thymidine kinase genes containing random nucleotide substitutions within the nucleotide-binding site, Dr. Loeb and colleagues used genetic complementation to obtain enzymes with unique properties for gene therapy in cancer. Some of the mutants are more active than the wild-type enzyme, some are more stable, and others preferentially phosphorylate different nucleoside analogues. This approach affords the capability of creating interesting mutant enzymes without a detailed knowledge of their three-dimensional structure and even the possibility of finding new activities that are not present in nature.

Dr. Loeb’s early work was with Harry Gelboin on alterations in messenger RNA metabolism induced by 3-methylcholanthrene, and then with Daniel Mazia on eukaryotic DNA polymerases. He received his M.D. in 1961 from the New York University School of Medicine, and his Ph.D. from the University of California, Berkeley in 1967. After working at the Institute for Cancer Research at Fox Chase from 1967 to 1978, he joined the University of Washington School of Medicine, where he currently is a Professor in the Departments of Pathology and Biochemistry and the Director of the Joseph Gottstein Memorial Cancer Research Laboratory and of the M.D./Ph.D. program at the University.

During his most distinguished and influential career, he has published more than 250 papers, been honored widely, served in a multitude of leadership positions nationally and internationally, and been very active in the affairs of the American Association for Cancer Research (AACR), of which he has been a member since 1969. In particular, he has been a dedicated Associate Editor of Cancer Research, having served on its Editorial Board from 1977 until the end of 1995. He was the Association’s President in 1988–1989, and he has served on the AACR Board of Directors (1986–1989) and on many committees, including the Program Committee (1995–1996) and the Scientific and Public Education Committee (1987–1990). His concern about public education was evident early on in his participation in the development of the AACR position statement on “Smoking and Lung Cancer” (Cancer Res., 44: 5940, 1984). This article, commissioned by the AACR Scientific and Public Affairs Committee in 1983, summarized the evidence to date on the association between tobacco smoking and lung cancer, and it contained recommendations to reduce cigarette smoking in our society. Dr. Loeb, as Chairperson of the AACR Panel on Smoking and Lung Cancer, coordinated the preparation of the Position Paper and co-authored the section on “Carcinogenesis.” The article was the object of intense interest and was widely distributed to the scientific community as well as to policymakers.

Another aspect of Association activity in which Dr. Loeb featured prominently was the AACR Special Conferences program. As Chairperson of the Special Conferences Committee when it first became a standing committee (1989–1992), he guided the launch of an extraordinary series of small conferences which have been offering researchers from around the world the opportunity to meet and discuss the most up-to-date findings on focused topics of cancer research. The photographs at the bottom was taken at the March 1993 AACR Special Conference on the Mechanism of Action of Retinoids, Vitamin D, and Steroid Hormones, which was chaired by Michael B. Sporn, Ronald M. Evans, and David Mangelsdorf. Showing Drs. Mangelsdorf and Evans discussing one of the meeting’s poster presentations with a group of attendees, this photo exemplifies the exchange of scientific information among researchers in the field that the Special Conferences were designed to promote.

We express our sincere appreciation to Dr. Loeb for providing us with his photograph (top right) and the chart used on the cover, as well as to Drs. Mangelsdorf and Evans for allowing us to use the photograph from the Special Conferences.