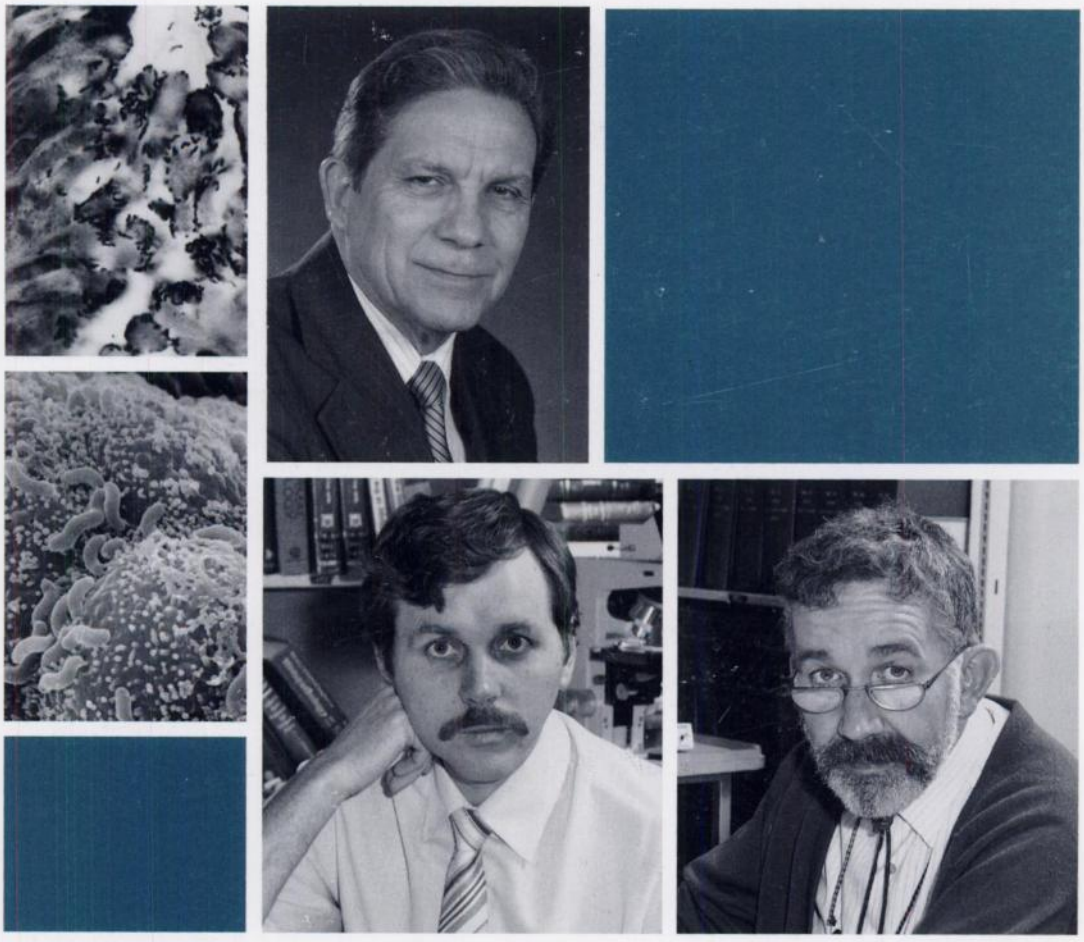
Cancer Research

AN OFFICIAL JOURNAL OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH



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AMERICAN ASSOCIATION FOR CANCER RESEARCH
86th Annual Meeting

Donald S. Coffey, Program Chairperson

Metro Toronto Convention Centre, Toronto, Ontario, Canada

March 18-22, 1995

Titles of Major Sessions

(Confirmed Chairpersons in Parentheses)

PLENARY SESSION

An Integrated View of the Cancer Cell (Donald S. Coffey)

SYMPOSIA

The Cell Cycle and Tumor Suppressor Genes (Thea D. Tlsty)
DNA Damage and Repair (Philip C. Hanawalt)
Natural Products in Chemoprevention of Cancer (Michael B. Sporn)
Ribozymes and Antisense Oligonucleotides and the Alteration of Gene Expression (Kevin J. Scanlon)
Genetic Susceptibility to Cancer (Kenneth W. Kinzler)
Contributions of Environmental Factors to Cancer (Kenneth Olden)
Cell Surface Glycosylation Defining Malignancy (Sen-itiroh Hakomori)
Peripheral Stem Cells and High-Dose Chemotherapy (Peter J. Quesenberry)
Apoptosis (Alan R. Eastman)
Biology of Radiation Oncology (H. Rodney Withers and C. Norman Coleman)
Biomarkers of Carcinogenesis (David Sidransky)
Transcription Factors and Carcinogenesis (Frank J. Rauscher III)
Gene Therapy in Cancer Clinical Trials
Telomeres and Telomerases (Carol W. Greider and Jerry W. Shay)
Extracellular Matrix, Gene Expression, and Cell Signalling (Hynda K. Kleinman)
Mechanistic Basis for Ethnic Differences in Cancer Risk (Kenneth Olden)
Signal Transduction and Gene Control and Development (James E. Darnell)
Angiogenesis (Judah Folkman and Adrian L. Harris)
Genes, Development, and Cancer (Eric N. Olson)
Growth Factors, Receptors, and Differentiation (Angie Rizzino)
New Strategies and Targets for Chemotherapy (Joseph R. Bertino and Eddie Reed)
Genetic Approaches to Invasion and Metastasis (Robert S. Kerbel and Patricia S. Steeg)
Immunotherapy: Tumor Vaccines (David A. Berd)
Graft *versus* Tumor Effects (Richard J. O'Reilly)
Dietary Intervention in Hormonal Carcinogenesis (Diane F. Birt and Lovell A. Jones)
The Role of Stromal-Epithelial Interactions in Growth and Neoplasia (Leland W. K. Chung)
Cancer Prevention and Intermediate Biomarkers (Peter Greenwald)
Combinatorial Chemistry for Anticancer Drug Discovery (Sydney E. Salmon)
Translational Research in Breast Cancer (Marc E. Lippman)
DNA Methylation (Peter A. Jones and Stephen B. Baylin)

METHODS WORKSHOPS

General, *In Situ*, and Quantitative PCR (including Differential Display) (Saraswati Sukumar)
Gene Targeting (Janet Rossant and Andras Nagy)

CONTROVERSY SESSIONS

Are Estrogens Implicated in Breast Cancer? (Lovell A. Jones)
Is Mammography Before Age 50 Beneficial? (Virginia L. Ernster)
What Are the Limits and Benefits of PSA as a Screening Tool? (John Trachtenberg)
Breast Cancer Prevention: What Will We Advise Women with BRCA1? (Louise C. Strong)
What Are the Risks of Electromagnetic Fields in Causing Cancer? (Mark A. Israel)
Is Bone Marrow Transplantation Indicated for Breast Cancer? (Nancy E. Davidson)

MEET-THE-EXPERT SUNRISE SESSIONS

New Developments in Clinical Pharmacology (Merrill J. Egorin)
Site-specific Gene Expression in Transgenic Animals (Norman Greenberg)
Organ-specific Carcinogenesis (Cheryl Lyn Walker)
Modeling and Analyzing Clinical Trials (Steven Piantadosi)
Multivariate Determinants of Radiocurability (Richard P. Hill)
Multidrug Resistance (Victor Ling)
Cytokines, Vaccines, and Gene Therapy (Jonathan W. Simons)
Tyrosine Kinases and Phosphatases
Prostate Cancer (John T. Isaacs)
Lung Cancer (Stephen B. Baylin)
Colon Cancer (Ronald N. Buick)
Pediatric Malignancies (Joseph V. Simone)
Hematological Malignancies (Lee M. Nadler)
Stem Cell Transplantation (Elizabeth J. Shpall)
Molecular Determinants of Multidrug Resistance (Elizabeth W. Newcomb)
Is a Mutagenic Event Involved in Initiation? (Ann R. Kennedy)
Glutathione S-Transferase (Kenneth D. Tew)
Farnesyl Transferase as a Target for Therapy (Alexander W. Wood)
Liver Cancer Etiology and Prevention (John D. Groopman)
Biochemical Determinants of Carcinogenesis (Allan B. Okey)

EDUCATIONAL WORKSHOPS

To Be Announced

Further Information: AACR Office • Public Ledger Building • Suite 816 • 150 S. Independence Mall West
Philadelphia, PA 19106-3483 • **TELEPHONE** (215) 440-9300 • **FAX** (215) 440-9313

Director

The University of Wisconsin Medical School, Madison, invites applications and nominations for the position of Director of the Wisconsin Comprehensive Cancer Center (UWCCC). The UWCCC comprises 145 members who engage in research, training, cancer care and outreach. The Center Director reports directly to the Dean of the Medical School, and with the advice and assistance of senior and program leaders, allocates the resources of the Center to accomplish its mission of excellence in research, education, clinical care and outreach. The Director guides a complex interdepartmental, interdisciplinary organization. Resource development is an important element of successful leadership. The position develops and sustains a broad program meeting NCI criteria for comprehensiveness with outstanding achievements in research in the basic and clinical sciences, high priority clinical trials, and cancer prevention and control; education and training; public information services, and community service and outreach.

Candidates will have an MD and/or PhD degree, nationally recognized experience and interest in oncology, and demonstrated administrative excellence. Academic credentials gained in clinical and/or laboratory research and education must meet standards for a senior faculty rank appointment. Tenure home will be in a department appropriate to the candidate's background.

Applications from minorities and women are encouraged. Curriculum vitae and letter of interest should be sent by January 31, 1995, to: **William Ershler, M.D., Chair, Cancer Center Director Search Committee, c/o Margie Martin, 1205 MSC, 1300 University Avenue, Madison, Wisconsin 53706, Fax: 608-265-3286.**

Confidentiality may be requested in writing. Finalists cannot be guaranteed confidentiality. UW is an equal opportunity/affirmative action employer.

UNIVERSITY OF
WISCONSIN-MADISON
MEDICAL SCHOOL

THE VANDERBILT CANCER CENTER

Several tenure track faculty positions are available in the Vanderbilt Cancer Center. Positions are available at all academic ranks and carry competitive startup packages. Outstanding candidates will be considered in all fields of cancer research but priority will be given to individuals interested in the identification or functional characterization of cancer genes and in molecular epidemiology. Women and minorities are especially encouraged to apply. Investigators will have primary appointments in Medical School departments and will be housed in newly constructed Cancer Center space. Candidates should send a curriculum vitae, an outline of research plans, and three letters of recommendation to:

Chair, Faculty Search Committee
The Vanderbilt Cancer Center
876 Medical Research Building
Vanderbilt University Medical Center
Nashville, TN 37232-6838

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THE OHIO STATE UNIVERSITY

INTERNAL MEDICINE/MEDICAL ONCOLOGY

Postdoctoral Fellowships in Oncology available beginning July 1995 and 1996 for those with M.D., D.O. or M.D./Ph.D., or Ph.D. degrees. Unique research training by interdisciplinary faculty with research interests including clinical research, developmental therapeutics, biological response modifiers, pharmacology and pharmacokinetics, hormones and cancer, cancer immunology, molecular biology and cancer control and prevention. Program prepares trainees for careers in academic or research setting focused on oncology. Contact: Stanley P. Balcerzak, M.D., The Ohio State University, N1025 Doan Hall, 410 West Tenth Avenue, Columbus, Ohio 43210.

An Equal Opportunity/Affirmative Action Program.

Minority applicants are encouraged.

AMERICAN ASSOCIATION FOR CANCER RESEARCH

GERTRUDE ELION CANCER RESEARCH AWARD

Supported by an Educational Grant from
Wellcome Oncology
Burroughs Wellcome Co.

- This Award was established in honor of Nobel Laureate Dr. Gertrude Elion, Scientist Emeritus at the Burroughs Wellcome Co. and Past President and Honorary Member of the AACR.

- The Gertrude Elion Cancer Research Award is a one-year, $30,000 grant for a scientist in the U.S. or Canada engaged in meritorious basic, clinical, or translational research in cancer etiology, diagnosis, treatment, or prevention at the level of Assistant Professor.

- The AACR will reimburse the Awardee for travel to the Annual Meeting where Dr. Elion will personally present this Award.

Eligibility

Candidates must have completed postdoctoral studies or clinical fellowships not later than July 1 of the Award year, and ordinarily not more than five years earlier. Tenured faculty in academia, government employees, and employees of private industry are not eligible for this award. A Candidate need not be a member of the AACR at the time of application, but must be nominated by a Member of the AACR. Associate Members may not be nominators.

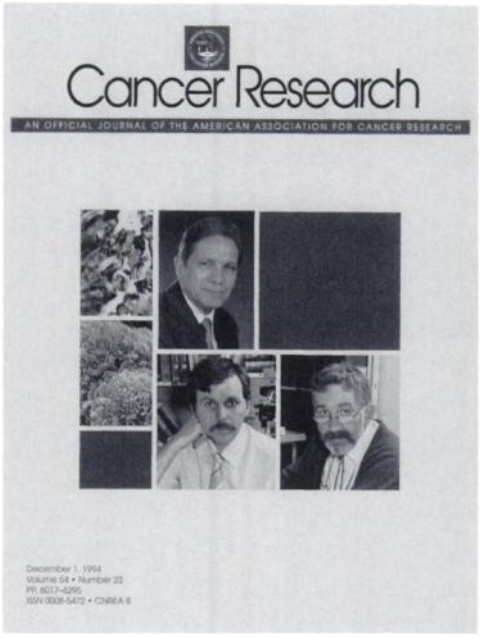
Selection Process

Applications are evaluated by a Committee consisting of AACR Members who are experts in basic, clinical, and translational cancer research. Complete applications must be submitted by **January 10, 1995** to be considered for the 1995 Award.

For Further Information/Application Forms

AMERICAN ASSOCIATION FOR CANCER RESEARCH
Public Ledger Building, Suite 816
150 South Independence Mall West
Philadelphia, PA 19106-3483
Telephone: (215) 440-9300
FAX: (215) 440-9313
ATTN.: Jenny Anne Horst-Martz

COVER LEGEND



This cover features John Robin Warren (*bottom right*) and Barry J. Marshall (*bottom left*) for their pioneering discovery of *Helicobacter pylori* in the gastric mucosa, a key etiological agent associated with the occurrence of gastric and duodenal ulcers, and Pelayo Correa (*top*) for his contributions in elucidating the role of *H. pylori* in gastric carcinogenesis.

This major recent discovery began in 1979 when Dr. Warren, a pathologist at the Royal Perth Hospital, made the astute yet controversial observation that bacteria were proliferating on gastric mucosa, visualized by fiber-optic biopsy. He confirmed the presence of this bacterium and verified its close relationship to active chronic gastritis (Lancet, *1:* 1273, 1983).

Dr. Warren had only limited clinical information with which he could link his observations until the Registrar in the Gastroenterology Department of the Royal Perth Hospital, Dr. Marshall, expressed interest in collaborating. Success ensued when culture plates produced visible colonies. Taxonomy of this gram-negative, urease-rich organism closely resembled a *Campylobacter* species but was later established as a new genus, *Helicobacter,* and named *H. pylori.*

A systematic evaluation of 100 consecutive patients undergoing elective gastroscopy revealed an association (Lancet, *1:* 1311, 1984). Patients with gastritis, who had gastric or duodenal ulcers treated with bismuth compounds and antibiotics, not only had healing of lesions but went also into long-lasting remissions, because *H. pylori* was thus eliminated. Patients treated with only antacids or cimetidine almost inevitably relapsed without continued treatment, since *H. pylori* persisted.

Dr. Marshall infected himself with *H. pylori* and demonstrated its relation to inflammation in his own stomach to confirm Koch's postulate. He was confident that he could be cured by the antibacterial treatment, and he was.

Dr. Correa, based on observation and material collected in New Orleans and Colombia, had shown that *H. pylori* may be an etiological factor in gastric cancer in at least 3 points of the chain of causation: (*a*) chronic gastritis and increased cell replication (Am. J. Gastroenterol., *88:* 1870, 1993); (*b*) interfering with the concentration of ascorbic acid in the gastric milieu (Nutr. Cancer, *22:* 65, 1994; Am. J. Gastroenterol., *89:* 533, 1994); and (*c*) attracting and activating inflammatory cells, especially neutrophils, which may deliver "oxidative bursts" in the immediate vicinity of replicating epithelial cells, with mutagenic potential (Cancer Res., *52:* 6735, 1992).

These historic findings have now been confirmed in other areas with a high incidence of gastric cancer. Now, only 11 years after the first publication by Drs. Warren and Marshall, *H. pylori* is accepted as a key etiological factor for gastric and duodenal ulcers and for gastric cancer. Nubia Muñoz recently reviewed the association of *H. pylori* infection and gastric cancer (Cancer Epidemiol., Biomarkers & Prev., *3:* 445, 1994). The data provide support for the mechanistic interpretation by John Weisburger and colleagues that *H. pylori* acts as a cytotoxin, leading to gastric cell regeneration, and renders the mucosa more sensitive to dietary genotoxic gastric carcinogens as described by Steven R. Tannenbaum and Dr. Correa (Cancer Res., *51:* 190, 1991; Chem. Res. Toxicol., *5:* 797, 1992) and by the Weisburger laboratory (J. Natl. Cancer Inst., *64:* 163, 1980).

Dr. Warren earned M.B. and B.S. degrees at the University of Adelaide, Australia, in 1961. He was Registrar in Hematology and Clinical Pathology in Adelaide, then Lecturer and Clinical Assistant in Pathology at the Royal Adelaide Hospital. He later became Registrar in Pathology at the Royal Melbourne Hospital and is currently a pathologist at Royal Perth Hospital. He was the guest of honor at the 6th International Workshop on *H. pylori* in 1991.

Dr. Marshall received M.B. and B.S. degrees from the University of Western Australia in Perth in 1974. After residencies at the Queen Elizabeth II Medical Center, he became Registrar in General Medicine and Gastroenterology at Royal Perth Hospital, where he became Clinical Research Assistant, and at Fremantle Hospital. Since 1986, he has been on the gastroenterology and internal medicine faculties at the University of Virginia Medical Center in Charlottesville, VA. He also serves as a consultant in diagnostics as President, Med Dial Corporation and Medical Director, TRI-MED Specialties, Inc. In addition, he is a founder of the Helicobacter Foundation.

Dr. Correa received his M.D. degree at the University of Antioquia, Colombia, in 1949 and did his pathology training at Emory University in Atlanta, GA. He then became Professor of Pathology at Universidad del Valle, Cali, Colombia. He served as a Visiting Fellow in Epidemiology at the National Cancer Institute in Bethesda, MD. At present, he is Professor and Chief of the Epidemiology Section in the Department of Pathology at Louisiana State University Medical Center, New Orleans, LA. He is Editor-in-Chief of *Cancer Epidemiology, Biomarkers & Prevention,* one of the official journals of the American Association for Cancer Research (AACR), and has served on a number of AACR committees including the International Affairs Committee and the Membership Committee.

We are indebted to those featured for photographs and information. On the cover is a photomicrograph from Dr. Warren displaying *H. pylori* within the gastric mucosa in one of his first historic observations (*first column, top*). The other photograph (by F. Hernandez) is from a scanning electron microscopic view of *H. pylori* obtained from Dr. Correa (*first column, bottom*).

John H. Weisburger