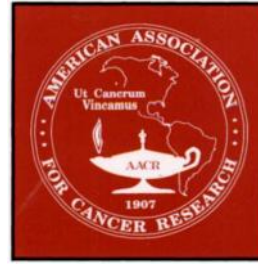


An Official Journal
of the
American Association
for
Cancer Research



Clinical Cancer Research

January 1997 • Volume 3 Number 1
PP. 1-143 • ISSN 1078-0432

AACR SPECIAL CONFERENCE IN CANCER RESEARCH

Basic and Clinical Aspects of Breast Cancer



March 7-12, 1997

The Keystone Resort, Keystone, Colorado

CONFERENCE CHAIRPERSONS

J. Carl Barrett / Research Triangle Park, NC
Karen S. H. Antman / New York, NY
Mary-Claire King / Seattle, WA

SCIENTIFIC PROGRAM

Keynote Addresses

Mary-Claire King / Seattle, WA
Karen S. H. Antman / New York, NY

Basic Biology of the Breast

José Russo / Philadelphia, PA
Marc E. Lippman / Washington, D.C.
C. Kent Osborne / San Antonio, TX
Charles W. Daniel / Santa Cruz, CA

Molecular and Cellular Aspects of Breast Cancer

Jerry W. Shay / Dallas, TX
Mina J. Bissell / Berkeley, CA
Martha R. Stampfer / Berkeley, CA
Joyce M. Slingerland / Toronto, Ontario, Canada

Genetic Predisposition to Breast Cancer

David E. Goldgar / Lyon, France
P. Andrew Futreal / Durham, NC

Mechanisms of Hormone Action

V. Craig Jordan / Chicago, IL
Myles A. Brown / Boston, MA
Kenneth S. Korach / Research Triangle Park, NC

BRCA1 and BRCA2 Function/Biochemistry

Roy A. Jensen / Nashville, TN
Wen-Hwa Lee / San Antonio, TX
David M. Livingston / Boston, MA
Frank J. Calzone / Thousand Oaks, CA

Experimental Models of Breast Cancer

Tak W. Mak / Toronto, Ontario, Canada
Roger W. Wiseman / Research Triangle Park, NC
Michael N. Gould / Madison, WI

Epidemiology of Breast Cancer

Walter C. Willett / Boston, MA
Maureen Henderson / Seattle, WA
Malcolm C. Pike / Los Angeles, CA
Mary S. Wolff / New York, NY

Clinical Aspects of Breast Cancer

Judy E. Garber / Boston, MA
Jeffrey T. Holt / Nashville, TN
M. John Kennedy / Baltimore, MD

*Applicants are encouraged to submit abstracts
for poster presentation.*

Application deadline: January 20, 1997

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)
aacr@aacr.org (E-mail)
<http://www.aacr.org>



**American Association for
Cancer Research, Inc.**
Executive Director and
Director of Publications
Margaret Foti

Publications Staff

Associate Director of Publications
Mary Anne Mennite
Manager, Editorial Services
Heide M. Pusztay

Staff Editors

Michael J. Beveridge
Kathleen C. Assenmacher
Pamela R. Arnold
Laurie B. Baker

Staff Assistant

Mary Ellen Pirring

Administrative Coordinator

Holly M. Haskins

Senior Editorial Assistant

Theresa A. Griffith

Editorial Assistants

Valerie L. Samuel
Andrea Conrad
Cecilia Gallo

Administrative Staff

Director of Administration

Adam D. Blistein

Controller

Joan D. Ritchie

Coordinator, Financial

Operations

George L. Moore

Manager, Meetings and Exhibits

Jeffrey M. Ruben

Meeting Planner

Carole L. Kanoff

Public Information Coordinator

Jenny Anne Horst-Martz

Assistant to the Executive Director

Ruth E. Fortson

Membership Development

Coordinator

Robin E. Felder

Administrative Assistant

Margaret A. Pickels

Systems Specialist

Lydia I. Rodriguez

Secretary

Malika L. Wright

Editorial Assistant

Diana F. Certo

Office Clerk

James J. Waters

Data Entry Clerk

Robert A. Simms II

Editor-in-Chief

John Mendelsohn

*Cell proliferation and death—preclinical, and clinical trials;
radiation therapy, surgery, and subspecialty investigation*

Deputy Editor

Waun Ki Hong

Clinical trials targeted at specific malignancies, chemoprevention

Senior Editors

Lance A. Liotta

Pathology, metastasis

David Sidransky

Molecular pathogenesis, molecular correlates

Paul Sondel

*Immunotherapy and cytokines—preclinical, and
clinical trials*

Associate Editors

Martin D. Abeloff

Carmen J. Allegra

James O. Armitage

Laurence H. Baker

Charles M. Balch

Barthel Barlogie

Robert C. Bast, Jr.

Colin B. Begg

Joseph R. Bertino

Clara D. Bloomfield

Ronald H. Blum

George J. Bosl

Paul A. Bunn, Jr.

Michael A. Caligiuri

Alfred E. Chang

Paul B. Chapman

Bruce D. Cheson

Michaele C. Christian

Curt I. Civin

Ronald Crystal

William S. Dalton

Albert B. Deisseroth

Patricia K. Donahoe

Ross C. Donehower

Timothy J. Eberlein

Merrill J. Egorin

Frederick R. Eilber

Robert M. Elashoff

Paul F. Engstrom

Eric R. Fearon

Isaiah J. Fidler

Richard M. Fox

Michael A. Friedman

Zvi Y. Fuks

Stephen L. George

Giuseppe Giaccone

Luca Gianni

Anna Giuliano

Eli Glatstein

David W. Golde

Mark R. Green

Jerome E. Groopman

William N. Hait

Adrian L. Harris

Curtis C. Harris

Sandra J. Horning

William J. Hoskins

Janet A. Houghton

Stephen B. Howell

Daniel C. Ihde

John T. Isaacs

Robert B. Jenkins

David H. Johnson

V. Craig Jordan

Barton A. Kamen

Michael B. Kastan

David R. Spriggs

*Preclinical pharmacology, pharmacological
clinical trials*

Jeffrey M. Trent

Genetics, cytogenetics

S. B. Kaye

David P. Kelsen

David Khayat

John M. Kirkwood

Donald W. Kufe

Steven M. Larson

John S. Lazo

Victor A. Levin

Allen Lichter

Marc E. Lippman

Edison T. Liu

Patrick J. Loehrer, Sr.

Dan L. Longo

Michael T. Lotze

Maurie Markman

William P. McGuire III

Roland Mertelsmann

Frank L. Meyskens, Jr.

John D. Minna

Monica Morrow

James L. Mulshine

Sharon B. Murphy

Charles E. Myers

Larry Norton

Richard J. O'Reilly

Robert F. Ozols

Ira Pastan

William P. Peters

Herbert M. Pinedo

Philip A. Pizzo

William K. Plunkett

Jerome B. Posner

Derek Raghavan

Mark J. Ratain

John C. Reed

Ralph A. Reisfeld

Jerome Ritz

Jack A. Roth

Eric B. Rowinsky

Edward A. Sausville

Howard I. Scher

Richard L. Schilsky

Richard M. Simon

John F. Smyth

Jeffrey A. Sosman

Michael B. Sporn

Louise C. Strong

Masaaki Terada

Daniel D. Von Hoff

Raymond P. Warrell, Jr.

Jane Weeks

Ralph R. Weichselbaum

Theresa L. Whiteside

Leonard A. Zwelling

Editorial Office

Colleen M. Hubona, *Executive Editor*, Department of Educational Publishing Services—227, The University of Texas M.D. Anderson Cancer Center, 1515 Holcombe Boulevard, Houston, Texas 77030. Phone: (713) 792-6014; Fax: (713) 792-6016.

AACR Publications Department
Public Ledger Building, Suite 816
150 South Independence Mall West
Philadelphia, PA 19106-3483
Phone: (215) 440-9300;
FAX: (215) 440-9354

Clinical Cancer Research is published monthly, one volume per year, by the American Association for Cancer Research, Inc. (AACR). Except for members of the AACR, all subscriptions are payable in advance to *Clinical Cancer Research*, P.O. Box 3000, Denville, NJ 07834 (Telephone: (800) 875-2997 or (201) 627-2427; FAX: (201) 627-5872), to which all business communications, remittances (in United States currency or its equivalent), and subscription orders should be sent. In Japan, send orders and inquiries to (sole agent): USACO Corporation, Tsutsumi Bldg., 13-12, Shimbashi 1-chome, Minato-ku, Tokyo 105, Japan; Tel. (03) 502-6471. Individuals who are not AACR members may subscribe to Volume 3 (1997) of *Clinical Cancer Research* at the rate of \$105 U.S./\$145 foreign. *Clinical Cancer Research* is only available to institutions as a combined subscription with *Cancer Research*. The combined 1997 institutional subscription price of \$685 U.S./\$815 foreign includes \$170 U.S./\$210 foreign for a subscription to *Clinical Cancer Research*. (Foreign subscription cost includes cost of surface mail. For faster delivery, expedited mailing rates are available by contacting the AACR Publications Department.) Canadian subscribers should add 7% GST. Changes of address notification should be sent 60 days in advance and include both old and new addresses. Member subscribers should send address changes to: AACR Member Services, Public Ledger Bldg., Suite 816, 150 South Independence Mall West, Philadelphia, PA 19106-3483. Nonmember subscribers should send changes of address to: *Clinical Cancer Research*, P.O. Box 3000, Denville, NJ 07834. Copies of the journal which are undeliverable because of address changes will be destroyed. Through the kind assistance of the Japanese Cancer Association, accelerated mailing of all AACR journals to AACR members in Japan is supported by a generous grant from the Banyu Pharmaceutical Company, Tsukuba, Japan.



Notice to Members of the American Association for Cancer Research

Officers for 1996-1997

President: Louise C. Strong, UT M. D. Anderson Cancer Center, Houston, TX 77030

President-Elect: Donald S. Coffey, Johns Hopkins University School of Medicine, Baltimore, MD 21287-2101

Treasurer: Bayard D. Clarkson, Memorial Sloan-Kettering Cancer Center, New York, NY 10021

Executive Director: Margaret Foti, AACR, Public Ledger Bldg., Suite 816, Philadelphia, PA 19106-3483

Annual Dues

The annual dues of active members of the American Association for Cancer Research are \$175, \$50 of which may be applied to a subscription to *Clinical Cancer Research*. Corresponding members of the Association will be charged an appropriate fee to offset periodicals postage costs. Payment of dues and changes of address of members of the Association should be sent promptly to Margaret Foti, Executive Director, American Association for Cancer Research, Public Ledger Bldg., Suite 816, 150 South Independence Mall West, Philadelphia, PA 19106-3483; Telephone: (215) 440-9300; FAX: (215) 440-9313.

Submission of Manuscripts

Clinical Cancer Research, a journal of the American Association for Cancer Research, publishes original articles describing clinical research on the cellular and molecular characterization, prevention, diagnosis, and therapy of human cancer. Its focus is on innovative clinical research and translational research which bridges the laboratory and the clinic. *Clinical Cancer Research* is especially interested in clinical trials evaluating new treatments for cancer; research on molecular abnormalities that predict incidence, response to therapy, and outcome; and laboratory studies of new drugs and biological agents that will lead to clinical trials in patients. All submissions undergo peer review. Papers should be sent directly to an appropriate Senior Editor or to the Editor-in-Chief for review. See "Instructions for Authors" (page ii of this issue) for complete mailing addresses of the Editor-in-Chief and Senior Editors.

Back Issues and Single Copy Sales of the Journal

Copies of back stock of the journal may be ordered from *Clinical Cancer Research*, P.O. Box 3000, Denville, NJ 07834 [Telephone: (800) 875-2997 or (201) 627-2427; FAX: (201) 627-5872]. As long as supplies permit, single copies will be sold by this company at \$25.00/copy. Orders outside the U.S. add \$3/copy to offset postage costs.

Advertisements

Advertisement insertion orders and copy must be received one month prior to the date of issue in which the advertisement is to be published. The journal is mailed on approximately the 1st day of the month of issue. Inquiries about advertising should be directed to: M. J. Mrvica Associates, Inc., 155 South White Horse Pike, Berlin, NJ 08009 [Telephone: (609) 768-9360; FAX: (609) 753-0064].

Copyright and Permissions

Authors who wish to publish in *Clinical Cancer Research* must formally transfer copyright to the proprietor of the journal, the American Association for Cancer Research, Inc. It is understood by this transfer that the authors relinquish all exclusive rights of copyright ownership, including the rights of reproduction, derivation, distribution, sale, and display.

Authors who prepared their articles as part of their official duties as employees of the U.S. Federal Government are not required to transfer copyright to the American Association for

Cancer Research, Inc., since these articles are considered to be in the public domain. In the case of articles supported by federal grants or contracts, copyright transfer to the American Association for Cancer Research, Inc., is required. The federal government may retain a nonexclusive license to publish or republish such material.

The Journal will routinely allow authors (or others with the permission of the authors) to include select parts of a copyrighted article in reviews, books, or subsequent papers, upon written request to the AACR Director of Publications. Requests to reproduce an article in its entirety will be considered on an individual basis and permission may be granted contingent upon payment of an appropriate copyright fee. All reproduction requests must include a brief description of intended use and a stamped, self-addressed envelope. Third parties should obtain the approval of the authors *before* corresponding with the AACR.

Those who wish to photocopy articles should contact the AACR Publications Department [Telephone: (215) 440-9300; FAX: (215) 440-9354].

No responsibility is accepted by the Editors, by the American Association for Cancer Research, Inc., or by Cadmus Journal Services for the opinions expressed by contributors or for the content of the advertisements.

Clinical Cancer Research is abstracted and/or indexed in *Cancer Lit*, *Chemical Abstracts*, and *Current Contents (Clinical Medicine)*.

Clinical Cancer Research (ISSN 1078-0432) is published monthly by the American Association for Cancer Research, Inc., Public Ledger Bldg., Suite 816, 150 South Independence Mall West, Philadelphia, PA 19106-3483 for \$50 annually for members and \$105 for individual nonmembers. *Clinical Cancer Research* is only available to institutions as a combined subscription with *Cancer Research*. The combined 1997 institutional subscription price of \$685 includes \$170 for a subscription to *Clinical Cancer Research*. Periodicals postage paid at Philadelphia, PA and additional mailing offices. POSTMASTER: Send address changes to *Clinical Cancer Research*, P.O. Box 3000, Denville, NJ 07834. Copyright 1997 by the American Association for Cancer Research, Inc. Printed on acid-free paper in the U.S.A.

Young Researcher's Award

*for Basic Research
in Renal Cancer*

\$60,000 to a young M.D. or Ph.D.

Proposal in NIH format, nine pages or less,
including references.

Funding for direct costs only.

Describe use of funds and other support.

Award is payable over a two year period in equal
payments of \$30,000.

Candidates should have access to a lab.

Send vita and three letters of recommendation,
and 10 copies of proposal.

Deadline April 1, 1997.

Decision June 3, 1997.

Focus on theory, originality, technical approach,
and potential for new contributions.

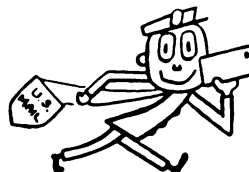
Funds will be available by July 19, 1997.

Call the National Kidney Cancer Association at
847.332.1051 for details.

National Kidney Cancer Association

1234 Sherman Avenue, Suite 203
Evanston, Illinois 60202-1375

Help us to serve you better.....



USE YOUR ZIP CODE

**Remember, your zip code
provides faster, more direct
delivery of your journals.
Use it on all correspondence,
too.**



Hit our Home Page on the World Wide Web!

<http://www.aacr.org>

Our web site features:

[AACR scientific meeting schedule](#)

[Table of Contents of AACR journals](#)

[Instructions for Authors](#)

[Information about AACR Research Fellowships and Travel Awards](#)

Plus . . . The latest AACR newsletter, and much more!