Instructions for Authors

Scope
Cancer Epidemiology, Biomarkers & Prevention publishes original research on cancer causation and prevention in humans. The following topics are of special interest: descriptive, analytical, biochemical and molecular epidemiology; the use of biomarkers to study the neoplastic and preneoplastic processes in humans; chemoprevention and other types of prevention trials; and the role of behavioral factors in cancer etiology and prevention.

Particular attention will be given to the identification of factors associated with various aspects of the carcinogenic process, including genetic susceptibility, host factors, infectious agents, chemical and physical carcinogens, environmental contaminants, dietary components and behavioral factors such as tobacco use and sun exposure.

Besides welcoming manuscripts that address individual subjects in any of the three disciplines, the Editors encourage the submission of manuscripts with an interdisciplinary approach.

Contents
- Original research articles
- Invited editorials
- Selected review articles
- Short communications
- Letters to the editor
- Meeting reports
- AACR and ASPO news

Editorial Policy
When a manuscript is received for consideration, the editors assume that no similar paper has been or will be submitted for publication elsewhere. Further, it is understood that all authors listed on a manuscript have agreed to its submission. Upon acceptance, authors must transfer copyright to the American Association for Cancer Research, Inc., the publisher and copyright owner of the journal, prior to publication. The editors endorse the principles embodied in the Declaration of Helsinki and expect that all investigations involving humans will have been performed in accordance with these principles. A copy of the Declaration is available from the American Medical Association, 535 North Dearborn Street, Chicago, IL 60610.

Manuscript Submission
Mail manuscripts directly to Dr. Pelayo Correa, Editor-in-Chief. Submit four original sets (not photocopies) of illustrations along with four copies of the manuscript. Illustrations will be returned to the author if the paper is not accepted for publication. If a manuscript is closely related to papers that are in press or have been submitted elsewhere, please provide copies of those papers with your submission. FAX transmission and overnight delivery service will be used to expedite review and publication.

Format
Manuscripts must be written succinctly in clear, grammatical English. Define abbreviations in an inclusive footnote to the text. Double-space on 8 1/2 x 11-inch paper. Dot-matrix printing is not acceptable. The format is as follows:
1. Title page, including title, authors, and affiliations;
2. A running title of fewer than 50 characters;
3. Text, arranged in this order: Abstract (not more than 250 words), Introduction, Materials and Methods, Results, Discussion, Acknowledgments, References;
4. Footnotes, on a page separate from the text. Designate footnotes consecutively with superscript Arabic numerals;
5. Tables, on pages separate from the text, with descriptive titles and/or legends;
6. Figure legends, on pages separate from the text. Define all symbols and include staining for halftones, where applicable.

References
Include only those articles that have been published or are in press. Unpublished data or personal communications must be cited as footnotes to the text. Personal communications should be substantiated by a letter of permission.

Number references in the order of their first mention in the text. Cite only the number assigned to the reference. References must be double-spaced.

Sample references:

Illustrations
Provide four original sets of illustrations (whether line-cut drawings or halftones). Label each figure in pencil on the reverse side with the first author's name, figure number, and an arrow indicating top of figure. Letters and numbers on illustrations should not be larger than 12-point type. All illustrations will be published at a width of approximately 3 inches (8 cm) unless the author requests a greater width. Use tissue overlays to indicate important areas of the photographs that must be reproduced with the greatest fidelity.

The complete expense of reproducing color photographs will be charged to the author. Submit color illustrations on flexible backing.

Proofs
Page proofs must be returned to the office of the American Association for Cancer Research within 24 hours of receipt. Return proofs by overnight mail. Proofs not received by the deadline will be published without the authors' corrections. Accepted manuscripts are regarded as final copy and should not be altered substantially in proof. Authors will be charged for all changes in proof not due to printer's errors. Each author's alteration in any line of text costs approximately $6.10. Lengthy insertions of entire sentences or paragraphs are billed at different rates depending upon the complexity of the alterations.

Typesetting Manuscripts from Computer Disks
Cancer Epidemiology, Biomarkers & Prevention welcomes disks to expedite production of accepted manuscripts. If your article is accepted for publication, you will receive instructions regarding disk submission and a form which must be completed and returned with your disk to the AACR Publications Department within 48 hours of notification of acceptance. It is the author's responsibility to ensure that the material on the disk matches the final accepted version of the manuscript.

For More Information, Contact:
Dr. Pelayo Correa, Editor-in-Chief, CEBP, Department of Pathology, Louisiana State University Medical Center, 1901 Perdido Street, New Orleans, LA 70112-1393. Telephone: (504)529-2848; (504)568-6035; FAX: (504)529-2849.

Or:
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(Required by 39 U.S.C. 3685)

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<th>B. PUBLICATION NO.</th>
<th>C. Date of Filing</th>
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<td>1 0 5 9 16 5</td>
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3. Frequency of Issue

Bi-monthly

4. Complete Mailing Address of Known Office of Publication (Street, City, County, State and ZIP + 4 Code) (Not printed)

American Association for Cancer Research
428 East Preston Street, Baltimore, MD 21202-3993

5. Complete Mailing Address of the Headquarters of General Business Offices of the Publisher (Not printed)

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428 East Preston Street, Baltimore, MD 21202-3993

6. Full Names and Complete Mailing Address of Publisher, Editor, and Managing Editor (This item MUST NOT be blank)

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428 East Preston Street, Baltimore, MD 21202-3993

Managing Editor (Name and Complete Mailing Address):
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American Association for Cancer Research
Public Ledger Bldg., Suite 816, 620 Chestnut St., Philadelphia, PA 19106-3483

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The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes (Check one)

(1) Yes (2) No

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(See instructions on reverse side)

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<th>Category</th>
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<tr>
<td>2. Mail Subscription (Paid and/or requested)</td>
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<td>2. Return from News Agents</td>
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<tr>
<td>E. Total Distribution (Sum of C and D above)</td>
<td>1135</td>
<td>1094</td>
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11. I certify that the statements made by me above are correct and complete

Signature and Title of Editor, Publisher, Business Manager, or Owner

(See instructions on reverse side)
**AMERICAN ASSOCIATION FOR CANCER RESEARCH**

**GUIDELINES FOR APPLICATION FOR ACTIVE AND CORRESPONDING MEMBERSHIP**

**BENEFITS OF MEMBERSHIP**

The American Association for Cancer Research (AACR), a scientific society consisting of laboratory and clinical cancer researchers, was founded in 1907 to facilitate communication and dissemination of knowledge among scientists and others dedicated to the cancer problem; to foster research in cancer and related biomedical sciences; to encourage the presentation and discussion of new and important observations in the field; to foster public education, science education, and training; and to advance the understanding of cancer etiology, prevention, diagnosis, and treatment throughout the world.

Members of the AACR enjoy the following benefits:

1. subscriptions to all of the Association's high-quality journals, Cancer Research, Cell Growth & Differentiation, and Cancer Epidemiology, Biomarkers & Prevention, at reduced member rates;
2. the privilege of sponsoring a paper for presentation at the AACR annual meeting;
3. an advance copy of the scientific Program and the Proceedings of the American Association for Cancer Research for each annual meeting;
4. reduced registration rates at all scientific meetings;
5. priority notification of events in the AACR's outstanding series of special conferences on timely subjects in the field;
6. the receipt of AACR newsletters, meeting announcements, and an up-to-date membership directory;
7. reduced rates for the AACR Employment Register; and
8. the professional benefits of AACR's public education activities.

**QUALIFICATIONS FOR MEMBERSHIP**

Active membership in the AACR is open to investigators who live in the Americas. Individuals who have conducted two years of research resulting in peer-reviewed publications relevant to cancer, or who have made substantial contributions to cancer research in an administrative or educational capacity, are eligible. If a candidate is working in a research area not directly related to cancer but has conducted research of merit in a related area of biomedical science, he or she may also qualify for membership.

Corresponding membership is open to persons who are not residents of the Americas. The qualifications for corresponding membership are the same as those for active membership. Visiting scientists from outside the Americas who intend to return to their countries of origin by the anticipated time of election should apply for corresponding membership. All other visiting scientists should apply for active membership and transfer to corresponding status at a later date upon leaving the Americas. Graduate and medical students, postdoctoral fellows, and physicians in training who do not yet meet the above qualifications should apply for associate membership.

**PROCEDURES FOR APPLICATION**

There are three deadlines for receipt of a membership application: January 1, May 1, and September 1 of each year. The Membership Committee will review all complete applications for active membership that have been received by these deadlines and will submit recommendations on each candidate to the Board of Directors which formally elects all members. The same procedure is followed by the Special Memberships Committee which receives applications for corresponding membership. Candidates will be notified according to the following schedule:

<table>
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<tr>
<th>Receipt of Application in AACR Office</th>
<th>Notification of Candidate</th>
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<tr>
<td>January 1</td>
<td>March</td>
</tr>
<tr>
<td>May 1</td>
<td>July</td>
</tr>
<tr>
<td>September 1</td>
<td>November</td>
</tr>
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</table>

A complete application consists of the following material:

1. 6 copies of the form on the opposite side of this page, with all requested information provided.
2. 5 copies of the candidate's most current curriculum vitae and bibliography.
3. 5 copies of a letter of recommendation from a nominator who is an active, corresponding, emeritus, or honorary member of the AACR (at least one copy must be a signed, original letter). This letter should describe the candidate's achievements in laboratory research, clinical investigations, or epidemiological research, and it must affirm that this research adheres to accepted ethical scientific standards. -OR- The nominator may supply the responses requested at the bottom of the application form in the section entitled "STATEMENT OF SUPPORT" (at least one copy of the form must be the signed original).
4. 5 copies of a letter of recommendation as described in Item 3 above from a secondor who is an active, corresponding, emeritus, or honorary member of the AACR (at least one copy must be a signed, original letter). -OR- The secondor may supply the responses requested at the bottom of the application form in the section entitled "STATEMENT OF SUPPORT" (at least one copy of the form must be the signed original).
5. 5 reprints of each of two publications on which the candidate appears as author.

All material should be collated into five complete sets with the original application form as a covering document and sent to the address given below. Questions regarding procedures for membership application may also be directed to the following address:

American Association for Cancer Research
Public Ledger Building
620 Chestnut Street
Suite 816
Philadelphia, PA 19106-3483
Phone: 215/440-9300
FAX: 215-440-9313

**RESPONSIBILITIES OF MEMBERSHIP**

Candidates should be aware of the following responsibilities of membership in the AACR. Active members must pay annual dues, a major portion of which is designated for subscriptions to AACR publications. In 1994 dues for active members are $150, $95 of which is designated for journal subscriptions. Newly elected members of the AACR who have already purchased subscriptions to Cancer Research, Cell Growth & Differentiation, or Cancer Epidemiology, Biomarkers & Prevention at the higher, nonmember rate will receive reimbursement of the unused portion of those subscriptions once their first year's membership dues are paid in full.

Corresponding members are required to pay dues ($65 in 1994) and may, if they wish, subscribe to Cancer Research, Cell Growth & Differentiation, or Cancer Epidemiology, Biomarkers & Prevention at reduced member rates.

Applicants elected in March will be responsible for payment of that year's dues; applicants elected in July and November will pay dues for the following year. Applicants elected in March and July will be eligible to sponsor an abstract for the next annual meeting. Every effort will be made to afford the same opportunity to applicants elected in November.

Margaret Foti
Executive Director
APPLICATION FOR ACTIVE OR CORRESPONDING MEMBERSHIP

NAME OF CANDIDATE: ____________________________  DATE OF BIRTH: ____________

LAST FIRST M.I.

PRESENT POSITION/TITLE: ____________________________

INSTITUTIONAL AFFILIATION: ____________________________

INSTITUTIONAL ADDRESS: ____________________________

(City) (State/Province) (Country) (Postal Code)

TELEPHONE NUMBER: ____________________________  FAX NUMBER: ____________________________

E-MAIL NUMBER (CARRIER): ____________________________

PRIMARY FIELD OF RESEARCH (Please check only one):

__ Biochemistry and Biophysics  __ Biostatistics  __ Carcinogenesis
__ Cellular Biology and Genetics  __ Clinical Investigations  __ Endocrinology
__ Epidemiology  __ Immunology  __ Molecular Biology and Genetics
__ Preclinical Pharmacology and Experimental Therapeutics  __ Virology  __ Other: ____________________________

(Please specify)

ACADEMIC DEGREES (Including where and when granted)

______________

EXPERIENCE SINCE HIGHEST DEGREE WAS GRANTED (Please list most recent first)

______________

______________

PUBLICATIONS (Reprints of two peer-reviewed articles on which the candidate appears as an author must accompany this application. For these two articles list the authors, title, journal, volume, inclusive pages, and year. Do not submit abstracts.)

______________

CANDIDATE NOMINATED BY*: ____________________________  (Please print)

CANDIDATE SECONDED BY*: ____________________________  (Please print)

CANDIDATE IS APPLYING FOR (Check one):  □ ACTIVE  □ CORRESPONDING  MEMBERSHIP

STATEMENT OF SUPPORT (in place of letters of recommendation)

Instead of submitting letters of recommendation, either the nominator or the seconder or both may complete the following section:

How long has the candidate worked in the field of cancer research? ______ years

Will the candidate make a long-term contribution to cancer research? ______ Yes ______ No

Does the candidate's research adhere to accepted ethical standards? ______ Yes ______ No

I therefore recommend this candidate for membership in the American Association for Cancer Research.

__________________________  ____________________________

Signature of nominator*  Date  Signature of seconder*  Date

See Guidelines for Application on the reverse side of this form for further instructions.

*Both nominator and seconder must be active, corresponding, emeritus, or honorary members of the AACR.

(This form may be reproduced.)
QUALIFICATIONS FOR MEMBERSHIP

Associate membership is open to graduate students, medical students, postdoctoral fellows, and physicians in training who are following a course of study or who are working in a research program relevant to cancer. Scientists in training who already have a substantial record of publications may wish to apply for active or corresponding membership which confers full benefits of membership.

BENEFITS OF MEMBERSHIP

The American Association for Cancer Research (AACR), a scientific society consisting of laboratory and clinical cancer researchers, was founded in 1907 to facilitate communication and dissemination of knowledge among scientists and others dedicated to the cancer problem; to foster research in cancer and related biomedical sciences; to encourage presentation and discussion of new and important observations in the field; to foster public education, science education, and training; and to advance the understanding of cancer etiology, prevention, diagnosis, and treatment throughout the world. Associate members of the AACR enjoy the following benefits:

1. the privilege of sponsoring a paper for presentation at the AACR annual meeting provided that (a) the associate member is the presenter of the paper and (b) an active, corresponding, emeritus, or honorary member in good standing of the AACR also signs the abstract of the paper in support of the work (In this instance, the member who cosigns the abstract does not lose his or her own sponsorship privilege);
2. an advance copy of the scientific Program and (if one has been purchased by the associate member) the Proceedings of the American Association for Cancer Research which contains abstracts of all papers being presented at each annual meeting;
3. the privilege of registering for the annual meeting at the low student rate (This rate is otherwise available only to predoctoral students);
4. preferred access to the AACR Employment Register;
5. optional subscriptions to the Association's high-quality journals Cancer Research, Cell Growth & Differentiation, and Cancer Epidemiology, Biomarkers & Prevention at reduced member rates;
6. priority notification of events in the AACR's series of special conferences on timely subjects in the field;
7. reduced registration rates at special conferences;
8. the receipt of AACR newsletters, meeting announcements, and an up-to-date membership directory; and
9. the facilitation of informal scientific exchange with leading researchers in the cancer field.

PROCEDURES FOR APPLICATION

Persons wishing to apply for associate membership must use the official application form on the reverse side of these instructions. Each candidate for associate membership must be nominated by an active, corresponding, emeritus, or honorary member in good standing of the AACR. Three completed copies of the form should be submitted; at least one of these copies must carry the original signatures of both the candidate and the nominator. The application form may be submitted to the Association Office at any time.

After review of applications for associate membership, the Executive Director will notify candidates of their election or deferral within one month of the receipt of the application form. A check for one year's dues payment must accompany the application. Dues are currently $30 for associate members residing in the Americas and $40 for residents of other countries. This fee will be refunded to any candidate deemed to be ineligible for associate membership. Checks should be in U.S. currency, made payable to AACR, Inc., and drawn on a U.S. bank. Send the three copies of the application form and the $30 or $40 dues payment to:

American Association for Cancer Research
Public Ledger Building
620 Chestnut Street
Suite 816
Philadelphia, PA 19106-3483
215/440-9300

RESPONSIBILITIES OF MEMBERSHIP

Associate members must pay annual dues in an amount to be determined by the AACR Board of Directors. Dues for 1993 and 1994 have been set at $30 per year for residents of the Americas and $40 for residents of other countries. If an application is submitted by August 31, the accompanying dues payment will be credited to the current year. Candidates submitting applications between September 1 and December 31 may indicate whether they wish their dues payments credited to the current or forthcoming year. Candidates should be aware, however, that associate members may sponsor an abstract for the annual meeting only if their dues for the current year are paid. For example, an associate member submitting an abstract in October 1993 for the forthcoming annual meeting must have paid dues for 1993. Any newly elected associate members of the AACR who have already purchased subscriptions to Cancer Research, Cell Growth & Differentiation, and Cancer Epidemiology, Biomarkers & Prevention at the higher, nonmember rate will receive a refund for the unused portion of that subscription upon receipt of their payment for a member's subscription.

Each Fall the AACR will send to current associate members an invoice for dues for the forthcoming year. Payment of this invoice must be accompanied by a statement signed by the associate member's current registrar, dean, or department head, verifying the member's current academic status. The Association's By-Laws state that dues are payable for each year in advance by January 1 of the year to which they should be applied. An individual may be an associate member for a maximum of five years. Each year in which an individual pays dues will count as one full year of associate membership. Thus, an associate member who pays dues for 1993 may retain associate membership until December 31, 1997. The Board of Directors may terminate the membership of an associate member whose dues are in arrears for two years.

Margaret Foti
Executive Director
APPLICATION FOR ASSOCIATE MEMBERSHIP

NAME OF CANDIDATE: ____________________________ DATE OF BIRTH: ____________

INSTITUTIONAL AFFILIATION: ____________________________

INSTITUTIONAL ADDRESS: ____________________________

(City) __________________ (State/Province) __________________ (Country) __________________ (Postal Code) ____________

TELEPHONE NUMBER: ____________________________ FAX NUMBER: ____________________________

PRESENT ACADEMIC STATUS/TITLE (Please check only one): ____________________________

___Graduate Student ___________________ ___Medical Student ___________________

___Physician in Training ___________________ ___Postdoctoral Fellow ___________________

PRIMARY FIELD OF RESEARCH (Please check only one): ____________________________

___Biochemistry and Biophysics _____________________ ___Biostatistics _____________________

___Cellular Biology and Genetics _____________________ ___Clinical Investigations _____________________

___Epidemiology _____________________ ___Immunology _____________________

___Preclinical Pharmacology and Experimental Therapeutics _____________________ ___Virology _____________________

___Other: ____________________________ (Please specify) ____________________________

ACADEMIC DEGREES (Please indicate degree(s) acquired to date along with the name of the academic institution and date of receipt. Provide information on degree currently being sought and the anticipated date of completion of this degree program.) ____________________________

RELEVANT RESEARCH EXPERIENCE NOT RELATED TO COURSE WORK (Please list most recent first.) ____________________________

PUBLICATIONS (List the authors, title, journal, volume, inclusive pages, and year of any article in a peer-reviewed journal on which the candidate appears as an author. Do not list abstracts. Continue on a separate sheet, if necessary.) ____________________________

CANDIDATE NOMINATED BY: ____________________________ (Please type or print name of AACC active member in good standing.) ____________________________

SIGNATURES
I hereby apply for associate membership in the American Association for Cancer Research. I have read the instructions on the reverse side of this form, and I understand the privileges and responsibilities of this class of membership. I certify that the statements on this application are true.

Signature of Candidate: ____________________________ Date: ____________________________

I recommend this candidate for associate membership in the American Association for Cancer Research. To the best of my knowledge, the candidate is qualified for this class of membership, and the statements on this application are true.

Signature of Nominator*: ____________________________ Date: ____________________________

Submit three copies of this form. At least one copy must contain the original signatures of the candidate and the nominator. Enclose a check in U.S. funds, made payable to AACC, Inc., and drawn on a U.S. bank for one year’s dues. Dues are currently $30 for associate members residing in the Americas and $40 for residents of other countries.

Check one of the following boxes only if this form is being submitted between September 1 and December 31:

☐ current ☐ forthcoming calendar year.

( NOTE: If dues are applied to the forthcoming year, membership will take effect on January 1, but the candidate will not be eligible to sponsor an abstract for presentation at the annual meeting in May of that year. ) See Guidelines for Application on the reverse side of this form for further instructions.

*Nominator must be active, corresponding, emeritus, or honorary member of the AACC.

(This form may be reproduced.)
Research and Training Opportunities in the Epidemiology and Biostatistics Program at the National Cancer Institute

Whether your goal is to apply your knowledge as a board-certified subspecialist or to pursue a career in research, a fellowship in the NCI’s Epidemiology and Biostatistics Program can offer you unlimited opportunities to investigate the causes of cancer. NCI is one of thirteen institutes of the National Institutes of Health, the largest institution in the world dedicated solely to biomedical research. Here you will work side-by-side with some of the most distinguished physician-scientists and researchers in the world.

The Epidemiology and Biostatistics Program is responsible for intramural and collaborative investigations into the distribution, causes, and natural history of cancer, as well as the means for its prevention. Areas of special interests for investigation include genetics, occupation, radiation, diet/nutrition, medications, infectious agents, lifestyle factors, environmental pollution, and statistics. Emphasis is placed on interdisciplinary investigations that integrate epidemiologic and laboratory approaches. A fellowship in epidemiology can be combined with training in either our accredited subspecialty programs in Medical Genetics, or Medical Oncology, or Pediatric Hematology/Oncology which offers credit toward board eligibility on an individual basis.

Combined programs can also be arranged for fellows interested in pursuing dual subspecialty board certification. Appointments are usually for a three-year period, but may be extended.

Positions are available to highly qualified applicants from a variety of academic, clinical, and research backgrounds. Applicants should hold an MD or a doctoral-level degree in epidemiology, biostatistics, or other relevant areas of biomedical research, or be pursuing such a degree. US citizens and resident aliens eligible for citizenship within four years are eligible to apply. Applications are accepted on a continuing basis.

To apply, please send a cover letter, curriculum vitae, bibliography, and statement of research interests to Dr. Joseph F. Fraumeni, Jr. or Dr. Michael Alavanja at the Epidemiology and Biostatistics Program of the Division of Cancer Etiology. In addition, please have letters of recommendation sent from three scientists who can provide an evaluation of your qualifications. For those wishing further information about fellowship opportunities, please write to Dr. Alavanja or call him at 301-496-1611.

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To order back issues, bound volumes, reprints of journal articles, microfilm, microfiche, CD-ROM: Call or write Williams & Wilkins, 428 East Preston Street, Baltimore, MD 21202-3993. Toll-free number: 1-800-638-6423.

* Members of the American Association for Cancer Research should direct all subscription inquiries and changes of address to: Member Services, AACR, Public Ledger Bldg., Suite 816, 620 Chestnut St., Phila., PA 19106-3483.
SCAPE

*Cancer Epidemiology. Biomarkers & Prevention* publishes original research on cancer causation and prevention in humans. The following topics are of special interest: descriptive, analytical, biochemical and molecular epidemiology; the use of biomarkers to study the neoplastic and preneoplastic processes in humans; chemoprevention and other types of prevention trials; and the role of behavioral factors in cancer etiology and prevention.

Particular attention is given to the identification of factors associated with various aspects of the carcinogenic process, including genetic susceptibility, host factors, infectious agents, chemical and physical carcinogens, environmental contaminants, dietary components and behavioral factors such as tobacco use and sun exposure.

INVITATION TO AUTHORS

Significant, original research meeting the highest scientific standards is invited for submission.

For more information, contact: Dr. Pelayo Correa, Editor-in-Chief (504) 529-2848, FAX (504) 529-2849.

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Nonrandom Chromosomal Abnormalities in Lymphocyte Cultures of Individuals with Colorectal Polyps and of Asymptomatic Relatives of Patients with Colorectal Cancer or Polyps
Bhavana J. Dave, Vicki L. Hopwood, John I. Hughes, Dixie Mellilo, Gilchrist L. Jackson, and Sen Pathak

Lora Lee, Elizabeth A. Gilpin, and John P. Pierce

Exploring Environmental Barriers to Participation in Mammography Screening in an HMO
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