INSTRUCTIONS FOR AUTHORS

FOR UPDATES TO THESE “INSTRUCTIONS FOR AUTHORS” THROUGHOUT THE YEAR, PLEASE CONSULT THE AACR WEBSITE AT http://www.aacr.org/caninst.htm

Cancer Research, an official journal of the American Association for Cancer Research, Inc. (AACR), is devoted to the publication of significant, original studies in all areas of basic, clinical, translational and epidemiological cancer research. Topics include: biochemistry; biophysics; chemical, physical, and viral carcinogenesis and mutagenesis; clinical investigations including clinical trials; endocrinology; epidemiology and prevention; experimental pathology; experimental therapeutics; immunology and immunotherapy including biological therapy; molecular biology and genetics; physiology; radiobiology and radiation oncology; tumor biology; and virology.

Papers are stringently reviewed, and only those that report results of novel, timely, and significant research and meet high standards of scientific merit will be accepted for publication.

CATEGORIES OF PUBLICATION

The following types of material will be considered for publication:

1. Research articles that report original experimental, clinical, translational or epidemiological studies relating to cancer, which are well documented, novel, and significant. These articles are published within an average of 60 days from their acceptance.

2. Advances in Brief, which are short, definitive reports of highly significant and timely findings in the field. These submissions receive an accelerated review and, if acceptable, are published within an average of 10 weeks from receipt. Those deemed to be of the highest scientific merit and priority appear in print within 6–7 weeks of their receipt. Advances should be approximately 3 printed pages in length (about 12 double-spaced typescript pages), containing an Abstract of about 100 words, a one-paragraph Introduction, an abbreviated Materials and Methods section, Results and Discussion sections (which may be combined), a maximum of 20 references, and no more than 4 items for the display of data (any combination of figures and tables). These guidelines will be strictly enforced. For any submission to this category that does not adhere to the guidelines, the Journal reserves the right to return the manuscript to the authors unreviewed.

3. Perspectives in Cancer Research, which are invited articles presenting fresh insights on either a very active or undeveloped area of research and viewpoints on where research in that area may or should be heading.

4. Reviews on subjects of timely interest and importance to cancer researchers. It is critical that these articles be written as concisely as possible in light of the limitations on space in the Journal. Authors of unsolicited reviews should submit an outline of the proposed article for approval by the Editorial Board. If submission of the complete article is encouraged, the review will be given particularly stringent editorial evaluation before acceptance.

5. Public Issues, which are brief reports on topics of interest to cancer researchers and the general public; these might include articles on funding for cancer research, training in the field, public education, science education, etc.

6. Letters to the Editor, offering considered opinions on manuscripts published in the Journal. Correspondence concerning articles that have not been published in Cancer Research will not be considered.

7. Brief meeting reports on symposia and conferences on cancer research. These reports should be submitted within 3–4 months of the meeting date in order to maintain their timeliness and should comprise no more than 3 printed pages (approximately 12 double-spaced typescript pages) and include a statement of the purpose(s) of the meeting, an integrated summary of the findings presented, and recommendations for future research. The names and affiliations of key speakers may be included if space is available.

8. Proceedings of symposia, published as external supplements to the Journal (Supplements to Cancer Research), the full expenses of which are assumed by the sponsoring agency. These proceedings are accepted for publication at the discretion of the Editor-in-Chief. Stringent acceptance criteria will be imposed.

9. Brief announcements of scientific meetings and of courses in cancer-related biomedical science of interest to our readers. These should be submitted at least 3 months prior to the expected month of issue.

10. Brief listings of recent deaths of distinguished contributors to the field of cancer research.

EDITORIAL POLICIES

Submission of a manuscript to Cancer Research implies that the author(s) of the paper understand and fully accept the policies of the Journal as detailed in these "Instructions for Authors.”

When a manuscript is submitted for consideration, the authors should confirm in writing that neither the submitted paper nor any similar paper, either in whole or in part, other than an abstract or preliminary communication, has been or will be submitted to or published in any other primary scientific journal. Once an article is accepted for publication in Cancer Research, the information therein is embargoed from reporting by the print media until the Journal’s issue date and embargoed from reporting by all other media until 6 p.m. (EST) the evening before the issue date.

It is also understood that all authors listed on a manuscript have agreed to its submission and content. For revised manuscripts, if an author is deleted or a new author is added, it is the responsibility of the corresponding author to provide the Publications Department with written documentation at the time of resubmission that the authors involved are aware of and agree to the changes in authorship. Cancer Research accepts no responsibility for such changes.

The Journal maintains an international editorial board of Associate Editors with broad expertise in all areas of cancer research. These Associate Editors, along with a large group of external reviewers, provide fair and thorough evaluations of papers submitted to Cancer Research. When reviewing manuscripts, the Associate Editors and reviewers are expected to adhere to a strict code of ethical conduct in the review of scientific literature. This code mandates that the confidentiality of the material under review be maintained. Further details on appropriate conduct for Editors and reviewers can be found in Ethics and Policy in Scientific Publications (First Edition, 1992, published by the Council of Biology Editors, Inc., Northbrook, IL 60063).

Journal policy requires that authors, reviewers, and Associate Editors reveal to the Editor-in-Chief any relationships that they believe could be construed as causing a conflict of interest with regard to the manuscript submitted for review. Submission of a manuscript implies acceptance by all authors of the strict policy of the Journal that under no circumstances will the identities or information leading to the identities of the Associate Editors and reviewers be revealed.

Every effort is made to render editorial decisions promptly, consistent with thoroughness of review. Inquiries regarding the status of manuscripts should be submitted in writing. Collect telephone calls from authors cannot be accepted.

SUBMISSION FEE AND PAGE CHARGES

A nonrefundable submission fee of $75 is assessed for each manuscript and must be paid regardless of the decision rendered on the paper. Payment must be made at the time of submission either by check (drawn on a U.S. bank) payable to the AACR, Inc., or credit card (Visa, Mastercard, or American Express). To pay by credit card, include the card number and expiration date in the covering letter accompanying your manuscript. Credit card payment is payable for submission from areas outside the U.S. Note: We will no longer accept purchase order payment for the manuscript submission fee.

A page charge of $80 per printed page will be levied on all manuscripts accepted for publication. It is understood at the time of submission that the author(s) agree to pay this charge in the event of publication. Please refer to the section entitled “Publication Fees and Reprints” for further details regarding payment of this fee. Under exceptional circumstances, when no grant or other
source of support exists, the author(s) may apply to the Editor-in-Chief at the
time of submission for a waiver of the page charges. All such applications must
be countersigned by an appropriate institutional official stating that no funds
are available for the payment of page charges.

PROCEDURES FOR SUBMISSION

Contributions should be addressed to: Dr. Carlo M. Croce, Editor-in-Chief,
Cancer Research, AACR, 150 S. Independence Mall West, Public Ledger
Bldg., Suite 826, Philadelphia, PA 19106-3483; Phone: (215) 440-9300; FAX:
(215) 440-9354. The paper should be submitted by an author, preferably the
senior author, who should indicate in a covering letter:
(1) that the paper is being submitted for consideration for publication in
Cancer Research;
(2) if the paper is to be considered as an Advances in Brief;
(3) the exact address to which all related correspondence should be sent and
the telephone, FAX, and e-mail numbers at which the author can be
reached;
(4) credit card number, expiration date, and an authorized signature, if
paying submission fee by credit card;
(5) that neither the submitted paper nor any similar paper, either in whole
or in part, other than an abstract or preliminary communication, has been
or will be submitted to or published in any other primary scientific
journal;
(6) that all of the authors are aware of and agree to the content of the paper
and their being listed as an author on the paper;
(7) that authorization has been given to use any information conveyed by
either personal communication or release of unpublished experimental
data;
(8) the salient and novel findings of the paper in a concise paragraph;
(9) the subject category that applies to the manuscript (please choose one
only):
Biochemistry and Biophysics
Carcinogenesis
Clinical Investigations
Endocrinology
Epidemiology and Prevention
Experimental Therapeutics
Immunology
Molecular Biology and Genetics
Tumor Biology
Virology

[The final category assignment of an article in an issue’s Table of
Contents is at the discretion of the Editors.]

(10) five key words describing the paper, to assist in the selection of
the Associate Editor and reviewers.

Authors may suggest appropriate Associate Editors (the names of whom are
listed in the front of each issue of Cancer Research) and reviewers to whom
the manuscript could be assigned. Full addresses of suggested reviewers should
be provided. Please note that final assignments are at the Editor-in-Chief’s
discretion.

Original submissions must include:
(1) The author’s covering letter in duplicate containing the above informa-
tion.
(2) Four copies of the manuscript and four sets of original illustrations.
Indicate which set of original illustrations should be used by the printer
in the event of publication.
(3) Papers in press or submitted for publication which are highly relevant to
the manuscript under review.

Revised manuscript submissions must include:
(1) A covering letter in duplicate, clearly indicating what alterations have
been made in response to the criticisms raised. Satisfactory reasons
should be given for noncompliance with any of the reviewers’ recom-
mendations for revision.
(2) Four copies of the revised version of the manuscript, plus a red-marked
copy of the manuscript indicating the changes made, and four sets of
original illustrations.
(3) A disk of the revised version of the manuscript to expedite typesetting
the article in the event of publication. The disk must be accompanied by
a completed Disk Submission Form, which can be found in the back of
each issue of Cancer Research. (See “Typesetting from Disks” section
later in these Instructions for further details.)

Note: For both original and revised submissions, we cannot guar-
antee that manuscripts and illustrations will be returned to the
author.

Authors are advised that the revised version of their manuscript is likely to
undergo another review if the original submission required extensive changes or
if the authors’ responses to the criticisms entail rebuttal rather than revision.
Authors of regular research articles are asked to submit their revised versions
within 3–4 weeks from the notification of the decision on a manuscript, while
authors of Advances in Brief are asked to resubmit within 2 weeks. The Editors
acknowledge that a longer period of time might be needed to make the revisions
in some cases. However, if a revised manuscript is not received
within six months from the date of its original receipt, the resubmission may
be considered a new manuscript and it will be subject to all of the conditions
of an original submission.

Manuscripts that have been declined for publication will be reconsidered at
the Editor-in-Chief’s discretion. An author of a rejected manuscript who
wishes to resubmit must send a paper that has been revised in response to the
criticisms, along with a covering letter in which the revisions are described.
The manuscript identification number of the previous submission should be
referenced in the covering letter. If the Editor-in-Chief determines that the
paper can be reconsidered, it will be assigned a new manuscript identification number,
the author will be charged a new manuscript submission fee, and the paper
will undergo review as a new submission.

The Editors cannot determine a priori whether a paper will be acceptable
after revision. Therefore, a letter from the author that merely describes inten-
tended revisions will not be acted upon.

FORMAT AND STYLE

Papers should conform strictly to Journal style. A recent issue of Cancer
Research will provide authors with assistance in the proper arrangement of
papers. Manuscripts are to be written in clear, grammatical English. Papers that
are not in Cancer Research style or that are not in good idiomatic English will
be returned to the author without review. Laboratory jargon as well as terras-
nology and abbreviations not consistent with internationally accepted guide-
lines should be avoided.

For general and technical assistance in writing scientific papers, authors
should refer to the following publications: Stedman’s Medical Dictionary
Editors, Inc., Northbrook, IL); and The ACS Style Guide (First Edition, 1986,
American Chemical Society, Washington, DC).

Data must be presented concisely. Large masses of data of peripheral
significance to the main thesis of the investigation will not be published in
Cancer Research but may be deposited with the National Auxiliary Publica-
tion Service, c/o Microfiche Publications, P.O. Box 3513, Grand Central
Station, New York, NY 10163-3513; Phone: (516) 481-2300; FAX: (516)
481-6213. The manuscript should contain a footnote that indicates how this
ancillary material can be obtained. Such data should be submitted for review
along with the manuscript.

The manuscript should be typed on 21.6- × 28-cm (81/2- × 11-inch) paper
with double spacing throughout, allowing for ample margins. Manuscripts
typed single-spaced or with typing on both sides of the page will be returned
to the authors. Consecutive numbering of all pages is required, with the title
page as page 1. The typescript should be arranged in the following order: (a)
title, (b) author(s) and complete name(s) and location(s) of institution(s) or
laboratory(ies), (c) running title, (d) key words, (e) footnotes, (f) text and
references, (g) tables, (h) legends for all illustrations, (i) illustrations, and (j)
other material. Numbered and lettered sections in the text should be avoided.
The appropriate location for each table and illustration should be indicated by
marginal notes. Simple chemical formulas or mathematical equations should
be presented in a form that allows their reproduction in single horizontal lines
of type; more complicated mathematical formulas or chemical structures
difficult to set in type should be provided for reproduction in the form of line
drawings or glossy photographs.

Title. Titles should be brief but informative, and limited if possible to about
100 characters. It is important for literature retrieval to include in the title
the key words necessary to identify the nature of the subject matter, including, if
applicable, the species on which the work is done. Use of expressions such as
“Studies on . . .” or “Observations of . . .” should be avoided, since they are
not informative. Chemical formulas or abbreviations should not be used. Also,
do not use Roman or Arabic numerals to designate that the paper is one in a
series (see section below on Footnotes).

Authors and Their Affiliations. Authors are urged to include their full

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names, complete with first and middle names or initials. Confusion often arises in the literature when authors are identified by surname and initials only. Authors' academic degrees should not be included. The full names of institutions and subsidiary laboratories should be given, together with a useful address (including postal code). If several authors and institutions are listed on a paper, it should be clearly indicated with which department and institution each author is affiliated.

**Running Title.** A brief running title should be provided, not to exceed 50 characters. Running titles in the form of declarative or interrogative sentences are not acceptable.

**Key Words.** On the title page, provide five key words identifying the nature of the subject.

**Footnotes.** Lengthy footnotes are discouraged since the same information can in most instances be presented more effectively in the text. Footnotes to the title page and text are to be designated consecutively with superscript Arabic numerals. A footnote to the title page should contain information on financial support, including the source(s) and number(s) of the grant(s). If the paper is one of a series, a footnote to this effect may be included. Authors should also include a footnote designating to whom reprint requests should be addressed. An all-inclusive abbreviation footnote should contain a definition for every nonstandard abbreviation used in the paper.

For footnotes to tables, see section on Tables below. Any footnote should appear at the beginning of the page, should be concise, yet indicative of the content of the paper. In 1998, the abstracts of Cancer Research articles will be available on-line through the AACR Website (http://www.aacr.org). In light of this increased visibility and because abstracts are often copied directly by the secondary services, they should recapitulate in abbreviated form the purpose of the study and the experimental technique, results, and interpretations of the data. Data such as the number of test subjects and controls, and animals or viruses used, routes and duration of administration, tumor yields and latent periods, length of observation period, and magnitude of activity should be included. Vague, general statements such as "The significance of the results is discussed," or "Some physical properties were studied," are uninformative and not acceptable. All important terms relevant to the content of the paper should be incorporated into the abstract to assist indexers in the derivation of key words. Abbreviations should be kept to an absolute minimum; however, if they are to be included, they must be properly identified so as to make the abstract independent of the text. Authors may wish to keep in mind that MEDLINE, the computerized monthly bibliography prepared by the National Library of Medicine, includes only those abstracts that contain fewer than 6,000 bytes (or approximately 400 words).

**Introduction.** It is not necessary to include all of the background literature in this section. Brief references to the most pertinent papers generally suffice to acquaint the reader with the findings of others in the field and with the problem or question which the author's particular investigation addresses.

**Materials and Methods.** Explanation of the experimental methods should be brief but adequate for repetition by qualified investigators. Procedures that have been published previously should not be described in detail but merely cited in appropriate references. Only new and significant modifications of previously published procedures need complete exposition. The sources of special reagents or biological preparations used should be given along with their locations [city and state (country, if foreign)].

This Journal endorses the principles embodied in the Declaration of Helsinki and expects that all investigations involving humans will have been performed in accordance with these principles. In particular, papers reporting human experimentation must include a statement that the human investigations were performed after approval by a local Human Investigations Committee and in accordance with an assurance filed with and approved by the Department of Health and Human Services, where appropriate. Also, papers reporting biomedical research involving human subjects must include a statement that informed consent was obtained from each subject or subject's guardian. To obtain a copy of the Helsinki Declaration, please contact the World Medical Association, Buite Postale 63, 01212 Ferney-Voltaire Cedex, France.

Further, the Journal is a staunch supporter of the most humane treatment of animals in the conduct of scientific studies. For animal experimentation reported in this Journal, it is expected that investigators will have observed the Interdisciplinary Principles and Guidelines for the Use of Animals in Research, Marketing and Education issued by the New York Academy of Sciences' Ad Hoc Committee on Animal Research, a copy of which is available for $5.00 from the Marketing Department, New York Academy of Sciences, 722 W. 43rd Street, New York, NY 10018-7289; Phone: (212) 838-0230. Only results of those experiments, including photographic presentation of data, in which proper attention has been given to experimental ethical considerations toward animals will be published.

**Results.** This section should include a concise textual description of the data presented in tables and illustrations. Excessive elaboration of data already given in tables and illustrations should be avoided. The Results and Discussion sections should be combined if, by so doing, space is saved or the logical sequence of the material is improved.

**Discussion.** In this section, the data should be interpreted concisely without repeating material already presented in the Results section. Speculation is permissible, but it must be well founded.

**References.** Number references in the order of their first mention in the text and to the number of the page in the text in which they have been cited. References should be typed in double-spaced form to facilitate copy editing. The bibliography should be limited to only those citations essential to the author's presentation. When comprehensive review articles are available, they are preferred to many separate references.

Before submission of the paper authors should verify the accuracy of all references and should check that all references have been cited in the text. Generally, each style requires that all authors, complete titles of articles, and inclusive page numbers be supplied in the reference list. Examples of the two most common types of Journal references are:


Journal articles and serial compendia. The complete title, journal, volume number, inclusive pages, and year of publication should be given. Serial compendia, such as Advances in Cancer Research and the Annual Review of Biochemistry, which appear annually in numbered sequence, should be cited as journals rather than books, thus omitting the names of publishers and editors. Serial Sources for the BIOSIS Previews Data Base (Volume 1997) should be consulted for abbreviations of journals and serials.

Books and chapter citations. Citation of a specific chapter or article in a book should carry the author(s) of the chapter, its title, edition(s) of the book, book title, edition, volume, inclusive pages of the chapter, location and name of the publisher, and year of publication. For references to complete books, give all of the above information that is pertinent.

Papers in press. Papers in press may be listed among the references with the journal name and tentative year of publication.

Unpublished material. Papers in preparation or submitted for publication, unpublished data, and personal communications should be cited in a footnote, not in the Reference section. The names of all authors should be given, along with manuscript titles if possible.

**Addenda.** Data acquired after acceptance of the paper, by the authors through discussion by others, cannot be added to the text. An addendum may be included at the proof stage as a “Note Added in Proof,” preceding the References section. However, such addenda are subject to approval by the Editor-in-Chief and could result in delay of publication. Addenda should be kept extremely brief.

**Tables.** Tabular material should not duplicate data already presented in the charts. Unnecessary columns of data that can easily be derived from the rest of the table should not be included. Large groups of individual values should be avoided; instead, these should be averaged and an appropriate designation of the dispersion such as standard deviation or standard error included.

**Authors are obliged to indicate the significance of their observations by appropriate statistical analysis.** Every table must have a descriptive title and an explanatory paragraph that clearly gives the experimental details for understanding by the reader without reference to the text. Each column must carry an appropriate heading and, if numerical measurements are given, these units should be added to the column heading. Tables should be numbered with Arabic numerals and table footnotes should be indicated with superscript italic letters (\(^*\), etc.).

All units of measurement and concentration should be clearly designated. Exponential terminology is discouraged (the term mm is preferable to \(10^{-3}\) mm). If exponentials are absolutely unavoidable in column headings, the quantity expressed should be preceded, not followed, by the power of 10 by which its value has been multiplied, i.e., \(10^{-3} \times \) concentration (m). This will prevent confusion as to whether the quantity should be multiplied or divided to obtain the correct value.

Illustrations. Both line drawings (graphs) and halftone illustrations (photographs, photomicrographs, electrophoretic patterns, etc.) should be designated figures.

Figures should be used when salient points need illustration for better comprehension by the reader. Halftones are particularly expensive to reproduce and only those absolutely essential to the clarity of the presentation
INSTRUCTIONS FOR AUTHORS

should be included. Straight-line functions such as relationships between concentration and absorbance, or Lineweaver-Burk plots when these are linear, should be described in a few lines in the text.

Each figure should be labeled in pencil with the first author’s name and the figure number on an adhesive label on the reverse side. For halftones, the top of the figure should also be noted.

Legends are important for all figures. They should briefly describe the data shown; details in the text should not be repeated. Staining should be included for halftones, where applicable. Each legend should adequately identify all symbols, abbreviations, mathematical expressions, abscissas, ordinates, units, and reference points used on the figure.

Line drawings, including flow diagrams and complex biochemical structures, should be prepared professionally (not simply typewritten). Illustrations should be provided on high-quality, smooth, opaque white paper or ordinary white bond paper. Tracing or textured papers are not acceptable. Illustrations should not be mounted on heavy cardboard. Clear, glossy prints are acceptable in lieu of original drawings, provided that all parts of the illustration are in focus. X-ray films or Polaroid photographs are not acceptable. If original drawings are submitted, they should not be larger than 21.6 × 28 cm (8½ × 11 inches).

Computer-generated graphs are acceptable provided that their quality adheres to the same standards as those produced by other means, e.g., all labeling must be clear and scaling must be in the proper proportion to reproduce legibly when reduced.

Except for especially complicated drawings showing large amounts of data, all line drawn illustrations are published at one-column width (8.9 cm or 3½ inches) or less. It is recommended that they be submitted in one-column size. If larger ones are submitted, it is the responsibility of the author to see that the abscissa, ordinate, and especially labels are sufficiently large to permit reduction. When the graphs are reduced to the size of a single column, the letters and numbers must be at least 6 points and no larger than 12 points, and all symbols on the illustration must be discernible or the drawing will be returned to the author for correction. Do not use gray shading or screening in any graphs, particularly bar graphs. Gray does not reproduce well, especially if reduction is required. Use patterns consisting of solid black and white first. If further distinctions need to be made among elements on an illustration, use horizontal, vertical, diagonal, or cross-hatched lines. The thickness of ruled lines on graphs is also vital for clear presentation of the data. Avoid using fine, broken, or dotted lines.

The symbols should be defined in the legend. Only those common symbols for which the printer has type (×, O, ○, □, △, ▲, O) should be used. Lines connecting the symbols should not extend beyond the data points.

Graphs should be ruled off close to the area occupied by the curve, and abscissas and ordinates should be clearly marked with appropriate units. Explanations of the coordinates should not extend beyond the respective lines. Do not box-in graphs with top and right-hand frame lines unless these are essential for reference. Titles printed outside the confines of the drawing waste space; all of this information should be included in the legend. Also, to conserve space these curves that may appropriately appear together should be included in a single graph.

The use of exponentials for labeling coordinates in graphs is considered ambiguous and should, if possible, be avoided. If exponentials must be used, the quantity expressed should be preceded by the power of 10 by which its value has been multiplied, i.e., 10^7 × concentration (m). The form “Concentration (m × 10^−7)” is not acceptable. If powers of 10 are used, the legend should designate how the quantity is to be calculated (whether multiplied or divided) to give the correct value.

Halftone illustrations should be submitted unmounted and trimmed to exclude all but essential material. The set of halftone illustrations intended for the printer’s use must be made from original negatives, i.e., they must be first generation glossy prints. Photographs made from other prints are not acceptable for reproduction. Karyotypes should be presented in the form of cardboard plates onto which chromosome sections from an original photomicrograph are pasted.

All halftones will be published at either 1(3½")-, 1½(5")-, or 2(7¼")-column width and placed as close as possible to their first citation in the text. Halftones must be prepared within these dimensions if they are to be reproduced without reduction; otherwise, they will be reduced to conform to these widths.

Figure numbers should not be included on the face of the illustration. However, halftones that must appear together for comparison should be grouped under one figure number with each section lettered “A,” “B,” “C,” etc., in the upper left-hand corner on the face of the illustration. Composite figures may be mounted on a plate, with the sections butted together and tiling (thin white lines) placed between the parts of the figure. For optimal reproduction, the contrast among photographs on a plate should be consistent. The overall dimensions of photographs on a plate should not exceed 18.4 × 22.4 cm (7¼ × 9 inches). The minimum dimensions to which the plate can be reduced must be indicated on the back.

Symbols, arrows, or letters used in photomicrographs should contrast with the background. If pressure-sensitive labeling such as Chartpak, Letraset, or Prestep is used, tissue overlays should be placed on the halftone to prevent the lettering from chipping away. In general, tissue overlays are recommended to protect the surface of halftones. The important areas of the photographs that must be reproduced with greatest fidelity should be indicated on overlays.

Internal scale markers should always be included on the photographs themselves as opposed to listing magnification in the legend since it may be necessary to reduce the figures. Magnifications given in the legend will reflect size before reduction.

Color Photographs. Authors are encouraged to submit color illustrations. The expense of reproducing color photographs must be offset partially by the author. The cost of color reproduction charged to authors is $975 per color figure. If the illustration is a composite figure, the parts should be mounted together in as space-saving an arrangement as possible. All color illustrations must be submitted on flexible backing, including mounted composite figures. Please note that the author is responsible for submitting prints that are of sufficient quality to permit accurate reproduction, and for approving the final color proof. Cancer Research assumes no responsibility for the quality of the photograph as it appears in the Journal.

Electronic Submission of Illustrations. Authors may submit illustrations on disk. Contact the AACR Publications Department for a form to enclose with illustrations submitted on disk. Color electronic images should be provided in Encapsulated PostScript (EPS) format. Black and white illustrations should be provided in Tagged Image File Format (TIFF) and sized to approximate column width. In all cases, original artwork should also be submitted with the disk. For more detailed information on submitting illustrations electronically, you can visit the Cadmus Website at http://www.cadmus.com/da or call the Digital Art Help Line at (800) 257-5531, ext. 3361.

ABBREVIATIONS

Abbreviations are in general a hindrance to readers in fields other than that of the author(s), to abstractors, and to scientists in foreign countries. Authors should limit their use to an absolute minimum. Single words should not be abbreviated, e.g., daunomycin, folate, vincristine. Abbreviations are not to be used in titles, but running titles may carry abbreviations for purposes of brevity. Abstracts may contain abbreviations for terms mentioned 3 or more times in that section but their identification is mandatory.

Authors should follow the recommendations of the IUPAC-IUB Commission on Biochemical Nomenclature (see section below on Terminology). All nonstandard abbreviations should be identified in an inclusive abbreviation footnote to the first such abbreviation after the Abstract.

Abbreviations that form recognizable words, such as EAT and MOPS, are discouraged.

Standard Abbreviations. Authors may use, without definition, the abbreviations in the following lists.

NAD+, NADH nicotinamide adenine dinucleotide and its reduced form
NADP+, NADPH nicotinamide adenine dinucleotide phosphate and its reduced form
(DPN+, TPN+, and their reduced forms are not acceptable.)
CoA, acetyl-CoA
coenzyme A and its acyl derivatives
(e.g., acetyl)
AMP, GMP, IMP,
UMP, CMP, TMP,
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UMP, CMP, TMP,
AMP, GMP, IMP,
UMP, CMP, TMP,
AMP, GMP, IMP,
UMP, CMP, TMP,
AMP, GMP, IMP,
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UMP, CMP, TMP,
AMP, GMP, IMP,
UMP, CMP, TMP,
AMP, GMP, IMP,
UMP, CMP, TMP,
AMP, GMP, IMP,
UMP, CMP, TMP,
AMP, GMP, IMP,
DEAE, TEAE  diethylaminoethyl, triethylaminoethyl
UV, IR  ultraviolet, infrared
RBC, WBC  red blood cell(s), white blood cell(s)

**Units of Concentration**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>molar (moles/liter)</td>
<td>M</td>
<td>(not used for moles)</td>
</tr>
<tr>
<td>millimolar (millimoles/liter)</td>
<td>mm</td>
<td>(preferred to (10^{-3}) M)</td>
</tr>
<tr>
<td>micromolar (micromoles/liter)</td>
<td>μM</td>
<td>(preferred to (10^{-6}) M)</td>
</tr>
<tr>
<td>nanomolar</td>
<td>nM</td>
<td>(not mA)</td>
</tr>
<tr>
<td>picomolar</td>
<td>pM</td>
<td>(not μM)</td>
</tr>
</tbody>
</table>

The expression mg % should be avoided; weight concentrations should be given as g per ml, g per 100 ml, g per liter, etc.

**Units of Length, Area, Volume, Mass, Time**

The abbreviations below are correct for both singular and plural forms of each term.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>meter</td>
<td>m</td>
<td></td>
</tr>
<tr>
<td>centimeter</td>
<td>cm</td>
<td></td>
</tr>
<tr>
<td>millimeter</td>
<td>mm</td>
<td></td>
</tr>
<tr>
<td>micrometer</td>
<td>μm</td>
<td>(not μ)</td>
</tr>
<tr>
<td>nanometer</td>
<td>nm</td>
<td>(not μm)</td>
</tr>
<tr>
<td>picometer</td>
<td>pm</td>
<td>(not μm)</td>
</tr>
</tbody>
</table>

**Physical and Chemical Units**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>retardation factor</td>
<td>(R_t)</td>
<td></td>
</tr>
<tr>
<td>acceleration of gravity</td>
<td>(g)</td>
<td></td>
</tr>
<tr>
<td>sedimentation coefficient</td>
<td>(s)</td>
<td></td>
</tr>
<tr>
<td>sedimentation coefficient in water</td>
<td>(s_{20,w})</td>
<td>at 20° C</td>
</tr>
<tr>
<td>degree Celsius (Centigrade)</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>degree Fahrenheit</td>
<td>°F</td>
<td></td>
</tr>
<tr>
<td>Kelvin</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>diffusion coefficient</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>equilibrium constant</td>
<td>(K)</td>
<td></td>
</tr>
<tr>
<td>inhibition constant</td>
<td>(K_i)</td>
<td></td>
</tr>
<tr>
<td>Michaelis constant</td>
<td>(K_m)</td>
<td></td>
</tr>
<tr>
<td>maximum velocity</td>
<td>(V_{max})</td>
<td></td>
</tr>
</tbody>
</table>

**Others**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>mole</td>
<td>mol</td>
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</tr>
<tr>
<td>Curie</td>
<td>Ci</td>
<td></td>
</tr>
<tr>
<td>equivalent</td>
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<td></td>
</tr>
<tr>
<td>counts per minute</td>
<td>cpm</td>
<td></td>
</tr>
<tr>
<td>disintegrations per minute</td>
<td>dpm</td>
<td></td>
</tr>
<tr>
<td>revolutions per minute</td>
<td>rpm</td>
<td></td>
</tr>
<tr>
<td>volt</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Svedberg unit</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>absorbance</td>
<td>(A) (not O.D.)</td>
<td></td>
</tr>
<tr>
<td>probability</td>
<td>(P)</td>
<td></td>
</tr>
<tr>
<td>roentgen</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>standard deviation</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>standard error of the mean</td>
<td>SE</td>
<td></td>
</tr>
<tr>
<td>logarithm (Briggsian)</td>
<td>log</td>
<td></td>
</tr>
<tr>
<td>logarithm (natural)</td>
<td>(\ln)</td>
<td></td>
</tr>
<tr>
<td>entropy</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>molecular weight</td>
<td>(M_r)</td>
<td></td>
</tr>
<tr>
<td>base pair</td>
<td>bp</td>
<td></td>
</tr>
<tr>
<td>kilobase</td>
<td>kb</td>
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</table>

**In chemical compounds**

<table>
<thead>
<tr>
<th>type</th>
<th>symbol</th>
<th>definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ortho</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>meta</td>
<td>m</td>
<td></td>
</tr>
<tr>
<td>para</td>
<td>(p)</td>
<td></td>
</tr>
<tr>
<td>secondary</td>
<td>sec</td>
<td></td>
</tr>
<tr>
<td>tertiary</td>
<td>tert</td>
<td></td>
</tr>
</tbody>
</table>

**Routes of administration**

<table>
<thead>
<tr>
<th>Route</th>
<th>symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>intramuscular</td>
<td>i.m.</td>
</tr>
<tr>
<td>intraperitoneal</td>
<td>i.p.</td>
</tr>
<tr>
<td>intravenous</td>
<td>i.v.</td>
</tr>
<tr>
<td>oral</td>
<td>p.o.</td>
</tr>
<tr>
<td>subcutaneous</td>
<td>s.c.</td>
</tr>
</tbody>
</table>

**TERMINOLOGY**

Approved terms and abbreviations for chemical substances have been collected in the Compendium of Biochemical Nomenclature and Related Documents, International Union of Biochemistry, Second Edition, 1992. This volume is available from: Portland Press Inc., Ashgate Publishing Co., Old Post Road, Brookfield, VT 05036; Phone: (802) 276-3162; FAX: (802) 276-3837.

Isotopically Labeled Compounds. A radioactive nuclide is indicated by its mass number as a superscript to the left of the symbol (\(^{32}\)P); when written out, it should correspond to the spoken word (phosphorus-32).

In an isotopically labeled compound, the isotopic prefix should be placed in square brackets immediately precede the name (word) to which it refers, as in \(\text{[^{13}C]thymidine, [a-^{14}C]leucine, (^{14}C)labeled}\). When more than one position in a substance is labeled by means of the same isotope and the positions are not indicated, the number of labeled atoms is added as a subscript to the right of the element, as in \(\text{[^{14}C]glycine}\). The symbol \(U\) indicates uniform labeling and \(G\), general labeling, e.g., \(\text{[U-^{14}C]glucose}\) (where the \(^{14}\)C is uniformly distributed among all six positions) and \(\text{[G-^{14}C]glucose}\) (where the \(^{14}\)C is distributed among all six positions, but not necessarily uniformly).

The isotopic prefix precedes that part of the name with which it refers, as in sodium \(\text{[^{23}Na]formate, [iodo-^{131}I]labeled, [^{35}S]methionine}\). Exemplary of this style are \(\text{[^{14}C]alanine, [^{14}C]leucine, [^{14}C]serine, [^{35}S]methionine, [^{14}C]labeled amino acids}\). The symbol \(\text{[^{33}P]}\) is used for ATP, \(\text{[^{33}P]}\)CMP, or \(\text{[^{35}S]}\)JdUrd.

When isotopes of more than one element are introduced, their symbols should be arranged in alphabetical order, e.g., \(\text{[^{15}N][3-^{14}C][2-^{13}C]labeled}\) serine. Deuterium and tritium may be designated as \(^2\)H or \(^3\)H or as D and T, respectively.

When not sufficiently distinguished by the following means, the positions of isotopic labeling are indicated by Arabic numerals. Greek letters, or prefixes in italics, are appropriate; these are to be placed within square brackets to appear before the symbol of the element concerned and are attached to it by a hyphen. Examples of this style are \(\text{[^{14}C]alanine, [^{2-^{14}C}]leucine or [^{1-^{14}C}]leucine, [carboxy-^{14}C]leucine, [^{2,3-^{14}C}]malic anhydride}\). The symbol \(\text{[^{35}S]}\) is used for ATP, \(\text{[^{33}P]}\)CMP, or \(\text{[^{35}S]}\)JdUrd. The square brackets are not to be used, however, with atomic symbols, or when the isotopic symbol is attached to a word that is not a specific chemical name, abbreviation, or symbol. Proper usage here is: \(\text{[^{14}C]}\)CO\(_2\), \(\text{[^{14}C]}\)H\(_2\)O, \(\text{[^{35}S]}\)SO\(_4\), \(\text{[^{33}P]}\)ATP, \(\text{[^{33}P]}\)CMP, or \(\text{[^{35}S]}\)JdUrd. When isotopic terms and abbreviations are used, the symbols should be cited in the text by the correct chemical name, abbreviation, or symbol. Proper usage here is: \(\text{[^{14}C]}\)CO\(_2\), \(\text{[^{14}C]}\)H\(_2\)O, \(\text{[^{35}S]}\)SO\(_4\), \(\text{[^{33}P]}\)ATP, \(\text{[^{33}P]}\)CMP, or \(\text{[^{35}S]}\)JdUrd.
Enzymes. Authors should use the Recommended Name given in Enzyme Nomenclature 1992: Recommendations of the Nomenclature Committee of the International Union of Biochemistry on the Nomenclature and Classification of Enzymes (Academic Press, Inc., Orlando, FL, 1992). In some cases the Systematic Name or the reaction catalyzed should also be included. It is strongly recommended that the Enzyme Commission number be stated at first mention.

For information on isozyme nomenclature, consult Biochemical Nomenclature and Related Documents, mentioned previously.

Histones. The six histone fractions are to be labeled H1, H1\(^*\), H2A, H2B, H3, and H4, rather than F1, F1\(^*\), F2a2, F2b, F3, and F2a1, respectively.

Interferon Assays. When reporting the calibration of interferon assays, authors should state the name, identifying number, and assigned potency of the international standard used to calibrate their assay, along with the observed geometric mean titer of the standard, the standard deviation of that value, the number of titrations performed to obtain that value, and the technical details of the assay.


Drugs. Generic names of drugs are preferred; a proprietary name may be used only after the first mention of the generic name and should be avoided in titles unless both names can be listed easily. If a foreign proprietary name is used, the name of the comparable U.S. product should be given. When there is no generic name for a drug, authors should give the chemical name or formula of a description of the active ingredients.

Authors should refer to the formally adopted generic names listed in USAN and the USP Dictionary of Drug Names (1998).

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Authors of clinical papers are encouraged to use the TNM staging system approved by the International Union Against Cancer and the American Joint Committee on Cancer, whenever applicable.

General. The composition of all solutions and buffers should be specified in sufficient detail so that the concentration of each component can be determined. The word "saline" should be replaced by "NaCl solution," along with the exact concentration. Inert terms such as "physiological saline" or "phosphate-buffered saline" are not permitted; exact contents and concentrations should be given.

Decimals are preferred to fractions; the form 0.01, not .01, is required in text, tables, and illustrations.

Ionic charge should be designated by a superscript immediately following the chemical symbol, e.g., Mg\(^2+\), S\(^-\).

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11. the professional benefits of the AACR’s public education activities concerning funding for cancer research and press coverage of the latest research findings;
12. the opportunity to participate in three Summer Workshops that foster knowledge in the cancer field for young investigators;
13. the facilitation of informal scientific exchange with leading researchers in the cancer field; and
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<table>
<thead>
<tr>
<th>Receipt of Application</th>
<th>Notification of Candidate</th>
</tr>
</thead>
<tbody>
<tr>
<td>in AACR Office</td>
<td></td>
</tr>
<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>
</tbody>
</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 should 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 seconder who is an active, corresponding, emeritus, or honorary member of the AACR (at least one copy must be a signed, original letter). –OR– The seconder 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. As noted above, evidence of patents developed by the candidate may be submitted in lieu of one or both of the publications. If submitting patents, supply patent number and year awarded.

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:

Membership Services Department
American Association for Cancer Research
Public Ledger Building, Suite 826
150 S. Independence Mall West
Philadelphia, PA 19106-3483
Phone: 215/440-9300
FAX: 215/440-9412
E-mail: aacr@aacr.org

RESPONSIBILITIES OF MEMBERSHIP

Candidates should be aware of the following responsibilities of membership in the AACR. Active members must pay annual dues. In 1998 annual dues for active members are $175, $100 of which is designated for AACR journal subscriptions. Newly elected members of the AACR who have already purchased subscriptions to Cancer Research, Clinical Cancer Research, Cell Growth & Differentiation, or Cancer Epidemiology, Biomarkers & Prevention at the higher, nonmember rates 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 ($90 in 1998) and may, if they wish, subscribe to Cancer Research, Clinical 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, Ph.D.
Executive Director
APPLICATION FOR ACTIVE OR CORRESPONDING MEMBERSHIP

NAME OF CANDIDATE: ___________________________  ___________________________  ___________________________
LAST  FIRST  M.I.  DATE OF BIRTH: ___________________________  ___________________________  ___________________________

PRESENT POSITION/TITLE: ___________________________

INSTITUTIONAL AFFILIATION: ___________________________

INSTITUTIONAL ADDRESS: ___________________________

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

TELEPHONE NUMBER: ___________________________

FAX NUMBER: ___________________________

E-MAIL ADDRESS: ___________________________

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. If submitting patents, supply patent number and year awarded.)


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

CANDIDATE NOMINATED BY*: ___________________________

CANDIDATE SECONDED BY*: ___________________________

STATEMENT OF SUPPORT

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

I acknowledge by signing this statement of support that this candidate adheres to accepted ethical scientific standards and has or will make a long-term contribution to 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 in good standing.

(1997)
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 proffered paper (abstract) for consideration 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 coauthors the abstract does not lose his or her own sponsorship privilege.);
2. optional subscriptions to the Association’s high-quality journals: Cancer Research, Clinical Cancer Research, Cell Growth & Differentiation, and Cancer Epidemiology, Biomarkers & Prevention at reduced member rates; beginning in 1998 associate members will be able to purchase AACR journals for half the price of a regular member subscription;
3. 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 that contains over 4,000 abstracts of proffered papers presented at the annual meeting;
4. the privilege of registering for the annual meeting at the low associate member rate;
5. the privilege of electing an Associate Member Council that organizes programs benefiting associate members and that presents their concerns to the AACR Board of Directors;
6. the opportunity to stand for election to the Associate Member Council;
7. preferred access to the AACR Employment Register;
8. priority notification of events in the AACR’s series of special conferences on timely subjects in the field;
9. substantially reduced registration rates at special conferences;
10. the receipt of AACR newsletters, meeting announcements, and an up-to-date Membership Directory;
11. the opportunity to participate in three Summer Workshops that foster knowledge in the cancer field for young investigators; and
12. 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. In addition, the candidate should submit one copy of his or her curriculum vitae. 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 for 1998 are $45 for associate members residing in the Americas and $55 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 appropriate dues payment to:

Membership Services Department
American Association for Cancer Research
Public Ledger Building, Suite 826
150 S. Independence Mall West
Philadelphia, PA 19106-3483
Phone: 215/440-9300
Fax: 215/440-9412
E-mail: aacr@aacr.org

RESPONSIBILITIES OF MEMBERSHIP

Associate members must pay annual dues in an amount to be determined by the AACR Board of Directors. Dues for 1998 have been set at $45 per year for residents of the Americas and $55 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 1997 for the forthcoming annual meeting must have paid dues for 1997. Any newly elected associate members of the AACR who have already purchased subscriptions to Cancer Research, Clinical Cancer Research, Cell Growth & Differentiation, or 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 1998 may retain associate membership until December 31, 2002. The Board of Directors may terminate the membership of an associate member whose dues are in arrears for two years.

Margaret Foti, Ph.D.
Executive Director
**APPLICATION FOR ASSOCIATE MEMBERSHIP**

**NAME OF CANDIDATE:**

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<thead>
<tr>
<th>LAST</th>
<th>FIRST</th>
<th>M.I.</th>
<th>DATE OF BIRTH:</th>
</tr>
</thead>
</table>

**INSTITUTIONAL AFFILIATION:**

**INSTITUTIONAL ADDRESS:**

<table>
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<tr>
<th>(City)</th>
<th>(State/Province)</th>
<th>(Country)</th>
<th>(Postal Code)</th>
</tr>
</thead>
</table>

**TELEPHONE NUMBER:**

**FAX NUMBER:**

**E-MAIL ADDRESS:**

**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
- Cellular Biology and Genetics
- Epidemiology
- Preclinical Pharmacology and Experimental Therapeutics
- Biostatistics
- Clinical Investigations
- Immunology
- Virology
- Other:

**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 print)

**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. In addition, submit one copy of your curriculum vitae. Enclose a check in U.S. funds, made payable to AACR, Inc., and drawn on a U.S. bank for one year's dues. For 1998, dues are $45 for associate members residing in the Americas and $55 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 March or April 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 AACR in good standing.

(This form may be reproduced.)
Guidelines for Submitting Disks
to
American Association for Cancer Research Publications

The word processing packages that we prefer are as follows:

MacWrite
Microsoft Word (DOS, Windows,
and Macintosh)
WordPerfect (DOS, Windows,
and Macintosh)
XyWrite (DOS and Windows)

Also acceptable:

Ability
AmiPro
$S$-TeX
Appleworks
ArborTeX
ArborText
ClarisWorks WP
CPT 8000
CTOS
Diablo
DisplayWrite
Duet
Einstein
Enable
EXP
Final Word
FullWrite
GemWord Plus
IBM Writing Assistant
Interleaf
LaTeX
Latex
Leading Edge
Lotus Manuscript
Lotus Write
Mass 11
MS Works
MS Works WP Mac
Multimate
Multimate Advantage
Nibia
Nisus (to ASCII file)
Notewriter
Obun
OfficeWriter
PC Write
PFS First Choice
Professional Write
Q&A Write
Quark XPress
RagTime MS Works
(to ASCII file)
Rich Text Format
RSG (to ASCII file)
Signature
SLiTeX
SmartWhere
SmartWrite II
SoloWriter
Sprint
Stx
SunWrite
Symphony
TEX
TeX78
Text EExecutive
Textures
Total Word
Troff
μTeX
Volkswagen
VuWriter
Wang OIS
Wang WPS
Wang Writer
Window Works
Windows Write
WiziWord
Wordstar
Wordstar 2000
WriteNow
Xerox

Software packages that we are unable to translate:

FrameMaker
PageMaker
Ready, Set, Go
Scientific Writer

Disks produced on IBM or IBM-compatible computers are preferred, but those produced on some Apple or Wang computers can also be converted. Because of the file structures and internal coding, we cannot accept disks created on desktop publishing systems or those created on proprietary typesetting systems. We also cannot guarantee that all special characters can be translated. Tabular and mathematical material, such as equations, will not be captured from the disk but will be rekeyed.

To expedite work and for your own security, we do require that you submit a hard copy printout of the disk file. The tables and equations will be keyed from this hard copy. We also need to know the name of the file to be converted, the type of hardware (e.g., IBM PC) on which the files were created, the operating system (e.g., DOS 3.3), and the version of the software (e.g., WordPerfect 5.1) used to create the file.

PLEASE FILL OUT ALL INFORMATION ON REVERSE SIDE AND SUBMIT THIS FORM WITH YOUR DISK. DISKS WILL NOT BE PROCESSED WITHOUT THIS INFORMATION.
DISK SUBMISSION FORM

AACR journals are now using personal computers to copyedit manuscripts accepted for publication. When submitting a revised manuscript, authors are encouraged to submit an electronic disk of the paper along with the required four hard copy printouts. Disks will ultimately be returned to the authors.

See reverse for the word processing packages that can be accepted.

File preparation

Please be sure that the file you send is the most recent version of the manuscript and that it matches the most recently submitted printed copy. The file should contain all the parts of the manuscript in one file. Mathematical and tabular material, however, will be processed in the traditional manner and may be excluded from the disk file.

Note: AACR does not assume responsibility for errors in conversion of customized software, newly released software, or special characters.

Please label the outside of the disk with the journal name, the first author's name, a partial title of the manuscript, and the name of the computer file used to access the manuscript on disk. To process your disk efficiently, we need the following information. Please be sure to provide ALL the information.

Name used to access paper on disk: ________________________________
Name of computer used (e.g., IBM/PS2): ___________________________
Operating system and version (e.g., DOS 3.3): _______________________
Word processing program and version (e.g., WordPerfect 5.0): ______
   [See reverse for acceptable programs.]

Manuscript number: _____________________________________________
First author: ___________________________________________________
Corresponding author (if different from first author): __________________
Telephone/FAX numbers: _________________________________________

This form (both sides) may be reproduced.
89TH ANNUAL MEETING
March 28-April 1, 1998
New Orleans, Louisiana

HOTEL RESERVATIONS

American Association for Cancer Research

RESERVE EARLY! DEADLINE - FEBRUARY 23, 1998

General Information:
Please read this page before making your reservation.

Deposits:
- A $150.00 deposit is required in order to reserve a room. The deposit may be made in the form of credit card or check. Your credit card will be charged immediately. Acceptable credit cards are: VISA, MasterCard, American Express, Diners Club, and Discover. Make checks payable to AACR Housing Bureau, 108 Wilmot Road, Deerfield, IL 60015.

Confirmations:
- Your hotel confirmation will be sent from the Housing Bureau. This is the only confirmation which you will receive. You will not receive a confirmation from the hotel. Each hotel will honor the Housing Bureau confirmation.

Room Tax/Rates:
- Rates do not include an 11% state and local tax as well as a $1 to $3 per night occupancy tax. Some hotels may charge additional fees for rooms with more than two occupants.

Instructions:
To arrange hotel accommodations for the AACR Annual Meeting, utilize one of the following options:

BY MAIL: Simply complete the Hotel Reservation Form and return it to the AACR Housing Bureau with a $150 per room deposit by check or credit card. All arrangements will be confirmed in writing for your approval. Return the form with a check or credit card number to:

AACR Housing Bureau
108 Wilmot Road
Deerfield, IL 60015

BY FAX: For convenience, when payment is by credit card, you may complete the Hotel Reservation Form and FAX it to the AACR Housing Bureau. The AACR Housing Bureau will confirm all arrangements, in writing, for your approval.

1-800-521-6017 Toll free - United States and Canada
1-847-940-1364 International

BY PHONE: When paying your deposit by credit card, you may phone your request to the AACR Housing Bureau. Written, detailed confirmations will be sent at the completion of your call.

Call the AACR Housing Bureau, Monday through Friday, from 8:00 a.m. to 5:00 p.m. Central Time. The hotels will not accept reservations directly.

- Registrants in the United States and Canada
  Telephone Number  1-800-424-5250
- International Registrants
  Telephone Number  1-847-940-2153

Tell the operator you are calling for AACR Annual Meeting hotel reservations. Please have the following information ready:

1. Hotel preference (1st, 2nd, and 3rd choices)
2. Arrival and departure dates and times (indicate if arrival will be after 6:00 p.m.)
3. Number of rooms required
4. Accommodations desired:
   Single
   Double (1 bed, 2 people)
   Twin (2 beds, 2 people)
5. Number of people in party
6. Credit card name, account number, name as it appears on card, and expiration date
7. Names of all occupants of room(s)
8. Mailing Address
9. Daytime telephone number with area code
10. FAX number with area code
11. Special requests (disability, smoking / nonsmoking, king-size bed, etc.)

Refund of Deposit:
- Cancellations made prior to February 23, 1998, will receive a full refund. Cancellations made after February 23, 1998, will be assessed a $14.00 processing fee. Your deposit will be forfeited entirely if you do not cancel prior to 72 hours before your arrival date.

Changes/Cancellations:
- Changes to reservations can be made in writing or by calling the AACR Housing Bureau at (800) 424-5250 or (847) 940-2153 until February 25, 1998. After that date, please contact your assigned hotel directly.
HOTELS IN NEW ORLEANS, LOUISIANA
RESERVING ROOMS FOR AACR REGISTRANTS

<table>
<thead>
<tr>
<th>Map Number</th>
<th>Hotel Name</th>
<th>Single</th>
<th>Double</th>
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<tr>
<td>1</td>
<td>New Orleans Hilton Riverside</td>
<td>$143</td>
<td>$163</td>
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<tr>
<td></td>
<td>(Headquarters Hotel)</td>
<td>Executive $158</td>
<td>$178</td>
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<td></td>
<td>Towers $179</td>
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<td>2</td>
<td>Ambassador Hotel</td>
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<td>$145</td>
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<tr>
<td>3</td>
<td>Bienville House</td>
<td>$135</td>
<td>$155</td>
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<tr>
<td>4</td>
<td>Bourbon Orleans Hotel</td>
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<tr>
<td></td>
<td></td>
<td>Townhouse Suite $189</td>
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<tr>
<td>5</td>
<td>Chateau Sonesta Hotel</td>
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<td>$165</td>
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<td>6</td>
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<td>Hampton Inn</td>
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<td>$135</td>
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<tr>
<td>10</td>
<td>Holiday Inn Chateau LeMoyne</td>
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<td>Holiday Inn French Quarter</td>
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<td>Deluxe $169</td>
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<td>13</td>
<td>Hotel Inter-Continental</td>
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<td>15</td>
<td>New Orleans Marriott</td>
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<td>$184</td>
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<tr>
<td>16</td>
<td>Omni Royal Orleans</td>
<td>$170</td>
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<td>Windsor Court Hotel</td>
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<td></td>
<td></td>
<td>Junior Suite $250</td>
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<td>20</td>
<td>Wyndham Riverfront Hotel</td>
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ALL RATES ARE SUBJECT TO AN 11% STATE AND LOCAL TAX AS WELL AS A $1 TO $3 PER NIGHT OCCUPANCY TAX.
# HOTEL RESERVATION FORM

## 89TH ANNUAL MEETING
March 28-April 1, 1998
New Orleans, Louisiana

American Association for Cancer Research

MAIL to: AACR Housing Bureau
108 Wilmot Road
Deerfield, IL 60015
（DO NOT MAIL IF PREVIOUSLY FAXED OR TELEPHONED）

OR

FAX to: 800-521-6017 Toll free inside United States and Canada
847-940-1364 International

OR

CALL: 800-424-5250 Toll free inside United States and Canada (between the hours of 8:00 a.m. and 5:00 p.m. Central time Mon. through Fri.)
847-940-2153 International

## NAME OF PERSON REQUESTING ROOM

<table>
<thead>
<tr>
<th>FIRST NAME</th>
<th>LAST NAME</th>
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<table>
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<th>FAX NUMBER</th>
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□ Please FAX Confirmation

## HOTEL PREFERENCE:

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<th>FIRST CHOICE:</th>
<th>THIRD CHOICE:</th>
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<th>FOURTH CHOICE:</th>
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</table>

## OCCUPANTS’ NAME(S): __________________________

## ROOM TYPE:

- [ ] SINGLE OCCUPANCY/ONE PERSON
- [ ] DOUBLE OCCUPANCY/TWO PERSONS (KING BED)
- [ ] TWIN OCCUPANCY/TWO PERSONS (TWO BEDS)
- [ ] SPECIAL NEEDS __________________________

□ NONSMOKING ROOM

Please Specify

## ARRIVAL DAY/DATE

□ $150 DEPOSIT BY CREDIT CARD ___ VISA: ___ MASTERCARD: ___ AMERICAN EXPRESS: ___ DISCOVER: ___ DINER’S CLUB

(Note: Your credit card will be charged immediately.)

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</table>

□ $150 DEPOSIT BY CHECK PAYABLE TO AACR HOUSING BUREAU (U.S. FUNDS DRAWN ON U.S. BANK)
**HOTEL DESCRIPTIONS**  
*(Descriptions Provided by Individual Hotels)*

1. **NEW ORLEANS HILTON RIVERSIDE (Headquarters)**  
Located at the foot of the busy Poydras Street corridor, right on the river, the New Orleans Hilton Riverside is a step from the fabled French Quarter and only two blocks from the Central Business District. The Hilton is an easy two block walk to the Ernest N. Morial Convention Center and just one block from the Aquarium of the Americas. All rooms have direct dial phones and video messages, as well as numerous other amenities. The Hilton boasts nine restaurants, plenty of nearby parking, two outdoor swimming pools, and the Rivercenter racquet and health club. Just steps away is the Riverwalk Festival Marketplace where you will find plenty of shopping and dining.  

**Poydras at the Mississippi River • ☎️ (504) 561-0500**  
**Rates:** Standard $143  
**Towers** Executive $158  
**$163** Single $179  
**$178** Double $199  

2. **AMBASSADOR HOTEL**  
Ambassador Hotel New Orleans offers meticulously appointed guest rooms featuring the uniqueness, character, charm, and history of Old New Orleans, with all of today's modern conveniences. Many guest rooms offer a view of the Historic Riverfront District and downtown New Orleans. Within walking distance to the Ernest N. Morial Convention Center, French Quarter, Central Business District, Riverwalk Marketplace, and Canal Place shopping, you will enjoy modern luxury with old world charm. Rooms have in-room safes, cable television, wrought iron beds, executive writing desk, hardwood floors, high ceilings, 24-hour parking, data compatible phones, business center, as well as restaurant and bar facilities.  

**353 Tchoupitoulas Street • ☎️ (504) 527-5271**  
**Rates:** Single $145  
Double $145  

3. **BIENVILLE HOUSE**  
Closest French Quarter Hotel to the Convention Center. Intimate European style hotel located in the French Quarter Riverfront, only steps away from House of Blues, Jackson Square, Bourbon Street, Riverfront Streetcar, Aquarium and IMAX Theater, Saks Fifth Avenue and many more attractions. Complimentary continental breakfast daily.  

**320 Decatur Street • ☎️ (504) 529-2345**  
**Rates:** Single $135  
Double $155  

4. **BOURBON ORLEANS HOTEL**  
The Bourbon Orleans Hotel, ideally located in the very heart of the French Quarter, features 216 custom-designed luxurious guest rooms, including 50 distinctive townhouse suites. The decor combines the most modern conveniences with 17th-century French Country House romantic atmosphere. All guest rooms feature mini-bars, hair dryers, coffee makers, and telephone equipped with voice mail and dataport capabilities. Outdoor pool in French style courtyard and just steps from Jackson Square.  

**Bourbon and Orleans • ☎️ (504) 523-2322**  
**Rates:** Single/Double $149  
Townhouse Suite $189  

5. **CHATEAU SONESTA HOTEL**  
The Chateau Sonesta Hotel is located at the site of the former D.H. Holmes Canal Street Department Store which was constructed in 1849 and occupied until its closing in 1989. Situated on Iberville Street in the French Quarter and with direct access to Canal Street, the hotel is steps away from the Central Business District and one block away from the Royal Sonesta Hotel. Many rooms with balconies overlooking Bourbon Street, Dauphine Street, and interior pool and courtyard areas. Outdoor pool and exercise room on property. La Chatelaine Restaurant and The Clock Bar open daily. Room service available.  

**800 Iberville Street • ☎️ (504) 586-0800**  
**Rates:** Single $145  
Double $165  

6. **CROWNE PLAZA**  
The Crowne Plaza New Orleans features 439 beautifully furnished guest rooms and suites, and Creole flavored restaurants and lounges - all within the sights, the sounds, and tastes that make the city so distinctive in the fabric of America. Ideally located alongside the French Quarter, within a short walk are the Ernest N. Morial Convention Center, Mississippi Riverwalk, Canal Place, the Superdome and a host of places to see and things to do.  

**333 Poydras Street • ☎️ (504) 525-9444**  
**Rates:** Single $147  
Double $162  

7. **DOUBLETREE HOTEL NEW ORLEANS**  
Located on Canal Street overlooking the Mississippi River and the city's major business and entertainment districts. Across the street from the world famous French Quarter and within walking distance to hundreds of shops and restaurants. The Ernest N. Morial Convention Center is within walking distance. All rooms provide a spacious, comfortable setting to spread out and work or just relax. Each room is equipped with color TV, in-room movies, phones with dataports, coffee makers, iron and ironing boards. The Chicory Rotisserie and Grill adds a new turn to fine dining while the Chicory Lounge provides an intimate meeting place for New Orleans style refreshments. The Sweet Dreams Café is a great alternative for those on the run. All guests receive complimentary chocolate chip cookies upon check-in.  

**300 Canal Street • ☎️ (504) 581-1300**  
**Rates:** Single $149  
Double $159  

8. **EMBASSY SUITES HOTEL NEW ORLEANS**  
Embassy Suites has a distinctive flair for making conventioneers feel welcome in more than 90 cities in over 34 states, but especially in one of America's favorite cities...New Orleans! Located in the heart of the Arts and Warehouse District, only two short blocks away from the Ernest N. Morial Convention Center and a short distance from the French Quarter, the Embassy Suites blends the old with the new. In addition to having all suite accommodations, Embassy Suites offers complimentary cooked-to-order breakfast and a two-hour Manager's reception daily to all guests. It's the Embassy Way.  

**315 Julia Street • ☎️ (504) 525-1993**  
**Rates:** Single $155  
Double $170  

9. **HAMPTON INN**  
Just steps from world-famous Bourbon Street and the French Quarter you will find the outstanding quality and service you have come to expect from Hampton Inn. Located within an historic, turn-of-the-century building, the Hampton Inn - Downtown/French Quarter Area features 186 newly constructed, oversized guest rooms. Included at no extra charge is a daily continental breakfast buffet, all local phone calls, incoming faxes, and use of the state-of-the-art fitness facility. Secured valet parking, laundry services, and a variety of tours leaving from the hotel daily are also available at an additional charge.  

**226 Carondelet • ☎️ (504) 529-9990**  
**Rates:** Single $125  
Double $135
10. HOLIDAY INN CHATEAU LeMOYNE
Unique 150-year-old townhouses and suites. Four lush tropical courtyards, iron lacework balconies and heated pool with sun deck. Located in the Historic French Quarter within strolling distance of legendary Bourbon Street and just minutes from New Orleans’ world famous shopping, restaurants, and nightspots.
301 Rue Dauphine • ☏ (504) 581-1303
Rates:  
Single $145
Double $155

11. HOLIDAY INN FRENCH QUARTER
With guest rooms overlooking the Mississippi River, the Holiday Inn French Quarter is situated in the center of the historic French Quarter. Just strolling distance from legendary Bourbon Street and minutes away from any of New Orleans’ world famous restaurants. Indoor heated pool with exercise facility.
124 Royal Street • ☏ (504) 529-7211
Rates:  
Single $140
Double $150

12. HOLIDAY INN SELECT
This deluxe property recently opened directly across the street from the Ernest N. Morial Convention Center. The hotel features Ray T’s Lounge, Atrium Restaurant with room service, fitness center, valet parking, laundry, and business services. The plush, spacious rooms are richly appointed with a large executive desk, coffee makers, hair dryer, iron and ironing board, and three phones (desk, bed, bathroom) with data ports.
881 Convention Center Boulevard • ☏ (504) 524-1881
Rates:  
Standard $149
Executive $169
Single $169
Double $189

13. HOTEL INTER-CONTINENTAL
In the heart of the financial district, only three blocks from the French Quarter, Aquarium, and other major areas of shopping and entertainment. Each elegantly appointed room features a mini-bar and refrigerator, television, hair dryer, and 24-hour room service. Parking, fitness center and pool are available.
444 St. Charles Avenue • ☏ (504) 525-5566
Rates:  
Single $145
Double $160

14. HOTEL MONTELEONE
Owned and operated by the Monteleone family since 1886, this property located in the heart of the French Quarter, has just completed a $20 million dollar renovation returning to its position as one of the premier hotels in New Orleans. Three restaurants, two cocktail lounges, full service business center, data posts in every guest room, iron and ironing board in every room, complimentary coffee each morning, heated pool and rooftop fitness center are available. The Monteleone is the closest French Quarter hotel to the Convention Center. New Orleans begins in the lobby of the Monteleone.
214 Royal Street • ☏ (504) 523-3341
Rates:  
Single $143
Double $168

15. NEW ORLEANS MARRIOTT
Our back door leads to the famous French Quarter. Out the front door, you may catch a streetcar ride or walk to many nearby attractions, Aquarium of the Americas, Riverboat Cruises, or the Riverwalk Shopping Mall.
555 Canal Street • ☏ (504) 581-1000
Rates:  
Single $164
Double $184

16. OMNI ROYAL ORLEANS
Located in the heart of the French Quarter on the corner of St. Louis and Royal Streets is the Omni Royal Orleans, an AAA 4-Diamond hotel. The Royal Orleans features four restaurants, beauty salon, barber and florist shops, covered valet parking, fitness center, rooftop pool, full bath amenities, direct dial telephone with voice mail, fax and computer hookup as well as specialty rooms with balconies or Jacuzzis.
Royal and St. Louis Streets • ☏ (504) 529-5333
Rates:  
Single/Double $170

17. RADISSON HOTEL NEW ORLEANS
The Radisson Hotel New Orleans is conveniently located downtown in the Central Business District and has recently completed a $10 million renovation to all guest rooms, meeting facilities, and public areas. This New Orleans landmark is listed on the National Register of Historic Places and features a tour desk and gift shop at the lobby level, voice mail message service and computer dataport in all guest rooms, scenic rooftop pool, hot tub deck, fitness center, valet parking, guest business center, and free shuttle to the French Quarter. Dining is available at Praline’s Restaurant, LaSalle’s Food and Spirits, and Pizza Hut.
1500 Canal Street • ☏ (504) 522-4500
Rates:  
Single/Double $132

18. SHERATON NEW ORLEANS
The beautifully renovated Sheraton New Orleans Hotel features exquisite mahogany furniture, rich jewel-tone colored fabrics and wall coverings, fine marble, and wrought iron detailing reminiscent of an historic New Orleans home. The hotel also features a fine dining restaurant, quality coffee shop, high-end gift shop, convenient business center, full-service fitness center with pool (complete with professional trainers), therapists, spa amenities, valet, and an award-winning concierge service. The Hotel is conveniently located in the heart of the Central Business District, bordering the historic French Quarter, and just blocks from the Mississippi River.
500 Canal Street • ☏ (504) 525-2500
Rates:  
Single $162
Double $185

19. WINDSOR COURT HOTEL
The Windsor Court Hotel is recognized as one of the world’s premier hotels. Abundant suites, a multi-million dollar art collection, and legendary cuisine complement the hotel’s incomparable convenience to the Ernest N. Morial Convention Center, the French Quarter, and the Mississippi Riverfront. Selected by both the Zagat Survey and the readers of Condé Nast Traveler Magazine as one of the “Top Three” domestic hotels and the only AAA “Five Diamond” rating in the Deep South.
300 Gravier Street • ☏ (504) 523-6000
Rates:  
Single/Double $205
Junior Suite $250
Full Suite $275

20. WYNDHAM RIVERFRONT HOTEL
New Orleans’ newest luxury hotel, the Wyndham Riverfront, is located just across the street from the Ernest N. Morial Convention Center and only steps away from the French Quarter. The deluxe guest rooms feature the finest attention to detail and amenities including in-room coffee makers with complimentary coffee, hair dryer, and iron and ironing board. The hotel also offers computer modem telephones, valet parking and complimentary usage of the fully equipped exercise room. E’s Café and lounge offers traditional continental cuisine and Creole specialties.
701 Convention Center Boulevard • ☏ (504) 524-8200
Rates:  
Single $165
Double $185
ADVANCE REGISTRATION FORM

AMERICAN ASSOCIATION FOR CANCER RESEARCH
89TH ANNUAL MEETING - NEW ORLEANS, LOUISIANA - March 28-April 1, 1998

Return to
American Association for Cancer Research • Public Ledger Building, Suite 826
150 S. Independence Mall West • Philadelphia, PA 19106-3483 • FAX: 215-440-7228

DEADLINES:
- February 2, 1998 for reduced rates and to ensure receipt of meeting materials by mail in March
- February 23, 1998 for all registration by mail (Registration forms received after this date will not be accepted. Registration will be conducted at the Morial Convention Center in New Orleans from March 28-April 1, 1998.)
- March 20, 1998 to cancel registration and receive refund less cancellation fee of $35

(Please print)

NAME: ___________________________ ADDRESS: ___________________________
Last First/Middle Initial AACR Member Number

TITLE: ___________________________ Institution ___________________________

Street, Building, or Post Office Box
City State or Province Zip/Postal Code Country (if not U.S.)

TELEPHONE NO.: __________________ FAX NO.: __________________ E-Mail: __________________

☐ Check this box if you have a physical disability and have special requirements for transportation, hotel accommodations, or other facilities in connection with the meeting. A member of the Association Staff will contact you.

WHAT IS YOUR PRIMARY FIELD OF RESEARCH? (Please check only one):
☐ 1Biochemistry/Biophysics ☐ 6Carcinogenesis ☐ 12Cellular Biology and Genetics ☐ 15Clinical Investigations
☐ 2Endocrinology/Signal Transduction ☐ 7Epidemiology ☐ 13Experimental Therapeutics ☐ 16Immunology ☐ 18Molecular Biology and Genetics
☐ 3Prevention ☐ 14Radiobiology/Radiation Oncology ☐ 17Virology ☐ 19Other (please specify): ________________________________

ARE YOU THE PRESENTER OF AN ABSTRACT SUBMITTED FOR THE 1998 AACR MEETING? ☐ Yes ☐ No

ON WHICH DAYS WILL YOU ATTEND THE 1998 AACR ANNUAL MEETING (Check all that apply)?
☐ Saturday, March 28 ☐ Sunday, March 29 ☐ Monday, March 30 ☐ Tuesday, March 31 ☐ Wednesday, April 1

☐ Check this box if you are a high school or undergraduate student. This information will be used for the organization of a special educational event during the annual meeting for students interested in pursuing careers in science. The program, to be organized by the AACR Science Education Committee, will include presentations as well as a panel discussion by cancer experts. Further information will be sent to you under separate cover.

PAYMENT OF REGISTRATION

Fees may be paid by check or with a VISA, MasterCard, or American Express credit card. All payments must be made in U.S. currency, and all checks must be drawn on a U.S. bank. Payment must accompany this form; purchase orders will not be accepted as payment.

<table>
<thead>
<tr>
<th>On or Before February 2</th>
<th>After February 2</th>
<th>METHOD OF PAYMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Active/Corresponding Member Rate</td>
<td>$160</td>
<td>☐ Check payable to AACR, Inc. in U.S. currency, drawn on a U.S. bank</td>
</tr>
<tr>
<td>☐ Nonmember Rate (includes copy of AACR Proceedings)</td>
<td>$310</td>
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<td>☐ Emeritus Member Rate</td>
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<td>☐ Associate Member/Predoctoral Student Ratea</td>
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<td>☐ Honorary Member Rate</td>
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<td>☐ AACR Proceedingsb</td>
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<td>☐ Optional Overseas Surchargec</td>
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</table>

TOTAL ENCLOSED OR CHARGED $ ____________ $ ____________

☐ An application for Associate Membership may accompany this form, but these should be submitted by February 16, 1998, as review of the Associate Membership application may delay registration. Students must enclose a statement, signed by the registrar, dean, or department head of their university or college on official letterhead, confirming their status. Postdoctoral fellows or physicians in training do not qualify for the student registration rate. Persons wishing to register at the associate member rate in New Orleans must submit applications no later than March 6, 1998, to ensure time for review of their applications.

☐ Active, corresponding, and associate members of the AACR who have paid dues for 1998 and registrants who pay the nonmember fee receive the Proceedings automatically. If these members or nonmembers check this box and pay the fee, they will receive an additional copy of the Proceedings.

☐ Optional payment for registrants outside of the U.S. and Canada only. Registrants paying this surcharge will receive meeting publications via airmail before the annual meeting. This service will not be available after February 2, 1998.

☐ AACR members in good standing, i.e., dues paid for 1998, will receive copies of the Program and Proceedings prior to the meeting. Nonmember and student registrants who meet the February 2 deadline will also receive the Program and if the meeting and (if they have purchased it) the Proceedings prior to the meeting. Nonmembers and students who do not meet the deadline must pick up publications at the meeting site.

REFUND POLICY

Refunds on registration fees will be granted on written request received in the AACR Office by March 20, 1998. Requests received after this date will not be honored. Receipts and badges (if they have been mailed) must be returned to the AACR Office with the refund request. A cancellation fee of $35 will be deducted from all refunds to cover administrative costs.

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LATE-BREAKING RESEARCH SESSION
AT THE AACR ANNUAL MEETING
Tuesday, March 31, 1998

Time has been set aside for the presentation of a few definitive reports of highly significant and timely findings in the field. Criteria for the selection of these presentations and instructions for submission of abstracts are as follows:

INSTRUCTIONS FOR SUBMISSION OF LATE-BREAKING ABSTRACTS

1. The work to be presented must be of major novelty and significance, e.g., the characterization of a new gene in familial cancer or the discovery of a new diagnostic marker, and should not have been previously published in a peer-reviewed scientific journal or presented at a national meeting.

2. The abstract must be sponsored by an AACR member in good standing (dues paid for 1998).

3. Each member in good standing may sponsor only one abstract for this session whether or not he or she sponsored an abstract last October for the regular annual meeting program. If an associate member is the sponsor, the abstract must also be endorsed by an active or corresponding member in good standing. In this case, the endorser does not forfeit the opportunity to sponsor a late-breaking abstract.

4. Abstracts must be typed on one side of one sheet of white paper.

5. All text on the page must fit within an area 6 1/2" wide and 9" high (16.5 cm X 22.9 cm) with margins of at least 1" (2.5 cm) on the top, bottom, and sides of the page.

6. Each abstract must be accompanied by a covering letter from the sponsor explaining why the work is novel and significant enough to be considered for this late-breaking research session and certifying that the findings became available after the annual meeting abstract deadline of October 28, 1997. This letter must contain the sponsor's complete mailing address, FAX number, and E-mail address (if available) so that we can communicate the scheduling decision of the Program Committee.

7. Abstracts and covering letters must be received in the AACR Office by 5:00 p.m. Eastern Time on February 27, 1998. FAX transmissions are not acceptable. Carrying envelopes should be clearly marked "Late-Breaking Abstract," and should be addressed to American Association for Cancer Research, Public Ledger Building, Suite 826, 150 South Independence Mall West, Philadelphia, PA 19106-3483. If you wish to receive acknowledgment of receipt of your abstract, enclose a self-addressed post card with appropriate postage affixed. Accepted abstracts will not be published since they will be received after the Proceedings of the American Association for Cancer Research has been printed; however, they will be distributed at the session in New Orleans.

8. A special subcommittee of the Program Committee appointed by President Donald S. Coffey will select the papers to be presented. Presenters of accepted papers will be notified via FAX no later than March 16, 1998.
### 1998 AACR ANNUAL MEETING TENTATIVE SCHEDULE OF EVENTS

(Names of chairpersons of scientific sessions are underlined.)

#### SATURDAY, MARCH 28, 1998

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 a.m.-1:30 p.m.</td>
<td>Associate Member Council Grant Writing Session</td>
</tr>
<tr>
<td>9:00 a.m.-8:00 p.m.</td>
<td>On-site Registration</td>
</tr>
<tr>
<td>9:30 a.m.-12:00 noon</td>
<td>Public Session</td>
</tr>
<tr>
<td>12:00 noon-6:30 p.m.</td>
<td>Educational Sessions</td>
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<tr>
<td>2:00-6:00 p.m.</td>
<td>Methods Workshops</td>
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<tr>
<td>6:30-8:00 p.m.</td>
<td>WICR Guest Lecture and Reception</td>
</tr>
<tr>
<td>8:00-10:00 p.m.</td>
<td>Opening Mixer</td>
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#### SUNDAY, MARCH 29, 1998

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 a.m.-4:00 p.m.</td>
<td>On-site Registration</td>
</tr>
<tr>
<td>7:00-8:00 a.m.</td>
<td>Associate Member Council Sunrise Session</td>
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<tr>
<td>8:00 a.m.-12:15 p.m.</td>
<td>Opening Events:</td>
</tr>
<tr>
<td>8:00 -9:00 a.m.</td>
<td>Presidential Address: Donald S. Coffey</td>
</tr>
<tr>
<td>9:00 a.m.-12:00 noon</td>
<td>Plenary Session: New Horizons in Cancer Research.  Frank J. Rauscher, III, Erkki Ruoslahti, Drew M. Pardoll, Bert Vogelstein, Waun Ki Hong, Donald S. Coffey</td>
</tr>
<tr>
<td>12:00 noon-12:15 p.m.</td>
<td>Elion Award Ceremony</td>
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<tr>
<td>8:00 a.m.-12:00 noon</td>
<td>Poster Sessions</td>
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<tr>
<td>12:00 noon-5:00 p.m.</td>
<td>Exhibit Show Kickoff</td>
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<tr>
<td>12:15 p.m.-1:15 p.m.</td>
<td>Clowes Award Lecture</td>
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<tr>
<td>1:15-5:15 p.m.</td>
<td>Poster and Poster Discussion Sessions</td>
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<tr>
<td>1:30-5:00 p.m.</td>
<td>Minisymposia</td>
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<tr>
<td>2:15-4:45 p.m.</td>
<td>Symposia:</td>
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<tr>
<td></td>
<td>Telomerase and Telomeres in Normal and Neoplastic Cells, Ronald A. DePinho, Jerry W. Shay, Calvin B. Harley, Virginia A. Zakian</td>
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<tr>
<td></td>
<td>Successes in Oncogene-based Drug Targeting: Selectivity and Specificity, Alex Matter</td>
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<tr>
<td></td>
<td>Inherited Cancer Susceptibility Syndromes: Genes, Genes, and Function, Daniel A. Haber, Bert Vogelstein, Yosef Shiloh, Sanford Markowitz, Andrea McClatchey</td>
</tr>
</tbody>
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#### MONDAY, MARCH 30, 1998

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>5:30-6:30 p.m.</td>
<td>AACR-Pezcoller Foundation Award Lecture</td>
</tr>
<tr>
<td>6:30-9:00 p.m.</td>
<td>Minority Issues Committee Careers in Cancer Research Symposium</td>
</tr>
<tr>
<td>8:00-10:30 p.m.</td>
<td>Annual Reception for All Registrants</td>
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</tbody>
</table>

#### EVENTS:

8:00-10:30 a.m.

- **Symposia:**
  - Tumor Angiogenesis: An Integrated Approach, Rakesh K. Jain, Robert S. Kerbel, Isaiah J. Fidler, George D. Yancopoulos
  - Signalling by wnt-1, Beta-Catenin, and the APC Tumor Suppressor in Cancer, Paul Polakis, Kenneth W. Kinzler, Walter Birchmeier, Randall Moon
  - Molecular Determinants of Cellular and Tumor Responses to Radiation, Michael B. Kastan, Amato J. Giaccia, Theodore S. Lawrence, Michael Karin
  - Poster and Poster Discussion Sessions
  - Minisymposia
  - Exhibit Show
  - Controversy Session
  - AACR-Burchenal Award Lecture
  - Controversy Session
  - Poster and Poster Discussion Sessions
  - AACR-American Cancer Society Award Lecture
  - Minisymposia
  - The bel-2 Family: Death Agonists and Antagonists, Stanley J. Korsmeyer
  - The Molecular Basis of Immune Recognition: Basic Concepts with Therapeutic Implications, Giorgio Trinchieri
  - Reconstruction of Human Tumorigenesis and Progression: Cancer Genetics In Model Organisms, Anthony Wychnaw-Boris

8:00 a.m.-12:00 noon

- Plenary Sessions
- Poster Sessions
- Minisymposia
- Symposia: Telomerase and Telomeres in Normal and Neoplastic Cells, Ronald A. DePinho, Jerry W. Shay, Calvin B. Harley, Virginia A. Zakian
- Successes in Oncogene-based Drug Targeting: Selectivity and Specificity, Alex Matter
- Inherited Cancer Susceptibility Syndromes: Genes, Genes, and Function, Daniel A. Haber, Bert Vogelstein, Yosef Shiloh, Sanford Markowitz, Andrea McClatchey
## Tentative Schedule of Events

**TUESDAY, MARCH 31, 1998**

<table>
<thead>
<tr>
<th>Time</th>
<th>Events</th>
</tr>
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<tbody>
<tr>
<td>7:00 a.m.-4:00 p.m.</td>
<td>On-site Registration</td>
</tr>
<tr>
<td>7:00-8:00 a.m.</td>
<td>Meet-the-Expert Sunrise Sessions</td>
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<tr>
<td></td>
<td>Growth Factor Signaling: The IGF-1, IGF-2 System in Cancer, Haim Werner</td>
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<td></td>
<td>Genetics and Biology of Hematologic Malignancies, Pier Pellici</td>
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<tr>
<td></td>
<td>Radiation Sensitization: Basic and Clinical Aspects, Rupert Schmid-Ullrich</td>
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<tr>
<td></td>
<td>Advances in Mechanisms of Drug Resistance: Basic Science and Clinical Implications, Susan E. Bates</td>
</tr>
<tr>
<td></td>
<td>Familial Cancer Syndromes: DNA Testing and Clinical Approaches, Ken Yamaguchi</td>
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<tr>
<td></td>
<td>Immunotherapy and Costimulatory Molecules, James D. Allison</td>
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<td></td>
<td>Cell Adhesion: Integрин Signaling, Membrane to Nucleus, Rudolph L. Juliano</td>
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<td>Emerging Issues in Molecular Epidemiology, Barbara S. Hulka</td>
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<tr>
<td>8:00-10:30 a.m.</td>
<td>Symposia</td>
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<td>Cell Death Signalling Pathways: Caspase Cascades and Effectors/Initiators of Apoptosis, Douglas R. Green</td>
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<td>p73/p53: An Emerging Gene Family, William G. Kaelin, Daniel Caput, Frank McKeon, Ute Moll</td>
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<td>Breast Cancer: Basic Science and Clinical Aspects, Sofia D. Merajver, Stephen P. Either, Paul S. Meltzer, Joseph Ragaz, Laura Esterman</td>
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<td>Tumor Physiology: Tumor-Stromal, Cell-Cell, and Microenvironment Interactions, Mina J. Bissell</td>
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<tr>
<td>8:00 a.m.-12:00 noon</td>
<td>Poster and Poster Discussion Sessions</td>
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<td>8:15-11:45 a.m.</td>
<td>Minisymposium</td>
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<tr>
<td>10:00 a.m.-4:00 p.m.</td>
<td>Exhibit Show</td>
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<tr>
<td>10:45 a.m.-12:15 p.m.</td>
<td>Late-Breaking Research Session</td>
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<tr>
<td>12:15-1:15 p.m.</td>
<td>Rosenthal Foundation Award Lecture</td>
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<td>1:15-5:15 p.m.</td>
<td>Poster and Poster Discussion Sessions</td>
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<tr>
<td>1:30-2:30 p.m.</td>
<td>Cain Award Lecture</td>
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<tr>
<td>1:30-5:00 p.m.</td>
<td>Minisymposium</td>
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<tr>
<td>2:45-3:45 p.m.</td>
<td>Rhodes Award Lecture</td>
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<td>4:00-6:30 p.m.</td>
<td>Symposia</td>
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<td>Molecular Targets and Endpoints for Chemoprevention, Wau K. Hong</td>
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<td>Gastrointestinal Cancer: Basic Science and Clinical Aspects, Kenneth W. Kinzler</td>
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<td>Tumor Virology: Molecular Biology and Etiology, Karl Münger, Nancy Raab-Traub, Yuan Chang, Kuan-Teh Jeang</td>
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<td>Advances in Cancer Vaccine Development, Dorothea Herlyn, Olivera J. Finn, Ralph A. Reisfeld, Saldano Ferrone, Glenn Dranoff</td>
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**WEDNESDAY, APRIL 1, 1998**

<table>
<thead>
<tr>
<th>Time</th>
<th>Events</th>
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<tr>
<td>7:00 a.m.-2:00 p.m.</td>
<td>On-site Registration</td>
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<tr>
<td>7:00-8:00 a.m.</td>
<td>Meet-the-Expert Sunrise Sessions</td>
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<td></td>
<td>Initiation of DNA Damage and Repair and its Role in Progression, Jan H. Hoeijmakers</td>
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<td>Chromosomal Translocation: Genetics, Biology, and Protein Function, James R. Downing</td>
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<td>Farnesyl Transferase Inhibitors, Ivan D. Horak</td>
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<td>From Slav's Master: The Biological Events during Melanoma Development and Progression, Meenhard Herlyn</td>
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<td>Topoisomerases: Structure and Function, James Wang</td>
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<td>Molecular Diversity-based Approaches to Anti-Cancer Drug Design, Jack D. Keene</td>
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<td>New Mechanisms of Action of Viral and Cellular Oncogenes, Elizabeth Moran</td>
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<td>Genetic Approaches to Diagnosis: The Impact of Molecular Medicine on Early Detection and Diagnosis, David Sidransky, M. Michele Manos, Philippe G. Anker, Klaus Pantel</td>
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<td></td>
<td>Tobacco and Lung Carcinogenesis: Genetics, Biology, and Epidemiology, Adi F. Gazdar, Curtis C. Harris, Stephen S. Hecht, Margaret Spitz, William D. Travis</td>
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<td>10:45 a.m.-12:00 noon</td>
<td>Controversy Session</td>
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<td>12:00 noon-12:45 p.m.</td>
<td>DeWitt Goodman Lecture</td>
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<td>Transcriptional Regulation of the Neoplastic Phenotype, Frank J. Rauscher, III</td>
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<td>Restoring Drug Sensitivity to Tumors: New Concepts from Tumor Biology and Physiology, William N. Hait, Michael M. Gottesman, Carlo M. Croce, Scott W. Lowe, Joseph R. Bertino</td>
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<td>Emerging Issues in Individual Cancer Susceptibility, Fred F. Kadlubar</td>
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<td>Epigenetics and Cancer, Stephen B. Baylin and Peter A. Jonas</td>
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<tr>
<td>4:00 p.m.</td>
<td>Annual Meeting Ends</td>
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PLENARY SESSION
New Horizons in Cancer Research (Frank J. Rauscher, III)

SYMPOSIA
Molecular Determinants of Cellular and Tumor Responses to Radiation (Michael B. Kastan)
Successes in Oncogene-based Drug Targeting: Selectivity and Specificity (Alex Matter)
Cancer Gene Therapy: New Concepts and Clinical Applications (Jack A. Roth)
Reconstruction of Human Tumorigenesis and Progression: Cancer Genetics In Model Organisms
Tumor Angiogenesis: An Integrated Approach (Rakesh K. Jain)
Signaling by wnt-1, β-catenin, and the APC Tumor Suppressor in Cancer (Paul Polakis)
Prostate Cancer: Basic Science and Clinical Aspects (Leland W.K. Chung)
The Molecular Basis of Immune Recognition: Basic Concepts with Therapeutic Implications (Giorgio Trinchieri)
The bcl-2 Family: Regulation and Effectors (Stanley J. Korsmeyer)
Inherited Cancer Susceptibility Syndromes: Genetics, Genes, and Function
New Concepts in Chemotherapeutics and Drug Resistance (Susan Band Horwitz)
Cell Death Signalling Pathways: Caspase Cascades and Effectors/Initiators of Apoptosis
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Emerging Concepts in Individual Cancer Susceptibility (Fred F. Kadlubar)

CONTROVERSY SESSIONS
Have We Improved the Treatment of Cancer?
Environmental Estrogens and Cancer
Will Multidrug Resistance Modulators Be Effective in the Clinic?

METHODS WORKSHOPS AND EDUCATIONAL SESSIONS
To Be Announced

"MEET-THE-EXPERT" SUNRISE SESSIONS
Cancer Genome Anatomy Project (CGAP): Update and Potential (Paul S. Meltzer)
Cell Adhesion: Integrin Signaling, Membrane to Nucleus
JAK-STATS: Dedicated Cytokine Signaling Pathways
Histone Acetylation and Transcriptional Regulation (Tony Kouzarides)
Molecular Genetics of Brain Tumors
Gene Analysis of Tumor Suppression by COX-2 Inhibitors (Makoto M. Taketo)
Antisense-based Therapeutics: Basic and Clinical Studies (Thale Jarvis)
Gene Transfer to Hematopoietic Progenitors (Fulvio Mavilio)
Psychosocial Aspects of Genetic Diagnosis (Caryn E. Lerman)
B-Cell Lymphomas: Genetics and Biology (Riccardo Dalla-Favera)
Hormonal Regulation of Cell Proliferation and Differentiation (Lorraine J. Gudas)
Cell Cycle Control (Giulio Draetta)
Proteases in Cancer: Clinical Significance and Mechanisms in Metastasis (Henri Rochefort)
Inherited Cancers of the Kidney: Family Studies, Genes, and Biochemistry (W. Marston Linehan)
Strategies for Combining Chemotherapy and Biotherapy (Antonio C. Buzaid)
New Concepts in Antimetabolites: Basic Science and Clinical Trials (Steven Grant)
IL-12: Biological and Clinical Developments (Giorgio Trinchieri)
Chemoprevention Trials: Progress and Promise (Scott M. Lippman)
Nuclear Hormone Receptors in Development and Disease
Growth Factor Signaling: The IGF-1, IGF-2 System in Cancer (Haim Werner)
Genetics and Biology of Hematologic Malignancies (Pier Pellici)
Radiation Sensitization: Basic and Clinical Aspects
Advances in Mechanisms of Drug Resistance: Basic Science and Clinical Implications (Susan E. Bates)
Immunotherapy and Costimulatory Molecules
Emerging Issues in Molecular Epidemiology (Barbara S. Hulka)
Initiation of DNA Damage and Repair
Familial Cancer Syndromes: DNA Testing and Clinical Approaches (Ken Yamaguchi)
HIV Receptors and Co-Receptors: Basic Science and Clinical Implications
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