

American Institute for Cancer Research

Grant Application Package

**Supersedes previous
announcements and statements
November 2009**

ACR

THE AMERICAN INSTITUTE FOR CANCER RESEARCH

The American Institute for Cancer Research (AICR) is the cancer charity that fosters research on diet and cancer and educates the public about the results. Since its founding in 1982, AICR has grown into the nation's leading charity in the field of food, nutrition, physical activity and weight management as it relates to cancer prevention, treatment and survivorship. It is part of the World Cancer Research Fund (WCRF) global network, an international alliance of organizations, dedicated to the prevention and control of cancer through healthy diets and lifestyles.

OUR VISION

AICR helps people make choices that reduce their chances of developing cancer.

OUR HERITAGE

We were the first cancer charity:

- To create awareness of the relationship between diet and cancer risk
- To focus funding on research into diet and cancer prevention
- To consolidate and interpret global research to create a practical message on cancer prevention

OUR MISSION

Today AICR continues:

- Funding research on the relationship of nutrition, physical activity and weight management to cancer risk
- Interpreting the accumulated scientific literature in the field
- Educating people about choices they can make to reduce their chances of developing cancer

WORLD CANCER RESEARCH FUND GLOBAL NETWORK

AICR is part of the World Cancer Research Fund (WCRF) global network, which consists of the following charitable organizations: The American Institute for Cancer Research (AICR); World Cancer Research Fund (WCRF UK); World Cancer Research Fund Netherlands (WCRF NL); World Cancer Research Fund Hong Kong (WCRF HK); World Cancer Research Fund France (WCRF FR); and the umbrella association, World Cancer Research Fund International (WCRF International).

The WCRF global network is dedicated to funding novel research on the role of food, nutrition and physical activity in the causation and prevention of cancer around the world. The network operates two research grant programs, one at AICR in Washington, DC, and the other at WCRF International in London. Instructions for AICR's grant program are contained in this application package. For information on the WCRF International Research Grant Program and to obtain a WCRF Grant Application Package, please visit www.wcrf.org and contact research@wcrf.org.

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1. WCRF GLOBAL NETWORK RESEARCH GRANT PROGRAMS

The WCRF global network is dedicated to funding innovative research on the role of food, nutrition, physical activity and weight management in the causation and prevention of cancer around the world. To achieve this, the network operates two research grant programs, one through AICR in Washington, DC, and the other through WCRF International in London.

All grant applications are reviewed by grant panels, comprising established investigators in different disciplines who have expertise in diet, nutrition, physical activity and cancer.

Programs Outline

AICR Research Grant Program

AICR manages and administers the AICR Research Grant Program. AICR selects the Grant Panels to review and recommend applications for funding, which are then presented to the AICR Board of Directors. The AICR Board of Directors approves the grants for funding. Instructions for AICR's Research Grant Program are contained in this Grant Application Package (GAP).

WCRF International Research Grant Program

WCRF International manages and administers the Research Grant Program on behalf of all of the WCRF national members (excluding AICR). WCRF International selects the Grant Panel to review and recommend applications for funding, which are then presented to the relevant WCRF Board of Trustees responsible for approving the funding for research grants. It is the WCRF national members (WCRF UK, WCRF NL, WCRF HK and WCRF FR/FMRC) who fund the approved grants.

Details of the WCRF International Research Grant Program can be found online (www.wcrf.org). Alternatively the WCRF grant application pack can be obtained either by post (22 Bedford Square, London WC1B 3HH) or by e-mail (research@wcrf.org).

Contact us for more information on AICR's grant program:

American Institute for Cancer Research
1759 R Street, NW
Washington, DC 20009
Phone: (202) 328-7744
Fax: (202) 328-7744
E-mail: research@aicr.org
Web: www.aicr.org

2. AICR RESEARCH DIRECTIONS

The 2007 AICR/WCRF expert report *Food, Nutrition, Physical Activity and the Prevention of Cancer: a Global Perspective*, identified 11 future strategic research directions to build on the current base of knowledge in the area of diet, nutrition, physical activity, body composition and cancer (see box below). See pages 5 and 6 for AICR's specific research priorities.

The research directions identified in the report aim to increase understanding of the cancer process, including cancer progression and metastasis, but also are often interdisciplinary and address issues that could help translate research into action to prevent cancer.

There are many fields of study that are only now beginning to be explored. These include early life exposures and genetic factors, as well as interactions between food and nutrition and other factors, notably smoking, inflammation and infectious agents. There is relatively little research on broad patterns of diets and on the interrelationship between components of diets and their effect on cancer incidence and survivorship.

More needs to be known about the levels of exposure that modify cancer risk as well as the extent to which risk is decreased or increased in relation to expression of and variation in specific genes.

Research Directions

- Strengthen the evidence for specific nutritional or physical activity exposures in relation to cancer
- Examine effect sizes with respect to timing, dose and duration for exposures where strong evidence of a causal relationship exists
- Evaluate effect modification by environmental and genetic factors on cancer risk
- Investigate mechanisms that link foods and drinks, dietary constituents or other nutritional and physical activity factors to cancer risk
- Identify and study genetic polymorphisms and nutritional exposures that influence gene expression and can be useful for understanding the relationship between nutrition or physical activity and cancer
- Assess whether weight loss in overweight or obese people can reduce cancer risk
- Identify and study the relevant milestones in the timing of growth and development that affect cancer risk and how they can be modified by food, nutrition and physical activity
- Identify and evaluate methods to study factors related to food production, processing, preservation and cooking methods, which may affect cancer risk
- Evaluate the effect of food, nutrition, body composition and physical activity on outcomes in cancer survivors
- Evaluate differences in relationships between food, nutrition, physical activity and cancer risk in various parts of the world
- Examine how measurement of food, nutrition, physical activity and body composition, in relation to cancer risk, can be improved

3. AICR GRANT PROGRAM

The AICR Research Grant Program encourages innovative research on food, nutrition, physical activity and weight management in relation to cancer prevention, treatment and survivorship.

3.1 Types of Grants

AICR offers three types of research grants: Investigator Initiated Grants, Postdoctoral Awards and Matching Grants.

Investigator Initiated Grants may be awarded to researchers at not-for-profit universities, hospitals or research centers. These grants are for a maximum of \$150,000 for up to two years, plus 10% indirect costs, with a limit of \$75,000 for any one year. Investigator Initiated Grant applications may be revised one time if they are not funded but receive a priority score between 1.0 and 2.5. Funded Investigator Initiated Grants are eligible for one-time renewal.

Postdoctoral Awards may be awarded to postdoctoral trainees at non-profit universities, hospitals or research centers. These awards are for a maximum of \$76,000 for up to two years, with a limit of \$38,000 for any one year and no indirect costs allowed. Postdoctoral Awards may not be revised and are not eligible for renewal.

Matching Grants follow the same eligibility requirements as Investigator Initiated Grants. AICR is interested in working with for-profit corporations and/or not-for-profit organizations in funding cancer research consistent with AICR's areas of interest. AICR usually provides up to \$75,000 as its part of the funding arrangement. Applications are evaluated by a peer review process and are held to the same high and rigorous standards as all other AICR-funded grants.

3.2 Specific Research Priorities for the AICR 2010 Grant Cycle

The types of studies and research approaches reviewed by AICR for funding fall into three general categories:

1) The mechanisms through which food, nutrition and physical activity act to prevent cancer throughout the life course.

- Determination of biologically plausible mechanisms for the action of micronutrients, macronutrients, phytochemicals and dietary patterns on cancer risk.
- Determination of the influence of processing, distribution, storage, preparation and cooking on the anticarcinogenic or carcinogenic potential of foods.
- Identification and validation of biological or biochemical markers of cancer risk, including immunological and hormonal markers, which are influenced by dietary exposures.
- Examination of how interactions among factors such as dietary patterns, whole foods and food components, physical activity and genetic factors act to modify cancer risk.
- Mechanisms through which energy intake and expenditure, body composition, body weight and physical activity influence cancer risk.
- Mechanisms by which dietary agents modulate tumor stem cell survival and proliferation.
- Addition of a food, nutrition or physical activity component to a funded epidemiologic, intervention or clinical study that examines cancer risk or cancer prevention.

2) The mechanisms through which food, nutrition and physical activity act when they are used to treat or inhibit the progression of cancer.

- Investigation of the selective growth (nutritional) requirements of tumor cells as compared with normal cells.
- Identification of nutritional factors alone or in combination that can selectively suppress tumor cell growth.
- Investigation of the mechanisms through which micronutrients, macronutrients, energy balance and other nutritional factors may improve cancer treatment or reduce the toxicity of chemotherapy drugs, radiation, or immunotherapy, while sustaining or enhancing the efficacy of treatment.
- Identification of diets and dietary constituents that modify cancer development and how modulating these factors may arrest or reverse cancer or its precursor lesions.
- Mechanistic studies addressing energy intake and expenditure, body composition, body weight, physical activity and the treatment of cancer.
- Addition of a food, nutrition, or physical activity component to a funded epidemiologic, intervention, or clinical study that examines cancer treatment or the inhibition of cancer progression.

3) Food, nutrition, physical activity and the prevention of subsequent cancer and enhancement of quality of life in cancer survivors.

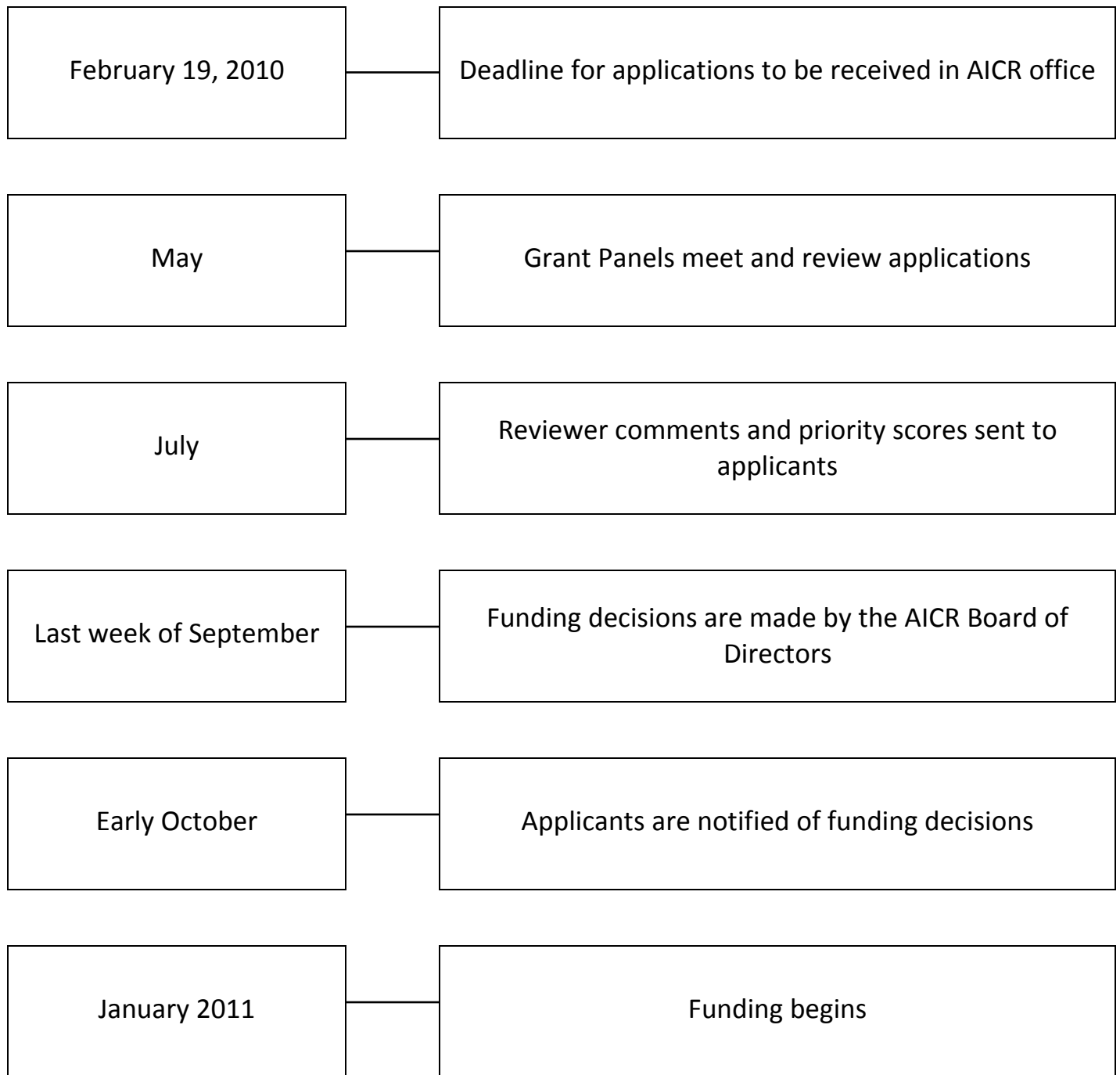
- Investigate differential mechanisms of action of food and nutrients on future cancer risk in cancer survivors as compared to those without cancer.
- Investigate nutrition-based treatments that enhance quality of life in cancer survivors, including those that mitigate negative effects of treatment.

- Addition of a nutrition component to a funded epidemiologic, intervention or clinical study on cancer survivors that will examine links between nutrition and cancer.

Please Note

1. An application may address one or more of these research priorities.
2. Preference will be given to applications that have direct relevance to human cancer.
3. Preference will also be given to applications that consider diets or foods as a whole and/or use whole body systems and use foods or dietary constituents in physiological amounts.
4. AICR recognizes the difficulty in distinguishing the medicinal uses of phytochemicals from their roles as nutrients and discourages applications that focus on the former. Such applications may be deemed out-of-scope upon receipt or during review.
5. AICR welcomes grants related to behavioral or laboratory measures that address a measurement problem that would allow an important area of research to move ahead. Preferably these would propose new and novel measures. Investigations of the properties of existing measures would be appropriate only if the work is novel and the findings are to be used as part of preliminary studies in support of planned NIH or similarly-funded applications.
6. Research may focus on any or all of the cancers in the systematic reviews of the 2007 AICR/WCRF second expert report as well as in the narrative reviews (including hematological cancers).
7. Given the interest in the diet and cancer field and the high quality of applications, *only* those applications that in the judgment of AICR and the AICR grant panels are of sufficient relevance to AICR's objectives will be considered suitable for review.

3.3 AICR Grant Application Timeline and Deadlines



4. INSTRUCTIONS FOR APPLICANTS

4.1 Eligibility

Research Grants are awarded to non-profit institutions. Principal Investigators working at an institution in the United States must be a citizen of the United States or foreign national with either permanent residence status or a visa that is valid for the duration of the grant award.

Grant applications will not be accepted from agencies of the federal government or agencies supported entirely by any federal or foreign government. All applications must bear the signature of the official head of the organization or that of a designee, since grants are not made to individual researchers.

AICR, in awarding grants, does not assume any responsibility for the conduct of the investigation or the acts or omissions of the investigator, since both are under the direction and control of the grantee's institution and are subject to its medical, ethical and scientific research policies.

For **Investigator Initiated Grants** and **Matching Grants**, the Principal Investigator must have a PhD, MD, or equivalent degree, and be a research staff or faculty member at a non-profit academic or research institution at the level of an assistant professor (or its equivalent) or higher.

For **Postdoctoral Awards**, the Principal Investigator must have a PhD, MD, or equivalent degree, awarded no more than four years prior to the date of application. The applicant must be sponsored by a professor from the facility or laboratory in which the applicant is to perform the research.

4.2 Types of Applications

New Applications

Most grant applications are for new projects. Only one grant application per Principal Investigator per grant cycle is permitted.

Revised Applications

If a new Investigator Initiated Grant is not funded but receives a priority score between 1.0 and 2.5, the Principal Investigator may revise the application and resubmit it during the next grant cycle. A revised application must include an additional section, inserted before Section 6 (Background and Significance), addressing the issues raised by the reviewers in their written reviews.

Note

Unfunded applicants who submitted a first revision of their application during the last grant cycle (February 2009) and received a priority score between 1.0 and 2.5 may submit a second revision during this cycle. In the future, no second revisions will be accepted.

Renewal Applications

Investigator Initiated Grants may be renewed one time. Renewal applications compete equally in the review process with new applications. Renewals must include a progress report and all manuscripts and reprints resulting from previous AICR funding. Postdoctoral Awards may not be renewed.

Award Terms

For Investigator Initiated Grants and Postdoctoral Awards, awards are generally made for a term of two years, although the applicant may specify a shorter period of time. Awards are made without assurance of continued support beyond the designated term.

4.3 Grant Budgets

Funds Available

Investigator Initiated Grants are awarded for a maximum \$150,000, plus 10% in indirect costs, with a limit of \$75,000 direct costs for any one year. Postdoctoral Awards are awarded for a maximum of \$76,000, with no indirect costs, with a limit of \$38,000 for any one year.

Budgets must be realistic estimates of the funds required for the proposed research. Unless specified otherwise, grants are generally made to cover the costs of such items as salaries for staff, research equipment and expendable supplies. Accurate financial tracking and management of the grant is the responsibility of the Principal Investigator, together with the institution's finance department. Budgets should be submitted in US dollars only.

Equipment

Requests for equipment in excess of \$500 should be itemized and justified on the budget attachment page. The title for equipment costing more than \$500 must stay with the AICR-sponsored project. If the Principal Investigator moves to a new organization and continues the AICR-sponsored project, the equipment and the title will transfer to the new organization. Equipment may not be purchased under a Postdoctoral Award.

Travel

Monies should be budgeted to present a poster at the AICR Annual Research Conference on Food, Nutrition, Physical Activity and Cancer at least once during the grant period. The maximum allowance for travel is \$2,000 in any one year.

Institutional Expenditures

The grantee institution is expected to provide the required physical facilities and administrative services normally available to research institutions. AICR does not provide funds for the items such as:

- Tuition and graduate fees
- Purchase of journals and books
- Purchase of lab or office furniture
- Payment of dues and memberships to professional societies

- Recruiting and relocation expenses
- Construction or maintenance of buildings
- Payment of non-medical or personal services to patients
- Payment of per diem charges for hospital beds

For Investigator Initiated Grant applications, indirect costs are computed at ten percent (10%) of total direct costs. No indirect costs are allowed for Postdoctoral Awards.

4.4 Grant Application Review Process

Review of All Applications

Applications must be received by AICR on or before the posted application deadline. Note: Applications that do not explicitly address one or more of AICR's research priorities, are not received on time or do not follow AICR's application instructions will be administratively rejected by AICR and will not be reviewed.

Accepted grant applications are reviewed by AICR's Grant Panels. The Grant Panels evaluate the scientific merit and novelty of the application; the qualifications, experience and productivity of the investigator; the facilities available; the budget; and the promise of the research for adding to our understanding of the role of food, nutrition, physical activity and weight management in relation to cancer prevention, treatment and survivorship.

Each application is reviewed by a primary and a secondary reviewer. Reviewers are asked to provide thoughtful and objective considerations of the application in light of the review criteria and to judge the merit of each proposal independently of other proposals. Reviewers provide written reviews that are discussed, in person, by the entire panel. The Panel chair leads the discussion and asks for input and comments from the other Panel members. If the Grant Panel finds that an application sent for review does not address one of AICR's specific research priorities, the application is deemed out of scope and is not discussed.

Grant applications are judged according to scientific merit and given a score between 1 and 5. Considerations for scoring include study design, hypothesis, supporting evidence, originality,

timeline and budget as well as the relevance to general and specific priorities. The written peer reviews are provided in unattributed form to the applicants at the end of the process.

At the end of the assessment process, each panel member gives the approved application a numerical score according to scientific merit, and these are averaged to prioritize them as a basis for funding decisions. Acceptance indicates that the application has sufficient merit to be worthy of funding; rejection indicates insufficient merit to warrant funding. Funding recommendations for accepted applications are based primarily on the priority scores assigned by the Grant Panel. Recommended grants are approved for funding by the AICR Board of Directors at their September meeting. Funding begins the following January.

AICR's grant program meets the general National Institutes of Health standards of peer review and funding. AICR support may be considered a "peer-reviewed, funded research project" and listed as competitive grant support on applications for research to government agencies and private funding organizations.

Additional Review Criteria for Postdoctoral Award Applications

Postdoctoral Award applications are reviewed using the criteria described above, with additional factors taken into account. In addition to reviewing scientific merit of the application, the Grant Panel reviews and discusses (1) the training plan for the applicant's professional progress; (2) the applicant's productivity, past experience and letters of support; (3) the mentor's productivity and evidence of successful training and mentoring; and (4) the overall research environment.

Please Note:

A well-thought out and detailed training plan is an essential component of a successful Postdoctoral Award application.

Conflicts of Interest

Members of an AICR Grant Review Panel may not review an application submitted by (1) a member of the same review panel, (2) a panel member's organization, or (3) a colleague who lists the panel member as having any responsibility or involvement in the project being reviewed or who collaborates or currently associates with the panel member in other capacities, which may or may not involve the application under consideration. In such cases, applications are reviewed by the other Grant Panel members and the member is barred from all discussion on the proposed project.

Collaboration with Other Organizations

AICR may occasionally enter into collaboration with for-profit corporations and/or non-profit organizations to fund cancer research consistent with AICR's areas of interest. (See page 5). Applications are evaluated using a peer review process and must meet the same high and rigorous standards as all other AICR funded grants.

Outcome

In July, applicants receive a packet containing their priority score, a summary statement of the Grant Panel's discussion and copies of the primary and secondary reviews. Applications with priority scores that may be in the fundable range are presented at the AICR Board meeting at the end of September. Notifications of funding decisions are made by early October.

For applications that are approved for funding, the notification letter includes the dates of the budget period; the amount of funds authorized for obligation to the grantee institution during the period indicated; the terms and conditions binding upon the award; and all general terms applicable to the award. (See section 6).

5. APPLICATION PROCEDURES: GUIDANCE FOR COMPLETING THE APPLICATION FORMS

This section provides guidance for completing the AICR grant application forms. AICR is moving to an online submission system that is expected to be in place and functional for the next grant cycle (2011). Procedures for the current grant cycle follow below.

Please Note:

Applications that are not clearly relevant to AICR's specific research priorities (see pages 5-6), exceed the page limitations or otherwise do not follow the instructions in this Grant Application Package will not be reviewed.

Applicants must use the most recent AICR application forms. The application forms are available online at www.aicr.org/grants.

Applicants should refer to the guidelines and policies for the grant program for which they are applying.

5.1 All Applications

All applications must include the original hard copy of the application, 3 additional hard copies and one CD or flash drive with a PDF version of the application. Please make sure that the entire application fits in one PDF file and that the file does not exceed 1 MB.

If the application includes an appendix, the original appendix and 2 hard copies should be submitted, separate from the hard copies of the application. The appendix is not to exceed 20 pages, front and back (40 pages of text). Preliminary data should be included in section 9 of the application, not in the appendix.

5.2 Revised and Renewal Applications

In addition to the above, **revised applications** should include a PDF copy and two hard copies of the application previously submitted that is being revised. **Renewal applications** should include PDF copies of the funded application, submitted progress reports and any manuscripts resulting

from the previous grant and two hard copies of the previous grant application.

Applications should be submitted to AICR at the following address:

American Institute for Cancer Research
Attention: Research Department
1759 R Street, NW
Washington, DC 20009
(202) 328-7744

5.3 Special Instructions for Postdoctoral Award Applications

AICR is committed to encouraging and supporting new researchers and scientists who are embarking on a career in nutrition and cancer research. See page 10 for information regarding the review of Postdoctoral Awards.

Postdoctoral Award applications *must* include the following:

- 1) A letter of recommendation from the sponsoring professor (mentor) that addresses the following:
 - a) the merit and independence of the candidate
 - b) the training program
 - c) the training environment and facilities
 - d) evidence of successful mentoring by the sponsoring professor
 - e) acknowledgment that the postdoctoral award is to be used for a minimum of 75% salary
 - f) acknowledgment that the application was written and prepared by the postdoctoral trainee and was reviewed by the sponsoring professor
- 2) The curriculum vitae of the sponsoring professor.

- 3) Two additional letters of recommendation from professors other than the sponsoring professor.

Please note:

If the postdoctoral training is in the same institution at which the applicant received a degree, please address how the proposed research differs from the applicant's doctoral research and what is being done to help the applicant achieve independence.

5.4 Application Form

Copies of the grant application form can be downloaded from the AICR Web site at www.aicr.org/grants.

The grant application form includes the following components:

- Cover page (Form APPLI)
- Budget proposal (Form BDGT)
- Biographical information (Form BIO)
- Certification for care and treatment of laboratory animals (Form LA)
- Certification for protection of human subjects and containment for recombinant DNA molecules (Form HS/DNA)
- Standard release form (Form RELEASE)
- Checklist (Form CKLST)

Sections of the proposal and instructions for each section are outlined below.

Format

The remaining pages of the application should be typed, single-spaced on plain white letter-sized paper. The type must be clear and readily legible, using Times Roman 12-point font or larger. Smaller point font will not be accepted.

If constant spacing is used, there should be no more than 15 cpi, whereas proportional spacing should provide an average of no more than 15 cpi. Also, there must be no more than six lines of text within a vertical inch. Margins should be at least one-half inch from the top, bottom and both sides of the page. Pages should be numbered consecutively from the Cover Page (page 1) through the Checklist (last page). All pages except the Cover Page should

include the name of the Principal Investigator in the upper right corner.

5.5 Instructions for Completing Grant Application

1) Cover Page – 1 page

The Cover Page must be completed in its entirety. Provide all the information requested in the ten boxes. The form must be signed by the Principal Investigator and the authorized organizational officer.

2) Budget Proposal – maximum of 3 pages

The Budget Proposal must be completed in its entirety. Budgets must be realistic estimates of the funds required for the proposed research and presented in US dollars. If no funds are requested for a particular budget category, indicate N/A. Even if the Principal Investigator is not requesting a salary, state the percentage of time he or she will devote to the project. When possible, personnel should be named with position title; otherwise indicate "to be named."

On a Budget Attachment page (a separate page), explain the roles of the individuals budgeted for this project. Unless otherwise specified, a grant is generally made to cover the cost of such items as salaries for professionals and technical assistants, research equipment and expendable supplies, and travel.

Personnel compensated in whole or in part with funds from a grant shall not be considered as employees of the American Institute for Cancer Research, but as employees of the grantee institution.

Travel funds may not exceed a total of \$2,000 per year for the grant term. Monies should be budgeted for travel to attend AICR's Annual Research Conference at least one time during the two-year grant period. (See page 9).

3) **Biographical Information – maximum of 4 pages per investigator, including BIO form**

Biographical information pages should be completed for all key personnel. The biographical sketch format used by the National Institutes of Health (NIH) may be used. Include only those publications that are pertinent to the AICR proposal.

Indicate all funding support (pending and approved) for each investigator identified in the budget section. Show the percent effort from each funding source for each investigator, summarize the Specific Aims for all projects, and indicate any overlap between this AICR application and other pending or approved projects. *This sub-section should not exceed 2 pages.*

4) **Certification and Release Forms**

- a) The “Certification for Care and Treatment of Laboratory Animals” must be reviewed and signed for *all* applications.
- b) The “Certification for Protection of Human Subjects and Containment for Recombinant DNA Molecules” must be reviewed and signed for *all* applications.
- c) The “Standard Release Form” must be completed and signed by the Principal Investigator.

5) **Scientific Abstract and Public Information Abstract**

On separate pages, prepare two abstracts, one scientific and one for public information. The public information abstract should be written at the level of newspaper and magazine articles, so that it can be easily understood by the general public. If complex scientific terms have to be used, their meaning must be explained. Abstracts should not exceed 350 words each.

Both abstracts must:

- a) Include the title of the project and the Principal Investigator’s name and address
- b) Describe the hypothesis, objectives and design of the proposed studies
- c) Describe the relevance of anticipated results to diet, nutrition and cancer and the likelihood that these results might save or prolong lives
- d) Include a list of key words at the end of the abstract

6) **Background and Significance – maximum of 2 pages**

Briefly review the background literature and existing knowledge that led to the hypothesis to be investigated. Clearly state the relevance of the proposed research to understanding the affects of dietary factors on cancer prevention or treatment. References cited should be listed numerically in the references section.

For revised applications, a response to the critiques of the previous application should be placed immediately before this section. Responses should not exceed 2 pages and are not counted toward the application page limitations.

7) **Specific Aims – 1 page maximum**

Enumerate the aims of the intended research. List the aims in the sequence in which they are to be studied.

8) **Research Design and Methods – maximum of 4 pages**

Concisely describe the study design. A schematic presentation is often helpful. Reprints of publications that have additional descriptions of the methods used may be included in the appendix. Appropriate statistical methods of analysis should be discussed.

Indicate any difficulties that might be anticipated in the interpretation of results.

9) **Preliminary Data or Progress Report – maximum of 3 pages**

Preliminary data (if applicable) should be included in this section. A progress report is required for all renewal applications. The progress report should summarize the results obtained in the previous grant period and list any publications supported by the grant. Include copies of publications from the previous grant.

10) **Facilities – maximum of 1 page for section 10 and 11 together**

Briefly describe the availability of facilities, laboratory space, and major equipment.

11) **Consultation – maximum of 1 page for section 10 and 11 together**

Describe the availability of expertise to be provided from colleagues both within and outside the institution. Letters from such colleagues indicating their willingness to participate in the study should be included in the appendix.

12) **References**

References cited in the application should be provided in this section. References should be listed in numerical order as they appeared in the narrative sections and reference style should follow that of the Uniform Requirements for Manuscripts Submitted to Biomedical Journals, found on the Web site of the National Library of Medicine. (www.nlm.nih.gov/bsd/uniform_requirements.html).

13) **Appendix – maximum of 40 pages (20 pages printed front and back)**

Itemize appendix material, such as reprints, letters of support and other relevant material and insert them after Section 12. For

Postdoctoral Awards, letters of support should be placed in this section.

Please note: Preliminary data should be included in the “Preliminary Data or Progress Report” section of the application, not in the appendix.

Submit the original and 2 hard copies of the appendix *separate* from the application.

14) **Proof of Non-Profit Status**

Proof of non-profit status of the institution must be submitted with the grant application. Examples of acceptable evidence are:

- A reference to the applicant’s organization listing in the Internal Revenue Service’s (IRS) most recent list of tax-exempt organizations described in section 501(c)(3) of the IRS Code
- A copy of a currently valid IRS tax exemption certificate
- A certified copy of the organization’s certificate of incorporation or similar document that clearly establishes non-profit status

15) **Checklist**

The checklist is to be the last page of the application. Check each item as appropriate. For releases that are pending, write in the date the approved release will be available.

Applications can be reviewed, but grants cannot be awarded, if AICR does not have all required certifications.

Please do not staple the grant application. Applications that do not adhere to these guidelines will be returned without review.

6. PROCEDURES FOR FUNDED GRANTS: TERMS AND CONDITIONS

6.1 Getting Started

Notice

Successful applicants will be notified in writing by the AICR Research Department in early October 2010, after grants are approved for funding. The initial letter includes the dates of the budget period and the amount of funds authorized during the period indicated.

Award Terms

For Investigator Initiated Grants and Postdoctoral Awards, awards generally are made for a term of 2 years, although the applicant may specify a shorter period of time. Awards are made without assurance of continued support beyond the designated term.

Funds Disbursement

Payments on Investigator Initiated Grants will be made by AICR on a monthly basis, at the end of each month within the grant payment period. For Postdoctoral Awards, AICR will make four payments per year within the grant payment period. Note that all funds are disbursed at the end of the month, beginning with the commencement date of the grant term, and are disbursed in US dollars. AICR's Accounting Department will notify the designated institution of the official payment schedule.

6.2 Changes to the Grant

Budget

AICR allows the Principal Investigator justified transfers of funds between the following categories in the budget: personnel, equipment, supplies, travel and miscellaneous. Any budget transfer between categories that is greater than 25% requires prior written approval from AICR. Transfers must be within the approved budget amounts.

Transfer to a New Institution

Grants may be transferred from one institution to another with prior written approval from AICR. The Principal Investigator of the grant is responsible for submitting the following to AICR, in a timely manner:

- A letter from the Principal Investigator requesting transfer of the grant to the new institution. The letter should include the Principal Investigator's new contact information as well as the name and contact information for the new grants administration officer.
- Written release and a final report of expenditures from the original institution, together with the refund to AICR of any unexpended balance.
- Written acceptance of the grant by an authorized official of the new institution.

This also applies to grants that are transferred before the grant start date. AICR will notify the institution and the Principal Investigator of approval in writing.

Payments will be initiated to the new institution upon receipt of a final financial accounting of all expenditure from the original institution and a letter acknowledging that the grant has been accepted by the transfer institution.

Transfer to a New Principal Investigator

Grants may also be transferred from one Principal Investigator to another with prior approval from AICR. When a transfer from one Principal Investigator to another is sought, the original investigator must submit a request in writing, stating the reason for the requested change, with evidence that the proposed new investigator can complete the project. Also, include a completed biographical information section of AICR's application form and a CV for the proposed new Principal Investigator. The new Principal Investigator must also submit a letter of intent to AICR. AICR will then notify the Principal Investigator in writing of its decision whether or not to transfer the grant.

Unfunded (no-cost) Extension

The grant period may be extended for up to one year without additional funds after prior written approval from AICR. Requests for extensions should be submitted no less than two months prior to the expiration of the grant period. AICR will notify the

Principal Investigator in writing of its decision whether or not to grant the extension.

Cancellation

A grant may be cancelled by either party upon 30 days' written notice. In the event of cancellation by AICR, the institution granted the award will be reimbursed for all costs incurred and all non-cancelled commitments that formed part of the original grant that was approved. In the event of cancellation by the institution granted the award, any unexpended funds that have been advanced by AICR should be refunded to AICR.

6.3 Monitoring of Grants

Progress Report

At the end of the first year of any two-year grant, the Principal Investigator must submit a progress report, including abstracts and publications of research supported in whole or in part by AICR. If there are no published materials credited to the grant, the report should be no more than three typed pages and include any progress made on the specific aims as outlined in the grant application or other relevant information illustrating the status of the grant. At the discretion of AICR, funds for the second year of the grant may be withheld based on the progress report or if progress reports are not submitted.

Final Scientific Report

Within three months of the completion of the grant period, AICR requires a final comprehensive report to outline the project's accomplishments. The final report must include a scientific summary, a plain language summary and a scientific report. The scientific report can be up to 3,000 words (plus reference section) and should include outcomes and describe achievements related to the initial proposal. A list of publications resulting from the project should also be included.

Electronic copies of all publications or manuscripts in press must be included with the final report. Electronic copies of any publication published after the final report is submitted should be forwarded to AICR as soon as they are available.

Failure to submit a final report will result in automatic disqualification from submitting a grant application to AICR for two years.

Final Financial Report

A final report of expenditures must be submitted within three months of the termination of the grant, together with the refund of any unexpended funds. Unexpended funds from an existing grant may only be carried forward as a no-cost extension to the grant term with the written permission of AICR.

AICR is not responsible for the over-expenditure of grant funds, for commitments against a grant not paid within 60 days after termination or for expenditures made before the starting date of a grant.

6.4 Dissemination

Publication

Publications resulting from research supported wholly or in part by AICR must contain an acknowledgment such as: "Supported by a grant from the American Institute for Cancer Research."

The Principal investigator must send a copy of all papers submitted to journals for publication and must notify AICR as soon as a scientific paper is accepted for publication by a journal. This will enable the AICR press office, in consultation with the lead author, to decide whether the work should be the subject of a press release on publication.

Failure to notify AICR of forthcoming publications may result in disqualification from submitting a grant application to AICR for a two-year period.

Conferences

Principal Investigators and their collaborators are strongly encouraged to attend and present a poster on their AICR-funded research at AICR's Annual Research Conference on Food, Nutrition, Physical Activity and Cancer, as well as at other appropriate conferences. Costs for such activities should be included as part of the budget available for travel and conferences, up to a maximum of \$2,000 per year.

Publicity

Publicity is absolutely vital to charities raising funds from members of the public. It is therefore likely that from time to time, researchers funded by AICR will be called upon to help with press calls regarding the topic of the grant. It is part of your grant acceptance that you agree to help whenever reasonably possible.

A digital photograph of the Principal Investigator must be submitted within six months of the grant award. During the funding period grant recipients may be interviewed for a report to be featured in one of our newsletters.

6.5 Intellectual Property and Patents

AICR does not assume any rights and makes no claim to any intellectual property relating to an AICR grant. All rights regarding intellectual property will be resolved between the grantee and the grantee institution.

7. GRANT HOLDERS

All Investigator Initiated Grants and Postdoctoral Awards funded by AICR over the past two years are listed below. For further information, visit our Web site at www.aicr.org.

Principal Investigator (PI)	Institution, City, State	Research Project Title
Harini Aiyer, PhD	University of Louisville Louisville, KY	Prevention of tamoxifen resistance by green tea polyphenols
Leonard Augenlicht, PhD	Albert Einstein Cancer Center Bronx, NY	Dietary induced sporadic colon cancer
Mohammad Saleem Bhat, PhD	University of Wisconsin-Madison Madison, WI	Targeting of cFLIP by lupeol, a dietary triterpene, for the chemoprevention of pancreatic cancer
Michael Bordonaro, PhD	The Commonwealth Medical College Scranton, PA	Factors determining the apoptotic response of colorectal carcinoma cells to butyrate, a fermentation product derived from dietary fiber
Scott Bultman, PhD	University of North Carolina at Chapel Hill Chapel Hill, NC	The role of dietary fiber and gut microflora in prevention of colorectal cancer
Megan M. Caulum, PhD	Colorado State University Fort Collins, CO	Metabolic profiling of plants for health
Melpo Christofidou-Solomidou, PhD	University of Pennsylvania Philadelphia, PA	Use of Secoisolariciresinol Disglucoside (SDG) in radiation pneumonopathy
Qi Dai, MD, PhD	Vanderbilt University Medical Center Nashville, TN	Magnesium, calcium and risk for colorectal adenoma
Maria Cecilia Daroqui, PhD	Montefiore Medical Center Bronx, NY	Transcriptional attenuation induced by sodium butyrate and vitamin D3 in colon cancer cells
Nathan Ellis, MD	University of Chicago Chicago, IL	Genetic interactions in vitamin D and colorectal cancer in African Americans
Marielle Engelen, PhD	University of Arkansas for Medical Sciences Little Rock, AR	Effects of essential amino acid intake on net protein synthesis in weight-losing non-small cell lung cancer patients
James Fleet, PhD	Purdue University West Lafayette, IN	Does vitamin D status modulate colon cancer driven by APC allele loss?
Lindsay Frazier, MD, ScM	Dana Farber Cancer Institute Boston, MA	Adolescent diet and benign breast disease

Principal Investigator (PI)	Institution, City, State	Research Project Title
Peter Gann, MD, ScD	University of Illinois at Chicago Chicago, IL	The effect of a lycopene-rich tomato extract on gene expression in benign prostate tissue: results from a randomized trial in men with HGPIN
Erin Giles, PhD	University of Colorado, Denver Aurora, CO	Metabolic inflexibility: a potential link between obesity and postmenopausal breast cancer
Stephen D. Hursting, PhD, MPH	University of Texas at Austin Austin, TX	Obesity, energy balance and breast cancer: the role of insulin-like growth factor -1
Margot M. Ip, PhD	Roswell Park Cancer Institute Buffalo, NY	Chemoprevention of her2/neu overexpressing breast cancer
Julie Kasperzyk, PhD	Brigham and Women's Hospital Boston, MA	Dietary factors in relation to prostate cancer risk and survival
Kara Kelly, MD	Columbia University New York, NY	Does dietary folate intake modify treatment-related toxicity or disease outcome among children with acute lymphoblastic leukemia?
Chungho Kim, PhD	University of California, San Diego La Jolla, CA	Effect of EGCG, a phytochemical from green tea, on integrin activation and cancer cell metastasis
Michelle A. Lane, PhD	Texas Tech University San Marcos, TX	Interaction between vitamin A and phosphatidylinositol 3-kinase in colorectal tumor metastasis
Jung Eun Lee, ScD	Brigham and Women's Hospital Boston, MA	Vitamin B6 and colorectal neoplasia: modification by time
Yuanyuan Li, MD, PhD	University of Alabama at Birmingham Birmingham, AL	Epigenetics of genistein and/or soy isoflavone in breast cancer prevention
Yunbo Li, MD, PhD	Virginia College of Osteopathic Medicine Blacksburg, VA	Enhancement of doxorubicin therapy via protecting against chronic heart failure by a unique nutraceutical
Unhee Lim, PhD	University of Hawaii Honolulu, HI	Dietary intake of choline and betaine, related genetic polymorphisms, and the risk of colorectal cancer
Lilian Maggio-Price, PhD, VMD	University of Washington Seattle, WA	Chemoprevention of DSS-induced colitis and colorectal cancer by dietary vitamin D in mice with defective TGF signaling
Ania Majewska, PhD	University of Rochester Rochester, NY	The role of caffeine in breast tumor metastasis to the brain
Michelle M. Martinez, PhD	Universidad Central del Caribe Bayamon, Puerto Rico	Mechanisms of anti-inflammatory breast cancer action of Reishi mushroom
Andrea Mastro, PhD	Pennsylvania State University University Park, PA	The effects of dietary selenium supplementation on breast cancer metastasis

Principal Investigator (PI)	Institution, City, State	Research Project Title
Samantha Morley, PhD	Case Western Reserve University Cleveland, OH	The alpha tocopherol transfer protein, vitamin E and prostate cancer
Julie Saba, MD, PhD	Children's Hospital Oakland Research Institute Oakland, CA	Soy sphingadienes and related compounds in colon cancer chemoprevention and treatment
Ravi Sahu, PhD	Indiana University-Purdue University Indianapolis (IUPUI) Indianapolis, IN	Role of oxGPCs/PAFR in BITC mediated suppression of melanoma
Christine Seppanen, PhD	University of Minnesota Austin, MN	Calorie restriction, lipid peroxidation, and mammary tumor prevention
Lilian Thompson, PhD	University of Toronto Toronto, ON, Canada	Interactive effect of flaxseed and trastuzumab in reducing the growth of human breast tumors over expressing HER2
Robert Uzzo, MD	Fox Chase Cancer Center Philadelphia, PA	Therapeutic synergy between piperine and docetaxel against prostate cancer
Ranal Wada, MD	Cancer Research Center of Hawaii Honolulu, HI	Regulation of the MYCN oncogene in neuroblastoma
Robin T. Wilson, PhD	Pennsylvania State University University Park, PA	Exposure to divalent heavy metals in fish and tobacco, biomarkers and susceptibility and risk of renal cell cancer
Kana Wu, MD, MPH, PhD	Harvard School of Public Health Boston, MA	Adolescent diet and lifestyle factors and colorectal adenoma

Contact us for more information on the grant program and expert reports:

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8. AICR/WCRF EXPERT REPORTS

8.1 Recommendations from the Second Expert Report

1. Be as lean as possible without becoming underweight.
2. Be physically active for at least 30 minutes every day.
3. Avoid sugary drinks. Limit consumption of energy-dense foods (particularly processed foods high in added sugar, or low in fiber, or high in fat).
4. Eat more of a variety of vegetables, fruits, whole grains and legumes such as beans.
5. Limit consumption of red meats (such as beef, pork and lamb) and avoid processed meats.
6. If consumed at all, limit alcoholic drinks to 2 for men and 1 for women a day.
7. Limit consumption of salty foods and foods processed with salt (sodium).
8. Don't use supplements to protect against cancer.

Special Population Recommendations

9. It is best for mothers to breastfeed exclusively for up to 6 months and then add other liquids and foods.
10. After treatment, cancer survivors should follow the recommendations for cancer prevention.

And always remember – do not smoke or chew tobacco.

8.2 AICR/WCRF Policy Report

The second expert report features personal recommendations for people as well as public health goals for the population as a whole, as an aid to policy-makers and health professionals in setting goals and monitoring progress. But setting these targets is just one step. Understanding how to successfully achieve them is equally important.

The AICR/WCRF policy report, *Policy and Action for Cancer Prevention*, a companion publication to the second expert report, addresses the reasons why people follow the dietary practices and physical activity patterns they do. It also looks at the outcome of actions that might change those behaviors, whether intentionally or not.

Based on a review of this evidence, the policy report makes recommendations on what can be done to make it more likely that people will behave in ways that meet the 2007 recommendations, as they relate to their risk of cancer. Recommendations are made to nine groups of actors: multinational bodies, civil society organizations, government, industry, media, schools, workplaces and institutions, health and other professionals, and people (as members of families and communities). As well as looking at what society can do to reduce the cancer burden, the policy report provides new estimates for how much cancer can be prevented through improved patterns of food, nutrition, and physical activity.

For more information visit the report Web site at www.dietandcancerreport.org.



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