



Oklahoma Center for the Advancement of Science and Technology

OKLAHOMA HEALTH RESEARCH PROGRAM

Intent Deadline:

5 PM, February 1, 2012

An intent must be submitted by the deadline to be eligible to apply

Application Deadline:

5 PM, February 22, 2012

Target Contract Start Date:

August 1, 2012

Online tools are optional and are not required to prepare an application. This solicitation is available at www.ok.gov/ocast, on the OCAST website under the section Program Support/Solicitation/Health Research.

OCAST may amend the solicitations. Amendments can be found on OCAST's website under the section Oklahoma Health Research Amendments. It is the responsibility of the applicant to review any such amendments and make necessary changes in the application to meet the amended solicitation requirements.

The free Acrobat Reader Version 8 allows you to save your completed forms to your computer. Earlier versions of the Acrobat Reader do not allow you to save work. For best results, it is recommended you download and open this file from your computer hard drive.

For best results, it is recommended that these forms be filled out on a PC.

Oklahoma Center for the Advancement of Science and Technology
755 Research Parkway, Suite 110
Oklahoma City, OK 73104-3612
Office: 405-319-8400
Toll Free: 866-265-2215
Fax: 405-319-8426
www.ok.gov/ocast

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OKLAHOMA CENTER FOR THE ADVANCEMENT OF SCIENCE AND TECHNOLOGY

OKLAHOMA HEALTH RESEARCH PROGRAM SOLICITATION

PROGRAM PURPOSE AND DESCRIPTION

The Oklahoma Health Research program provides seed funding to superior research projects conducted by Oklahoma-based investigators for the multiple purposes of (1) enhancing the competitiveness of Oklahoma health researchers for national research funds, (2) recruiting and retaining outstanding health research scientists for the state, (3) improving health care for Oklahoma citizens and (4) strengthening the state's health care industry.

Under this program, OCAST awards competitive health research funds, through professional service contracts, to public and private colleges and universities in Oklahoma, nonprofit health research organizations in the state and private enterprises of special importance to the Oklahoma economy. Research funded under this program investigates the causes, diagnosis, treatment and prevention of human diseases and disabilities and facilitates the development of health care products and services.

The Health Research program funds projects for one to three years at a minimum of \$10,000 to a maximum level of \$45,000 per year. Funding awards are made on a year-by-year basis. Neither approval of a multiple-year award nor funding of any year of a contract shall automatically lead to funding in subsequent years. For each year originally awarded, funding shall be dependent on a satisfactory annual performance evaluation and the availability of funds.

PROGRAM ADMINISTRATION

OCAST administers the Oklahoma Health Research program under the governance of the statutorily created Oklahoma Science and Technology Research and Development (OSTRaD) Board of Directors. The Programs Division of OCAST is responsible for the development of program specifications, production and distribution of proposal solicitations, processing of applications, organization and implementation of peer reviews, award of contracts and monitoring of contract performance.

The governor-appointed Oklahoma Health Research Committee (OHRC) acts in an advisory capacity to the OSTRaD board and OCAST staff. This statutorily created committee is required to include eight health research scientists and one member who is from the clergy or who has an advanced degree in philosophy from an accredited institution of higher learning. All nine members must satisfy stringent statutory requirements. A membership list of the OHRC is available at the OCAST web site.

The OHRC recommends program policies and procedures and advises and assists in the organization and implementation of the peer review of Oklahoma Health Research program applications. The OHRC also advises and assists in the annual performance evaluation of funded Oklahoma Health Research program projects.

HEALTH RESEARCH PROJECT DEFINED

is defined in Oklahoma statute as:

. . . a specific examination, experimentation or investigation or initiative to provide research resources oriented principally toward basic, applied and developmental scientific inquiry related to the causes, diagnosis, prevention and treatment of human diseases and disabilities and mental health and emotional disorders and the rehabilitation of persons afflicted with such diseases, disabilities and disorders; new knowledge, better understanding and innovative methods to improve the processes by which health care

services are made available and how they may be provided more efficiently, more effectively and at a lower cost, for all the citizens of this state; and the development of new products and services which shall form the basis of new high-technology health research and care industry for this state (74 O.S., Section 5060.4).

APPLICANT ELIGIBILITY

OCAST has purposely kept strict applicant eligibility requirements to a minimum. While this encourages broad participation in the Oklahoma Health Research program, it also means the program receives more applications than it can fund. Investigators must be residents of Oklahoma before the ninetieth (90) day after a professional services contract, pursuant to which they will be functioning as an investigator who has been funded by OCAST. Peer reviewers carefully consider the experience and expertise of applicants as documented in the application.

ELIGIBLE ORGANIZATIONS

By statute, an *eligible applicant organization* is (1) an Oklahoma public or private college or university, (2) a non-profit research organization or (3) an enterprise of special importance to the Oklahoma economy.

Enterprise is defined as a firm with its principal place of business in Oklahoma.

The **principal investigator** (commonly referred to as the PI) preparing an application (1) shall be employed by or affiliated with an eligible applicant organization, and (2) is an Oklahoma resident

Investigator is statutorily defined as

. . . a person who proposes research projects and is primarily responsible for the execution of the proposed projects and is employed by or affiliated with an institution of higher education, a nonprofit research institution in this state or a private enterprise.

PREVIOUS RECIPIENT ELIGIBILITY

OCAST requires previous recipients of an Oklahoma Health Research contract to submit one or more applications to a national funding organization prior to applying for new funding from OCAST. Previous recipients must address this in Item 26 of the Required Attachments.

An individual PI may hold only one Oklahoma Health Research contract at a time; however, a currently funded PI may compete with a new project and, if successful, decline the current award to accept the new award. A currently funded PI may also apply if the current project funding ends prior to the beginning of funding of a new FY12 award. OCAST informs reviewers regarding satisfactory or unsatisfactory performance on previous OCAST contracts.

Any applicant organization or PI who, in OCAST's judgment, has failed to correct a material breach of a contract previously awarded under any of OCAST programs will not be eligible to be awarded a new funding contract.

Any PI who has a delinquent progress report or has not responded to other OCAST requests for information, impact survey data or special reports on a previously funded OCAST project will not be eligible to submit an application for new project funding. Any PI who has a delinquent progress report at the time of review will not be eligible for review. Any PI with a delinquent progress report at the time of award will not receive a contract until the progress report has been submitted. In the latter case, if the delinquent report has not been submitted within 60 days of the award date, OCAST will nullify the award and return the monies to the Oklahoma Health Research fund.

CHANGE OF PRINCIPAL INVESTIGATOR

If the PI of a proposed project becomes unable to perform the proposed research between submission of the application and the initial contract period, OCAST will not allow a change in PI. Consequently, if the original PI ceases to head the project between submission and review, the project will not be eligible for review; if the original PI is lost to the project prior to award, the project will not be considered for award. When a PI on a proposed project becomes unable to perform, the applicant organization(s) must inform OCAST within 10 days. If funds have been awarded, monies will revert to the Oklahoma Health Research fund.

CONFLICT OF INTEREST

Neither members of the OSTRaD board nor the Oklahoma Health Research Committee shall be precluded from participating directly in an Oklahoma Health Research program project. However, any director, officer, agent or employee of OCAST, including any member of an advisory committee or review panel, shall comply with the conflict of interest provisions from the OCAST statute which reads as follows:

If a member of the board of directors, officer, agent or employee of the Oklahoma Center for the Advancement of Science and Technology (OCAST) has any direct or indirect interest in any approval, contract or agreement upon which the member, officer, agent or employee may be called upon to act or vote, the board member, officer, agent or employee shall disclose the same to the secretary of OCAST prior to the taking of final action by OCAST concerning such contract or agreement and shall so disclose the nature and extent of such interest and his or her acquisition thereof, which disclosure shall be publicly acknowledged by OCAST and entered upon the minutes of OCAST. If a board member, officer, agent or employee holds such an interest, he or she shall refrain from any further official involvement in regard to such contract or agreement, from voting on any matter pertaining to such contract or agreement and from communicating with other board members, officers, agents or employees concerning said contract or agreement . . .

Indirect interest shall include pecuniary or competitive advantage which exists or could foreseeably accrue as a result of the act or forbearance of OCAST (74 O.S., Section 5060.7).

SUBMISSION REQUIREMENTS AND DEADLINES

The Statement of Intent must be received by OCAST by 5 PM, February 1, 2012.

Each PI submitting an application must submit a Statement of Intent form to the Oklahoma City office by the required deadline. PIs may submit only one Statement of Intent. Only the OCAST Statement of Intent form will be accepted; letters of intent written by the PI are not acceptable. Only those applicants who comply with this requirement shall be eligible to submit an application. Intents may be faxed to 405-319-8426 to meet the deadline. It is the responsibility of the PI to ensure the intent is received by OCAST by the deadline. The applicant assumes the risk the OCAST fax machine may be overloaded or otherwise inoperable close to the scheduled deadline. Statements of Intent will not be accepted via electronic mail or in any electronic format. **If faxing a Statement of Intent, do not also send an original copy.**

After the Statement of Intent submission deadline, a project number will be e-mailed to the PI who submits an intent form by the scheduled deadline. The project number must be placed in the upper right hand corner of all copies of all text and forms submitted with the application.

The application must be received by OCAST by 5 PM, February 22, 2012.

Each PI applying may submit only one (1) application per funding cycle. With the exception of documentation of institutional review board (IRB) approval of experiments using human subjects, vertebrate animals or recombinant DNA, OCAST must receive all materials pertaining to the application by the required deadline. No additional documents for an application will be accepted after the deadline.

Application submission address:

OCAST
755 Research Parkway, Suite 110
Oklahoma City, OK 73104-3612
Phone: 405-319-8400
Toll Free: 866-265-2215

Applications will not be accepted via facsimile, electronic mail or in any electronic format. No applications or supplemental materials shall be accepted after the submission deadline except at the request of OCAST.

Required Materials: Applications eligible for review should contain all items listed in the sample Table of Contents in application **Item 7**. OCAST may return applications that are judged to be incomplete or inappropriately completed without review. Applications that do not include all of the required information described in the Research Plan Section (Application required attachment **Item 28**) or the required Letter of Commitment (Application required attachment **Item 30**) may be returned without review.

Each Oklahoma Health Research program applicant shall submit the following materials organized as specified below:

Each application must include a CD containing an electronic copy of the entire proposal must be named HR12-XXX and PI's first and last name.pdf, (e.g., HR12-001 Jane Doe) where XXX is the project number received from OCAST upon submission of the Statement of Intent form. For identification purposes, the face of the CD must be marked by a permanent marker or printed label using the above example. The application contained on the CD is what the reviewers will receive to complete their evaluations. Therefore, please check your CD on a PC (preferably different from the one on which the CD was created) before submitting it to OCAST. OCAST will not be held responsible for CDs that arrive blank or improperly saved and such applications may not be forwarded to the reviewers.

Number	Contents
1	Original paper application, marked "original," with appendices attached (stapled or left unbound). Prepare required application form pages 1-11 (Items 1-23) as provided. Refer to required attachments pages 1-8 (Items 24-33) for instructions to prepare text sections of the application including, presentation order and headings.
1	Paper set of application form pages 1-11 (Items 1-23), stapled in the upper left corner.
1 CD	File containing the entire application in .pdf format, including appendices. Signatures are not required on the CD.

DO NOT USE binders or notebooks, rubber bands or regular paper clips to assemble your application. OCAST prefers to receive applications with as little hardware and extra paper as possible. Please do not include extra cover sheets, binder clips, or folders. Please submit your unbound full application, stapled extra set of forms, and CD in one envelope.

Institutional Reviews, Hazardous Substances: Work with human subjects, vertebrate animals, recombinant DNA, narcotics and dangerous drugs, radioactive substances and biological hazards require special approval or license and, in some cases, specialized training in order to engage in certain research. In addition, many chemicals require special handling or equipment. The applicant organization is responsible for ascertaining that state as well as applicable federal requirements are met. The PI and applicant organization shall supply evidence of compliance, qualification or license(s) as specified (**See attachment requirements Item 31**).

RESUBMISSIONS

Resubmissions have fared well in OCAST reviews; however, it is important the applicant include ALL required materials listed below. A PI resubmitting a proposed project that was not funded in a previous Oklahoma Health Research program funding competition must proceed as follows:

1. indicate it is a *resubmission* on application form Item 3
2. prepare an **Appendix II**, which includes the following:
 - a. letter which responds to the reviewers' comments from the previous review and notes all changes in the new research plan
 - b. copy of the previously submitted application
 - c. all reviews of that application

REVIEW PROCESS

Oklahoma statutes obligate OCAST to ensure that funding to support health research projects is awarded only on the basis of scientific merit. Statutorily, a review must evaluate the merits of proposed health research projects, the qualifications of investigators and the facilities in which the proposed health research projects shall be performed.

Scientists who reside outside the state of Oklahoma and are nominated and approved by the Oklahoma Health Research Committee review all applications. Reviewers rank applications for funding on the basis of the scientific merit of the proposed research. The reviewers establish the budget amount for each application recommended for funding.

The staff provides reviewer recommendations to the OSTRaD board, which grants approval for funding.

EVALUATION CRITERIA

In general, in addition to evaluating the **appropriateness of the budget**, peer reviewers evaluate applications for scientific merit according to the following criteria:

1. **Significance:** Does this study address an important problem? If the aims of the application are achieved, how will scientific knowledge or clinical practice be advanced? What will be the effect of these studies on the concepts, methods, technologies, treatments, services or preventive interventions that drive this field?
2. **Approach:** Are the conceptual or clinical framework, design, methods and analyses adequately developed, well integrated, well reasoned and appropriate to the aims of the project? Does the applicant acknowledge potential problem areas and consider alternative tactics?
3. **Innovation:** Is the project original and innovative? For example: Does the project challenge existing paradigms or clinical practice; address an innovative hypothesis or critical barrier to progress in the field? Does the project develop or employ novel concepts, approaches, methodologies, tools or technologies for this area?
4. **Investigators:** Are the investigators appropriately trained and well suited to carry out this work? Is the work proposed appropriate to the experience level of the principal investigator and other researchers? Does the investigative team bring complementary and integrated expertise to the project (if applicable)?
5. **Environment:** Does the scientific environment in which the work will be done contribute to the probability of success? Do the proposed studies benefit from unique features of the scientific environment or subject populations or employ useful collaborative arrangements? Is there evidence of institutional support?

OVERALL EVALUATION

In one paragraph, briefly summarize the most important points of the critique, addressing the strengths and weaknesses of the application in terms of the five review criteria. Recommend a score reflecting the overall impact of the project on the field, weighing the review criteria, as you feel appropriate for each application. An application does not need to be strong in all categories to be judged likely to have a major scientific impact and, thus, deserve a high merit rating. For example, an investigator may propose to carry out important work that by its nature is not innovative, but is essential to move a field forward.

ECONOMIC DEVELOPMENT

Economic Impact Potential: Part of the legislative mandate for the Oklahoma Health Research program is to stimulate economic growth by facilitating technological development. Although a developing program may require many years to have a meaningful impact, the Oklahoma Health Research committee and the OSTRaD board and staff are making a serious effort to develop this aspect of the program. Accordingly, OCAST asks reviewers to recognize and reward excellent applied research as well as that which has fundamental importance. Reviewers may complete a commercial potential form for each proposal in which they can identify any product, concept or service which, in their opinion, has potential. OCAST forwards any such information to the PI in hopes that he or she and the applicant organization can find a successful means to develop it. Commercialization potential is not a review criterion.

RELEASE OF INFORMATION

The meetings of the OSTRaD board and the Oklahoma Health Research committee are subject to the Open Meeting Act and the Open Records Act. However, Oklahoma statute exempts the following:

Any information submitted to or compiled by the Oklahoma Center for the Advancement of Science and Technology with respect to marketing plans, financial statements, trade secrets, research concepts, methods or products or any other proprietary information of persons, firms, associations, partnerships, agencies, corporations, institutions of higher education, nonprofit research institutions or other entities shall be confidential, except to the extent that the person or entity which provided such information or which is the subject of such information consents to the disclosure. Executive sessions may be held to discuss such materials if deemed necessary by the board of directors (74 O.S., Section 5060.7).

Unless specifically requested, OCAST will use the contents from Statement of Intent, application abstracts and the executive summary of the annual progress reports for the required OCAST annual report or other publications without obtaining permission from the PI or applicant organization. **OCAST does not guarantee that the contents of any application will remain confidential.**

AWARD PROVISIONS

Award of contract shall be contingent upon the following:

1. Receipt by OCAST of certification of institutional review and approval of the research project if it involves human subjects, vertebrate animals or recombinant DNA;
2. Verification that the PI is not presently receiving funds from another source to support any portion(s) of the proposed research described in the Oklahoma Health Research program application which has been approved for funding;
3. If the awardee is a former recipient of an Oklahoma Health Research contract, evidence of submission to a national funding organization between the contract starting date of the previous award and the submission of a proposal for a subsequent Oklahoma Health Research award. Evidence of submission

includes: (a) the face sheet of an application for funding or (b) a notice of award or rejection within the above designated period.

CONTRACT PROVISIONS

Oklahoma statute requires the mechanism for funding approved applications to the Oklahoma Health Research program be a professional services contract between OCAST and the applicant organization(s). The contractor is the applicant organization which:

1. employs or is affiliated with the PI,
2. provides research services and/or facilities for the funded project and
3. executes the contract.

A principal investigator may hold only one Oklahoma Health Research contract at a time. The contract shall include commitments on the part of the contractor to perform the activities described in the application and funded by OCAST. The approved application becomes a component of a contract for performance of the research project. The professional services contract carries more strict performance requirements than most research grants; however, it is anticipated that the PI will revise his/her plans according to the difficulties and opportunities which may arise.

CONCURRENT FUNDING

Acceptance of funding from another source either prior to the beginning or during the period of an OCAST contract that duplicates support for the research described in the application submitted to OCAST is considered concurrent funding. **A principal investigator shall not receive concurrent funding that duplicates support for any portion of the research described in the application.**

Contract Administration: The contractor's responsibilities shall include the following:

1. Assuring and documenting compliance with state and federal requirements pertaining to human subjects, vertebrate animals, recombinant DNA, radioactive substances, narcotics and dangerous drugs and/or biological hazards, which require special approval or license; before issuing a subcontract for any portion of a project funded by OCAST, the contractor must also assure such compliance.
2. Maintaining records and accounts that properly document and account for the source and application of all project funds; all such records and accounts shall be made available on demand by OCAST for inspection and use in carrying out its responsibilities for administration of the funds.
3. Complying with the audit policy of OCAST and, as OCAST deems necessary, permitting authorized representatives of OCAST and the state of Oklahoma full access and the right to fully examine all project records and accounts. The contractor shall provide OCAST timely copies of reports on any audits that include funds received from OCAST.

The contractor shall notify OCAST within 10 days of the occurrence of any of the following:

1. The official notification of resignation by the PI as an employee of the contractor
2. The official decision to terminate the PI as an employee of the contractor
3. The inability of the PI to perform the research described
4. Any occurrence which the contractor determines will affect the successful completion of the research project
5. Receipt of notification of award of concurrent funding by the PI to support any portion(s) of the research described in the contract

Any of the conditions stated in Items 1-5 above may result in the termination of the contract at the discretion of OCAST. Receipt of concurrent funding by the PI to support ANY portion(s) of the research described in the contract (see Item 5 above) shall result in termination of the contract at midnight of the day prior to the beginning date of the concurrent funding.

As discussed above, if the principal investigator is no longer employed by or affiliated with the contractor, the contract may be terminated. However, if the PI is subsequently employed by or affiliated with another eligible applicant organization in the state of Oklahoma and if the second organization agrees to support the research project, OCAST may consider issuing a new contract negotiated between OCAST and the new organization to fund the research project initiated under the original contractor. If the principal investigator cannot perform on a contract for health or other reasons, the contractor may request that OCAST consider continuing the contract with another eligible scientist designated as principal investigator.

REQUIRED DATA COLLECTION

Efforts to evaluate the Oklahoma Health Research program and assess individual projects require periodic collection of information from the PI and/or contractor. **Recipients are required to respond annually to an Impact Survey for Funded Projects.** Continued funding of any active OCAST contract may be affected if the required information is not provided. By applying for a professional service contract, the principal investigator and the contractor become obligated to provide OCAST with the requested information. PIs may be required to respond several years after funding, if the project continues to produce impacts.

REQUIRED CONFERENCE

Oklahoma statute requires OCAST to sponsor an annual conference of health research investigators, representatives of institutions of higher learning, non-profit research institutions and representatives of industry to facilitate and accelerate the commercial development of new products and services conceived or developed as a consequence of professional service contracts supporting health research projects. Acceptance of an Oklahoma Health Research contract obligates both the PI and a representative of the contracting organization to attend this conference.

AUDITS

Oklahoma Center for the Advancement of Science and Technology will perform compliance reviews and audits of contracts executed by the agency for all OCAST programs including the Health Research program. The acceptance of an Oklahoma Health Research professional research contract obligates the contractor to permit authorized representatives of OCAST and the state of Oklahoma to have full access to, and the right to fully examine, all such records and documentation pertaining to the project.

PERFORMANCE EVALUATION

Acceptance of a professional service contract, which is issued by OCAST for the Oklahoma Health Research program, obligates the PI to submit an annual progress report 60 days prior to the ending date of each contract period except the final contract period. A final report must be submitted 30 days after the end of the final contract period.

Annual project performance is evaluated by external reviewers. A satisfactory performance evaluation shall verify that the PI is complying with the terms of the contract and achieving project objectives in a timely manner. Progress report instructions are available on the OCAST website at www.ocast.ok.gov. Continued funding is contingent upon satisfactory, annual performance evaluations and availability of funds. Failure to submit an annual progress report on or before the deadline, as specified, may result in the termination of funding.

OPTIONAL POST AWARD MEETING

OCAST will host an optional post award kick-off meeting prior to the start of the first year contract for projects awarded during each funding competition. The purpose of the meeting is to explain the mechanism by which projects will be funded and contract requirements (such as progress report due dates, allowable expenses, budget or contract modifications, Request for Payment procedures, records retention, etc.) to the award recipient. The Principal Investigator, Contract Official, and Fiscal Agent will be invited attend.

The Contract Official will be notified of the specific kick off meeting day and time in the award letter, which will be sent shortly after the OSTRaD Board approves projects for funding.

APPLICATION DOCUMENTS BEGIN ON NEXT PAGE

Oklahoma Center for the Advancement of Science and Technology (OCAST)

FY12 Oklahoma Health Research Program Statement of Intent

Each principal investigator must submit a statement of intent by the intent deadline: 5 PM, February 1, 2012. Only applicants who comply with this requirement shall be eligible to submit an application. Applicants may only submit one statement of intent.

Statements of Intent may be faxed to **405-319-8426** to meet the deadline. It is the responsibility of the PI to ensure that the intent is received by OCAST's Oklahoma City office by the scheduled deadline. The applicant assumes the risk that the OCAST fax machine may be overloaded or otherwise inoperable close to the scheduled deadline. Statements of Intent will not be accepted via electronic mail or in any electronic format.

If faxing a Statement of Intent, do not also send an original copy.

OCAST
755 Research Parkway, Suite 110
Oklahoma City, OK 73104
Fax: 405-319-8426

1. Principal investigator information

Name:		Terminal Degree:
Position or Title:		
Organization of Principal Investigator:		
Address: <i>(include department, division or equivalent and zip+4)</i>		Phone:
		Fax:
E-mail:	URL: http://	
Signature of PI:	Date:	

2. Estimated request for OCAST funds (may differ from final proposal)

Year 1	Year 2	Year 3
\$	\$	\$

Principal Investigator:	HR12-
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**Oklahoma Center for the Advancement of Science and
Technology (OCAST)
FY12 Oklahoma Health Research Program Funding
PROPOSAL APPLICATION**

1. Title (limited to 56 characters)

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2. Amount of funding requested

Year 1 \$	Year 2 \$	Year 3 \$
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3. Is this a resubmission?

<input type="checkbox"/> Yes	<input type="checkbox"/> No	If yes, previously assigned project numbers:	<input style="width: 200px;" type="text"/>
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4. Principal investigator (PI) information

Name:		Terminal Degree:
Position or Title:		
Organization of Principal Investigator:		
Mailing Address: (include department, division or equivalent and zip+4)		Phone:
		Fax:
E-mail:	http://	

5. Research area (check one category)

<input type="checkbox"/>	Biomedical Engineering
<input type="checkbox"/>	Cell/Molecular Biology
<input type="checkbox"/>	Chemistry & Biochemistry
<input type="checkbox"/>	Genomics & Gene Expression
<input type="checkbox"/>	Immunology
<input type="checkbox"/>	Infectious Disease
<input type="checkbox"/>	Instrumentation / Data Sciences / Clinical Evaluation
<input type="checkbox"/>	Neurobiology
<input type="checkbox"/>	Nutrition / Psychology / Public Health
<input type="checkbox"/>	Physiology / Pharmacology
<input type="checkbox"/>	Other (specify): _____

Principal Investigator:	HR12-
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6. Statement of purpose Describe in 150 words or less how the proposed project fulfills one or more of the following purposes: 1) the causes, diagnosis, prevention and treatment of human diseases and disabilities and mental health and emotional disorders and the rehabilitation of persons afflicted with such diseases, disabilities and disorders; 2) new knowledge, better understanding and innovative methods to improve the processes by which health care services are made available and how they may be provided more efficiently, more effectively and at a lower cost, for all the citizens of this state; 3) the development of new products and services which shall form the basis of new high-technology health research and care industry for this state.

7. Complete the Table of Contents page numbers

Application Form pages (Items 1-6)	application form page 1
Table of Contents (Item 7)	application form page 2
Abstract (Item 8-9)	application form page 3
IRB Approvals and Certifications (Item 10-15)	application form page 4
Signature Page (Item 17-20)	application form page 5
Budgets (Items 21-23)	application form pages 6-11
Budget Justification (Item 24)	
Biographical Information (Item 25)	
Previous OCAST Funding (Item 26)	
Facilities, Instrumentation and Resources (Item 27)	
Research Plan (Item 28)	
Literature Cited (Item 29)	
Letter of Commitment (Item 30)	
Appendix I: Required IRB Documentation (Item 31)	
Appendix II: Resubmission Materials (Item 32)	
Other Appendices (Item 33)	

Principal Investigator:

HR12-

8. Abstract Within the space provided, concisely describe the proposal including specific aims and methodology with special reference to its long-term benefit.

9. Five scientific key words that describe the research project

Principal Investigator: _____ HR12-_____

10. Human subjects?

Is institutional approval pending?

Yes No

Is institutional approval in Appendix I?

Yes No

11. Vertebrate animals?

Is institutional approval pending?

Yes No

Is institutional approval in Appendix I?

Yes No

12. Recombinant DNA?

Is institutional approval pending?

Yes No

Is institutional approval in Appendix I?

Yes No

13. Narcotics/dangerous drugs?

Yes No

If the registrant is not the PI, state name and address of the individual whose registration number from the Oklahoma State Bureau of Narcotics and Dangerous Drugs and the U.S. Drug Enforcement Administration will be used.

Name: _____

Address: _____

Use Number: _____

14. Radioisotopes?

Yes No

State name, address and radioactive use number of the individual under whom radioisotopes will be purchased, stored and used.

Name: _____

Address: _____

Use Number: _____

15. Biological hazards?

Yes No

Principal Investigator:	HR12-
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16. Research performance site physical location (name of organization and address)

Name of Organization:
Address:

17. Applicant organization (name and address of organization which employs or is affiliated with the principal investigator and will be the contractor in event of award). **Note: Applicant organization must have its principal place of business in Oklahoma.**

Name of Organization:
Address:
Federal ID Number:

18. Official signing for applicant organization

Name:	
Position or Title:	
Mailing Address: (include department, division or equivalent)	Phone:
	Fax:
E-mail:	http://

19. Signature of official signing for application organization

Certification and acceptances. I certify that the statements and budget figures herein are true and complete. I accept the obligation to comply with the laws of the state of Oklahoma and the requirements of OCAST as they pertain to the performance of this project. I further affirm that none of the funds provided for this project will be used to undertake any research that has abortion as its propose as defined in Oklahoma statute (O.S. 63, Sections 1-730).	
Signature of Official Signing for Applicant Organization:	Date:

20. Signature of principal investigator

I hereby accept responsibility for the scientific conduct of the project, for providing the materials required for annual contract performance evaluation and for providing the information requested in the annual project Impact Survey. I give consent for the materials in this application to be viewed, as required, by members of the OCAST staff, board, OHRC and review panels. I affirm that none of the funds provided for this project will be used to undertake any research that has abortion as its purpose as defined in Oklahoma statute (O.S. 63, Sections 1-730).	
Signature of Principal Investigator:	Date:

Principal Investigator:	HR12-
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Year 1

21. Budget request (direct costs only). Include and complete 21A if contractual services are over \$2,000.

Personnel:			Amount Requested: (dollars only)		
Name	Title/Position	Hrs/Wk	Salary	Fringe	Totals
	PI		-0-	-0-	-0-
Subtotals:					
Professional Travel: (maximum is \$1,000)					
Supplies: (itemize by category)					
Equipment: (list items over \$500)					
Contractual Services: (itemize)					
Patient Care Costs:			Outpatient:	Inpatient:	
Alterations & Renovations:					
Other Direct Costs: (itemize, include travel associated with data gathering)					
Total Direct Costs:					

OCAST Approval:	Date:
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Principal Investigator:	HR12-
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21A. Contractual Service Breakout

Year 1

Personnel:			Amount Requested: <i>(dollars only)</i>		
Name	Title/Position	Hrs/Wk	Salary	Fringe	Totals
Subtotals:					
Professional Travel: <i>(maximum is \$1,000)</i>					
Supplies: <i>(itemize by category)</i>					
Equipment: <i>(list items over \$500)</i>					
Contractual Services: <i>(itemize)</i>					
Patient Care Costs:			Outpatient:	Inpatient:	
Alterations & Renovations:					
Other Direct Costs: <i>(itemize, include travel associated with data gathering)</i>					
Total Direct Costs:					

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Principal Investigator:	HR12-
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Year 2

22. Budget request (*direct costs only*). Include and complete 22A if contractual services are over \$2,000.

Personnel:			Amount Requested: (<i>dollars only</i>)		
Name	Title/Position	Hrs/Wk	Salary	Fringe	Totals
	PI		-0-	-0-	-0-
Subtotals:					
Professional Travel: (<i>maximum is \$1,000</i>)					
Supplies: (<i>itemize by category</i>)					
Equipment: (<i>list items over \$500</i>)					
Contractual Services: (<i>itemize</i>)					
Patient Care Costs:			Outpatient:	Inpatient:	
Alterations & Renovations:					
Other Direct Costs: (<i>itemize, include travel associated with data gathering</i>)					
Total Direct Costs:					

OCAST Approval:	Date:
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Principal Investigator:	HR12-
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22A. Contractual Service Breakout

Year 2

Personnel:			Amount Requested: <i>(dollars only)</i>		
Name	Title/Position	Hrs/Wk	Salary	Fringe	Totals
Subtotals:					
Professional Travel: <i>(maximum is \$1,000)</i>					
Supplies: <i>(itemize by category)</i>					
Equipment: <i>(list items over \$500)</i>					
Contractual Services: <i>(itemize)</i>					
Patient Care Costs:			Outpatient:	Inpatient:	
Alterations & Renovations:					
Other Direct Costs: <i>(itemize, include travel associated with data gathering)</i>					
Total Direct Costs:					

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Principal Investigator:	HR12-
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23. Budget request (direct costs only). Include and complete 23A if contractual services are over \$2,000.

Year 3

Personnel:			Amount Requested: (dollars only)		
Name	Title/Position	Hrs/Wk	Salary	Fringe	Totals
	PI		-0-	-0-	-0-
Subtotals:					
Professional Travel: (maximum is \$1,000)					
Supplies: (itemize by category)					
Equipment: (list items over \$500)					
Contractual Services: (itemize)					
Patient Care Costs:			Outpatient:	Inpatient:	
Alterations & Renovations:					
Other Direct Costs: (itemize, include travel associated with data gathering)					
Total Direct Costs:					

OCAST Approval:	Date:
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Principal Investigator:	HR12-
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23A. Contractual Service Breakout

Year 3

Personnel:			Amount Requested: <i>(dollars only)</i>		
Name	Title/Position	Hrs/Wk	Salary	Fringe	Totals
Subtotals:					
Professional Travel: <i>(maximum is \$1,000)</i>					
Supplies: <i>(itemize by category)</i>					
Equipment: <i>(list items over \$500)</i>					
Contractual Services: <i>(itemize)</i>					
Patient Care Costs:			Outpatient:	Inpatient:	
Alterations & Renovations:					
Other Direct Costs: <i>(itemize, include travel associated with data gathering)</i>					
Total Direct Costs:					

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Oklahoma Health Research Program

REQUIRED ATTACHMENTS

Items 24 through 33 are prepared on 8 ½ x 11-inch white paper with a font size not smaller than 10-point, with 1 to 1.5 spacing. Fonts for the text of the proposal must be Arial, Helvetica, Palatino, Times New Roman or Georgia. Use the presentation order and headings below. If a section is not applicable, it must be acknowledged and indicated as not applicable. Photographs, oversized documents and materials that do not reproduce well should be submitted as appendices. Applications should not include three-dimensional materials. The project number should appear on **every page** of the application attachments in the upper right corner.

24. Budget justification Required attachment (4 pages maximum) Carefully prepare a detailed explanation of the budget. The budget justification section plays an important role in the review process. Award amounts are established by the reviewers and cannot be modified after the date of award. Excessive or unexplained costs are cut by reviewers. Request only the amount necessary to conduct the research. Complete the required items for **each** year of requested funding. List the costs requested for performance of the proposed project. If obvious budget items are omitted, the PI should provide information in the budget justification regarding the alternative resources available. Please note that funds budgeted for one year cannot carry over to a subsequent contract year.

Personnel Monies from the Oklahoma Health Research fund may not be used to replace or augment any part of the salary of (1) any full-time faculty member at an Oklahoma college or university or (2) any person of equivalent status in an organization other than a university or college if he or she is the PI or collaborator on an Oklahoma Health Research contract. Salaries or stipends for technicians, postdoctoral associates, students or other staff important to the success of the project are appropriate personnel costs which may become part of a professional service contract.

List the names and positions of all personnel involved in the project, both professional and nonprofessional, whether or not salaries are requested. Estimate the hours per week on the project for all personnel. List the dollar amounts separately for each individual for salary and fringe benefits. Fringe benefits may be requested to the extent that they are treated consistently by the applicant organization as a direct cost to all sponsors.

Note: For each professional, state the hours per week they will be working on the project. In computing salary charges to an Oklahoma Health Research contract, an individual's base salary must represent the total authorized annual compensation that an applicant organization would be prepared to pay for a specified work period, whether an individual's time is spent on government sponsored research, teaching or other activities. The base salary must exclude income that an individual may be permitted to earn outside of full-time duties to the applicant organization.

Professional travel Describe including the purpose of the travel, the number of trips, the destination and the number of individuals for whom funds are requested. Professional travel may not exceed \$1,000 per year and the reviewer approved amount may not be increased.

Supplies Itemize supplies such as glassware, chemicals and animals in separate categories. If animals are involved, state how many are to be used, their unit purchase cost and their unit care cost.

Equipment List separately each item of equipment with a unit acquisition cost of \$500 or more. If funds are requested to purchase items of equipment that appear to duplicate or to be equivalent to items listed under *Facilities, Instrumentation and Resources* (see **Item 27** below) or items used in preliminary studies, **justify the reasons for duplication**. In most cases, reviewers have denied requests for microcomputers unless they are dedicated to the project.

Contractual services Itemize and justify any work on the project that is going to be contracted.

Patient care costs Include inpatient and outpatient charges only if they are an integral part of the research supported by a professional service contract. Provide the names of the hospitals to be used and the amounts requested for each. Indicate in detail the basis for estimating costs in this category, including the number of patient days, estimated cost per day and cost per test or treatment. Patient care costs do not include patient travel and per diem costs; request these costs in the *Other Expenses* category.

Alterations and renovations Costs of building construction, per se, are not permissible charges. If the costs of essential alterations of facilities are requested (i.e., repairs, removal or installation of partitions, shielding or air conditioning), itemize such costs by category and justify each fully. When applicable, indicate the square footage involved and provide the basis for the costs, such as an architect's or contractor's detailed estimate. When possible, submit a line drawing of the alterations being proposed.

Other direct costs Itemize other expenses, such as publication costs, page charges and books by category and unit cost. Itemize and justify such items as patient travel and per diem costs, donor fees, rentals, leases and computer costs. Reimbursement is allowable for personal expenses incurred by human subjects participating in the project, including travel with an escort if required. This reimbursement is applicable for all classes of research subjects, including inpatients, outpatients, donors and normal volunteers regardless of employment status. Travel associated with data gathering must be listed in this category, fully explained and detailed (miles, number of trips, duration, number of participants, travel locations, etc.) in the budget justification.

Indirect costs are disallowable.

25. Biographical information and other support Required attachment (4 pages maximum for each individual) Begin with the PI. Do not designate co-principal investigators for an Oklahoma Health Research Project.

A. Name and Title

B. Education: (provide education, baccalaureate through postdoctoral; include institution and location, degree year conferred and field of study; begin with baccalaureate or other initial professional education, such as nursing or biotechnology associates degree.)

C. Positions and Honors: List in chronological order previous positions, concluding with your present position. List any honors.

D. Research Support: For each project give the source of the support, identifying number, project title, name of investigator, time or percent of effort on the project by the professional named, annual direct costs and entire period of support. (If part of a larger project, provide the titles of both the parent grant and the subproject and give the annual direct costs for each.) Briefly describe the contents of each item. **If any of these overlap, duplicate or are being replaced or supplemented by the present application, justify and delineate the nature and extent of the scientific and budgetary overlaps or boundaries.** Include abstracts (does not count as a part of the page limit, when attached as a separate page(s) within this section) of all funded and pending grants.

- i. List and attach abstracts for selected ongoing and completed (during the past three years) research projects. Begin with the projects that are most relevant to the research proposed in this application. Briefly indicate the overall goals of the projects and responsibilities of the person listed.
- ii. List applications pending review.
- iii. List applications planned to be submitted prior to the anticipated start date of the Oklahoma Health Research award.

E. List in chronological order beginning with the most recent, the titles and complete references to your recent publications pertinent to this application.

26. Previous OCAST funding Required attachment (1 page maximum) If a previous recipient of OCAST funding, list all awards and briefly describe the results of these efforts (e.g. publications and non-OCAST funding received). Include evidence of submission to a national funding organization if previously funded under the Oklahoma Health Research Program.

27. Facilities, instrumentation and resources Required attachment (1 page maximum) Describe any specialized facilities, instrumentation and/or resources necessary and available for this project.

28. Research plan Required attachment (15 pages maximum, counting figures, graphs and charts Sections A-D are typically 12-15 pages.) **This section must contain a detailed description of the proposed work to be undertaken in the format shown below.** Applications lacking a complete Research Plan may be returned without review.

Organize sections **A-D** of the research plan to answer these questions: (1) What do you intend to do? (2) Why is the work important? (3) What has already been done? (4) How are you going to do the work? The research plan should be prepared in the following format:

A. Specific Aims: List the broad, long-term objectives and the goal of the specific research proposed. e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field or develop a new technology.

B. Background and Significance: Briefly sketch the background of the proposed project, critically evaluate existing knowledge and specifically identify the gaps that the project is intended to fill. State concisely the importance of the research described in this application by relating the specific aims to longer-term objectives. If the aims of the application are achieved, state how scientific knowledge or clinical practice will be advanced. What is the innovation? Describe the effect of these studies on the concepts, methods, technologies, treatments, services or preventative interventions that drive this field.

C. Preliminary Studies: Provide an account of the PI's progress which led to formulating the proposed project as well as any other information that will assist the reviewers in assessing the competence of the PI for performing the project.

D. Research Design and Methods: Discuss in detail the research design and the clinical framework, procedures and analyses to be used to accomplish the specific aims of the project. Describe the protocols to be used. Provide a tentative sequence or timetable for the investigation. Include the means by which the data will be analyzed and interpreted. Discuss any new methodology and its advantage over existing methodologies. Discuss the potential difficulties and limitations of the proposed procedures and the alternative approaches to achieve the aims. Point out any procedures, situations or materials that may be hazardous to personnel and the precautions that will be exercised.

29. Literature cited Required attachment The literature cited does not count toward the page limitations. Do not scatter complete literature citations throughout the text. Some reviewers have found the inclusion of titles to be very helpful. Number the references in order of appearance and provide the complete citations, which correspond to the numbers, in a list at the end of the research plan. Each citation must include the names of all the authors, the name of the book or journal, volume number, page numbers and year of publication. Although no page limitation is specified for this part of the application, make every attempt to be judicious in compiling a relevant and current bibliography. It need not be exhaustive.

30. Letters of commitment and recommendation Required attachment OCAST requires all applicants to submit a *Letter of Commitment* from an official authorized to commit the resources of the applicant organization (i.e., department, division or unit head) detailing organizational plans and commitments on the applicant's behalf. These comments should include plans and commitments beyond the tenure of the proposed research. The letter should also include commitments for such items as equipment, computer services, facilities and release time for key personnel and/or technical and clerical support which the organization will provide for the project. This information is essential to document that applicants will have the facilities and time necessary to conduct the proposed research and the opportunity to follow-up promising results.

Letters of Recommendation OCAST encourages applicants in the early stages of their research careers to also submit up to two letters of recommendation from individuals able to evaluate the applicant's scientific potential.

31. Appendix I. Institutional Approvals and Certifications Required attachment Institutional approvals and certifications are not required at the time of submission of the application or prior to the OCAST peer review process, unless the applicant organization requires such approval prior to submission. If approvals have been received, include documentation of institutional approval and certifications in Appendix I.

No OCAST Health Research award will go to contract without institutional approvals and/or certifications when the research involves:

- human participants, human derived materials, human data
- vertebrate laboratory animals
- recombinant DNA
- narcotics/dangerous drugs
- radioisotopes

- biological hazards

Required attachments (as needed).

On a separate sheet(s) address the following issues detailed below and include in Appendix I:

Human Subjects First, identify the sources of the potential human subjects, human derived materials or human data. Describe the characteristics of the subject population, state the anticipated number, age, gender, ethnic background and state of health. Identify the criteria for inclusion or exclusion. Explain the rationale for the use of special classes of subjects, such as fetuses, pregnant women, children, institutionalized mentally disabled, prisoners or others, especially those whose ability to give voluntary informed consent may be in question.

Second, describe the recruitment and consent procedures to be followed, including the circumstances under which consent will be solicited and obtained, who will seek it, the nature of information to be provided to prospective subjects and the methods of documenting consent. (A copy of the consent form must be provided if requested by OCAST.)

Third, describe any potential risks – physical, psychological, social, legal or other – and assess their likelihood and seriousness. Describe alternative methods, if any, that were considered and why they need not be used.

Fourth, describe the procedures for protecting against or minimizing any potential risks and include an assessment of their likely effectiveness. Include a discussion of confidentiality safeguards, where relevant, and arrangements for providing medical treatment if needed.

Fifth, describe and assess the potential benefits to be gained by the subjects, as well as the benefits that may accrue to society in general, as a result of the planned work.

Finally, discuss the risks in relation to the anticipated benefits to the subjects and to society.

If human subjects, human derived materials or human data are to be used in this project, complete Item 10 and, if IRB approval has been received, submit documentation of institutional approval (IRB) in Appendix I.

Research on human subjects, derived materials or data utilizing resources awarded under the Oklahoma Health Research program must follow federal guidelines as promulgated in 45 CFR. In addition, **these funds may not be used to “undertake any research which has abortion, as defined by Section 1-730 of Title 63 of the Oklahoma statutes, as its purpose” (74 O.S., Section 5054).**

The federal regulation is available from Office of Human Research Protection, www.hhs.gov/ohrp. The regulation provides a systematic means, which is based on generally accepted ethical principles, for protecting the rights and welfare of individuals who may be exposed to the possibility of physical, psychological or social injury while they are participating as subjects in research, development or related activities. The regulation extends to the human fetus (either in utero or ex utero), the dead, organs, tissues and body fluids as well as graphic, written or recorded information derived from human sources. It covers activities which present no physical risk to the subject but which may create legal risks or expose subjects to public embarrassment or humiliation through breach of confidentiality or invasion of privacy.

The major focus of a project (for example, on a medical procedure) may not be the sole determinant of the types of risks involved or the need for additional protection. The safeguarding and confidentiality of medical records and other forms of data collected on

individuals and groups, the use of such data by the investigator conducting the original research, the concurrent uses of the data by other investigators and the use of the data for research purposes at a later time are considered within the scope of this policy.

The regulation requires institutional assurances, including the implementation of procedures for review and the assignment of responsibilities for adequately protecting the rights and welfare of human subjects. **Safeguarding the rights and welfare of human subjects is the responsibility of the applicant organization.** In particular, the applicant organization is responsible for ensuring that the activity described in the application and any additional information relating to human subjects, derived materials or data are reviewed and approved by an institutional review board (IRB) defined in statute as:

a committee composed of (at least) investigators, lay representatives and legal counsel
... for the express purpose of determining the appropriateness of any research involving human subjects (74 O.S., Section 5060.4).

The above stated federal requirements have been adopted by the Oklahoma Health Research Committee and OCAST.

Vertebrate Animals If vertebrate laboratory animals are to be used in this research project complete **Item 11**. Include this information in Appendix I, if available, submit documentation of **institutional approval**. In Appendix I state the species, strains, ages and numbers of the animals involved. If the animals are in short supply, costly or to be used in large numbers, provide the rationale for their use and their numbers. Describe the procedures for adequate care of any animals involved. Describe the procedures to avoid unnecessary discomfort, pain or injury to the animals, such as surgical anesthesia, post-trauma analgesia, tranquilizing drugs and comfortable restraining devices.

In recent years, there have been extensive changes in federal requirements for the use of vertebrate animals in research. Investigators, their projects and their institutions must adhere to these requirements beginning with the date of submission of a proposal.

As part of its compliance with these regulations, an applicant institution must duly constitute a review committee to assist in assuring humane treatment and care of animals.

Recombinant DNA If recombinant DNA technology will be used in the project, complete **Item 12** and submit, if available, documentation of **institutional approval in Appendix I**. On a separate sheet state the level of containment to be used and explain why this level is appropriate for the proposed project; include this information in Appendix I.

Applicant institutions are required to comply with federal guidelines regarding the application of recombinant DNA technology as of the date of application submission. The applicant institution must establish an institutional biosafety committee which must judge appropriate proposals and approve only those that conform to the guidelines.

Narcotics and Dangerous Drugs Letter The use of narcotics and dangerous drugs is regulated by the Oklahoma State Bureau of Narcotics and Dangerous Drugs and by the Drug Enforcement Administration of the U.S. Department of Justice. The PI must identify the individual or organization under whose auspices narcotics or dangerous drugs will be used.

If these substances will be used in the project, the PI must do as follows: (1) Check yes on **Item 13** and (2) include a letter in Appendix I which states the registration number with the Oklahoma State Bureau of Narcotics and Dangerous Drugs and the U.S. Drug Enforcement

Administration to be used in this project. If the registrant is not the PI, the PI must (1) provide the registrant's name, title, address and phone number in **Item 13** and (2) submit a letter from the responsible individual which (a) states the registration number with the Oklahoma Bureau of Narcotics and Dangerous Drugs and the U.S. Drug Enforcement Administration and (b) grants permission for its use in this project. **Item 13 must be satisfactorily completed and the required letter submitted, as appropriate, if a proposed health research project is to receive funding.**

Radioisotopes Letter Use of radioactivity is regulated by the U.S. Nuclear Regulatory Commission. Appropriate licenses must have been obtained by the applicant organization as well as the PI, his or her sponsor or a responsible colleague. If radioisotopes are to be used in the performance of the proposed project, the PI must proceed as follows: (1) complete **Item 14** and, (2) if the responsible individual is someone other than the PI, include in **Appendix I** a letter granting permission for the use of radioisotopes in this project under this license. **Item 14 must be satisfactorily completed and the required letter submitted, as appropriate, if a proposed health research project is to receive funding.**

Biological Hazards If any contact with infectious agents or substances containing them is anticipated, complete **Item 15** and, on a separate sheet, identify any potential biological hazards, explain procedures to protect individuals from infection or injury, state the level of containment to be used and explain why it is appropriate; include this information in Appendix I.

Various barrier techniques are advised when work is performed with potentially infectious agents or with substances that may contain infectious agents. A guide to the level of containment for infectious agents based upon the recommendations of the Center for Disease Control may be obtained from the U.S. Government Printing Office Washington, D.C. 20402, HHS publication NO. (CDC) 88-8395, entitled *Biosafety in Microbiological and Biomedical Laboratories*.

It is the sole responsibility of the contractor – the applicant institution, who is the employer of or affiliated with the PI – to maintain a safe working environment and to make any changes required by subsequent regulations or law. **The biological hazards must be satisfactorily addressed if a proposed health research project is to receive funding.**

32. Appendix II Required attachment if resubmitting an application Persons resubmitting an application submitted to a previous Health funding cycle must prepare a separate appendix that includes the following:

- A. a letter that responds to the reviewers' comments from the previous review and notes all changes in the new research plan
- B. a copy of the previously submitted application
- C. all reviews of that application

33. Other appendices The applicant may also include a maximum of five pages of additional material printed on one side of each page. For example, a glossy photograph of an item that is included in reduced form within the 15-page research plan, abstracts of papers accepted for publication or patent abstracts and claims. **Do not use this appendix to circumvent page limits of the research plan or other sections.**

THIS IS THE LAST PAGE OF THE SOLICITATION