



CANCER PREVENTION &  
RESEARCH INSTITUTE OF TEXAS

**REQUEST FOR  
APPLICATIONS**

**RFA R-10-RTA1**

**Research Training Awards**

**2009–2010**

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## 1. ABOUT CPRIT

The State of Texas has established the Cancer Prevention and Research Institute of Texas (CPRIT); CPRIT may issue \$3 billion in general obligation bonds over 10 years to fund grants for cancer research and prevention.

CPRIT is charged by the Texas Legislature to:

- Create and expedite innovation in the area of cancer research, thereby enhancing the potential for a medical or scientific breakthrough in the prevention of cancer and cures for cancer;
- Attract, create, or expand research capabilities of public or private institutions of higher education and other public or private entities that will promote a substantial increase in cancer research and in the creation of high-quality new jobs in this State; and
- Continue to develop and implement the Texas Cancer Plan by promoting the development and coordination of effective and efficient statewide public and private policies, programs, and services related to cancer and by encouraging cooperative, comprehensive, and complementary planning among the public, private, and volunteer sectors involved in cancer prevention, detection, treatment, and research.

## 2. EXECUTIVE SUMMARY

CPRIT will foster cancer research in Texas by providing financial support for a wide variety of projects relevant to cancer research. This RFA solicits applications for *integrated institutional research training programs* to support promising individuals who seek specialized training in the area of cancer research. The goals of the Research Training Awards are to attract outstanding predoctoral (Ph.D. or M.D./Ph.D.) and postdoctoral trainees committed to pursuing a career in basic, translational, or clinical cancer research; to expand the skills and expertise of trainees to promote the next generation of investigators and leaders in cancer research; to position most trainees for independent research careers; and to support the development of high-quality, innovative, and creative research that, if successful, could provide the basis for a significant impact on cancer prevention, detection, and/or treatment. Individuals from underrepresented racial and ethnic groups, individuals with disabilities, and individuals from disadvantaged backgrounds are especially encouraged to participate in CPRIT's training programs. In addition to predoctoral and postdoctoral research training, potential opportunities include master's degree-level programs to train clinical investigators; undergraduate summer research

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internship programs, including those directed at recruitment of underrepresented minorities; and master's degree-level programs to encourage the pursuit of alternative careers in laboratory support positions. *Awards will be made for institutional programs; individual fellowship applications will not be considered.* CPRIT expects outcomes of supported activities to directly and indirectly benefit subsequent cancer research efforts, cancer public health policy, or the continuum of cancer care—from prevention to treatment and cure. To fulfill this vision, trainees may pursue any research topic or issue related to cancer biology, causation, prevention, detection or screening, treatment, or cure.

### **3. MECHANISM OF SUPPORT**

CPRIT will fund research training programs at eligible institutions able to support promising individuals seeking specialized training in the area of cancer research. Programs are encouraged to provide a breadth of pre- and postdoctoral research training opportunities consistent with individual institutional strengths. Successful applicant institutions are expected to provide trainees with broad access to research opportunities across disciplinary and departmental lines and to maintain high standards for intellectual rigor and creativity. Under the leadership of the Principal Investigator (PI), the overall goal is to promote innovative research training in areas relevant to the prevention, detection, or treatment of cancer. It is expected that that these training opportunities will increase the number of future investigators with knowledge, expertise, and skills in basic, translational, and/or clinical cancer research. Each supported trainee and his or her mentor and institution are jointly responsible for planning, directing, and executing the proposed research training program.

It is expected that the research training experience will provide:

- A strong foundation in research design, methods, and analytic techniques appropriate to the proposed research project;
- The development or enhancement of the supported trainee's ability to conceptualize and think through research problems with increasing independence;
- Experience in conducting, presenting, and publishing independent research;
- Instruction in the responsible conduct of research;
- The opportunity to interact with members of the scientific community at appropriate seminars, scientific meetings, and workshops; and

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- A well-conceived career plan to increase the trainee's ability to secure additional support for his or her research.

Attracting the finest trainees to Texas laboratories and academic institutions is critically important for the local cancer research enterprises, but it is acknowledged that a significant number of those trained in Texas may ultimately seek positions elsewhere.

#### **4. RESEARCH OBJECTIVES**

The goal of this award is to facilitate the training of the next generation of outstanding cancer biology researchers to help ensure that a diverse pool of highly trained scientists is available in adequate numbers and in appropriate research areas to address the State's and the nation's basic, clinical, and translational cancer research needs. Training is expected to be directed toward building the broad research competence required to ensure that trainees are prepared to assume leadership roles in cancer research. This award supports the training of highly qualified individuals, both predoctoral and postdoctoral, who have the potential to become productive, independent research scientists or physician-scientists and who intend to pursue careers focused on cancer research.

Committed institutional support is required, especially in the form of superb research opportunities, excellent instruction and mentoring, and state-of-the-art facilities. Trainees are expected to be immersed in a highly interactive and supportive didactic and research program that facilitates research and instruction in cancer-related areas that will contribute to innovative approaches to key problems and will help bring novel solutions and potential therapies into practice. The training environment should be enriched by programmatic elements such as seminars from visiting researchers, journal clubs, internal research seminars, videoconferencing with collaborating institutions (if applicable), and attendance at national and/or international scientific meetings. Each supported trainee is expected to identify an appropriate mentor and/or mentor committee that will be responsible for providing critical teaching, advising, and leadership experience.

In addition to support of Ph.D. and postdoctoral research training, potential opportunities include the following:

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- Master's degree-level programs to train clinical investigators. Trainees may be in predoctoral (M.D./M.S.) programs or clinical fellowship positions, or they should have just received their first faculty appointment as an instructor or assistant professor.
  - Master's degree-level programs to facilitate trainees' pursuit of research careers as high-level laboratory support personnel. When trained, such individuals would be capable of training others in a laboratory with regard to sophisticated technical issues and of performing research with only modest levels of supervision. CPRIT encourages innovative approaches to training such individuals. Programs whose goals are to produce trainees with a conventional master's degree in a relevant biomedical or related science by successful completion of a relatively modest research project are not appropriate.
  - Undergraduate summer research internship programs, including those directed at underrepresented minorities.

## 5. FUNDING INFORMATION

The maximum individual award that will be made under this RFA is \$750,000 per year (total costs). The maximum duration of each award is 5 years, and 5-year budgets should be submitted. However, initial awards will probably be made for 3 years; support for the remaining time period will be made available following noncompetitive review of progress reports. Support may be requested as follows for the various types of trainees in an institutional training program:

- **Ph.D. trainees:** May request support for stipend (up to \$28,000 per year, which may be supplemented with other available funds) and benefits and an allowance per trainee of \$1,000 per year that may be used for travel to scientific meetings if the trainee is making a presentation (oral or poster). Funds for tuition may also be requested (to a maximum of \$6,000 per year). Individual trainees may be supported for up to 4 years, but they will not be supported by this mechanism until it is clear that their mentor and research program are highly relevant to cancer.
- **M.D./Ph.D. trainees:** May request support equal to that of Ph.D. trainees (above). Funds may be used only during the time of research training, not during medical school years.

- **Postdoctoral trainees:** May request NIH-scale salary support plus benefits and an allowance per trainee of \$2,000 per year for travel to scientific meetings. Appointments may be made for up to 3 years. Individuals holding Ph.D., M.D./Ph.D., or M.D. degrees are eligible for postdoctoral fellowship support provided that the training supported by CPRIT is for research (basic, translational, or clinical).

Support may also be requested for following types of institutional training programs:

- **Undergraduate summer internship programs:** May request up to \$5,000 per trainee for summer stipend and housing allowance.
- **Master’s degree–level programs to support research careers as laboratory support personnel:** May request stipend support (\$28,000 per year) plus benefits. Appointments may be made for up to 2 years. Funds for tuition may also be requested (to a maximum of \$6,000 per year).
- **Master’s degree–level programs to train clinical investigators:** May request \$28,000 per year plus benefits if trainees are predoctoral (e.g., an M.D./M.S. training program). Funds may not be used while trainees are in medical school. May request \$50,000 per year plus benefits if trainees are clinical fellows or faculty members. It is anticipated that institutions will supplement stipends for trainees at this level. Funds for tuition may be requested (to a maximum of \$6,000 per year).

## 6. KEY DATES

### RFA

RFA release January 8, 2010

### Application

Online application opens February 12, 2010, 7 a.m. Central Time

Application due March 1, 2010, 3 p.m. Central Time

Application review May 2010

### Award

Award notification June 2010

Anticipated start date August 2010

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## 7. ELIGIBILITY

- The applicant must be a Texas-based institution of higher education or a component of a university system with appropriately accredited degree-granting training programs (if support is requested for training leading to a degree).
- Institutions may submit only one application under this RFA. For purposes of this RFA, an institution is defined as that component of a university system that has its own president. There must be only one PI, but Co-PIs may direct individual components of the overall program described in the application. An institution may apply for as many components of the training program as are appropriate for the institution.
- The PI must have a doctoral degree, including M.D., Ph.D., D.D.S., D.M.D., Dr.P.H., D.O., D.V.M., or equivalent. The PI must reside in Texas during the time the training program that is the subject of the grant is conducted.
- Trainees with the skills and background necessary to carry out the proposed research training should work with their mentors and other appropriate individuals in the institution to develop individual applications for their own support. These applications are to be submitted to the PI in a form to be determined by the PI and will be evaluated in a manner to be described by the PI.
- All supported trainees must reside in Texas during the time the training program that is the subject of the grant is conducted.
- Trainees may be citizens or noncitizen nationals of the United States or citizens of foreign countries who hold student visas. All trainees should be officially enrolled in the appropriate training program.
- Excluding summer interns, trainees must have at least a baccalaureate degree and show evidence of both high academic performance in the sciences and keen interest in research in areas of high priority to the participating institution. In addition, trainees who are degree candidates must be enrolled in an accredited program and be sponsored by a mentor for the research component.
- CPRIT funds may be used to supplement funding available from other sources if the pool of trainees is of sufficient size and quality to justify additional support.
- CPRIT grants will be awarded by contract to successful applicants. Certain contractual requirements are mandated by Texas law or by administrative rules. Although applicants need not demonstrate the ability to comply with these contractual requirements at the time

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the application is submitted, applicants should make themselves aware of these standards before submitting a grant application. Significant issues addressed by the CPRIT contract are listed in Sections 10 and 11. All statutory provisions and relevant administrative rules can be found at [www.cprit.state.tx.us](http://www.cprit.state.tx.us).

## **8. APPLICATION REVIEW**

### **8.1. Outline**

All eligible applications will be reviewed using a two-stage process: (1) Peer review, and (2) programmatic review. In the first stage, applications will be evaluated by an independent scientific merit review panel using the criteria listed below. In the second stage, applications judged to be most meritorious by review panels will be evaluated and recommended for funding by the CPRIT Scientific Review Council based on comparisons with applications from all of the merit review panels and programmatic priorities. Each stage of application review is conducted completely confidentially, and all panel members are required to sign nondisclosure statements regarding the contents of the applications. All panel members will be non-Texas residents and operate under strict conflict of interest prohibitions. Under no circumstances should institutional personnel or individual applicants initiate contact with any member involved in the peer review process (with the exception of members of the CPRIT Scientific Review Office) regarding the status or substance of the application. Violations of this prohibition will result in the administrative withdrawal of the application.

### **8.2. Review Criteria**

Peer review of applications will be based on primary scored criteria and secondary unscored criteria, listed below. Review committees will evaluate and score each primary criterion and subsequently assign a global score that reflects an overall assessment of the application. The overall assessment will not be an average of the scores of individual criteria; rather, it will reflect the reviewers' overall impression of the application.

#### **8.2.1. Primary Criteria**

Primary criteria will evaluate the scientific merit of the proposed training program described in the application. A concern with any of these criteria questions the impact and/or feasibility of the proposed training program.

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**Overall Evaluation of Training Potential:** What is the likelihood that the training program will serve as a sound foundation to enhance a supported trainee's potential for, and commitment to, a productive, independent scientific research career in a cancer-related field?

**Research Training Plan:** Will the training plan provide trainees with individualized and supervised experiences that will enable them to develop the research skills needed to be independent researchers or physician-scientists? Is the training plan customizable for students from diverse academic backgrounds and differing educational philosophies?

**PI and Mentors:** Do the PI and mentors have excellent research qualifications (including publications in high-quality journals and peer-reviewed research support) and track records of mentoring that are appropriate for the proposed training program?

**Trainees:** Are high-quality individuals routinely recruited at the applicant institution's existing training programs? Are the qualifications and interests of these potential trainees appropriate for the training program described by the applicant institution? Are there sufficient numbers of highly meritorious potential trainees to fill the slots requested? Have efforts been made to enhance the diversity of trainees by recruiting from underrepresented groups?

**Institutional Environment and Commitment to Training:** Is there a high-quality institutional environment for the scientific development of trainees? Is there appropriate institutional commitment to fostering training as investigators or physician-scientists? Are the research facilities, resources (e.g., equipment, laboratory space, computer time, subject populations), and training opportunities adequate and appropriate?

### 8.2.2. Secondary Criteria

Secondary criteria contribute to the global score assigned to the application. A concern with any of these criteria questions the value of the proposed training program.

**Relevance to Cancer Research:** Does the proposed training program have a high degree of *direct* relevance to cancer research?

**Project Leadership:** Is the program managed by strong leadership in a position to organize and manage the proposed training activities?

**Budget and Duration of Support:** Are the budget and duration of support requested appropriate for the proposed training program?

**Responsible Conduct of Research:** Does the applicant institution have acceptable plans to provide instruction in the responsible conduct of research?

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## 9. SUBMISSION GUIDELINES

### 9.1. Online Registration

Applications will be accepted beginning at 7 a.m. Central Time on February 12, 2010 and must be submitted via the CPRIT Application Receipt System (<https://CPRITGrants.org>). **Only applications submitted at this portal will be considered eligible for evaluation.** All applicants must register a user name to start and submit an application.

#### 9.1.1. Application Submission Deadline

All applications must be submitted by 3 p.m. Central Time on March 1, 2010.

#### 9.1.2. Application Components

Applicants are advised to follow all instructions to ensure accurate and complete submission of the online application.

##### 9.1.2.1. Contact Information

Enter all required applicant and Application Signing Official (ASO) information along with the application title.

##### 9.1.2.2. Summary (5,000 characters)

Provide a summary of the proposed training program, including the program goals, an outline of proposed didactic and research training activities, and an overview of institutional infrastructure and commitment.

##### 9.1.2.3. Institutional Support (1 page)

Each application must be accompanied by a letter of institutional support from the president or provost indicating support and commitment to the program and certifying that this is the sole application submitted by this institution in response to this RFA.

##### 9.1.2.4. Research Training Plan (15 pages)

**Background:** Present the rationale behind the proposed training program, emphasizing how the proposed project will support the development of dedicated investigators in cancer research.

**Program Goals:** Concisely state the goals to be achieved by the research training plan described in the application.

**Training Plan:** Provide a description of proposed courses/classes, seminars, and opportunities for interaction with other groups and scientists. Describe both formal program requirements

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and opportunities for professional development. Training in career skills (e.g., grant-writing and presentation skills) is strongly encouraged. Elaborate on the research environment and available research facilities and equipment, and discuss the relationship of the proposed research projects to trainees' careers. A training plan must be described for each type of program for which support is requested.

**Selection of Trainees and Mentors:** Describe the process and major criteria that will be used to select trainees to be supported by this program. Describe the process and major criteria that will be used to select mentors for this program.

**PI:** Outline the responsibilities of the PI in the overall management, administration, and evaluation of the program. Describe how the PI's scientific background, leadership, and administrative capabilities will enable him or her to coordinate and oversee the proposed research training program.

**Recruitment Plan/Diversity Recruitment:** Include a recruitment and retention plan for recruiting trainees from both outside and inside the applicant institution and for attracting trainees from complementary disciplines (e.g., from the physical, computational, and engineering sciences) to cancer research. Provide plans for enhancing the diversity of the trainee pool by recruiting from underrepresented groups and a plan for retaining such trainees. Applications that do not address recruitment and retention plans will be considered incomplete.

**Responsible Conduct of Research:** Describe the plan to provide instruction in the responsible conduct of research, including the rationale, subject matter, appropriateness, format, frequency, and duration of instruction. The amount and nature of faculty participation must be described.

#### **9.1.2.5. Supplemental Documents**

**References:** Provide a concise and relevant list of references cited for the application.

**Budget and Justification:** Provide an outline and justification of the budget for the entire proposed period of support. Allowable costs include trainee stipends (see limits above) and benefits and travel allowances (as indicated above). Tuition (to a maximum of \$6,000 per year) may be included for those in degree-granting programs. The budget should be based on the number of trainee slots requested for each type of training activity. Justification of the number of trainees requested must be compelling and based on the number of exceptionally well-qualified individuals who are likely to be available and who deserve such support (see below for

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requested information) as well as funds currently available from other training programs to support them. An appropriate and modest level of salary support may be requested for the PI, Co-PIs, and administrative staff. The maximum amount that may be requested is \$750,000 per year (total costs). Applicants should be aware that Texas law limits the amount of indirect costs that may be funded by CPRIT grants to 5 percent of the total award. Guidance regarding indirect cost recovery can be found in the administrative rules proposed by CPRIT. The proposed rules and the statute can be found at [www.cprit.state.tx.us](http://www.cprit.state.tx.us). The maximum annual salary (also referred to as direct salary or institutional base salary) that an individual may receive under a CPRIT award for FY 2010 is \$200,000; CPRIT FY 2010 is from September 1, 2009 through August 31, 2010. Salary does not include fringe benefits and/or facilities and administrative (F&A) costs, also referred to as indirect costs. An individual's institutional base salary is the annual compensation that the applicant organization pays for an individual's appointment, whether that individual's time is spent on research, teaching, patient care, or other activities. Base salary excludes any income that an individual may be permitted to earn outside of his or her duties to the applicant organization.

**PI, Co-PI, and Mentor Information:** Provide biographical sketches for the PI and Co-PIs describing their education and training, professional experience, awards and honors, and publications relevant to cancer research. Each biographical sketch must not exceed 2 pages. Information on the qualifications of the mentors should be submitted in tabular form and should include name, position (rank and department), highest degree received and institution granting the degree, three key words describing current research area, current annual total of externally peer-reviewed research support (direct costs only), and citations for three relevant publications. Include the current annual total of externally peer-reviewed research support (direct costs only) for the PI and Co-PIs in this table.

**Institutional Current and Pending Support:** Describe the funding source, duration, and title of all current and pending competitively reviewed support for training available at the institution that is relevant to cancer research. Indicate *approximately* how stipends for all trainees in a given category (e.g., predoctoral, postdoctoral, etc.) are supported at the institution.

**Training Record:** Describe the research training record of the PI and the Co-PIs.

**Current Trainee Pool:** Supply the equivalent of NIH NRSA Tables 9A and 9B to describe the qualifications of current predoctoral (Table 9A) and postdoctoral (Table 9B) trainees. Confine this list to trainees who would be considered eligible for training under this award.

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**Former Trainees:** Supply the equivalent of NIH NRSA Table 5 to describe the past and current trainees of participating faculty members. Confine this list to trainees whom who would be considered eligible for training under this award.

**Institutional Environment and Commitment:** Provide appropriate evidence of institutional support and commitment to the goals of the research training program. This could include, but is not limited to, laboratory space, shared laboratory facilities and equipment, funds for curriculum development, and support for additional trainees in the program.

Applications that are missing one or more of these components or do not meet the eligibility requirements listed above will be administratively rejected without review.

## **10. AWARD ADMINISTRATION**

All CPRIT awards will be made to institutions, not to individuals. Texas law requires that CPRIT research awards be made by contract between the applicant and CPRIT. Texas law specifies several components that must be addressed by the award contract, including needed compliance and assurance documentation, budgetary review, and terms relating to intellectual property rights. These contract provisions are specified in CPRIT's administrative rules, which are available at [www.cprit.state.tx.us](http://www.cprit.state.tx.us).

CPRIT requires award recipients to submit an annual progress report. These reports summarize the progress made toward the training goals and address plans for the upcoming year. Continuation of funding is contingent upon receipt of these reports. Forms and instructions will be made available at [www.cprit.state.tx.us](http://www.cprit.state.tx.us).

## **11. REQUIREMENT TO DEMONSTRATE AVAILABLE FUNDS**

Texas law requires the CPRIT award recipient to demonstrate that it has an amount of funds equal to one-half of the CPRIT funding dedicated to the research that is the subject of the award.

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## 12. CONTACT INFORMATION

### 12.1. HelpDesk

HelpDesk support is available for questions regarding user registration and online submission of applications. Queries submitted via e-mail will be answered within 1 business day. HelpDesk staff are not in a position to answer questions regarding scientific aspects of applications.

**Dates of Operation:** January 8, 2010 to March 1, 2010 (excluding public holidays)

**Hours of Operation:** Monday through Friday, 8 a.m. to 5 p.m. Central Time

**Tel:** 866-941-7146

**E-mail:** [ResearchHelp@CPRITGrants.org](mailto:ResearchHelp@CPRITGrants.org)

### 12.2. Scientific and Programmatic Questions

Questions regarding the CPRIT program, including questions regarding this or other funding opportunities, should be directed to the CPRIT Scientific Review Office:

**Tel:** 512-305-8491

**E-mail:** [ResearchHelp@CPRITGrants.org](mailto:ResearchHelp@CPRITGrants.org)

**Web:** [www.cprit.state.tx.us](http://www.cprit.state.tx.us)