



CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

**INSTRUCTIONS FOR
APPLICANTS**

**Recruitment of
First-Time Tenure-Track Faculty Members
(RFA R-22.1-RFT)**

**Recruitment of Rising Stars
(RFA R-22.1-RRS)**

**Recruitment of Established Investigators
(RFA R-22.1-REI)**

FY 2022

Fiscal Year Award Period

September 1, 2021-August 31, 2022

TABLE OF CONTENTS

1. INTRODUCTION.....	4
2. SUMMARY INSTRUCTIONS.....	4
3. APPLICATION SUBMISSION DEADLINE	5
4. APPLICATION PREPARATION AND SUBMISSION PROCESS.....	5
5. APPLICATION/AUTHORIZED SIGNING OFFICIAL (ASO)	6
6. GRANTS CONTRACT/OFFICE OF SPONSORED PROJECTS OFFICIAL	6
7. USER REGISTRATION AND/OR LOGIN.....	6
8. STARTING A NEW APPLICATION	7
9. STATUS DISPLAY	8
9.1. TAB STATUS	8
9.2. APPLICATION STATUS.....	8
10. TAB: SUMMARY.....	9
11. TAB 1: CONTACTS.....	10
12. TAB 2: APPLICATION INFORMATION	11
13. TAB 3: PROJECT PERSONNEL AND COLLABORATORS.....	13
14. TAB 4: REQUIRED DOCUMENTS	13
15. TAB 5: FINAL REVIEW & SUBMIT.....	15
16. PROVIDED TEMPLATES.....	16
17. FORMATTING INSTRUCTIONS	16
18. CONTACT INFORMATION.....	18
18.1. HELPDESK	18
18.2. SCIENTIFIC AND PROGRAMMATIC QUESTIONS	18
APPENDIX 1: DESCRIPTION OF RESEARCH AREAS.....	19
APPENDIX 2: PROGRAM FOCUS - DEFINITIONS OF CANCER RESEARCH TYPES	21

VERSION HISTORY

6/22/21 Release of Instructions for Applicants

1. INTRODUCTION

The Cancer Prevention & Research Institute of Texas (CPRIT) Application Receipt System (CARS) (<https://CPRITGrants.org>) provides a means for the research community (ie, nominators, candidates, Principal Investigators [PIs], and Application/Authorized Signing Officials [ASOs]) to respond to CPRIT funding opportunities electronically over the Internet through a secure connection. This document provides instructions and guidance to nominators to submit an application in response to CPRIT’s Request for Applications (RFA) for Recruitment of First-Time Tenure-Track Faculty Members (RFA R-22.1-RFT), Recruitment of Rising Stars (RFA R-22.1-RRS), and Recruitment of Established Investigators (RFA R-22.1-REI). Applications may be submitted from June 22, 2021, through June 20, 2022.

2. SUMMARY INSTRUCTIONS

- **Technical Support:** Nominators and candidates are strongly advised to carefully read this document in its entirety before starting an application. The CPRIT Helpdesk ([section 18.1](#)) is available to answer technical questions and guide nominators with application submission. This *Instructions* document will be updated as necessary. Revisions will be listed in the *Revision History*.
- **Document Format for Uploaded Files:** Use Portable Document Format (PDF) only.
 - Do NOT password protect documents.
 - Do NOT submit documents that are bound together in a single PDF package.
- **Font Type/Size:** Arial (11 point), Calibri (11 point), or Times New Roman (12 point).
- **Page Format:** Single spacing, 0.75-inch margins in all directions.
- **Templates:** Use the provided template for candidate current and pending support.
- **Submission Process:**
 - The candidate prepares the relevant information and documents for the nominator.
 - The nominator completes/finalizes all sections in the system and forwards it to the organization’s ASO for review and final submission to CPRIT. The ASO is an individual authorized to submit an application for the organization.
- **Tab Finalization and Reset:**
 - Application information saved “as draft” can be edited at a later time.

- Once application information is “finalized for ASO approval,” it can be edited only after an ASO has reset the section to draft mode at the request of the nominator.

3. APPLICATION SUBMISSION DEADLINE

Applications will be accepted on a continuous basis throughout FY22. In order to manage the timely review of nominations, it is anticipated that applications submitted by 11:59 PM central time on the 20th day of each month will be reviewed by the 15th day of the following month. For an application to be considered for review during the monthly cycle, that application must be submitted on or before 11:59 PM. In the event that the 20th falls on Saturday or Sunday, applications may be submitted on or before 11:59 PM central time the following Monday. CPRIT will not extend the submission deadline. During periods when CPRIT does not receive an adequate number of applications, the review may be extended into the following month.

NOTE: CARS will be unavailable the third Thursday of each month between 7 PM and 9 PM central time for routine system maintenance.

4. APPLICATION PREPARATION AND SUBMISSION PROCESS

Nominations for CPRIT Recruitment awards will continue to be submitted on behalf of a specific candidate by the president, provost, vice president for research, or appropriate dean of a Texas-based public or private institution of higher education, including academic health institutions. All nominations must be submitted via a user account in CARS (which must include the nominator’s credentials and email address). Due to the nature of the recruitment process, the candidate will prepare and provide information and documents to the nominator who will then be in a position to supplement the candidate-provided documents with institutional documents to submit the complete nomination in the system via his/her user account. As with other CPRIT award mechanisms, the application must be started by an individual (the nominator) and then forwarded to the institution’s ASO for formal submission to CPRIT. A summary of this process is as follows:

- The candidate prepares the relevant information and documents for the nominator.
- The nominator completes/finalizes a series of numbered tabs of the application.
- Finalized tabs can be reset by the ASO.

Once all tabs are finalized, the ASO reviews, approves, and submits the application to CPRIT.

5. APPLICATION/AUTHORIZED SIGNING OFFICIAL (ASO)

The ASO is the individual officially authorized to submit an application on behalf of an organization to CPRIT. An ASO is required on the application and must be identified by the nominator. As the organization's representative, the ASO is required to review the tabs finalized by the nominator and subsequently submit the application. The ASO can reset nominator–finalized tabs to draft at the request of the nominator.

6. GRANTS CONTRACT/OFFICE OF SPONSORED PROJECTS OFFICIAL

The Grants Contract/Office of Sponsored Projects Official is the individual who will manage the grant if an award is made. This individual must be identified for the application. The nominator or the ASO can assign this individual to this role.

7. USER REGISTRATION AND/OR LOGIN

Nominators begin the application process by registering or logging in to CARS (<https://CPRITGrants.org>). User accounts for nominators may be created via the *Register here* link in CARS. All nominator accounts must select the general role of “I am an Applicant or work for one,” a role similar to that of a PI on Academic Research applications. On successful login into the system, nominators will be presented with the *My Applications* page. All prior applications by that user are listed on this page. After initial registration or after login, all users are encouraged to complete/verify the information under the *My Profile* link on the top left of this screen.

8. STARTING A NEW APPLICATION

New applications can be started in 1 of 2 ways:

1. My Applications (this is the default page after login) → click *Start a New Application* → FY 2022 Academic Research Programs → Recruitment of First-Time Tenure-Track Faculty Members, Recruitment of Rising Stars, or Recruitment of Established Investigators → click *New Application*, or
2. Current Funding Opportunities → click *FY 2022 Academic Research Programs* → Recruitment of First-Time Tenure-Track Faculty Members, Recruitment of Rising Stars, or Recruitment of Established Investigators → click *Start New Application*.

Upon starting a new application, nominators are required to enter the title of the application (160-character limit; can be edited later) and select the submitter role. Symbols or special characters should NOT be used—these will not be transmitted correctly. Once this step is completed, nominators will be directed to the summary page. Examples of application titles for Recruitment nominations are as follows:

- Nomination of Dr John Smith for CPRIT Rising Stars Award
- Recruitment of First-Time, Tenure-Track Faculty Member – Dr Jane Cook
- Dr Jack Frost: Genetic Approaches to Identifying Cancer Mutations

Nominators are advised to carefully read the information on the summary page before moving on to the numbered tabs. All tabs must be successfully completed/finalized by the nominator before the ASO can review, approve, and successfully submit the application.

- Tab 1 (Contacts) and Tab 2 (Application Information) **must** be completed/finalized prior to Tab 3 (Collaborators).
- Tab 2 (Application Information) **must** be completed/finalized prior to Tab 4 (Required Documents).

9. STATUS DISPLAY

9.1. Tab Status

The status of each tab is displayed under the row of numbered tabs. The figure below is an example of the status of Tab 1.



Status	Status Definition
DRAFT	The tab is being prepared by the nominator.
PENDING ASO APPROVAL	The tab has been finalized by the nominator. When all tabs are finalized and reflect this status, the ASO will receive email notification stating that the application can be reviewed/submitted. The nominator is included on this notification.
ASO APPROVED AND SUBMITTED	The ASO has reviewed, approved, and submitted the application to CPRIT. Once the application has been submitted by the ASO, the nominator is notified via email.

9.2. Application Status

The status displayed under the row of numbered tabs on the *Summary* tab indicates the status of the application (as indicated in the figure above).

10. TAB: SUMMARY

The status of each tab is also displayed on this page. Status definitions are described below.

My Applications: Summary

Summary
1 Contacts
2 Application Information
3 Personnel & Collaborators
4 Required Documents
5 Budget
6 Final Review & Submit

Summary
Application ID: XXXXXXXX
Phase: Full Application
Status: **DRAFT**

Application Title: screen shot
Program: FY 2014 Research Programs
Award Type: Individual Investigator Research Awards

Please be sure to verify format requirements. Applications that do not meet format requirements and/or reviewers' determination of readability may result in rejection of your application. Please check the format requirements found in the [Request for Application \(RFA\)](#).

Full Application Deadline: February 3, 2014 by 3:00 PM CT ([check current official time](#))

This application is in progress and is not ready for ASO approval. Each section outlined below must be completed, finalized, and approved by the ASO at your institution prior to the submission deadline. When all sections have been completed and set to "PENDING ASO APPROVAL", the Application Signing Official will need to approve the application submission in order for it to be forwarded for review. The table below shows the status of each section in the submission process as of December 20, 2013 5:12 PM CT.

Section #	Application Section	Status
1	Contacts	draft
2	Application Information	draft
3	Project Personnel and Collaborators	draft
4	Required Documents	draft
5	Budget	draft
6	Final Review and Submit	NOT APPROVED

Section	Status	Status Definition
1-5	Draft	The tab is being prepared by the nominator.
	Pending ASO Approval	The tab has been finalized by the nominator. When all tabs are finalized and reflect this status, the ASO will receive email notification that the application can be reviewed/submitted. The nominator is included on this notification.
6	Not Approved	The application has not been approved/submitted by the ASO.
	Pending	All tabs have been finalized by the nominator and reflect the status "pending ASO approval." At this point, the application is awaiting ASO approval and subsequent submission.

NOTE: As stated in the preceding section, the status displayed under the row of numbered tabs on this page indicates the status of the entire application.

11. TAB 1: CONTACTS

- **Nominator:** Verify information for the nominator; update as necessary.
- **Alternate Submitter (Optional):** An alternate submitter may be designated on the application by the nominator. Follow the search guidelines below.
- **Application Signing Official (Required):** An ASO must be listed in order to complete/finalize this tab. To designate the ASO, do the following:
 - Click the *Search for Application Signing Official* button.
 - Enter information, and click the *Search Contacts* button.
 - If the individual is listed on the subsequent search results page, that individual may be added to the application via the *Add Contact* link.
 - If the individual is not listed, different search criteria may be used (for example, using the last name only, spelling variations, etc). Alternatively, the individual may be invited to register in CARS and be part of the application by clicking the *Send them an invitation* link. On the subsequent page, complete the fields, and click the *Send Invitation* button. When this individual joins the application as the ASO, his/her information will be listed in the appropriate section of the tab.
 - Change or remove an individual by clicking the appropriate button.
- **Alternate Application Signing Official (Optional):** This individual can be assigned only by the ASO. Follow the search guidelines above.
- **Grants Contract/Office of Sponsored Projects Official (Required):** A Grants Contract/Office of Sponsored Projects Official must be listed in order to complete/finalize this tab. This individual can be assigned by the nominator or the ASO. Follow the search guidelines above.

When all information is entered, click the *Finalize Contacts Section* button. Note that this tab cannot be finalized until the 3 required fields of this section, namely, “Nominator,” “Application Signing Official,” and “Grants Contract/Office of Sponsored Projects Official” have been completed. Nominator information is entered automatically; an ASO must be identified and added by the nominator. The Grants Contract/Office of Sponsored Projects Official may be identified and added by the nominator or the ASO.

12. TAB 2: APPLICATION INFORMATION

- **Application Identification**

- **Award Mechanism:** Verify the listed award mechanism. Note that the award mechanism cannot be changed here.
- **Application Type:** Verify application type (drop list defaults to *New Application*).
- **Application Title:** The application title is stated. Edit if necessary. Examples of application titles for Recruitment nominations are as follows:
 - Nomination of Dr John Smith for CPRIT Rising Stars Award
 - Recruitment of First-Time, Tenure-Track Faculty Member – Dr Jane Cook
 - Dr Jack Frost: Genetic Approaches to Identifying Cancer Mutations

- **Project Information**

- **Requested Award Duration:** Enter requested award duration. Only whole numbers are allowed. The duration cannot exceed maximum limit noted below:

Award Mechanism	Maximum Duration
Recruitment of First-Time, Tenure-Track Faculty Members (RFT)	5 years
Recruitment of Rising Stars (RRS)	5 years
Recruitment of Established Investigators (REI)	5 years

- **Award Amount Requested:** The maximum award that may be requested is as follows:

Award Mechanism	Maximum Award
Recruitment of First-Time, Tenure-Track Faculty Members (RFT)	\$2,000,000
Recruitment of Rising Stars (RRS)	\$4,000,000
Recruitment of Established Investigators (REI)	\$6,000,000

NOTE: Exceptions to these limits will be entertained only if there is compelling written justification (see RFA for the details).

- **Application Classification**

- **Research Area:** Select the research area that best describes the proposed work. Please refer to the [Appendix 1](#) for a detailed description of each research area.
- **Program Focus:** Select the focus of the proposed work. Please refer to [Appendix 2](#) for the definitions of cancer research types.

- **Cancer Site Addressed:** Select the most relevant cancer site(s) addressed, up to a maximum of 3. If the focus of the project is not on specific cancer site(s), select All Cancers. The selection of cancer sites in this section assists CPRIT with reporting on cancer research that is being performed.
- **Candidate Identification:** Provide information for the candidate: name, title, degree(s), gender, race and ethnicity (optional), institution from where the candidate is being recruited, contact information including telephone number and email address, and expertise.
- **State Legislative Districts**
 - **State Senate District:** Enter the State Senate District of your (nominator) institution. Use the link provided to find this information using the nominator’s institutional address.
 - **State House District:** Enter the State Senate District of your (nominator) institution. Use the link provided to find this information using the nominator’s institutional address.
- **Cancellation of Applications/Awards by Granting Organization (in past 5 years)**
 - Select whether the applicant/nominator is currently eligible to receive federal grant funds. If “No” is selected, provide a reason.
 - Select whether the applicant/nominator had an application or award terminated for cause within the last 5 years. If yes, then select the category of Application or Award. Select the Granting Organization. Enter the Award Title, Award Number, Award Amount, and the Reason for Cancellation. Click the *Add Application/Award* link to add additional applications or awards.
- **Donations**
 - Select whether the grant applicant/nominator or any individual listed on the application has made a donation, gift, or grant to CPRIT, the CPRIT Foundation, the Texas Cancer Coalition, or any nonprofit organization/entity established to benefit CPRIT.
 - If yes, then enter the name of the donor, entity name, donation amount, and date of donation. Click the *Add Donation* link to add additional donations.

- **CPRIT Priorities Addressed (from Statute or Texas Cancer Plan)**
 - Choose the CPRIT priority addressed in the application. More than 1 priority may be selected. If choice 13 is selected, then enter the name of the research sponsor and the sponsor’s priority that the application addresses.

Review the instructions, and click the appropriate button (*Save Application Information as Draft* or *Finalize Application Information for ASO Approval*) to save entered application information.

NOTE: Application information saved “as draft” can be edited at a later time. Application information “finalized for ASO approval” can be edited only after the ASO has reset the application to draft mode at the request of the nominator.

13. TAB 3: PROJECT PERSONNEL AND COLLABORATORS

- **Investigators and Submitters:** Ensure that the nominator and the candidate are listed.
- **Collaborators:** Enter information for all collaborators (select the appropriate *Role for Application* from the drop list). Click the *Save as Draft* button to save additions. Review the list to ensure that all entered collaborators have been successfully added.
- **Note:** We recognize that project personnel might not have been identified at this point so applicants are not required to list any in this section.

When all information is entered, click the *Finalize Collaborators* button. Note that this tab can be finalized only after Tab 1 (Contacts) has been finalized.

14. TAB 4: REQUIRED DOCUMENTS

NOTE: All documents must be uploaded in PDF format only. The system will not allow upload of documents in other formats or of documents that exceed the page limits specified in the individual RFAs. Do NOT password protect documents. Do NOT submit documents that are bound together in a single PDF package.

- **Application Abstracts: Summary of Nomination and Summary of Goals and Objectives:** Enter a summary of the nomination in the designated text box (2,000 characters for RFT and RRS and 2,500 characters for REI; character limit includes letters, spaces, and punctuations). Enter a broad summary of goals and objectives to be achieved in the designated text box (2,000 characters for all mechanisms; character limit

includes letters, spaces, and punctuations). **The summary of goals and objectives must be prepared by the candidate.**

Do NOT use symbols or special characters (eg, Greek letters)—these will not be transmitted correctly. Save the entered information by clicking the *Save Application Abstracts as Draft* button. Information must be saved before any documents are uploaded below or the summary of the nomination and/or summary of goals and objectives will be lost when the upload refreshes the web page.

- **Institutional Commitment (up to 3 pages):** Describe the institutional commitment to the candidate. Institutional commitment must be presented in a tabular summary that clearly identifies the salary amount, sources, and any additional research support that will be offered from institutional sources over the course of the CPRIT award. *See individual RFAs for details.*
- **Letter of Support from Department Chair (1 page):** Provide the letter of support from and signed by the chair of the department to which the candidate is being recruited. *See individual RFAs for details.*
- **Curriculum Vitae (CV):** Provide a complete CV and list of publications for the candidate. **This document must be prepared by the candidate.**
- **Research (up to 4 pages):** Upload a Research PDF document that provides an overview of the candidate's proposed research (*see RFA for details*). Citations must be referenced within the page limit. **This document must be prepared by the candidate.**
- **Research Collaboration/Synergy Plan (up to 2 pages):** Upload the research collaboration/synergy plan (*see RFA for details*).
- **Biographical sketches of collaborators:** Upload biographical sketches of collaborators established in the research collaboration/synergy plan (*see RFA for details*).
- **Publications/References (1 page):** Upload the Publications/References PDF document. Journal articles are not allowed under this section. Any appropriate citation format is acceptable; official journal abbreviations should be used.
- **Publications:** Upload the most significant publications that have resulted from the candidate's research efforts. Three publications should be provided for the RFT mechanism; 5 publications must be provided for the RRS and REI mechanisms. Only

articles that have been published or that have been accepted for publication (“in press”) should be submitted. **Publications files must be provided by the candidate.**

- **Timeline (1 page):** Upload a timeline that provides a general outline of the major outcomes to be tracked during this award. **The timeline must be prepared by the candidate.**
- **Current and Pending Support:** Upload the candidate’s current and pending support. Candidates must use the “Recruitment - Current and Pending Support” template posted under the *Summary* tab). Refer to the sample current and pending support document located in [Current Funding Opportunities](#) for Academic Research in CARS. **This document must be prepared by the candidate.**
- **Letters of Recommendation:** For the RFT mechanism, upload 3 letters of recommendation from individuals who are in a position to detail the candidate’s academic and scientific research accomplishments. Letters of recommendation are not required for the RRS and REI mechanisms.
- **Research Environment (1 page):** Upload a document that describes the research environment available to support the candidate’s research program, including core facilities, training programs, and collaborative opportunities.
- **Descriptive Biography (up to 2 pages):** Provide a brief descriptive biography of the candidate. If the nomination is approved for funding, this section will be made publicly available on CPRIT’s website. Candidates are advised not to include information that they consider confidential or proprietary when preparing this document. *See RFA for details.* **This document must be prepared by the candidate.**

When all information is entered, click the *Finalize Required Documents* button.

15. TAB 5: FINAL REVIEW & SUBMIT

When Tabs 1 through 4 have been completed and finalized by the nominator, the status of the application is set to “PENDING ASO APPROVAL.” The ASO will then receive email notification to review, approve, and submit the application to CPRIT. **Only the ASO is authorized to officially submit the application.** The ASO must log in to the system and click the appropriate application ID number listed under his/her *My Applications* page. To submit the

application, the ASO must enter his/her password and click the *Approve and Submit Application* button. The ASO will then be asked to click the *Continue* button to submit the application. After the application has been submitted, the status of the application on the *My Applications* page (and also on all tabs of that application) will be “ASO APPROVED AND SUBMITTED.” Upon successful submission of the application by the ASO, a confirmation notification will be sent to the nominator at the email address provided with a link to download the complete autoconcatenated application.

16. PROVIDED TEMPLATES

Candidates must use the provided template—Recruitment - Current and Pending Support—to prepare their current and pending support. The template is posted under the *Summary* tab and is available in .doc and .pdf format.

17. FORMATTING INSTRUCTIONS

All sections of the application should be written in clear and legible text and must follow the guidelines described below. Nominators and candidates are advised to use font sizes, font faces, line spacing, page sizes, and page margins that permit easy readability of the application text. Every attempt should be made to keep files sizes to a minimum (see *Scanning Resolution* below). Applications that do not meet these guidelines are subject to administrative withdrawal.

Formatting guidelines for all submitted CPRIT applications are as follows:

- **Language:** English.
- **Document Format:** PDF only.
- **Font Type/Size:** Arial (11 point), Calibri (11 point), or Times New Roman (12 point).
- **Line Spacing:** Single.
- **Page Size:** 8.5 x 11 inches.
- **Margins:** 0.75 inch, all directions.
- **Color and High-Resolution Images:** Images, graphs, figures, and other illustrations must be submitted as part of the appropriate submitted document. Candidates should include text to explain illustrations that may be difficult to interpret when printed in black and white.

- **Scanning Resolution:** Images and figures must be of lowest reasonable resolution that permits clarity and readability. Unnecessarily large files will NOT be accepted, especially those that include only text.
- **References:** Applicants should use a citation style that includes the full name of the article and that lists at least the first 3 authors. Official journal abbreviations may be used. An example is included below; however, other citation styles meeting these parameters are also acceptable as long as the journal information is stated. Include URLs of publications referenced in the application.

Smith, P.T., Doe, J., White, J.M., et al (2006). Elaborating on a novel mechanism for cancer progression. *Journal of Cancer Research*, 135, 45-67.

- **Internet URLs:** The nominator/candidate are encouraged to provide the URLs of publications referenced in the application; however, URLs directing reviewers to websites containing additional information about the proposed research should not be included.
- **Headers and Footers:** Other than page numbers, these should not be used unless they are part of a provided template. Page numbers may be included in the footer (see following point).
- **Page Numbering:** Add page numbers in the footer for each document that is uploaded as a PDF. Restart the page numbering at 1 for each document. Pages should be numbered at the bottom right corner of each page.
- **All attachments that require signatures must be filled out, printed, signed, scanned, and then uploaded in PDF format.**

18. CONTACT INFORMATION

18.1. Helpdesk

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

Hours of operation: Monday through Friday, 8 AM to 6 PM central time

Tel: 866-941-7146

Email: Help@CPRITGrants.org

18.2. Scientific and Programmatic Questions

Questions regarding the CPRIT program, including questions regarding this or other funding opportunities, should be directed to the CPRIT Program Manager for Academic Research.

Email: Research@cprit.texas.gov

Website: www.cprit.texas.gov

Appendix 1: Description of Research Areas

In Tab 2 (Application Information/Application Classification), the nominator is required to select a research area that best describes the proposed work. Descriptions of research areas are as follows:

- **Cancer biology:** Research on the biology of how cancer starts and progresses as well as normal biology relevant to these processes. Examples include oncogenes and suppressor genes, epigenetics, DNA repair, growth factors, signaling pathways, cancer immunology, microenvironment, and tumor progression and metastasis.
- **Cancer control, survivorship, and outcomes research:** Research in this category covers a broad range of areas, including patient care and pain management, cancer surveillance, cancer disparities research, quality of life for patients with cancer and their families, identification and reduction of late effects of cancer treatment, education and communications that reduce cancer risk, health services research, and attitudes and belief systems that affect cancer control.
- **Early detection, diagnosis, and prognosis:** Identification and testing cancer markers and imaging methods detecting and/or diagnosing cancer as well as predicting the outcome or chance of recurrence. Examples include discovery of markers and/or technologies for use in cancer detection and diagnosis and/or prognosis, animal trials and clinical human trials, tumor response to therapy, risk assessment, screening methods, informatics and informatics networks, and biostatistics.
- **Etiology:** Research on the causes of cancer—genetic, environmental, and lifestyle factors and their interactions. Examples include environmental chemicals, hormone-disrupting agents, gene-environment interactions, microbial agents, radiation exposure, and genetic polymorphisms that affect carcinogen metabolism.
- **Prevention:** Identification of interventions that reduce cancer risk. Examples include chemoprevention, vaccines to prevent cancer, behavioral modifications that reduce cancer risk, studies on energy balance and dietary factors associated with cancer risk, and identification of cancer risk factors.
- **Scientific model systems:** Development of new animal models, cell culture systems, computer simulations, and their application to other studies across the spectrum of cancer

research. Examples include mathematical modeling of cancer processes, development of diverse animal models, including transgenic mice, zebra fish, *Drosophila*, etc, and development of organ and tissue model systems.

- **Treatment:** Identification, development, and testing of treatments for cancer. Examples include drug development, immunotherapy, personalized cancer therapy, methods of drug delivery, antiangiogenic therapy, clinical trials, and treatments to prevent recurrence.

Appendix 2: Program Focus - Definitions of Cancer Research Types

In Tab 2 (Application Information/Application Classification), the applicant is required to select a program focus that best describes the proposed cancer research type. Descriptions of cancer research types are as follows*:

- **Basic Research** - results in the acquisition of new knowledge and elucidates fundamental mechanisms in biology.
- **Translational Research** - involves the application of discoveries from basic research to practical problems associated with cancer as well as research on how to improve best practices in the community.
- **Clinical Research** - involves studies with human subjects and includes patient-oriented research on mechanisms of disease, therapy, and development of new technologies as well as epidemiologic and behavioral studies and outcomes and health services research.

*Taken from Rubio et al, Defining Translational Research: Implications for Training, *Academic Medicine*. 2010; 85:470-475.