## **TREC Baseline Evaluation Survey**

The following survey items pertain to your TREC-related activities and experience as well as some pre-TREC research experiences and perspectives. Your candid responses to the survey items will enable the National Cancer Institute to better understand the processes and outcomes of the TREC Initiative. Moreover, investigators' collective responses to the survey will provide useful information about the ongoing activities and accomplishments of the TREC centers and suggest ways in which TREC-related research and training activities can be enhanced over the course of the TREC Initiative. As specified in the preceding statement of informed consent, your responses will remain confidential. Any future reports of the survey findings will maintain the anonymity of each investigator's individual responses. We hope that you will decide to complete the survey as your responses are vital to the success of the TREC Initiative and other collaborative research initiatives.

Thank you in advance for your participation — we greatly appreciate your time and assistance.

Name: Title/Rank:

Primary Field of Training: Primary Field Specialty: Secondary Field of Training: Secondary Field Specialty: Tertiary Field of Training: Tertiary Field Specialty:

#### **History of Collaboration**

HOC-AI1. Please indicate whether or not you have previously worked or are currently working collaboratively on research with the individuals listed below. For each individual you have collaborated with, please indicate the length of time and your level of satisfaction with that collaboration.

Name of Investigator	Have you worked with this person on a non- TREC related project?	this person on a non- TREC relatedmonths or years did you workplease rate you collaboration or			
Investigator 1:	Yes / No	mosyrs	not at all satisfied - somewhat unsatisfied - neutral - somewhat satisfied - completely satisfied		
Investigator 2:	Yes / No	mosyrs	not at all satisfied - somewhat unsatisfied - neutral - somewhat satisfied - completely satisfied		
Investigator 3:	Yes / No	mosyrs	not at all satisfied - somewhat unsatisfied - neutral - somewhat satisfied - completely satisfied		
Investigator 4:	Yes / No	mosyrs	not at all satisfied - somewhat unsatisfied - neutral - somewhat satisfied - completely satisfied		
Investigator 5:	Yes / No	mosyrs	not at all satisfied - somewhat unsatisfied - neutral - somewhat satisfied - completely satisfied		
Investigator 6:	Yes / No	mosyrs	not at all satisfied - somewhat unsatisfied - neutral - somewhat satisfied - completely satisfied		

#### **Research Orientation**

TREC collaboration.

ROS-Intro. There are a variety of different approaches to conducting collaborative research involving one or more disciplines. Research environments vary across settings and can include some or all of these approaches.

ROS-AI1. The following items pertain to some of the thoughts and expectations you may have about your participation in research activities. Please indicate how strongly you agree or disagree with each of the following statements:

		Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
a.	I tend to be more productive working on my own research projects than working as a member of a collaborative research team.	•	•	•	•	•
b.	There is so much work to be done within my field that I feel it is important to focus my research efforts with others in my own discipline.	•	•	•	•	•
c.	The research questions I am often interested in generally do not warrant collaboration from other disciplines.	•	•	•	•	•
d.	While working on a research project within my discipline, I sometimes feel it is important to seek the perspective of other disciplines when trying to answer particular parts of my research question.	•	٠	•	•	•
e.	Although I rely primarily on knowledge from my primary field of interest, I usually work interactively with colleagues from other disciplines to address a research problem.	•	•	•	•	•
f.	I think it is important that researchers focus on increasing their understanding of their own individual discipline in order to collaborate with colleagues from other disciplines more effectively.	•	•	•	•	•
g.	I believe that the benefits of collaboration among scientists from different disciplines usually outweigh the inconveniences and costs of such work.	•	•	•	•	•
h.	In my collaborations with others I integrate research methods from different disciplines.	•	•	•	•	•
i.	In my own work, I typically incorporate perspectives from disciplinary orientations that are different from my own.	•	•	•	•	•
j.	Although I was trained in a particular discipline, I devote much of my time to understanding other disciplines in order to inform my research.	•	٠	•	٠	•
k.	In my collaborations with others I integrate theories and models from different disciplines.	•	•	•	•	•
1.	I am confident that collaboration among members of the TREC centers will yield valuable scientific outcomes that would not have occurred without the	•	•	•	•	•

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
m. Because of my involvement in transdisciplinary research, I have an increased understanding of what my own discipline brings to others.	•	•	•	•	•

## **Collaborative Resources**

SKIP PATTERN: If *TREC Center Director*, then participant will receive questions CRS-CD1 through CRS-CD2, for all others - survey skips to question CRS-AI1.

CRS-CD-Intro. The following questions inquire about currently available or anticipated resources at your TREC Center that are relevant to the initiation and maintenance of transdisciplinary research and training activities over the next five years and beyond.

CRS-CD1. To your knowledge, does your institution have in place a mission statement that explicitly states its commitment to promoting research that integrates knowledge across two or more fields?

Yes	No	Not Sure
•	•	•

CRS-CD2. To your knowledge, has your institution provided any of the following resources to your TREC center for purposes of supporting its research and training activities?

		Yes	No	Not Sure
a.	Additional administrative/support staff	•	•	•
b.	Other administrative resources	•	•	•
c.	Additional conference rooms	•	•	•
d.	Additional laboratories	•	•	•
e.	Additional research space	•	•	•
f.	Additional research equipment	•	•	•
g.	Supplemental graduate researcher stipends	•	•	•
h.	Supplemental postdoctoral trainee stipends	•	•	•
i.	Teaching releases for center investigators	•	•	•
j.	Other: [Manually filled]	•	•	•

CRS-AI1. Please evaluate the *institutional resources* for conducting your TREC-related research:

	Very Poor	Poor	Fair	Good	Excellent
a. <i>Availability</i> of physical resources (e.g., computer equipment, software, supplies.)	•	•	•	•	•
b. <i>Quality</i> of physical resources (e.g., computer equipment, software, supplies)	•	•	•	•	•
c. Availability of physical space (e.g., office, lab)	•	٠	•	•	•
d. Quality of physical space (e.g., office, lab)	•	٠	٠	٠	٠
e. <i>Availability</i> of the personnel resources (e.g., secretarial support, library support, technical support)	•	•	•	•	•

f. <i>Quality</i> of the personnel resources (e.g., secretarial support, library support, technical support)	•	•	•	•	•
g. <i>Availability</i> of electronic or other resources for collaboration between remote research sites	•	•	•	•	•
h. <i>Quality</i> of electronic or other resources for collaboration between research centers	•	•	•	•	•

CRS-AI2. Please rate the research, core, and developmental projects with which you are actively involved. For each of those projects, please estimate the likelihood that you and fellow project members will be able to adhere to the schedule outlined in your proposal for completing major year-1 deliverables.

# Names of TREC Research, Core, and Likelihood of Completing Year 1 Deliverables on Time Developmental Projects at Your TREC Center:

Center.	Highly unlikely	Somewhat unlikely	Not sure	Somewhat likely	Highly likely	Not applicable
PRE-POPULATED	•	•	•	•	•	•
PRE-POPULATED	•	•	•	•	•	•
PRE-POPULATED	•	•	•	•	•	•
PRE-POPULATED	•	•	•	•	•	•

CRS-AI3. Please comment on the reasons why (or why not) it is likely that these projects will successfully adhere to the schedule of research activities and expenditures outlined in your TREC center proposal for year-1:

CRS-AI4. For each of the following *center-wide activities within your own TREC center*, use the following scale to indicate whether or not that activity is currently occurring, or will occur in the future, at your TREC center:

			ty CURREN at my TRE No			vity is plann enter in the No	
a.	TREC-wide retreats to integrate scientific findings across research projects	•	•	•	•	•	•
b.	Establishment of working groups that meet on a regular basis to integrate findings across TREC research projects	•	•	•	•	•	•
c.	Development of a web based TREC -wide Intranet site	•	•	•	•	•	•
d.	sharing of methodological tools or measures across TREC research projects	•	٠	•	•	•	•
e.	Development of a shared data base spanning two or more TREC research projects	•	•	•	•	•	•
f.	Development of a shared conceptual framework bridging two or more TREC research projects	•	•	•	•	•	•
g.	Creation of developmental research projects to promote collaboration among TREC members	•	•	•	•	•	•

CRS-AI5. For each of the following *inter-center activities linking your center to the other TREC centers*, use the following scale to indicate whether or not that activity is currently occurring, or will occur in the future:

			ty CURREN at my TRE( No			ty is planned ter in the F No	
a.	Inter-center retreats to integrate scientific findings from research projects based at different TREC centers	•	•	•	•	•	•
b.	Establishment of working groups that meet on a regular basis to integrate findings from research projects based at different TREC centers	•	•	•	•	•	•
c.	Development of a web based TREC Initiative- wide Intranet site	•	•	•	•	•	•
d.	Sharing of methodological tools or measures across research projects based at different TREC centers	•	•	•	•	•	•
e.	Development of a shared data base spanning multiple research projects based at different TREC centers	•	•	•	•	•	•
f.	Development of a shared conceptual framework bridging multiple research projects based at different TREC centers	•	•	•	•	•	•
g.	Creation of developmental research projects to promote collaboration among the members of different TREC centers	•	•	•	•	•	•

CRS-AI6. Using the following 5-point scale, please assess the extent to which you agree or disagree with each of the following statements about the collaborative aspects of your TREC center:

		Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
a.	I am confident that our TREC center will be successful in achieving its transdisciplinary <i>research</i> goals.	•	•	•	•	•
b.	I am confident that our TREC center will be successful in achieving its transdisciplinary <i>training</i> goals.	•	•	•	•	•
c.	The members of our center have a high level of mutual trust in each other.	•	•	•	•	•
d.	The members of our center are a socially cohesive group.	•	•	•	•	•
e.	The director of our center is effective in promoting a climate of collaboration and trust.	•	•	•	•	•

CRS-AI7. Please fill in below the requested information regarding your prior experience managing and/ or participating in transdisciplinary or interdisciplinary research projects and centers:

		Managed	Participated in ( <i>but not managed</i> )
a.	<i>Number</i> of non-TREC trans- or interdisciplinary research projects (past and/or present):		
b.	<i>Number</i> of non-TREC trans- or interdisciplinary research centers (past and/or present):		
c.	<i>Total number of years</i> involved in trans- or interdisciplinary research projects (pre-TREC):		
d.	Total number of years involved in trans- or interdisciplinary		

research centers (pre-TREC):

## CRS-AI8. Impressions of Your TREC Center

a. Each scale below reflects a continuum between the two terms listed. For each scale, please place a check mark in the box that best represents your impression of your TREC center as a whole.

*For example*, unrelated to *TREC*, if you think a glass is slightly more than half full, you might place a check mark in the  $5^{th}$  box:

Empty			X		Full
Unexciting					Exciting
Boring					Stimulating
Cold					Warm
Unfriendly					Friendly
Frustrating					Satisfying
Unproductive					Productive
Unsuccessful					Successful
Hindering					Facilitating
Competitive					Cooperative
Unenjoyable					Enjoyable
Territorial					Non-territorial
Conflicted					Harmonious

Not Supportive				Supportive
Socially Non-cohesive				Socially Cohesive
Scientifically Fragmented				Scientifically Integrated
Uneven Participation				Even Participation

b. For each of the following scales, please place a check mark in the box that best represents how you feel as a member of your TREC center:

Pessimistic				Optimistic
Socially Alienated				Socially Integrated
Intellectually Integrated				Intellectually Isolated
Unappreciated				Appreciated

### **Collaborative Processes**

CPS-AI1. Please evaluate the *collaboration within your TREC center*.

	Very Poor	Poor	Fair	Good	Excellent
a. Communication among collaborators.	•	•	•	•	٠
b. Ability to capitalize on the strengths of different researchers.	•	•	•	•	•
c. Resolution of conflicts among collaborators.	•	•	•	•	٠
d. Productivity of collaboration meetings.	•	•	•	•	•
e. Overall productivity of collaboration.	•	•	•	•	•

CPS-AI2. Please rate your views about *collaboration* with respect to your TREC center-related research.

	Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
a. In general, you feel that you can trust the colleagues with whom you collaborate.	•	•	•	•	•
b. In general, you find that your collaborators are open to criticism.	•	•	•	•	•
c. In general, collaboration has improved your research productivity.	•	•	•	•	•

### **Collaborative Activities**

CAI-AI1. Please assess the frequency with which you typically engage in each of the activities listed below using the following 7-point scale.

		Never	Rarely	Once a Year	Twice a Year	Quarterly	Monthly	Weekly
a.	Read journals or publications outside of your primary field	•	•	•	•	•	•	•
b.	Attend meetings or conferences outside of your primary field	•	•	•	•	•	•	•
c.	Participate in working groups or committees with the intent to integrate ideas with other participants	•	•	•	•	•	•	•
d.	Obtain new insights into your own work through discussion with colleagues who come from different fields or disciplinary orientations	•	•	•	•	•	•	•
e.	Modify your own work or research agenda as a result of discussions with colleagues who come from different fields or disciplinary orientations	•	•	•	•	•	•	•
f.	Establish links with colleagues from different fields or disciplinary orientations that have led to or may lead to future collaborative work	•	•	•	•	•	•	•
g.	Collaborate with members of your own TREC centers on developmental projects.	•	•	•	•	•	•	•
h.	Collaborate with members of other TREC centers on developmental projects	•	•	•	•	•	•	•
i.	Collaborate with investigators from other TREC centers in ways other than developmental projects	•	•	•	•	•	•	•

## Training

ITS-Intro-1. Training is one of the components of the TREC centers. The first set of questions pertains to your *opinions and experiences* about transdisciplinary training.

Transdisciplinary training in this context refers to the:

- a. incorporation of *one or more substantive foci* in which the concepts, methods, and findings from two or more scientific fields are brought together and integrated in a novel fashion (e.g., through the development of a new conceptual framework that bridges concepts and methods associated with each field)
- b. incorporation of a *process-oriented component* that introduces participants to the unique qualities and requirements of transdisciplinary collaboration
- c. requires a *sustained reciprocal exchange of information* among trainers and trainees over the course of successive collaborative interactions, rather than a one-way episodic delivery of information by experts to non-experts

ITS-AI1. Using the following 5-point scale, please assess the extent to which you agree or disagree with each of the following sentences:

		Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
a.	When training cancer researchers, one should make an effort to include as many disciplinary perspectives pertinent to the research phenomenon as possible.	•	•	•	•	•
b.	Transdisciplinary training is very difficult to conduct.	•	•	•	•	•
c.	The benefits of transdisciplinary training outweigh its costs and inconveniences.	•	•	•	•	•
d.	Transdisciplinary training increases the likelihood that trainees will conduct transdisciplinary research in their future careers.	•	•	•	•	•
e.	Transdisciplinary training sacrifices focus by diluting training across too many fields.	•	•	•	•	•
f.	Transdisciplinary training leads to higher quality scholarship than a discipline-specific approach to training.	•	•	•	•	•
g.	Transdisciplinary training increases the likelihood that trainees will conduct research that will be translated into practice to benefit society.	•	•	•	•	•

ITS-AI2. Choose the one statement below that <u>best</u> describes your attitude about transdisciplinary scientific collaboration for trainees at your TREC center.

- I do not think it is useful for my trainees to collaborate with faculty/students from other disciplines.
- I do not consider transdisciplinary scientific collaboration necessary for my trainees, but transdisciplinary collaboration could be useful for others.
- I think trainees should collaborate with colleagues from other disciplines, but I do not think it is possible for them to do so.
- I think collaboration with colleagues from other disciplines is vital and all trainees should do so.
- I already support a system of training where trainees collaborate with colleagues from other disciplines.

ITS-AI3. In what ways do you feel transdisciplinary training at your TREC center will benefit the career development of the trainees?

ITS-AI4. Using the following scale, please indicate whether or not each training activity listed took place at your institution prior to the start of the TREC initiative, is currently occurring at your TREC center or is planned for the future at your TREC center:

Training Activities	The activity occurred PRIOR to the start of my TREC center		The activity CURRENTLY is occurring at my TREC center			The activity is planned for my TREC center in the FUTURE			
	Yes	No	Not sure	Yes	No	Not sure	Yes	No	Not Sure
Trainee journal club	•	٠	•	•	٠	•	٠	٠	•
Writing group	•	٠	•	•	•	•	•	٠	٠
Attendance at colloquia/symposia	•	•	•	•	•	•	•	•	•
Presentation at colloquia/symposia	•	٠	٠	•	•	٠	٠	٠	٠
Career development seminar/workshop	•	•	•	•	•	•	•	•	•
Coursework outside trainee's primary discipline	•	•	٠	•	•	•	٠	•	•
Research mentoring in the lab or group setting	•	•	•	•	•	•	•	•	•
Spatial proximity to faculty mentors (e.g. sharing space nearby)	•	•	•	•	•	•	•	•	•
Access to an electronic information network (e.g. intranet, shared drives)	•	•	•	•	•	•	•	•	•
Cooperative relationships among faculty mentors	•	•	•	•	•	٠	•	٠	•
Cooperative relationships among trainees within a research lab or team	•	•	•	•	•	•	•	•	•
Cooperative relationships between trainees and faculty mentors	•	•	•	•	•	٠	•	•	•
Other: [Manually filled]	•	•	•	•	•	•	•	•	•

ITS-Intro-2. The next set of questions refers to research training in general.

ITS-AI5. Using the following 5-point scale, please rate how necessary you believe the following aspects of the training environment will be for trainee development at your TREC center over the next 4-5 years:

	Absolutely Unnecessary	Somewhat Unnecessary	Neutral	Somewhat Necessary	Absolutely Necessary
Trainee journal club	•	•	٠	•	•
Writing group	•	•	•	•	•
Attendance at colloquia/symposia	•	•	•	•	•
Presentation at colloquia/symposia	•	•	•	•	•
Career development seminar/workshop	•	•	•	•	•
Coursework outside trainee's primary discipline	•	•	•	•	•
Research mentoring in the lab or group setting	•	•	•	•	•
Spatial proximity to faculty mentors (e.g. sharing space nearby)	•	•	٠	٠	٠
Access to an electronic information	•	•	٠	•	•

network (e.g. intranet, shared drives) Cooperative relationships among faculty mentors	•	•	•	•	•
Cooperative relationships among trainees within a research lab or team	•	•	•	•	•
Cooperative relationships between trainees and faculty mentors	•	•	•	•	•
Other: [Manually filled]	•	•	•	•	•

ITS-AI6. How would you describe the effectiveness of the training process at your center to date?

Completely	Somewhat	Neutral	Somewhat	Completely
Ineffective	Ineffective		Effective	Effective
•	•	•	•	•

ITS-AI7. Please indicate below the number of pre-doctoral and post-doctoral trainees participating in TREC projects at your center:

Number of pre-doctoral trainees in your center: Number of post-doctoral trainees in your center:

ITS-AI8. In what ways could your TREC center do a better job of preparing trainees for their careers?

#### Closing

Are there any issues that we have not yet addressed in the above survey items, or any comments or ideas that you would like to share with us about the survey and/or your experiences as a TREC Investigator more generally?

This concludes our survey. Thank you very much for your time!