NC TraCS $5K - $50K Translational Research Matched Pilot Grant Program
Focus on Drugs, Devices and Diagnostics Development (4D):
Request for Applications
Next deadline October 10, 2017

PLEASE NOTE the new requirement for biostatistical consultations for all 4D pilot grant applications. See “Section V: Application Procedure” for details.

The North Carolina Translational and Clinical Sciences Institute (NC TraCS) is the academic home of the National Institutes of Health Clinical and Translational Science Award (CTSA) at UNC Chapel Hill (UNC-CH). The mission of NC TraCS is to transform clinical and translational research by creating new programs and pathways that make it easier for such research to be performed at UNC-CH and disseminated throughout the state of North Carolina.

I. Purpose

The NC TraCS Translational Research Pilot Program was established to facilitate the transfer of research findings to clinical practice in order to improve the health of the people of North Carolina. This program is designed to promote novel clinical and translational research in its many forms. Translational research includes two areas of translation. One is the process of applying discoveries generated during research in the laboratory, and in preclinical studies, to the development of trials and studies in humans. The second area of translation concerns research aimed at enhancing the adoption of best practices in the community.

Cross-disciplinary research addressing the development of therapies, diagnostics or devices applicable to human disease, clinical research/trials, epidemiological studies, and/or community-based research are considered eligible for these awards. Proposals are encouraged from teams of investigators from different disciplines, institutions and diverse communities.

The TraCS pilot program is now accepting applications with a deadline of October 10, 2017. This RFA is seeking applications for pilot grants that utilize the Drugs, Devices and Diagnostics Development (4D) Strategic Initiative. The 4D Initiative strives to effectively organize relevant resources in a user-friendly fashion and discover new paradigms to efficiently accelerate drugs, devices and diagnostics development and commercialization. The Pilot Grant program is one component of the 4D Initiative.

Applications for this RFA will be seeking funding to move drug, diagnostic, or medical device-related innovations toward an eventual commercial endpoint, such as the launching of a company or licensing to an established company. Examples of the type of activities this pilot grant intends to fund would include the following:

- Studies to validate the relevance of a biological target. The process of target validation identifies and assesses whether a molecular target merits the development of pharmaceuticals for therapeutic application.
• Development of a screening assay in support of discovering a lead compound
• Antibody humanization for therapeutic testing
• Optimization of a lead compound through iterative synthesis and testing
• Pharmacokinetic and pharmacodynamics studies of a drug or drug candidate that may directly impact clinical applications
• Development and validation of a novel drug delivery system using a model compound
• Development of novel toxicity/side effect testing approaches that extrapolate from in vitro to in vivo
• Genomic, proteomic, or metabolomics screening to identify disease-related biomarkers, relevant to a diagnostic test or monitoring drug efficacy
• Development of novel pharmacogenomics approaches to forecast efficacy and/or safety of drugs in human populations
• Development of novel approaches to improve drug compliance/outcomes of drug use
• Development of novel protocols to improve the efficacy of clinical trials
• Development of a proof-of-concept medical device
• Animal or human testing of a medical device prototype

Applicants are strongly encouraged to consult with the 4D Strategic Initiative Program Manager in preparing pilot applications, so as to identify the best resource for a given research question. To do so, please send an email to 4Dprogram@unc.edu.

NC TraCS is no longer able to fund pilot grants where the research is conducted outside the United States. Proposals with a foreign component must be discussed with a TraCS Research Navigator prior to submission - click here to schedule a consultation.

II. Eligibility

Applicants must conform to the following eligibility criteria:

• Applicant must hold a UNC-CH faculty appointment. Adjunct faculty researchers are not eligible to apply.
• UNC-CH researchers whose appointment allows them to serve as PI on externally sponsored research projects, for instance researchers holding EHRA non-faculty “research scientist” appointments at UNC research institutes and centers, are eligible.
• Members of NC TraCS-affiliated academic partner institutions and community organizations are eligible if they include a UNC-CH faculty member as a collaborator or co-investigator. RTI International and NC A&T State University are now partners in the CTSA with UNC-CH. Applications submitted by investigators from RTI or A&T must also include an investigator from at least one of the other two partner organizations. Therefore, a proposal from an RTI / A&T team is not required to include a UNC-CH investigator, although this is still strongly encouraged. Proposals that do not include a UNC-CH investigator must have a budget entirely comprised of funds from RTI and A&T.
• Teams of multiple PIs are encouraged, although one person must be identified as the main contact with primary responsibility for the research project and the disposition of project data.
• All research team members should be members of NC TraCS – see www.tracs.unc.edu for instructions on how to become a member.

III. Funding
NC TraCS will award one-year grants of up to $25,000 which must be matched with equal funds from the research team’s home schools, departments, centers or partner organizations, for total awards of up to $50,000. For example, a research project with a $10,000 budget would receive $5,000 from NC TraCS matched with $5,000 from the research team’s units. The match must be in actual funds and not in “in kind” contributions. Matching funds may not include funds previously committed to the research project. Since multidisciplinary proposals will be considered highly responsive to this RFA, it is preferred that matching support comes from more than one school, department, center or partner organization. It is encouraged that entities with their own internal pilot programs use those funds as an NC TraCS pilot matched funding source. Projects that include RTI and UNC investigators may be eligible for match funds provided by RTI. A list of potential matching funders can be found here.

NC TraCS’ new CTSA award includes a formal partnership with RTI International, the goal of which is to support high quality collaborative research between the two organizations. Projects that include RTI and UNC investigators may be eligible for match funds provided by RTI. Investigators may request up to $25,000 to support project activities at UNC and $25,000 to support activities at RTI, so no departmental match would be required for a UNC investigator collaborating with an RTI investigator. Additional questions about the RTI – UNC collaboration and potential collaborators at RTI or UNC should be directed to Lisa Gehtland (lagehtland@rti.org). Individuals interested in learning more about research expertise at RTI may also visit this website.

The CTSA is a research infrastructure grant, and NC TraCS provides members with access to research service expertise. Applicants are encouraged to utilize those research services where appropriate. Where appropriate, NC TraCS staff should be consulted prior to submission to ensure that proposals include accurate budget information for the planned use of NC TraCS services. However, applicants are not required to use NC TraCS services.

IV. Review Criteria

It is the applicant’s responsibility to present the proposal in a clear and logical fashion, to make a convincing case for the significance of the work and to present sufficient detail about the proposed methods so that an adequate evaluation of the proposal can be made.

The NC TraCS 4D Strategic Initiative will give priority to proposals with a focus in the area of Drugs, Devices and Diagnostics Development. Proposals should be at a stage where the investigator(s) have identified a novel and promising drug target, have validated a novel and relevant biomarker with diagnostics applications or have a novel medical device for diagnosis or treatment of disease.

Collaborative proposals integrating researchers working across two or more areas such as those listed above are encouraged but not required (e.g., development of a novel drug delivery system with the potential of attacking previously undruggable target(s) or integrating target identification and molecular profiling in the area of orphan and neglected disease using innovative animal models for target/drug candidate validation). The potential for progress to commercialization of a drug, device or diagnostic will be a major metric upon which the proposal will be evaluated.

The following review criteria will also be considered:

1. Significance of the work
   a) Does the project address an important unmet medical need or a critical barrier to progress in the field?
   b) How will successful completion of the aims change the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field?

2. Innovation with Commercial Potential
   a) Is the innovation novel relative to other current (commercial) approaches?
b) Does the proposed project have commercial potential to lead to a marketable product, process or service?

c) Does the application challenge and seek to shift current research or clinical practice paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation, or interventions?

3. Commercial Development Pathway

a) What is the anticipated path that will lead to a commercial product?

b) What are the scientific and regulatory hurdles along this pathway?

c) How will this funding move this project along that pathway?

d) If this project is successful, what are the next steps?

4. Investigator(s) / Team

a) Existence of a genuine multidisciplinary team in place that is integral to the conduct of the research.

b) Are the PD/PIs, collaborators, and other researchers well suited to the project?

5. Approach and Soundness of Methodology

a) Is the proposed project feasible within the one-year project period?

b) Are the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the project?

b) Are potential problems, alternative strategies, and benchmarks for success presented?

d) If the project is in the early stages of development, will the strategy establish feasibility and will particularly risky aspects be managed?

e) Feasibility of accomplishing the stated project goals within the one-year project period.

V. Application Procedure

NC TraCS very strongly recommends involving a biostatistician in the application development process. A large proportion of investigator-initiated studies have major statistical deficiencies that can generally be easily addressed. To increase the likelihood of funding of translational research grants and to accelerate the initiation of grants, a biostatistician should be engaged early in the proposal development process. The online application form will ask for the name of the biostatistician who consulted on the proposal.

For investigators without access to a biostatistician through their Department or Center (or RTI), biostatistical support can be obtained through the NC TraCS Biostatistics Service by completing the “Request a Consult” form.

For cancer-related research, please contact the Lineberger Comprehensive Cancer Center for biostatistical support (email: LCCC_BIOS@med.unc.edu).

For any questions, email nctracs@unc.edu or calling 919-966-6022 or 866-705-4931 (toll free).

Applications must be submitted using the NC TraCS online system. Proposal sections (except the Abstract) will be uploaded as individual PDF files. The application sections are:

1) - Scientific Abstract (250 word maximum): The abstract summary of the proposal for use by review committee members and NC TraCS (250 word maximum).

2) - Research Plan (5 pages maximum): The Research Plan should include Specific Aims, Significance, Innovation, and Approach. Include, where applicable clear evidence of how the proposal meets the review criteria. 5 page limit, includes tables and figures. 1.5 line spacing, font no smaller than Arial 11, and 1-inch margins.

3) - Cited References (No page limit).
4) **Budget**: Use [PHS 398 Form Page 4](#) (see Section VI below for more details). For most projects, one budget for the total project, including the match funds, should be submitted. However, for projects with a Co-PI from RTI or NC A&T, please submit a separate budget listing funds to be expended at each institution.

5) **Budget Justification (No page limit)**: The Budget Justification should include sufficient detail for reviewers to assess whether appropriate resources have been requested. Any overlap with existing funding must be addressed in this section.

6) **Proposal Timeline (1 page maximum)**.

7) **Human and/or Animal Subjects (No page limit)**: Briefly describe any human and/or animal subject issues. If human subjects will be involved in the research, provide a description of their involvement and characteristics, specific risks to subjects who participate, and protection against those risks. Describe the sources of materials that will be obtained from human subjects as part of their study participation. Provide assurance that the project will be reviewed and approved by the UNC IRB and comply with HIPAA. If vertebrate animals are to be used, provide a description of the proposed use of the animals in the work outlined and procedures for ensuring that discomfort, distress, pain and injury will be limited. Please note that neither Institutional Review Board (IRB) nor Institutional Animal Care & Use Committee (IACUC) approval is required prior to submission. However, IRB and/or IACUC approvals must be obtained before funds can be released. (See Section VII below for more details).

8) **Letter(s) of Collaboration (if applicable – no page limit)**: If a proposal has just a sole PI, and that sole PI is not UNC-CH faculty, then the proposal must include a Letter of Agreement from their UNC-CH faculty Co-Investigator (not required for sole PIs from RTI or NC A&T). Proposals that have Co-PIs do not need a Letter of Agreement if one of the Co-PIs is UNC-CH faculty.

9) **Resubmission Summary (if applicable – no page limit)**: If your proposal is a resubmission to NC TraCS, provide a summary that details your changes to the original proposal. Include the names of any TraCS advisors you consulted with specifically regarding this resubmission. Applicants are limited to one resubmission per proposal. If an investigator substantially changes and improves a proposal following two unsuccessful TraCS pilot submissions, a determination will be made by a TraCS Research Navigator as to whether that can be submitted as a new proposal.

10) **NIH Summary (if applicable)**: If your proposal references a prior NIH review, include the NIH reviewer comments.

11) **NIH Biosketches** for the key members of the research team (4 page maximum each). Please note the new NIH Biosketch format as of May 2015 – [click here](#) for details.

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**VI. Budget Guidelines**

1) **NC TraCS pilot grant budgets cover expenditures for a 12-month period. The budget period will begin when applicable IRB/IACUC documentation is provided to NC TraCS and the PI indicates everything is in place for the project to begin. If more than 6 months passes after notification of funding and the PI is still not ready to start, TraCS reserves the right to retract the award. At the end of the 12 month project period, any unexpended funds will be retained by NC TraCS and/or returned to the match organization.**

2) **For most projects, one budget for the total project, including the match funds, should be submitted. However, for projects with a Co-PI from RTI or NC A&T, please submit a separate budget listing funds to be expended at each institution.**

3) **Allowable Items.** Pilot grant funds may be budgeted for:
   - research support personnel
   - use of NC TraCS services, including salary support for NC TraCS core faculty, for example biostatistics and biomedical informatics faculty
• travel necessary to perform the research
• equipment, research supplies and core lab costs
• other purposes deemed necessary for the successful execution of the proposed project.

4) - Pilot grant funds may not be budgeted for:
• salary support for the UNC PI or faculty collaborators
• office supplies or communication costs
• travel or meals except as required to collect data
• professional education or training
• computers or audiovisual equipment
• manuscript preparation and submission
• indirect costs.

5) – No salary support for UNC-CH principal investigators and co-investigators is allowed. Although funds may not be used for UNC-CH faculty salary support or overhead, requests from academic partners for such support will be considered.

VII. Other Guidelines

1) - Prior to receiving funds, research involving human subjects must have appropriate approvals from the UNC-CH IRB. If the research includes animals, the appropriate IACUC animal research forms must also be filed and approved before the project’s start date. Either an IRB approval letter or an IRB response to a “Determination Whether Research or Similar Activities Require IRB Approval” must be submitted to NC TraCS prior to funds being released. Human subjects or animal research must be reviewed in accordance with the university’s general assurances and HIPAA. In addition, if the research involves human subjects, all personnel named on the budget page must have certification of training in the protection of human subjects prior to the start of the grant period.

2) - NC TraCS staff will work closely with funded projects throughout the grant period to monitor progress and, where necessary, provide assistance. A six-month interim progress report and a final progress report will be required. NC TraCS expects the PI to report over the lifetime of the work the outcomes achieved due to the pilot award, e.g., subsequent external funding, publications, presentations and patents.

3) - If an awardee leaves their position, they should contact NC TraCS to initiate close-out procedures.

VIII. New requirements for funded pilot grants

The NC TraCS Institute is funded through a CTSA grant from NIH’s National Center for Advancing Translational Sciences (NCATS). NCATS recently instituted a new policy requiring the review and approval of all TraCS pilot grants involving human subjects research prior to TraCS funds being released. Therefore, if your proposal is funded and involves human subjects research, TraCS will require additional documentation to send to NCATS. NCATS expects to complete their review in less than 30 days. The NCATS review can occur concurrently with the IRB review but final NCATS approval is contingent upon IRB approval.

IX. Submission Instructions

NC TraCS pilot grant applications are accepted 3 times per year (see the NC TraCS website for exact dates). Applications will be accepted only through the NC TraCS online system. Applications are due by 5:00 p.m. on the due date. Within 24 hours after receiving each application, applicants will receive an email confirmation from NC TraCS.
Applicants will be notified by email within 12 weeks of the deadline whether their application has been selected for funding.