Center for Leading Innovation and Collaboration (CLIC)
CTSA Program Synergy Papers: Request for Applications (RFA)
Application Deadline: October 2, 2019

**RFA 2019003 is a rapid response call for topics related to machine learning and/or artificial intelligence.**

**Background**

Cross-network translational research Synergy Papers are designed to focus on substantial challenges in clinical and translational research, address gaps in research, and convene new, innovative writing teams. Synergy Paper topics will be of high relevance and import to translational science, addressing specific methodological and/or content areas. These papers will present new or transformed assessments and perspectives, with emphasis on increasing capacity and further developing collaboration. A manuscript might focus on the status of translational science in a domain where cross-disciplinary teams are needed (e.g. modernizing clinical trial design and use of real world data; closing the translational gap for a specific disease) and review the state of the field, identify translational gaps and opportunities, and outline recommendations for advancing the field.

Machine learning and artificial intelligence approaches have a host of applications throughout all stages of the translational science spectrum. This Synergy Paper application will provide teams the opportunity to apply to write a manuscript that focuses on areas such as the development and enhancement of technology, new software, updated regulations and refining integration. Additional possible topics of application include data validity, generalizability of algorithms, and reproducibility.

Selected Synergy Paper teams will receive one year of administrative support to develop a manuscript, with the goal of submission to a scientific journal for publication within one year. We anticipate two calls for Synergy Paper teams per year, with one designated as a rapid response paper for a specific topic, and one designated as an open call with topics identified by the individual applicant teams.

**Goals**

The goal of Synergy Papers are to advance the field of translational science and build collaborations within and external to the CTSA Program consortium, while meeting the academic needs of co-authors to produce high quality scientific publications. In addition, the process of working on a joint manuscript forges new relationships and teams around shared goals, develops a common vocabulary across translational stages, and serves as a springboard for career development and further collaborations.

The selected application and final Synergy Paper will be recognized and highlighted by the CTSA Program consortium as identifying key opportunities and needs for continued translational science focus. In addition to expanding existing collaborations and fostering new ones, the Synergy Paper will help inform future CTSA Program research and training priorities. This may lead to new working groups, Un-Meetings, CTSA Program meeting topics and collaborations to pursue other funding opportunities.

---

*The University of Rochester Center for Leading Innovation and Collaboration (CLIC) is the coordinating center for the Clinical and Translational Science Awards (CTSA) Program, funded by the National Center for Advancing Translational Sciences (NCATS) at the National Institutes of Health (NIH), Grant U24TR002260.*
Rapid Response Call for Applications

Collaborative teams are invited to apply for CLIC assistance for a paper that focuses on either:

1) A new approach to a significant translational science process or method roadblock in machine learning and/or artificial intelligence and how to address this challenge to advance translational science; or

2) A contentknowledge review of a pressing translational science topic across several stages of the translational continuum, as it relates to machine learning and/or artificial intelligence, identifying gaps and approaches to move the field forward (that would also include a section on relevant process gaps as well).

For example, a topic/manuscript that focuses on a narrow area such as the development of a specific immunotherapy and its mechanism of action would not be responsive, while a manuscript that more comprehensively assesses barriers and opportunities to advance immunotherapies from the bench to preclinical and then to clinical (with specific examples) would be viewed as responsive. In this particular example, the manuscript would likely address areas of emerging science, regulatory aspects, implementation, and policy considerations, among other issues.

Areas that could be addressed in synergy papers are reflected in the Fall 2017 CTSA Program meeting presentation by Dr. Chris Austin, Director of NCATS, who highlighted both “scientific translational problems” and “organizational/cultural translational problems” on NCATS’s to-do list (https://clic-ctsa.org/content/fall-2017-ctsa-program-meeting-slides). Potential topics range from digital health and modernizing clinical trials to rare diseases and pharmacogenomics. These topics are provided as examples and synergy teams are welcome to submit topics not included on this list.

Application Requirements:

- The proposal identifies important translational science gap(s)/barrier(s) and will recommend innovative approaches/methods that could address this gap.
- The proposed topic is time sensitive, addressing a current or emerging public health issue or involving an emerging technology or approach of significant importance to translational science.
- Multidisciplinary team involves at least three (3) CTSA Program hubs collaborating on a critical translational science area, with complementary and diverse team members representing multiple stages (two or more) of the translational science continuum. Teams should include a combination of senior, mid-level, junior, and trainee investigators.
- The resulting Synergy Paper should inform future CTSA Program areas of research and training, and will advance a component of the field of translational science.
- The application identifies new and diverse collaborative teams, potentially building on existing collaborations while including new partners from academia, industry, government, foundations, or patient groups.
- The specific proposal topic and collaboration are not currently supported via a Domain Task Force (DTF) or other related Working Group, NCATS CTSA Collaborative Innovation Award or other related NCATS or CTSA Program Coordinating Center support.
The University of Rochester Center for Leading Innovation and Collaboration (CLIC) is the coordinating center for the Clinical and Translational Science Awards (CTSA) Program, funded by the National Center for Advancing Translational Sciences (NCATS) at the National Institutes of Health (NIH), Grant U24TR002260.

- Proposed team and application demonstrate capacity (with CLIC support) to develop and submit a collaborative manuscript for publication within 1 year.

**Application Review Process**

CLIC will initially triage proposed topics and review applications for completeness and responsiveness. CLIC will present the applications to a review committee that will consist of the CLIC Principal Investigators, a representative from NCATS, and 2-3 additional external reviewers. The committee will review the proposed topics based on the criteria above, providing a final selection and approval to receive support as a Synergy Paper.

**Support for Accepted Applications**

CLIC will generally provide the following support for one year for teams approved to develop a Synergy Paper:

- Provide logistical project management support to the writing team similar to support provided to DTF working groups. This will include organizing monthly videoconferences (anticipated 18 meetings total for the year), distributing meeting notes, assisting with document management (including providing access to web-based collaboration spaces), assisting with logistics of manuscript submission (e.g. obtaining co-author signatures and COI statements), covering all or a portion of publication costs (up to $3,000), and disseminating publications through traditional and social media outlets. Publications are required to acknowledge partial support from CLIC (grant U24TR002260).
- Assist the writing team with identifying and recommending additional external collaborators to participate on the team, as appropriate. This may include writing team participants or advisors from government agencies, industry, foundations or other academic institutions.
- Note: all writing and editing of the manuscript will be the responsibility of the Synergy Paper writing team.

**Application Process**

- The application portal for submissions, along with additional information, can be found here https://clicredcap.urmc.rochester.edu/surveys/?s=93FXCR4MJ3
- Applications are due October 2, 2019

Please send a brief summary (no more than three (3) pages, single spaced, minimum 11 point font and ½ inch margins) of the proposed topic, highlighting its relevance to translational science and how it is responsive to the criteria noted above. Include NIH bio-sketches of the proposed team members/authors as separate attachments.

Please use the following outline/key elements when developing the submission narrative (no more than three pages, not including references):

- Statement of the translational science problem
The University of Rochester Center for Leading Innovation and Collaboration (CLIC) is the coordinating center for the Clinical and Translational Science Awards (CTSA) Program, funded by the National Center for Advancing Translational Sciences (NCATS) at the National Institutes of Health (NIH), Grant U24TR002260.

- Brief background and rationale
- Current challenges/gaps/roadblocks
- Approach writing team will pursue to develop proposed solutions, innovations, and/or needed research roadmap. Include a succinct timeline of key process milestones.
- Brief overview of writing team members and description of how they meet the criteria for a multidisciplinary Synergy Paper team (include NIH bio-sketches as separate attachments)

Timeline
- Application Deadline: October 2, 2019
- Notification: November 19, 2019
- Support initiated: January 2, 2020
- Support concluded: December 31, 2020

Contact
The application is available here. For any questions regarding this RFA please contact synergy_papers@clic-ctsa.org.