

The TRANSFORM TL1 Training Program for Doctoral Students

INFORMATION AND APPLICATION PROCEDURES

**PRIORITY DEADLINE:
DECEMBER 14, 2018**

**ANTICIPATED AWARD START DATE:
JULY 1, 2019**

I. Background. Through the CTSA, the NIH launched a national consortium that seeks to transform the conduct of clinical and translational research, with the ultimate goal of enabling researchers to provide new treatments more efficiently and quickly to patients. The CTSA at Columbia University encompasses extensive research support, infrastructure, training programs, and mentoring mechanisms. A key component is the **TRANSFORM TL1 Training Program**, which offers structured training and practical exposure to the needed training for **doctoral students currently enrolled in basic science, population science or pre-clinical doctoral programs**, who want to gain some exposure to understanding how individual differences in people's genes, environments, and lifestyles can lead to the development of innovative approaches to disease prevention and treatment.

The TRANSFORM TL1 Training Program is intended to provide students already enrolled in doctoral training programs, primarily from GSAS, P&S, School of Nursing, or the Mailman School of Public Health, with additional research training to prepare for an academic research career that can contribute in some meaningful way to the important field of precision medicine. [Please note that precision medicine includes research related to, but not limited to, lifestyle, environment, or genetics.] This two year training opportunity¹ which will run simultaneously with the students' ongoing doctoral training, allows doctoral students to gain knowledge and skill-sets that may be outside of their primary academic or clinical discipline. The interdisciplinary education gained as a TRANSFORM TL1 trainee will serve as an invaluable asset in conducting future research and collaborating with scientists and investigators from other clinical and academic fields of knowledge. Participation in this program will not necessitate extending an individual's doctoral training program.

II. Award Provisions. With TRANSFORM support, doctoral students will obtain additional training in research. They will accomplish this goal by completing didactic training (including **Introduction to Precision Medicine**) that will advance their knowledge of precision medicine, such as systems biology, genomics, statistics, and/or medical informatics, according to the applicant's background and future career goals. They will also attend the year-long, weekly **Patient Oriented Research colloquia** (hour-long presentations covering academic career topics of interest), **monthly Precision Medicine colloquia**, **Introduction to ELSI Research on Genetics and Genomics, Funding and Grantsmanship for Research and Career Development Activities**, and the **Responsible Conduct of Research and Related Policy Issues**. It is important to note that these course activities **will be in addition** to the coursework and mentored research they will be completing within their "home" program. Successful completion of the

¹Initially awarded for 1 year and renewed for a second year with satisfactory progress

1-credit course entitled “Responsible Conduct of Research” is required, but can be part of the doctoral requirements.

Trainees are also required to complete at least one externship. Options include:

- **Entrepreneurship Coursework.** The Columbia Biomedical Accelerator aims to catalyze the advancement of biomedical technologies by providing funding, education, resources and mentorship to interdisciplinary teams of clinicians, engineers, scientists and students working to develop solutions to clinical unmet needs, with the ultimate goal of bringing innovative research out of the lab to benefit society. Project support is expected to serve as a bridge to commercial investment, with awards granted to perform specific tasks needed to validate a commercial hypothesis (vs. a scientific hypothesis). For more information, please visit: www.columbia-coulter.org
- **Dissemination and Implementation Science Training.** This externship will provide an opportunity to gain experience in the field of dissemination and implementation science through hands-on mentorship and research with faculty from the Columbia University Irving Medical Center. Potential projects relate to the adaptation, implementation, and sustainability of evidence-based programs in real-world community and clinical settings.
- **Enhancing Partnerships and Productivity with Industry.** We have developed specific opportunities to provide our trainees with exposure to drug development and industry research, through engaging with industry partners (e.g. Regeneron, Merck, Janssen) that have worked closely with Columbia University investigators. We will create a day-visit program for our trainees to gain insight into aspects of drug development including discovery, validation, clinical development, medical affairs, and marketing.
- **Biomedical Entrepreneurship.** Our trainees will be required to attend 3 or more **Columbia Health Tech Assembly (HTA)** sessions and/or case competitions to learn about the process of interdisciplinary collaboration and engagement with venture capitalists: <http://www.healthtechassembly.com/>
- **Translational Therapeutics Boot Camp.** The **Translational Therapeutics (TRx) module** has developed a 6-week boot camp and additional seminar series to provide exposure to the drug development and commercialization process.
- **Other.** You have the option of proposing your own research externship. Please provide a detailed summary that addresses the following: Where and how often would you visit this externship location? Who would be supervising the externship? What are your goals for completing this externship? How would this externship enhance your current training?

Recipients of the TRANSFORM TL1 funding will be required to submit a written progress report during each year of the training, and may be contacted periodically to provide information on their research career.

Eligible students admitted into the training program will be considered for an award that will provide 2 years of support (awarded for 1 year and renewed for a second year with satisfactory progress) including a stipend and funds for tuition and fees. Students should discuss with their Program Director if stipend and tuition award supplementation is available.

**TL1 award recipients must be FULL-TIME doctoral students, as per NIH guidelines.*

III. Eligibility Criteria for TRANSFORM TL1 Training Program.

Specific **eligibility criteria** are as follows:

- Applicant must be a U.S. citizen or permanent resident to be eligible for funding under this program.
- The CTSA places special emphasis on multidisciplinary research, which must be reflected in mentorship for this program. Consequently, each applicant must identify **one TRANSFORM Multidisciplinary Mentor from a different discipline** than the Dissertation Supervisor to advise on his/her research progress during the period of the CTSA award. Any Columbia University Faculty member can serve as a multidisciplinary mentor.
- Students entering their third year of doctoral training or beyond are preferred.

**Please note that individuals currently supported by other federal funds are not eligible for trainee support from the TRANSFORM TL1 program at the same time. The CTSA funds will replace other federal funds during the two year period of training in precision medicine.*

IV. Application Information

Applications will be judged primarily by: 1) the academic potential of the doctoral student to engage in and contribute to Precision Medicine research; 2) the merit of the proposed courses/additional mentor/personal statement; 3) the strength of the recommendation letters.

Supplemental pieces to the application form include:

- Current CV
- NIH Biosketch (version D)
- Training Support (past, current, and pending)
- Current transcript
- Research Proposal (no more than 2-pages single spaced; no less than .5" margins and Arial 11 font size), highlighting any innovative approaches to disease prevention and treatment that takes into account individual differences in people's genes, environments, and lifestyles.
- Personal Statement (no more than 250 words): Please explain why you have chosen to seek additional research training via the TRANSFORM TL1 Training Program.
- Career goals (no more than 250 words): Explicitly describe your career goals and how the TRANSFORM TL1 Training Program would prepare you for them.
- A proposed schedule of meeting times between the student and his/her mentors
- Proposed precision medicine coursework
- Three letters of recommendation (Dissertation Supervisor, TRANSFORM Multidisciplinary Mentor, Department Chair). Each letter should comment on the following:
 - **Applicant's academic potential**
 - **Applicant's proficiency in own area of study**
 - **Applicant's ability to extend into precision medicine that would be meaningful to the candidate's own research**

*The Dissertation Supervisor will be asked to guarantee that the individual will complete the TRANSFORM TL1 Training Program requirements during the award period.

Irving Institute for Clinical and Translational Research
Columbia University Irving Medical Center

The application can be accessed [here](#). The recommendation form can be found [here](#). The priority deadline is December 14, 2018.

Questions? Contact the Irving Institute Education Center at ctsa_edu@cumc.columbia.edu