The TRANSFORM Clinical or Translational Certificate Program
Columbia University

INFORMATION AND APPLICATION PROCEDURES
FOR CURRENT DOCTORAL STUDENTS ONLY

APPLICATION DUE DATE:
FEBRUARY 16TH, 2009

ACCEPTANCE ANNOUNCEMENT DATE:
APRIL 1ST, 2009

AWARD START DATE:
JULY 1ST, 2009

I. Background. On September 29th, 2006, Columbia University was named as one of twelve institutions to be awarded the new Clinical and Translational Science Award (CTSA) from the National Institutes of Health. As of December, 2008, there are thirty-eight institutions currently awarded with the CTSA. Through the CTSAs, the NIH launches a new, 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 Clinical or Translational Education Certificate, which offers structured training and practical exposure to clinical or translational research for students currently enrolled in basic science or pre-clinical doctoral programs.

The T32 Certificate is intended to provide pre-doctoral students, primarily from GSAS, P&S, School of Nursing and the Mailman School of Public Health, with clinical and translational research training to prepare for an academic and clinical research career. T32 allows pre-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 T32 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.

II. Award Provisions. With TRANSFORM Certificate support, doctoral students will obtain additional training in either translational (e.g. bench to bedside) or clinical (patient-oriented) research. They will accomplish this goal by enrolling in 2 additional graduate courses of 3 credits each (see below), attending weekly Patient Oriented Research colloquia (hour-long presentations covering multi-disciplinary topics of interest), and engaging in one 10-week, 3 days a week, research practicum. These activities will be in addition to the coursework and mentored research they will complete within their "home" program. **Eligible students admitted into the training program will be considered for an award that will provide 1 year of support including a stipend (up to $20,750 per year) and funds for tuition and fees (up to $22,500 per year). Students should discuss with their Graduate Director if stipend and tuition award supplementation is available. Students who do not meet NIH eligibility (see below) are still invited to apply to the training program, but funds will not be awarded.** ****Please note that individuals currently supported by other federal funds are not eligible for trainee support from the T32 program at the same time.*Please also note that the T32 Certificate Program serves as an opportunity for exposure training and no Trainee will be expected nor mandated to publish a paper from the program.*T32 award recipients must be FULL-TIME doctoral students, as per NIH guidelines.***

III. Eligibility Criteria for Clinical, Patient Oriented OR Translational Education Certificate.

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 new CTSA places special emphasis on multidisciplinary research, which must be reflected in mentorship for this certificate. Consequently, each applicant must identify **one TRANSFORM Certificate Mentor from a different discipline** than the Dissertation supervisor to oversee his/her research progress during the period of the award. Any Columbia University Faculty member can serve as a mentor.

- Applicant must be enrolling in 2nd or higher year of a doctoral program in Epidemiology, Biostatistics, Environmental Health Sciences, Sociomedical Sciences, Nursing, Biomedical Informatics, Chemical Engineering or Biomedical Engineering to be eligible for the **Translational** Education Certificate.

- Applicant must be enrolling in 2nd or higher year of a doctoral program in Biochemistry & Molecular Biophysics, Biomedical Informatics, Cell Biology & Pathobiology, Cellular Molecular & Biophysical Studies (Integrated), Genetics & Development, Microbiology, Neurobiology & Behavior, Nutrition, Pharmacology, and Physiology & Cellular Biophysics, Biomedical Engineering or Chemical Engineering to be eligible for the **Clinical, Patient Oriented** Education Certificate.

- **Applicant must provide 5 paper copies of**:
    - Current CV
    - Current transcript
    - A completed TRANSFORM Certificate application, found below
    - Three letters of recommendation (Current mentor, New multidisciplinary mentor, Director of Program) 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 other forms of research that would be meaningful to the candidate's own research**
    - A proposed schedule of meeting times between the student and his/her mentors
    - An additional supporting letter from the Dissertation supervisor guaranteeing that the individual will complete the TRANSFORM T32 certificate requirements during the year.

- Successful completion of the 1-credit course entitled "Responsible Conduct of Research and Related Policy Issues" (G4010) is required of all TRANSFORM certificate students.

- Recipients of the TRANSFORM Certificate will be required to submit a written progress report for the year of the training, and may be contacted periodically to provide information on their research career.

Possible Courses for **TRANSFORM Clinical, Patient Oriented Certificate** (choice of 2):

(Discipline: School & Course ID)	**Course Title (# credits is 3 unless otherwise noted)**
Biostatistics: MSPH P6104	Introduction to Biostatistical Methods (FALL, SUMMER)
Epidemiology: MSPH P6400	Principles of Epidemiology I (FALL, SUMMER)
Biomedical Informatics: GSAS G4001	Introduction to Computer Applications in Health Care & Biomedicine (FALL ONLY)
Research Ethics: GSAS G4010	Responsible Conduct of Research & Related Policy Issues (1 credit) (SPRING ONLY)
Clinical Trials: MSPH P8140	The Randomized Clinical Trial I (FALL ONLY)

Possible Courses for **TRANSFORM Translational Certificate** (choice of 2):

(Discipline: School & Course ID)	**Course Title (# credits is 3 unless otherwise noted)**
Pharmacology & Drug Discovery: GSAS G9600	Molecular Pharmacology: From Membrane to Nucleus (SPRING ONLY)
Genetics: MSPH P8141 *or* MSPH P8175	Genetic Analysis Laboratory (FALL ONLY) *or* Principles of Genetics for Biostatisticians (FALL ONLY)
Biomedical Informatics: GSAS G4001*	Introduction to Computer Applications in Health Care & Biomedicine (FALL ONLY)
Research Ethics: GSAS G4010	Responsible Conduct of Research & Related Policy Issues (1) (SPRING ONLY)
Biochemistry and Molecular Biology: GSAS G6300	Biochemistry & Molecular Biology of Eukaryotes I (FALL)

IV. Practicum:

Examples of 3 possible practica are described below. The examples are provided to demonstrate the type of training the practicum will ultimately include, however an individual practicum will be developed for each TRANSFORM Certificate recipient.

1. "Research in Minority Populations" Practicum – Would introduce scholars to methodological issues in minority health and health disparities research, and increase scholars' awareness of community based participatory research (CBPR) for conducting research that is relevant and responsive to the needs of minority communities. Participants would be introduced to the history, demographics, political and cultural make-up of the Northern Manhattan community, community asset mapping, and theoretical constructs supporting CBPR.

2. Ginsberg Lab Practicum – Would allow scholars to learn and perform techniques used by Dr. Ginsberg in his mechanistic studies of lipoprotein metabolism in cells, mice, and humans. By attending regular lab meetings, trainees would be exposed to **approaches for moving from results to new experiments.** In the laboratory, trainees would gain experience with a variety of laboratory techniques and observe approaches to minimizing errors, including the use of quality control programs designed to gauge the performance of selected methods from sample to sample and year to year.

3. Industry Practicum – Would expose scholars to the **drug development and approval process at major pharmaceutical companies.** Through this experience, trainees would learn about and participate in the design and conduct of pre-clinical studies, the regulatory approval process, and interactions with the FDA.

Please note that these are only examples of possibilities. An individual practicum for each T32 trainee will be developed by the certificate committee and the certificate recipients.

V. Application Procedures and Deadline: Five stapled sets of materials should be submitted to **Nkemdilim Ukwu, PH-10-305 and one copy of the application should be also e-mailed to nu2113@columbia.edu, by February 16th, 2009. ** Recommendations can be e-mailed separately by the recommender to nu2113@columbia.edu.** Questions can be emailed, or call at (212) 305-0760.

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

APPLICATION FOR A TRANSFORM Clinical or Translational Certificate Program

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Applicant's Name:
Applicant's Email:
Applicant's Phone:
Applicant's Mailing Address:
Applicant's Doctoral Program:
Title of Dissertation Project:
Name, Title and Email of Dissertation Supervisor <u>and</u> TRANSFORM Mentor:

Applicant's Name:

Please <u>explicitly</u> describe your future career goals and how the T32 Certificate would prepare you for them (200 words or less):

Applicant's Name:

Please list other Training Support (past, current and pending) (please use N/A if appropriate):

Applicant's Name:

Please list proposed Certificate courses:

Applicant's Name:

Personal Statement (no more than 250 words):

Please explain why you have chosen to seek additional research training via the TRANSFORM Doctoral-level Certificate Program.