I. Background.
On September 29th, 2006, Columbia University became one of the first twelve institutions to compete successfully for the new Clinical and Translational Science Award (CTSA) from the National Institutes of Health. Through the CTSA, the NIH has launched a new national consortium that seeks to transform the conduct of clinical and translational research, ultimately enabling researchers to provide new and effective treatments more efficiently and quickly to patients. A key component of the CTSA at Columbia is the TRANSFORM K12 Mentored Career Development program. The TRANSFORM K12 award combines didactic training, mentoring, exposure to multidisciplinary research, and ongoing evaluation to prepare young investigators for careers in patient oriented research (POR). We anticipate that new slots will become available as of July 1st, 2013.

II. Award Provisions.
With TRANSFORM K12 support, junior investigators will participate in an integrated didactic and mentored research program, similar to an individual K23/Clinical Research Career Development Award. The award will provide funds to cover 75% of the individual’s salary (up to $100,000 annually), as well as funds for travel, supplies, research assistant salary, and tuition expenses (up to $25,000 per year).

III. Eligibility Criteria.
- Applicant must be a U.S. citizen or permanent resident, and must hold a research or health-professional doctoral degree or its equivalent.
- Applicant must have a professorial appointment at Columbia University (tenure track or clinical track). It is acceptable to have a non-professorial title at the time of the application, so...
long as the applicant will be promoted to professorial rank by the time of the award (July 1st);

this must be clearly indicated in the letter of support from the applicant’s department chair.

- Applicant must be able to devote a minimum of two years to the K12 training program.
- Each applicant’s department chair or supervisor must provide a supporting letter guaranteeing that the individual will have no more than 25% time committed to non-research (e.g., clinical) duties during the period of the award. (Exceptions can be made for surgeons, for whom the rule will be 50% protected time.)
- The applicant must not have been the recipient of any other K award from the NIH in the past or currently. In addition, the applicant may not have served, in the past or currently, as the PI of an R01, R29, or P50 grant award. Recipients of R03 or R21 awards, however, are eligible.

IV. Further Application and Award Details

- Note that the typical duration of the K12 award is 2 years, initially awarded as a one-year grant but renewable annually based on performance. Extensions beyond 2 years are possible but rare. (After 2-3 years as a TRANSFORM K12 Scholar, individuals are still eligible for K awards from the NIH in most cases. Note that each NIH institute has its own policy on this issue and the institute should be consulted for clarification.)
- The K12 program places special emphasis on multidisciplinary and interdisciplinary research (see section VII for definitions), which must be reflected in the research, training, and “team mentorship” plans. By “team mentorship,” we mean that each applicant must identify K12 Mentors from at least two different disciplines to supervise his/her research progress during the period of the award (see sections VII and VIII below for guidance). Additional consultants may also be named, as needed and appropriate. A proposed schedule of meeting times between the scholar and his/her mentors must be provided. The K12 Mentors must be identified in the Letter of Intent (more below).
- Each Phase II application must include a 5-page research proposal (page limits apply to sections A and B; see application forms), developed in consultation with the applicant’s mentors.
- We will accept applications from individuals with doctoral-level degrees, whether or not they hold in addition a Master’s degree in patient oriented research or a related field.
  - Those who enter the K12 program without a patient-oriented research Master’s degree will be required to complete the Patient-Oriented Research Master's program offered through the Department of Biostatistics at the Mailman School of Public Health (MSPH). Additional information regarding the POR Master's program can be found online at: http://www.cumc.columbia.edu/dept/mailman/biostat/por/index.html. For details on applying to the POR program, please see the MSPH application web site: http://www.publichealth.columbia.edu/apply/how-to-apply. Candidates who will enroll in the Patient Oriented Research Master’s program as part of their training should indicate that they will follow the required curriculum, and should specify the elective courses they will choose and how these will enhance their research and career plans.
  - Candidates who enter the program having already completed a patient oriented research Master’s program (e.g., MS in Biostatistics, Patient Oriented Research track; MS/Clinical Research Methods track; or MS in Epidemiology) will take 4-6 additional
courses related to their research interests and career development (to be described in the “plan for didactic training” as part of the application). These can be courses offered at Columbia or elsewhere and which are relevant to the applicant’s research. In all cases, applicants should describe how additional training will enhance their specific research program.

- We also welcome applications from candidates who are currently enrolled in but have not yet completed a patient oriented research Master’s degree program.

- Successful completion of the 1-credit course entitled “Responsible conduct of research and related policy issues” (G4010) is required of all K12 scholars.

- Active participation in and attendance (80% or better) at the weekly POR Career Development Colloquium is a program requirement, as well as completion of all assignments.

- Awardees will also be required to participate in at least one additional career development opportunity per year (e.g., leadership seminar, writing workshop).

- K12 Scholars will be required to present oral progress reports 3-4 times per year and to submit a written report annually.

- Each scholar and his/her mentors must attend periodic progress report meetings, and must also provide upon request written updates on the scholar’s academic career accomplishments and feedback on the program and mentorship, both during the program and throughout the scholar’s career.

- Scholars must work with administrators in their home departments as well as CTSA administrators to ensure successful management of K12 funds ($25,000 per year) for the costs of tuition, research expenses, travel, and supplies.

- All K12 Scholars will be expected to apply for independent research funding from NIH or other agency by the end of the first year of support, and certainly no later than the middle of the second year of support.

- In order to receive a K12 Award, scholars and their mentors must sign the “K12 Compact” indicating their agreement to all K12 Award requirements and expectations.

V. Phase I Application.
Each applicant must submit electronically the Phase I Application and his or her current NIH 4-page biosketch. Each applicant must also submit three letters of reference (2 from primary mentors and 1 from the Department Chair) and all mentors’ NIH biosketches. Phase I Application includes the name, title, and department of the applicant; tentative title and brief abstract for the research project; publication and research support summaries; the proposed training plan; the applicant’s personal statement; and the names of 2 (or more) proposed K12 Mentors and proposed meeting schedule (see section VIII below for more on mentor selections). The Phase I Application should be sent in one PDF file via email to David Zhai (dz2214@mail.cumc.columbia.edu) by 5pm on November 1, 2012.

Please note: Applicants without a patient oriented research Master’s degree must concurrently apply to the POR Master’s program at the Mailman School of Public Health to be considered for the K12 program. Detailed requirements for the POR Master’s program can be found online at http://www.cumc.columbia.edu/dept/mailman/biostat/por/admissions.html. Be sure to follow all of the school’s instructions on applying, which can be found at: http://www.publichealth.columbia.edu/apply/how-to-apply. Applications to the POR Master’s program are due January 15th, 2013.
The K12 Selection Committee will announce candidates selected to participate in Phase II on December 5, 2012.

VI. Phase II Application.
Applicants selected to Phase II must submit a 5-page research proposal. The research proposal should represent a well-developed scientific initiative in clinical or translational investigation. Because of page limitations, the proposal does not require the full detail of an NIH grant, but must be thorough enough to be evaluated in terms of overall design, significance, statistical approach, and human subjects issues (see the application form for specific K12 instructions, modeled after NIH research grant instructions). The proposed research must meet the NIH definition of patient oriented research, so that the focus of the research can be translational, mechanistic, therapeutic, clinical trials-oriented, physiological, behavioral, or epidemiologic in nature.

VII. Emphasis on Multidisciplinary and Interdisciplinary Research.
The CTSA award, which funds the TRANSFORM K12 program, seeks to promote multidisciplinary and interdisciplinary research initiatives. Consequently, applications that reflect a strong multidisciplinary or interdisciplinary flavor will be viewed very favorably. According to the web site for the NIH Roadmap Initiative, multidisciplinary research “brings together different disciplines to address a particular issue”; while interdisciplinary research goes further, and “takes bits and pieces from the contributing disciplines and integrates them in ways that produce a new conceptual framework” (http://nihroadmap.nih.gov/interdisciplinary/summit0806). For additional guidance, see the 2007 paper by Aboelela and colleagues on “Defining Interdisciplinary Research: Conclusions from a Critical Review of the Literature” (Health Services Research 42: 329-346).

VIII. K12 Team Mentorship.
Each application must specify at least two K12 Mentors from different disciplines (who may be from different schools, departments, or divisions) to oversee the candidate’s progress in patient oriented research. As the ideal K12 candidate will propose science that is multi- or interdisciplinary, the mentors should be chosen to reflect the disciplines needed to gain independence in the proposed research area. For example, a lab-based researcher and an endocrinologist might be chosen to supervise a project on early diabetes drug development. The K12 Mentors should be chosen from the large pool of senior investigators at Columbia who have established reputations in clinical/translational research and mentorship. The K12 Advisory Committee will review the credentials of the proposed mentors for appropriateness. Criteria used in their review will include scientific productivity, grant-funding record, and mentoring history. If the committee decides that a mentor is unsuitable, the applicant may be required to meet with CTSA program leaders to discuss how to proceed. In some instances, the K12 Committee may recommend that a more senior mentor join the mentoring team, or propose additional mentors. Because of the outstanding cadre of clinical/translational investigators at CUMC and its affiliates, we do not expect any difficulty in identifying excellent mentors. Applicants may send specific questions on mentor selections via email to Dr. Melissa Begg (mdb3@columbia.edu).

A specific schedule for meetings between the scholar and mentors must be included in the application package. The strongest applications will specify frequent (e.g., weekly) team mentoring meetings in which all mentors meet simultaneously with the scholar. Meetings with other advisors/consultants are expected to take place less frequently. In addition, the K12 Mentors must
be available to report on the candidate’s progress to the full K12 Advisory Committee at meetings and symposia 3-4 times per year. Finally, written feedback and evaluations are required periodically of both scholars and mentors.

**IX. Miscellaneous Issues.**

- There is no need to present a formal budget; just be sure that you will have enough funds to do what you have planned, and remember that **tuition costs come out of your annual fund** for travel, supplies, etc.

- If research, tuition, and other costs are expected to exceed the annual allotment of $25,000, a pledge of additional required funding from the candidate’s mentors or department chair should be included in one of the letters of support.

- For guidance in choosing courses, it may be helpful to study the required and elective coursework for the MS/Patient Oriented Research (POR) track: [http://www.mailman.columbia.edu/academic-departments/biostatistics/academics/ms-program](http://www.mailman.columbia.edu/academic-departments/biostatistics/academics/ms-program)

- Letters of support for Phase II applications can be directed to David Zhai (dz2214@mail.cumc.columbia.edu).

- Appendices are not permitted.

- We reserve the right to request additional information at any point during the review process.

**X. Application Procedures and Deadlines.**

The application process is divided into 2 separate phases:

1. The Phase I Application must be submitted by 5pm on **November 1, 2012**. Phase I applications are to be submitted via email to David Zhai (dz2214@mail.cumc.columbia.edu). Phase I includes the one page application form plus supporting documents (supporting documents should be submitted in one PDF file. **Applicants who do not hold a patient-oriented research Master's degree must also submit complete (and separate) applications to the Mailman School of Public Health's POR Master's program by January 15th, 2013.**

The K12 Selection Committee will announce candidates selected for Phase II on **December 5, 2012.**

Selected candidates must submit the Phase II Application by **5pm on January 2, 2013**. The final application must include your research proposal (please see instructions on page 2 of this document). Send **one PDF file** by email to David Zhai (dz2214@mail.cumc.columbia.edu).