Clinical & Translational Science Center

A Weill Cornell Medical College Multi-Institutional Consortium with:

Weill Cornell Graduate School of Medical Sciences / New York Presbyterian Hospital / Cornell University, Ithaca / Cornell University Cooperative Extension, New York City / Memorial Sloan-Kettering Cancer Center / Hospital for Special Surgery / Hunter College of the City University of New York / Hunter-Bellevue School of Nursing / Hunter School of Urban Public Health / Hunter Center for Translational and Basic Research / Animal Medical Center and Cornell College of Veterinary Medicine

1300 York Ave, Box 149, New York, NY 10065 • Tel: 646-962-8302 • Fax: 646-962-0534 • www.med.cornell.edu/ctsc

CTSC MASTER'S DEGREE IN CLINICAL & TRANSLATIONAL INVESTIGATION
Request for Applications

DUE BY 5PM ON WEDNESDAY, MARCH 8, 2023
Courses Begin in September 2023
CLICK TO INITIATE APPLICATION
View Eligibility Requirements
View Application Instructions

The CTSC Master's Degree Program is comprised of a didactic curriculum of core and elective courses and a mentored clinical research project. During the first year, trainees work with their mentors to develop and refine their research project. In the second year and third year (if needed), trainees will utilize the skills acquired from the didactic curriculum to conduct their research project, **at 75% time and effort (50% minimum for surgeons and other specific clinical specialties).**

Research projects must have a translational or clinical research focus. Pre-clinical studies should have *near-term potential to translate into patient-oriented research*. Emphasis is placed on precision medicine, drug discovery, targeted therapeutics, biomarkers, device development and novel technologies, LGBTI health needs, underserved populations, community health outcomes, pediatric and women's health studies, life course studies of diseases, and studies incorporating biostatistical methodologies and design.

INVESTIGATORS FROM ALL DISCIPLINES —PRE-CLINICAL, CLINICAL AND TRANSLATIONAL—ARE WELCOME TO APPLY.
INDIVIDUALS FROM UNDERREPRESENTED GROUPS, DISADVANTAGED BACKGROUNDS AND/OR WITH DISABILITIES ARE STRONGLY ENCOURAGED TO APPLY.

What is Translational Science? Translational Science is the field of investigations that focus on turning observations in the laboratory, clinic, and community into interventions that improve the health of individuals and the public—from diagnostics and therapeutics to medical procedures and behavioral changes. Read more about the stages of translational science here.

The goal of the Clinical & Translational Education Program (CTEP) is to educate and train highly motivated individuals to become successful, independent clinical and translational (C/T) investigators with a strong foundation in the knowledge and practical skills necessary to conduct C/T team research across disciplines and institutions.

PROGRAM REQUIREMENTS
- 75% time and effort (50% for surgeons) devoted to performing and completing a mentored clinical & translational research project during the training period
- Presentation of the mentored research project at a CTSC Research in Progress Luncheon
- 30 credits of didactic curriculum (22 Core and 8 Elective)
- A grant submitted to the NIH or other funding agency requiring peer-reviewed funding with the trainee as the Principal Investigator, *or* a first author article submitted to a high-quality, peer-reviewed, scientific journal
- A presentation of the mentored research project at a local, national, or international scientific conference
- A presentation of the mentored research project at a Research-in-Progress networking lunch
- Master's Degree Thesis (Written Thesis and Oral Presentation)

REVIEW CRITERIA

Upon submission to the online application module ePAR , your application will undergo review based on several Application Review Criteria.

APPLICATION PROCESS & TIMELINE

Applications are due by 5pm on Wednesday, March 8, 2023. Candidates will be notified by June 2023 of their applications final disposition. At that time, if selected, the applicant will complete additional required enrollment, regulatory, and compliance documents within 30 days.

Questions? See CTEP FAQs, or email CTSC-Education@med.cornell.edu

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ELIGIBILITY REQUIREMENTS

Applications must comply with eligibility and submission requirements

Documents or information that are missing or incomplete will disqualify application for review

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Program Eligibility - All Candidates

Must be a **US Citizen, Non-Citizen National,** or **Permanent Resident** (Proof of residency status is required)

Must have the ability to devote full-time **75% effort** (50% for surgeons) to the MSCTI

Must have **primary appointment** or be **employed** at a **Weill Cornell CTSC partner institution**

Only 2 resubmissions are allowed by an individual applicant (whether or not the projects are different)

Medical students and Medical Doctors **(MDs), MD/PhDs**, senior residents, fellows

Veterinarians (**DVM**), Osteopaths (**DO**), Dentists (**DDS, DMD**), or Physical Therapists (**DPT**)

Post-doctoral PhDs seeking a career in clinical and translational research

Faculty members from any of the **partnering Weill Cornell CTSC institutions**

PhD candidates in Nursing School, those with Bachelor of Science in Nursing (**BSN**), Master of Science in Nursing (**MSN**), and Doctorate of Science in Nursing (**DNS**) degrees

Certified Physicians' Assistants and Clinical Research Project Coordinators/Aides with a bachelor's degree

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Application Instructions and Checklist	
To access your application login to WebCAMP. Click on **Protocol Authoring and Review**. Under the **Abbreviated Title** column click on **Your Master's Research Project Title** to access your application.	
Trainee Application Form	**Completed**
• A valid **employer issued/institutional email** is required to initiate an application.	☐
• **Is this a re-submission?** Answer 'yes' if the current application is a re-submission of a prior application that was not selected for funding/admissions. Resubmissions must outline/highlight changes from previous submission. No more than 2 resubmissions are allowed, whether or not the projects are different.	☐
• **Click on** your current **Residency Status**.	☐
• Has there been any **disadvantage** in your life or training that you have had to overcome?	☐
• **If you are not selected** for the MS Degree program and **wish to be considered for the Advanced Certificate program,** please select the appropriate check-box. A letter of support from your department chair/division chief is required**.**	☐
• **Is this project covered under mentor's IRB/IACUC?** Answer 'yes' or 'no' • **Proposed Research Study:** a. If research study is covered under **multiple IRB or IACUC protocols**, please click on the "Other IRB/IACUC numbers" link to enter in additional protocol numbers.	☐
• **Project Summary:** Briefly (250 word or less) describe your project written in plain language so even a non-scientist can understand the importance of the project. Include the project's broad, long-term objectives, specific aims, research design, methods, significance, and innovation.	
• **Multidisciplinary Integration:** Briefly (250 word or less) describe how a multidisciplinary approach is integrated into this proposal. A multidisciplinary approach is one that brings experts from biomedical or physical sciences with non-biological disciplines including biostatistics.	
• **Mentors -** Click on **[add]**, fill in required information. Two mentors are required, but list no more than 3 mentors. A Primary Mentor must be designated, each mentors' role must be defined. All mentors must have **active** or **recent** (federal or foundation) **funding**. Mentors cannot be listed on more than 2 active CTSC applications or current awards (including CTSC Seed Awards). Of the two mentors:	
• One must be designated to serve as a **Clinical research mentor** and one a **Basic Science or Public Health mentor**	
• At least one mentor must have active NIH funding.	
• Both must have a strong history of mentorship and a clear collaboration/mentoring plan.	
• At least 2 mentors, *including the primary mentor*, must be from different Weill Cornell **CTSC partner institutions** and from **different disciplines**. NIH definition of different disciplines will have priority	

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(areas <u>outside</u> biology, e.g., computer science, imaging, chemistry, mathematics, informatics, engineering, behavioral science, health services/ outcomes research, and biostatistics). A mentor's institution will be determined by their primary appointment.	

Biographical Sketches	**Completed**
Upload individual PDF files for the applicant and mentors; new NIH Biosketch format is required.	☐
Supporting Documents – Please Upload Attachments as individual PDF files.	**Completed**
Research Proposal: Projects must have a translational or clinical research focus. Pre-clinical studies should have near-term potential to translate into patient-oriented research. Clinical Trials (phases I or II) are permitted. Emphasis is placed on drug discovery, targeted therapeutics, biomarker or device development and novel technologies; projects focusing on health needs of LGBTI and underserved populations and/or directly impacting health outcomes in the community; pediatric and women's health studies; life course studies of disease; and studies incorporating biostatistical methodologies and design. Limited to **3 single-spaced** pages (at least ½ inch margins, no smaller than 11pt Arial font) to include: • Hypothesis and specific aims • Scientific background for the study, citing appropriate references of work in the area by the investigator(s) and others • Research Plan (research team to be involved, experimental design, methods, statistics, timeline, innovation, human subjects and animal issues, if applicable) • References and supporting tables, figures, (2-3 additional pages are allowed) • First Name, Last Name in the upper left-hand corner	☐
Career Statement (1 page or less) – Discuss short and long-term goals, how this award would impact your career & professional development. Include your First Name, Last Name in the upper left hand corner.	☐

Letters - address to the Admissions Committee, on departmental letterhead, sign, and send from the department to ctsc-education@med.cornell.edu with candidate's name in the subject header.
    a. **Department Chair/Division Chief Letter:** must state a guarantee of 75% protected time & effort (50% for surgeons).
    b. **Mentors Letters**: Required from all mentors and the designated primary mentor's letter must include a **mentoring plan** (click link for instructions).
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Provide Verification of Residency Status: • **US Citizen:** U.S. Passport, Birth Certificate, Certificate of Citizenship, or Naturalization Certificate. • **Non-Citizen National**: a notary's signed statement certifying legal verification of such status • **Lawfully Admitted Permanent Resident**: a notary's signed statement certifying that you have legal verification of such status and scanned copy of Permanent Resident Card (USCIS Form I-551).	☐
Transcripts and Test Scores – Upload digital copies of test scores and transcripts with application submission. Upon program acceptance, official documents will be required in hardcopy. Test scores include: MCAT, GRE and TOEFL. Transcripts from Undergraduate, graduate and/or medical school.	☐
Non-Refundable Application Processing Fee ($175): A non-refundable Application Processing Fee of $175 payable by a departmental account or by PayPal must accompany all applications. Please contact ctsc-education@med.cornell.edu to set up a departmental transfer. For PayPal, please use the link below to pay the application fee: https://www.paypal.com/cgi-bin/webscr?cmd=_s-xclick&hosted_button_id=963CRYNF9QTVA. Once you have successfully completed the payment, please upload a photo of the receipt to your WebCAMP application as proof of payment. *Medical/Graduate students, please email ctsc-education@med.cornell.edu ***before*** proceeding to make payment.*	☐

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How to Submit Your Application
1. Return to the **Application Status Page** (link in the upper left-hand side of the page), click on the blue **Submit Application** button.
2. If you do not see the **Submit Application**, please click the **Run Detailed Completeness Check** link to display items missing, or incomplete.

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MENTORING PLAN INSTRUCTIONS:
(Each mentor's letter not to exceed 3 pages, excluding table of current and past trainees)

Please provide a detailed mentoring plan for the Candidate that describes the approaches to be used such as frequency of one-on-one and group meeting; oral scientific presentations; instruction on how to critically evaluate the literature and experimental design; training in scientific writing (e.g., grant proposal preparation, manuscripts, and abstracts); designing experiments, etc.

Plans to enhance the candidate's research capabilities should include:

1. Describe how the Candidate will be supported and guaranteed protected time, and how it will be ensured that the project is completed in a timely manner
2. Specific skills to be acquired during the mentoring experience
3. Milestones that will be reached during the mentoring experience (e.g., acquisition of preliminary data, new research skills, presentation of research findings at local/national meetings, and publications)
4. Opportunities to interact with research team; The role of other investigators who will contribute to the research mentoring should be described in the application
5. The mentoring plan must include instruction in the ethical conduct of research (including training in animal and human subjects' protection, if applicable)
6. A plan to acquire presentation and publication skills, and presentation of at least one poster or oral presentation at a national or international scientific meeting during the award period
7. A plan on how opportunities will be provided for the Candidate to participate in writing and publishing scientific papers
8. Describe any planned outside laboratory experiences or collaborations for the Candidate
9. How this experience will help the candidate move toward achieving her/his stated career goals
10. Mentors and candidate must provide a projected timeline delineating specific research milestones and other activities that will be undertaken to secure independent research funding (i.e., anticipated publications, training in grantsmanship, timeframe for grant submissions and type of independent research support the candidate seeks)
11. Mentors should provide evidence of mentoring experience and success. Please provide a table containing: (1) Current Trainees, (2) Past Trainees (≤ 10 years). For each of the individuals listed, please provide their current positions and name of institution, outcomes of the prior trainees. Describe how these prior mentoring experiences influenced the development/mentorship plan proposed for the current candidate

Reference NHLBI (7.1.8. MENTORING PLAN)

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APPLICATION REVIEW CRITERIA

Similar to the NIH process, each proposal is carefully reviewed by at least two independent evaluators for scientific merit based on translational focus and significance. The following criteria are taken into consideration:

✓ **Overall Impact Score -** Reviewers should provide their assessment of the likelihood that the proposed career development and research plan will enhance the candidate's potential for a productive, independent scientific research career in a health-related field, taking into consideration the criteria below in determining the overall impact score.

✓ **Candidate:** Does the candidate have the potential to develop to be an independent and productive researcher? Is the candidate's prior training and research experience appropriate for the proposed project? Is the candidate's academic, clinical (if relevant), and research record of high quality? Is there evidence of the candidate's commitment to meeting the program objectives to become an independent investigator in research? Do the letters of reference address the above review criteria, and do they provide evidence that the candidate has a high potential for becoming an independent investigator?

✓ **Career Development Plan/Career Goals & Objectives -** What is the likelihood that the plan (the award) will contribute substantially to the scientific development of the candidate and lead to scientific independence?

✓ **Research Proposal -** Is there a strong scientific premise for the project? Are the proposed research question, design, and methodology of significant scientific and technical merit? Has the candidate presented strategies to ensure a robust and unbiased **approach**, as appropriate for the work proposed? Is the research plan of high quality, and does it have potential for advancing the field of study with **innovation**? Is the scientific and technical merit of the proposed research plan of **significance**? Will the proposed research lead to an independent line of research for the candidate?

✓ **Mentors and Mentoring Plan** - At least 2 mentors are required. Primary and Secondary mentors must be from CTSC partner institutions. Additional mentors may be from any institution. Are the qualifications of the mentor(s) in the area of the proposed research appropriate? Does the mentor(s) adequately address the candidate's potential and his/her strengths and areas needing improvement? Is there adequate description of the mentor's proposed role in providing guidance and advice to the candidate? Is there evidence of the mentors' current research productivity and peer-reviewed support? Is there evidence of the mentors' active/pending research funding? Do the letters from mentors document their willingness to participate in the award program? Is the proposed Mentoring plan likely to contribute substantially to the scientific and professional development of the candidate, and facilitate his/her successful transition to independence? (see Instructions for Mentoring Plan)

✓ **Environment & Departmental Commitment:** Is there a strong statement of commitment by the department to the levels of effort required to devote directly to the research and career development

activities described in the application? Is the environment for scientific and professional development of the candidate of high quality? Is there assurance that the department intends the candidate to be an integral part of its research program as an independent investigator?

The following areas receive additional priorities for their special relevance to the CTSC mission:
- **Translational and Clinical Research Focus** – Projects aimed at improving research methods and/or incubating novel technologies to accelerate multidisciplinary clinical and translational research.
- **Pre-clinical studies** should have near-term potential to translate into patient- oriented research, and clinical trials (phases I or II) are permitted.
- **Emphasis is placed on:**
    - Drug discovery, targeted therapeutics, biomarker or device development and novel technologies.
    - **Comparative effectiveness and health disparities research** - Projects focusing on health needs of LGBTI and underserved populations and/ or directly impacting health outcomes in the community.
    - **Pediatric and Women's Health Studies**
    - **Life course studies of disease**
    - Studies incorporating **Biostatistical Methodology and Design**

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