College within a College and Medical Student Summer Research
version 2013
## Research Options as JMC Student

<table>
<thead>
<tr>
<th>Summer</th>
<th>CwiC</th>
<th>MD/PhD</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Self directed</td>
<td>- Structured curriculum</td>
<td>- Structured curriculum</td>
</tr>
<tr>
<td>- Limited duration</td>
<td>- 4 years</td>
<td>- 7 or 8 years</td>
</tr>
<tr>
<td></td>
<td>- Mentored milestones</td>
<td>- Dual degree</td>
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<td></td>
<td></td>
<td>- Mentorship</td>
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Research Structure

Program options
- Summer Program
- CwiC
- None (D.I.Y.)

Research Advisor options
- Any on- or off-campus researcher
Options for research

- **Summer research (~40 slots)**
  - Stipend*
  - Structured lectures

- **College within the College (CTR)**
  - Structured program over 4 years

- **Ad hoc research**
  - Individual relationship with investigator
CwiC
Clinical and Translational Research

Directors: Walter Kraft, M.D.
Wayne Lau Bond, M.D.

- Designed to supplement the medical school curriculum with a mentored, scientific concentration in Clinical and Translational Research (CTR).

- Will not replace existing curricular elements.

- Will include a scientific advisor (PI) and research mentor.

- Upon graduation participants will graduate with distinction and be prepared for a career as a physician scientist.
CwiC Clinical-Translational Research

- Mentoring
- Identify Advisor
- Independent Research
- Research Methods Training
- Project Presentation

Year one Year two Year three Year four

Summer Student Research Program
- Identify Advisor
- Independent Research
- Research Methods Training
- Project Presentation

Recognition on transcript
College within a College (CwiC)

- **What is it?**
  
  It is an *optional* mentored experience that will extend over the four year duration of medical school.

- **If I do not enroll in the CwiC am I still eligible for the summer research program?**
  
  Yes

- **If I enroll in the CwiC am I required to participate in the summer research program?**
  
  No
College within a College (CwiC)

- Do I need to be in CwiC to be allowed to continue working with an advisor after the summer? No

- How do I apply?
  
  An application for CwiC CTR will be available online and due early January.

- Do CwiC and Summer research have different applications? Yes. CwiC is first, opening in Dec.
Program Objectives

- Appreciate the contributions of basic, translational and clinical research

- Improve the student’s understanding of diseases and, ultimately patient care

- Develop expertise in scientific and experimental methods related to the medical sciences

- Foster constructive views of career opportunities for physician scientists

- Have a meaningful, productive and enjoyable summer!
Summer program

Director: Constantine Daskalakis, Ph.D.

Program provides:
- Stipend*
- Lectures

Program does not provide:
- Research advisor
- Support for off-campus activities
Stipend

- ~40 students supported
- 7-10 weeks
- 30 hrs/week + seminars
- Federal work study supplied

*Note*
Other on campus programs may provide support.
There may be external sources of support.
Status of Federal Work Study (FWS) unclear

If no FWS funding available options are:
- Work without stipend
- Research advisor provides stipend
- You find external source of stipend

Program will still exist to support conferences and Levine eligibility
Summer Seminar Topics

- Scientific literature searches
- Scientific literature reading and evaluation
- Laboratory safety
- IRB / responsible conduct in research
- Ethics
- Clinical trials
- Cardiovascular research
- Cancer research
- Data analyses
- Writing and reporting results
- Presenting results
Levine Scholarship Tuition Reimbursement

Earn $1000.00 Tuition Scholarship by:

- Successful completion of research project
- Submitting a scientific abstract
- Attestation of research advisor
Travel Fellowships

This Program will award students up to $400.00 in matching funds to students meeting the following requirements:

- The medical student must be first author (presenter) on the abstract that is to be presented at a national or international scientific meeting

- The faculty of the departmental sponsor must sign the application indicating the source of matching funds
Where to find Research Advisors

Centralized Programs

Non-centralized Programs

Directly contact investigator
- List of prior student projects
- Faculty interest database
- TJU and Kimmel Cancer Center websites
- AOA list
- Word of mouth
Centrally coordinated programs

- Anesthesia
- Basic and translational medicine
- Center for urban health
- Computational systems biology
- Computer assisted education development
- Emergency medicine
- Family & community medicine
- Neurological surgery
- Neurology
- Obstetrics & gynecology
- Orthopaedics
- Surgery

http://www.jefferson.edu/jmc/students/summer_research/programs.html
Online list of potential advisors

- CwiC student projects (2011-13)
  https://docs.google.com/spreadsheet/ccc?key=0Aox4J_b6BueddFNCYIAyVWIRMFdyRkY3c2ZzVJGeGc&usp=sharing

- 2013 summer student projects
  http://www.jefferson.edu/content/dam/tju/jmc/files/StudentSummerResearch/SummerProjects.pdf

- Faculty Interest Database
  https://w3.jefferson.edu/faculty/search/index.cfm
Departments at TJU
Without Central Coordination

- Biochemistry & Molecular Biology
- Cancer Biology
- Dermatology & Cutaneous Biology
- Medical Oncology
- Medicine*
- Microbiology & Immunology
- Molecular Physiology & Biophysics
- Neuroscience
- Oral & Maxillofacial Surgery
- Ophthalmology
- Otolaryngology/Head & Neck Surgery
- Pathology, Anatomy & Cell Biology
- Pediatrics

- Pharmacology & Experimental Therapeutics
- Psychiatry & Human Behavior
- Radiation Oncology
- Radiology
- Rehabilitation Medicine
- Stem Cell & Regenerative Medicine
- Urology
Programs and Directors

- Computer Education
  - Anthony Frisby, PhD
- Obstetrics and Gynecology
  - Jason Baxter, MD
- Emergency Medicine
  - Bernard Lopez, MD
- Family Medicine
  - Marianna LaNoue, PhD
- Neurology
  - Michael Oshinsky, PhD
- Neurosurgery
  - James Harrop, MD
- Computational Biology
  - Raj Vadigepalli, PhD
- Anesthesia
  - Jeff Joseph, DO
- Orthopedic Surgery
  - Javad Parvizi, MD
- Basic and Translational Medicine*
  - Tung Chan, PhD
- Surgical Research
  - Jonathan Brody, PhD
Application Process
Summer Program
Deadline: February 2014

Online application at Jeffline/
Intramural Research at JMC
http://jeffline.tju.edu/Researchers/StudentResearch/jmc.html

- Notifications made by mid-March
Application Process

CwiC CTR

Deadline: January 6, 2014

Online application will go live on December 6.
http://www.jefferson.edu/jmc/students/cwc/applicationEntry.cfm

- Notifications made by early February
- Specify if you will be applying to summer program also
Overview

- Think about how you will do research
  - Summer program
  - CwiC +/- Summer program
  - Ad hoc

- Identify and reach out to research advisors sooner rather than later
Slides available at CwiC CTR website
http://www.jefferson.edu/jmc/students/college_within_college/translational_research.html

College within The College
Clinical Translational Research (CTR) Track

Modern medicine is based upon a foundation of science. Physician scientists play a key role in translating scientific discovery to the care of patients. Clinician scientists also have a unique role in identifying the needs in clinical practice that drive new research. Jefferson Medical College faculty and students have a long history of conducting research that has direct impact on the health of patients.

The CwiC-CTR is designed to create the next generation of physician scientists and leaders. The body of knowledge specific to research is not fully covered in the medical curriculum. CwiC-CTR is designed to aid students to be effective researchers in a systematic fashion. The program consists of independent, hypothesis-driven research with an advisor. This is augmented by the assignment of a program mentor and a curriculum of core research topics. CwiC-CTR will complement, though not replace, existing curricular elements.

The CwiC-CTR track is ideal for those interested in:

- Defining the best treatments for patients
- Advancing scientific knowledge beyond the current limits
- A career in academic medicine
- Clinical research in their future practice
- Drug development
- Achievement beyond the curriculum