College within the College Clinical Translational Research (CwiC-CTR) and Medical Student Summer Research 2015
### 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 (TJU or non TJU)
Options for research

- **Summer research (~55 slots in 2014)**
  - 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

Co-Directors: Walter Kraft, MD
Wayne Bond Lau, MD

- Supplements medical school curriculum with mentored, scientific concentration in Clinical and Translational Research (CTR)
- Will not replace existing curricular elements.
- Includes 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

Year one  Year two  Year three  Year four

Summer Student Research Program

Identify Advisor  Independent Research

Research Methods Training

Project Presentation
College within a College (CwiC) Clinical and Translational Research

- **What is it?**
  An optional mentored experience extending over the 4 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
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 (Dec 1) and due early next year (Jan 5).

Do CwiC and Summer research have different applications?

Yes. CwiC is first (Dec 1)
Program Objectives

- Appreciate contributions of basic, translational, & clinical research
- Improve student’s understanding of diseases & ultimately patient care
- Develop expertise in scientific & experimental methods related to medical sciences
- Foster constructive views of career opportunities for physician scientists
- Have a meaningful, productive, & enjoyable summer!
# Summer program

Director: Constantine Daskalakis, PhD

<table>
<thead>
<tr>
<th>Program provides</th>
<th>Program does not provide</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Stipend*</td>
<td>- Research advisor</td>
</tr>
<tr>
<td>- Lectures</td>
<td>- Support for off-campus activities</td>
</tr>
</tbody>
</table>
Stipend

- ~55 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.
Stipend (Summer 2015)

- 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 & reporting results
- Presenting results
Lavine Scholarship Tuition Reimbursement

Earn $1000.00 Tuition Scholarship by:

- Successful completion of research project
- Submitting scientific abstract
- Research advisor attestation
Travel Fellowships

Awards students up to $400.00 in matching funds if:

- The medical student is first author (presenter) of abstract 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

- Contact annette.chesson@jefferson.edu
Where to find Research Advisors

Centralized Programs

- Contact designated investigator

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
- Clinical Medicine (JCCCR)
- Center for urban health
- Computational systems biology
- Computer assisted education development

- Emergency medicine
- Family & community medicine
- Neurological surgery
- Neurology
- Obstetrics & gynecology
- Ophthalmology
- 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_b6BueddFNCYIAyVWIMFdyRkY3c2ZzVVJGeGc&usp=sharing

- 2013-4 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  Pediatrics
Cancer Biology  Pharmacology & Experimental Therapeutics
Dermatology & Cutaneous Biology  Psychiatry & Human Behavior
Medical Oncology  Radiation Oncology
Medicine*  Radiology
Microbiology & Immunology  Rehabilitation Medicine
Molecular Physiology & Biophysics  Stem Cell & Regenerative Medicine
Neuroscience  Urology
Oral & Maxillofacial Surgery  
Otolaryngology/ Head & Neck
Pathology, Anatomy & Cell Biology
Programs and Directors

- Computer Education
  Anthony Frisby, PhD

- Obstetrics and Gynecology
  Jason Baxter, MD

- Emergency Medicine
  Wayne Bond Lau, MD

- Family Medicine
  Marianna LaNoue, PhD

- Neurology
  Michael Oshinsky, PhD

- Neurosurgery
  Stav Tjoumakaris, 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

- JCCCR/Cardiology
  Suzanne Adams

- Ophthalmology
  Lisa Hark
Application Process
Summer Program
Deadline: February 2016

Online application at SRP website
http://www.jefferson.edu/university/jmc/students/summer_research.html/

- Notifications made by mid-March
Application Process
CwiC CTR
Deadline: January 5, 2016

Online application live on Dec 1:
http://www.jefferson.edu/jmc/students/cwc/applicationEntry.cfm

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

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

- Identify & 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

Overview | Clinical Translational Research | Population Health | Class | Faculty & Staff

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