Abstract:

The UCLA CTSI Research Associates Program (CTSI-RAP) aims to provide undergraduate UCLA students with the opportunity to gain exposure to hospital-based medicine as well as clinical research. The program is designed to build a stronger support infrastructure for the research initiatives of UCLA faculty physicians and investigators by engaging undergraduate students in scientific research and kindling their interest in biomedical research. Research associates play a key role in the implementation of research protocols in which they are involved and are given the opportunity to assist primary investigators with various aspects of their project including, but not limited to, conducting clinical research studies, collecting securitized data, assisting in the authorship of research protocols, and co-authoring abstracts, assisting in the authorship of research protocols, and co-authoring abstracts, posters, and papers. The unique blend of first-hand clinical experience and scientific research will give CTSI-RAP alumni a unique advantage in public healthcare in the future.

CTSI Research Advisor:

Laurie Ann Shaker-Irwin, Ph.D., M.S.

CTSI Members:

2015-2016 CTSI Members:

Cao, Quang • Dey, Ipista • Dickson, Crystal • Ho, David • Iqbal, Khashif • Jiang, Kelsey • Jones, Adrian • Kanji, Sne • Lam, Harrison • Liang, Michelle • Lu, Mimi • Mohundra, Rohit • Ng, Cassia • Nguyen, Dzung Maria • Ong, Stephanie • Onggo, Stevyndennis • Patel, Shrey • Sheu, Katherine • So, Joshua • Wang, Zoey • Yao, Douglas • Zhang, Lily

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**Copper Touch**

**Background:**
Health care-associated infections (HAIs) are among the most serious adverse events in healthcare. As the number of new effective antimicrobial agents declines and treatment of HAIs becomes increasingly difficult, hospital environments have become reservoirs and vehicles for the spread of nosocomial infections. Studies have shown that copper prevents bacterial growth through contact killing, a mechanism where bacteria undergo membrane rupture and cell damage upon exposure to copper.

**CTSI-RAP Involvement:**
The study is performed in selected ICU rooms on the 4th and the 8th floors of the Ronald Reagan Medical Center. Experimental assets contain active copper ingredient while sham assets do not. CTSI-RAP students screen all assets on 4th and 8th floor ICU rooms twice a day and our goal is to monitor the asset movement and remain aware of patients transfers, procedures, and new admits.

![Figure 1: Tag on an asset indicating room](image)

**Figure 1:** Tag on an asset indicating room

![Figure 2: Assets coated with copper/sham stainless steel](image)

**Figure 2:** Assets coated with copper/sham stainless steel

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**Polycystic Ovarian Syndrome (PCOS)**

**Background:**
Polycystic Ovary Syndrome (PCOS) is an endocrine system disorder caused by hormone imbalance resulting in enlarged ovaries filled with small collections of fluid. Symptoms include irregular menstrual cycles, pelvic pain, and infertility, and associated long-term complications are Type II diabetes, heart disease, and endometrial cancer. The purpose of this research study is to identify changes that take place in the body that result in PCOS by collecting specimen samples and medical information from women with or without PCOS.

**CTSI Involvement:**
CTSI-RAP students function as clinical study coordinator assistants within the PCOS study. Students conduct patient screenings to determine study eligibility for prospective participants, audit and maintain patient files, optimize and conduct study participant recruitment strategies, and observe and scribe for PCOS study medical procedures.

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**BrainSPORT**

**Background:**
Mild traumatic brain injury (mTBI) and sport-related concussion (SRC) are major public health problems. The UCLA Steve Tisch BrainSPORT program aims to utilize clinical care, education, and research to address the true natural history of clinical and physiological recovery of SRC, which has critical implications for improving safety, injury prevention, and medical care in athletes and military personnel.

**CTSI-RAP Involvement:**
Alongside the BrainSPORT multidisciplinary team, CTSI students are trained to assist with obtaining baseline concussion information from collegiate athletes and children. These tests include a Standard Assessment of Concussion (SAC), Weschler Test of Adult Reading (WTAR), reaction time test, balance error scoring system (BESS), and many others.

![Figure 1: Meeryo Choe performing a baseline concussion assessment](image)

**Figure 1:** Meeryo Choe performing a baseline concussion assessment

**Figure 2:** Demonstration of the reaction time test technique

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**Additional Ongoing Projects**

**Carotid Flow in Shock, PI: Igor Barjaktarevic, M.D., M.Sc.**

**Actigraphy, PI: Biren Kamdar, M.D., MBA, MHS**