MEMORANDUM

TO: College of Medicine Faculty

FROM: Rajesh Khanna, PhD, Professor, Pharmacology, Anesthesiology, and Neuroscience, Chair, Medical Student Research Committee
       Marlys H. Witte, MD, Professor of Surgery and Director, Medical Student Research Program

SUBJECT: Medical Student Research Program and related High School/Undergraduate Student Research Programs

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The Medical Student Research Program: Founded in 1981, the Medical Student Research Program (MSRP), funded by the National Institutes of Health, with administrative support from the Dean's Fund, continued and further developed a wide variety of activities during 2017-2018.

Summer Institute on Medical Ignorance

• For FY 2017-2018, 50 medical student short-term full-time research fellowships were awarded most of which were integrated into the Summer Institute on Medical Ignorance Seminar Series (SIMI) (5/29-7/28/17). Final presentations were videostreamed and can be viewed at the UA Biocommunication streaming website.
• Recruitment of 2018 summer research fellows began in November 2017. 24 medical students have already successfully competed for summer research fellowships with an additional 9 upperclass medical students approved for full-time research fellowships not during the summer months.
• Since the inception of the program in 1982, 994 medical student researchers have completed one or more fellowships through MSRP.
• Medical student research prizes/awards, publications, and research presentations at regional and national meetings.
  • As of January 2018, ~750 papers, ~45 chapters, and ~1300 abstracts have been published since 1982.
  • Fifteen medical students were selected to make presentations at the 2018 Western Medical Research Conference (WMRC) regional meeting of the American Federation for Medical Research, Carmel, CA, January 25-27, 2018: All 15 abstracts were presented in subspecialty sessions. Medical student Akshay Roy-Chaudhury was awarded the Edwin E. Osgood Award (top student abstract submitted to WMRC from 18 western medical schools). Students also made presentations at meetings such as the Orthopaedic Research Society 2018 Annual Meeting, 3/10-12/2018, New Orleans, LA.

Research Distinction Track

• The Research Distinction Track (RDT) (Surgery 800A) (approved for 6 academic credits by the Curriculum Committee in 2000): 24 seniors completed the track and will graduate in 2018 with Distinction and Honors in Research: Brittany Arcaris, Jennifer Bao, Sean Behan, Matthew Bull, Ivorie Coleman, Collin Costello, Hillary DeRose, S. James Dunleavy, Mohammed Fazel, Joseph Frankl, Kieran Hynes, Robert Kay, Eric Lander, Ivy Lin, Katherine Marsh, Rohini Patel, Ashley Pickering, Nitin Prabhakar, Ned Premyodhin, Alyssa Streff, Nathan Tanoue, Janson Trieu, Morgan Whitaker, and Michael Wyman. 42 COM 2018-2020 students are currently enrolled in RDT, 53 students have submitted Applications of Intent, and 3 applications are pending approval. In addition, MSRP students held periodic student journal clubs and scheduled student research presentations and participated in Departmental and College Research Seminars. Information and application forms are available in Rm 4402K, AHSC, and on our website.

Basic and clinical faculty who know of interested students, or who have opportunities available for medical students, undergraduate, and/or high school students, are encouraged to contact MSRP Program Manager Grace Wagner at (520) 626-6360 or e-mail grace@surgery.arizona.edu for further information.
Disadvantaged High School Student/Teacher Research Program

Founded in 1987 and 1991, respectively, the NIH High School Student/K-12 Science Teacher Research Program, which is integrated into the Medical Student Research Program and funded by NIH including Science Education Partnership Award (SEPA) (1987-present) for a Translating Translation curriculum “medical ignorance collaboratory,” K-12 Virtual Clinical Research Center and Medical Ignorance Exploratorium (website: www.medicalignorance.org) to improve scientific and health literacy, and NINDS (2011-2021), NICHD (2013-2018), and NIAID (2013-2019) offered a variety of student- and teacher-centered activities.

- For Summer 2017, 35 basic and clinical research fellowships were awarded to financially, socially, or educationally disadvantaged high school students from around Arizona. Mentors were recruited in targeted areas of neuroscience, cardiovascular, cancer, and pediatric disease for these outstanding high school students. Student research fellows participated in an expanded intensive program (partially on-line) including the seminar series of the Summer Institute of Medical Ignorance, were introduced to the Medical Ignorance Exploratorium, the Virtual Clinical Research Center/Questionarium, and most recently, mobile access (curiosityforall.org) – which also includes our Curiosity for All Videos. They also created videos of research topics area tools for our YouTube channel (www.youtube.com/user/medicalignorance).

- The 2018 SEPA Summer Institute on Medical Ignorance program will run from June 4-July 20, 2018. 32 high school students have been accepted and assigned to College of Medicine laboratories and clinics. We are in urgent need of a few more mentors for high school students who have been selected for our NINDS-funded summer program – for additional information, please contact MSRP Program Manager, Grace Wagner <grace@surgery.arizona.edu>.

- Continued short-term and long-term followup evaluation of the achievements and career paths taken by the >680 high school students and several hundred K-12 teachers who have participated for extended periods in the program since its inception and hundreds more have been trained in our workshops.

Undergraduate Student Research Program

In addition to medical and high school students, 20 diverse undergraduate student researchers (predominantly students previously graduated from SIMI) joined the 2018 NHLBI and NICHD-supported summer program. We placed most of these returning SIMI alumni in their prior or related research laboratory or clinic under the former or a collaborating mentor. Research emphasis targeted cardiovascular-blood-lung research, with smaller numbers in the neurosciences and pediatrics. These undergraduate student researchers worked for 2-3 months over the summer recess and hundreds more have been trained in our workshops.

20 diverse UA undergraduate students have been accepted for the 2017 Undergraduate Research Program funded by NICHD, NHLBI, and NINDS grants.

Medical and Pre-Medical Ignoramics Curriculum

Marlys H. Witte, MD, Professor of Surgery and Director of these Student Research Programs, colleagues, and staff also organized and participated in conferences presenting a variety of local, regional, national, and international workshops, invited lectures, curricula, and posters, and co-authored publications highlighting the program and providing training and in-service support to K-12 teachers and educators at all levels and in many disciplines.

AHSC Faculty Research Mentor Network

The Faculty Sponsor Directory, currently undergoing extensive update, contains profiles on more than 220 clinical and basic science faculty members interested in having medical and high school students and K-12 science teachers do research in their labs and/or clinics. New faculty and those who have not yet submitted their research projects/programs for inclusion in the Directory are encouraged to do so–please call (520) 626-6118 or e-mail MSRP@email.arizona.edu for further information. The Directory is available online at: http://www.msrp.medicine.arizona.edu/facultysponsors.htm.