



The **Medical Student
Research Program**
The University of Arizona College of Medicine, Tucson

MEMORANDUM

May 8, 2017

TO: College of Medicine Faculty

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

RKhanna
Marlys Witte, MD

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

MSRP webpage: <http://www.msrp.medicine.arizona.edu/>
SEPA webpage: <http://www.ignorance.medicine.arizona.edu/>

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 2016-2017.

Summer Institute on Medical Ignorance

- For FY 2016-2017, 45 medical student short-term full-time research fellowships were awarded in conjunction with the *Summer Institute on Medical Ignorance Seminar Series* (SIMI) (6/1-7/30/16). Final presentations were videostreamed and can be viewed at the UA Biocommunication streaming website.
- Recruitment of 2017 summer research fellows began in January 2016. 42 medical students have already successfully competed for summer research fellowships with additional 6 upper class medical students approved for full-time research fellowships not during the summer months.
- Since the inception of the program in 1982, more than 950 medical student researchers have completed one or more fellowships through MSRP. NIH training funds supported 345 of these individual students.
- Medical student research prizes/awards, publications, and research presentations at regional and national meetings.
 - As of January 2017, >550 papers, >40 chapters, and >1050 abstracts have been published since 1982.
 - Eight medical students were selected to make presentations at the 2017 Western Section Medical Research Forum of the American Federation for Medical Research (WSMRF) meeting, Carmel, CA, January 26-28, 2017: 7 abstracts were presented in subspecialty sessions. Students also made presentations at the following meetings: 5th Congress of World Union of Wound Healing Societies, Florence, Italy, 9/25-29/2016; ACEP Annual Research Forum, Las Vegas, NV, 10/2016; NE Society of Plastic Surgeons, Baltimore, MD, 10/2016; ACP 2016 Annual Regional Meeting, Tempe, AZ, 11/2016; 65th Annual Meeting of American Society of Tropical Medicine and Hygiene, Atlanta, GA, 11/15/2016; and 76th Annual Meeting of the Society for Investigative Dermatology, Portland, OR, 4/26-29, 2017.

Research Distinction Track

- The Research Distinction Track (RDT) (Surgery 800A) (approved for 6 academic credits by the Curriculum Committee in 2000): 16 seniors completed the track and will graduate in 2017 with Distinction and Honors in Research: Ersilia Anghel, Aubri Carman, Daniel Casey, Racquel Chahal, Sharon Chopra, John Dicken, Tyler Durns, Stephan Gruessner, Richard Jones, Jeffrey Kartchner, Jonida Krate, Salena Loreda, Pouran Malekzadeh, Abigail McCallum, Ryan Miller, and Jodi Solway. 40 COM 2018-2020 students are currently enrolled in RDT, 68 students have submitted Applications of Intent, and 6 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 4402G, 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 Explorarium (website: www.medicalignorance.org) to improve scientific and health literacy), and NINDS (2011-2021) (just renewed), NICHD (2013-2017), and NIAID (2013-2018) offered a variety of student- and teacher-centered activities.

- For Summer 2016, 37 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 Explorarium, Questionator game, the Virtual Clinical Research Center/Questionarium, and most recently, mobile access (curiosityforall.org).
- The 2017 SEPA Summer Institute on Medical Ignorance program will run from June 5-July 21, 2017. 35 high school students have been accepted and assigned to College of Medicine laboratories and clinics.
- Continued short-term and long-term followup evaluation of the achievements and career paths taken by the >650 high school students and 135 K-12 teachers who have participated full-time 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, 19 diverse undergraduate student researchers (predominantly students previously graduated from SIMI) joined the 2016 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 number in the neurosciences. These undergraduate student researchers worked for 2-3 months over the summer recess and hundreds more have been trained in our workshops.

22 diverse UA undergraduate students have been accepted for the 2017 Undergraduate Research Program funded by NICHD and 2 recently awarded NHLBI and NINDS 5 year grant renewals.

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. An 8/24/15 New York Times Op-Ed piece featured “The Case for Teaching Ignorance.”

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>.

Medical Student Research Committee: Chair: Rajesh Khanna, PhD (Pharmacology), Lonnie Lybarger, PhD (Cellular/Molecular Medicine), Lalitha Madhavan, MD, PhD (Neurology), Ray Runyan, PhD (Cellular & Molecular Medicine), and Farshad Shirazi, MD, PhD (Emergency Medicine), Kristian Doyle, PhD (Immunobiology & Neurology), Marlys Witte, MD (ex officio Director, MSRP) (Surgery), Grace Wagner (MSRP Program Manager), & Graceann Thompson (MSRP Program Coordinator); and medical students Nathan Tanoue ('17) and Giuliana Repetti ('19). The committee welcomes your comments and suggestions and extends their appreciation to those faculty members who participate in the MSRP and related NIH-funded programs. We are committed to promoting opportunities for student research and look forward to another successful year in 2017-2018.