



# UCSF Department of Medicine ZUCKERBERG SAN FRANCISCO GENERAL

## STRENGTHENING AND DIVERSIFYING THE PIPELINE FOR MEDICINE

### Partnership between ZSFG Pulmonary Division and UC Berkeley Biology Scholars Program supports aspiring undergrads

As a child accompanying her father, who battled kidney disease, to doctor appointments and hospital visits, Semhar Teklu grew to know closely the vinyl chairs of waiting areas and fluorescent lit exam rooms. “My father was ill my whole life. I have memories of going with him to get dialysis and for checkups, and to different cities for treatment,” said Teklu. “When I think of my childhood, it was all healthcare related.”

While her familiarity to hospitals inspired the UC Berkeley junior to study biology and consider a career in healthcare, Teklu had no tangible experience or knowledge of a physician’s career path. This summer, however, as a participant in the Biology Scholars Clinical Exposure Program (BICEP), Teklu was invited to spend a week at ZSFG DOM in the Pulmonary Division, shadowing physicians, fellows, and residents.



**Semhar Teklu**

in medicine (UIM) or with minimum exposure to medical professions. Students shadow the pulmonary team for one week in the summer and gain insight into a career as a physician or researcher. The program began organically and through the

proactive efforts of former Pulmonary and Critical Care Chief Dr. Courtney Broadus in response to an undergraduate who contacted her via email asking for advice about how to experience the day-to-day of a physician. A partnership, facilitated by BSP Director Dr. John Matsui, was created and the program born.

BSP was founded to connect students with a passion for science to communities while celebrating their unique backgrounds and identities. Over the past 27 years, 60% of more than 3,000 BSP graduates are underrepresented minorities, 70% women, and 80% from low-income backgrounds or are the first in the their family to attend college.

“Universities like UC Berkeley are set up in a way that best supports students from backgrounds similar to those who’ve been historically successful,” notes Matsui. “I was looking to fill the gaps, to create the support that was missing at Berkeley in order to better serve the students that no one really expected to survive or succeed in science. I saw a lot of talent being wasted, so, like Billy Beane of the Oakland Athletics, I went looking for that ‘undervalued talent’ – students with the potential to be scholars.”

This June, three UC Berkeley undergraduates, Aisha Jama, Kristin Heldreth, and Semhar Teklu, completed BICEP at ZSFG. In July, three more students, Anna Rios, Isaac Avila-Vargas, and Eddie Lin, will take part in the program.

“BICEP exposes students to what it’s like on the provider side,” said Antonio Gomez, MD, Acting Chief of Pulmonary and Critical Care Medicine. “There isn’t as much opportunity if there’s no family or friend in health care. This encourages kids who are UIM and students who don’t know personally what a career in biology and sciences looks like.”

Students accompany the pulmonary team on patient consults, attend procedures, surgeries, and

rounds, interpret pulmonary function tests, attend conferences and learning the process of writing up notes and communications. Participants cite the contrast between what is shown on TV or in media versus the reality of a clinical team’s day. While hospital dramas highlight the frenetic movement of emergency surgery, the program reveals the relationship building that comprises the most durable foundation of patient care.

### Patient and physician interactions inspire students to pursue medical profession



**Aisha Jama**

Jama, a San Jose native who is the oldest of seven children, is the first in her family to attend college. Although she always held a strong interest in biology and public health, she was uncertain about a path that included both research and clinical pursuits. She credits BICEP with her deciding to apply to medical school with an interest in ecological and evolutionary biology.

“When I watched a bronchoscopy, that solidified it. You get to see what’s actually what happening and that the patient really needs this,” said Jama. “It was so cool to see the inside of a human body. There are so many pathways and the doctor knew exactly what to do.”

While Jama appreciated the opportunity to witness

“I was surprised that there were so many conversations,” said UC Berkeley senior Aisha Jama. “There was so much discussed with patients including end of life and continuation of care. And so much time making sure that they were informed.”

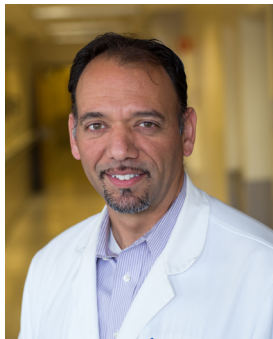


procedures, she emphasized that the connection between the pulmonary providers and their patients was her favorite aspect of the program.

As students shadow the team, they are afforded a view into the relationship built with patients as they check-in each day on rounds. “We saw the same patients every day and saw how grateful they were. It taught me a lot about how important these interactions are. I was impressed with how they would explain procedures and answer questions and really cared,” said Jama.

### Diversity of health care providers impacts patient care with positive results

Access to the full experience of the day-to-day interactions of providers is one of the strongest values of BICEP. Likewise, the ability to view a



**Dr. Antonio Gomez**

transition from high school to undergraduate to medical school and beyond can retain students who might otherwise not continue in the healthcare field. “My parents were not doctors or involved in science,” explains Gomez. “My parents are Cuban immigrants, my dad is an Episcopalian priest and my mom is an educator. So though I wanted to be in medicine, I had no idea how to conceptualize it.” Gomez credits a good friend who had family contacts with in-patient neurosurgery at USC with expanding his view of the medical field. “I was able to see that you could see a patient, identify what was wrong, and go in and try to fix it, which was more than I had experienced.”

Strengthening the pipeline from undergraduate to medical school and professional placement benefits not just perspective students’ futures but patient health. Numerous studies over the past twenty years have demonstrated a correlation between diversity among healthcare providers and positive patient outcomes. A review by the US Bureau of Health Professionals found that UIM health professionals overall disproportionately chose to serve minority patients and that minority

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or ethnically similar background. Additionally, the ability of providers to communicate directly with patients who speak a language other than English as primary, increase the likelihood of patients to commit to follow-up appointments.

UCSF Department of Medicine has committed to increasing diversity and representation among medical students and residents. In 2017 first-year residents from groups under-represented in medicine grew dramatically from 15% to 28%. However, demystifying the process from undergraduate studies to medical school application remains an important piece of increasing inclusion.

“Speaking with the fellow and residents at ZSFG really has encouraged me to keep going,” said Teklu. “I was worried about applying to med school and now I am confident that I can go. I can even see now that I can commit to both research and clinical practice.” Teklu, who is the daughter of immigrant parents from Eritrea, noted the ability to listen to advice from members of the pulmonary team with adjacent experiences. “I connected with someone from East Africa, and also from Sudan, and they encouraged me to apply and that you need to advocate for yourself. The program gave me such clarity.”

For BICEP students, one week can inspire life-altering action. All three of this June’s participants



**Kristin Hildreth**

plan to continue on to medical school. They noted the ability to see a path outlined and chance to receive advice from fellows, attendings, nurses, physicians, and technicians as key in their decision-making process.

For Kristin Hildreth, who graduated this spring from UC Berkeley with a degree in Integrative Biology, and completed BICEP this June, the experience at ZSFG has bolstered her resolve to apply to medical school. She will begin the Charles Drew University Post Baccalaureate Pre-Medicine

patients tended to receive more culturally competent care from providers of demographically or racially

## SPOTLIGHT

### 2019 Medical Staff Awards

#### Krevans Award recognizes Arturo Gasga, MD

**Dr. Arturo Gasga** was born in Reedley, California and grew up in Acapulco, Mexico. At the age of 15, Gasga returned to the San Joaquin Valley and attended Cal State University-Fresno where he obtained a BS in Chemistry. As an undergraduate, he worked as a dishwasher, chemistry tutor, and emergency medicine scribe to support his college career and sponsor his parents’ immigration to the U.S. to reunite his family. His experiences growing up in underserved communities in Acapulco and the Central Valley were important drivers for him to pursue a career in medicine. He attended UC Davis School of Medicine, where he was part of the San Joaquin Valley Program in Medical Education (SJV PRIME), a program that trains future physicians committed to improving the health of underserved communities in the Central Valley. Gasga is a first year categorical Internal Medicine resident, whose continuity clinic is in the Richard H. Fine People’s Clinic. His clinical interests and passion include improving health care access for the underserved with language barriers and immigrant health issues. He plans to return to the San Joaquin Valley; where he will be honored to practice medicine.

The Krevans Awards recognize “excellence in patient care, as exemplified by clinical competence, professional conduct, concern for patients and interaction with all level of staff, including peers,” with recipients selected by ZSFG medical department chiefs. The award was established in 1979 by the Gladstone Institutes and is named for former UCSF Chancellor Julius R. Krevans.

#### Rapaport Award recognizes Jeffrey Critchfield, MD

**Dr. Jeffrey Critchfield** is a UCSF Professor of Medicine, Division of Hospital Medicine at ZSFG. He serves as the Chief Medical Experience Officer and Medical Director of Risk Management.

The Elliot Rapaport Award is awarded to a physician who demonstrates a significant commitment to ZSFG in one or more of the following areas:

program in the fall with plans to take the MCAT. While Hildreth was drawn to becoming a provider to help others, she was unclear of the viability of a path. Diagnosed with Asperger’s in the 7th grade, she was drawn to the medical field to help diagnose and support others.

“It was hard to be diagnosed at that age so I lived childhood confused and alone a lot,” said Hildreth. “I want to be able to give back to children dealing with diseases and conditions so they know they’ll be just fine,” said Hildreth. “I was on the path to becoming a pediatrician but had questions. Now that I’ve had a glimpse into the life of a physician, it’s confirmed my passion to be in the medical field.”

*Brooks Bigart*

*Editors: Neil Powe, Laurae Pearson*

