Do mussels hold a key to better medicine?

They very well might, says George Degen, a chemical engineering graduate student at UC Santa Barbara. According to Degen, the proteins secreted by the molluscs’ feet, which enable them to adhere to irregular surfaces in wet conditions, could provide clues to new ways of repairing delicate human tissues, particularly in cases where stitches are impractical or even impossible.

Degen shared his research in a three-minute TED-style talk as part of the 2019 UC Santa Barbara Grad Slam. The annual tournament-style competition showcases the best and brightest of the campus’s young researchers. Close to 80 students accepted the challenge of condensing their work into brief, accessible presentations. Nine made it all the way to the finals, and Degen walked away with the first-place prize.

“We had another fantastic year of the Grad Slam,” said Carol Genetti, dean of the Graduate Division at UC Santa Barbara. “The presenters never cease to amaze me with the marvelous research that they do and their excellent communication skills.” This year’s slam also provided the opportunity to learn a little more about the participants and their diverse backgrounds and interests, she added.

The competition was tight and the excitement contagious. The final round Friday, April 19, culminated two weeks of preliminary and semifinal rounds and before that, months of preparation and training in which participants honed their presentation
chops, polished their stage presence and mastered the art of connecting to a diverse audience with engaging material. These skills, while the focus of Grad Slam, are also essential for young researchers on the cusp of their professional lives, as they build their networks, go on job interviews or are asked to discuss their area of expertise.

The other eight finalists gave thought-provoking talks on a wide range of subjects: Rebecca Baker (English) discussed science fiction and the power of possible worlds; Vinnie Wu (Psychological & Brain Sciences) probed the nuances of intergroup interactions; and Taylor Heisley-Cook (Environmental Science & Management) shed light on sustainable fashion made from cannabis waste. Meanwhile, Ana Sofia Guerra (Ecology, Evolution and Marine Biology) talked about the human impacts on seabirds and their environment via waste; Camille Endacott (Communication) waxed lyrical about artificial intelligence and the future of work; and Zachary Reitz (Chemistry) offered insight on strategies for future antibiotics. Phoebe Racine (Environmental Science & Management) shared her work related to the next food revolution while Melissa Gordon Wolf (Education) took on the validity of conventional self-report surveys.

While Degen won the $5,000 grand prize, all the competitors in the final round walked away with cash prizes for their efforts. Runners up Reitz and Heisley-Cook received $2,500 each, while the remaining finalists each took home $750. Degen will go on to compete at the UC systemwide competition in San Francisco, squaring off against Grad Slam winners from the other UC campuses.

“I’m excited,” Degen said. “We do great research here and I think that the work related to marine biology is really strong at UCSB, and I’m excited to spread it.”

In addition to being the birthplace of Grad Slam competition, now in its seventh year, UC Santa Barbara has for the last two years won the People’s Choice award at the systemwide event. Those interested in supporting Degen and in giving UC Santa Barbara its third straight People’s Choice win, can vote May 10 at gradslam.universityofcalifornia.edu.

For the students planning to test their presentation mettle at the next Grad Slam, Degen has these words of wisdom: “I think that everyone has things they love about their research, and if you could convey that excitement, I think that’s what people enjoy seeing.”
About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.