

Colors of the Brain

Student-run program aims to boost underrepresented minority students into STEM careers



From left: Colors of the Brain leaders Minerva Contreras, Maribel Patino, Jillybeth Burgado, and Christian Cazares gather to plan their next event. Photos by Erik Jepsen/UC San Diego Publications

By the time Christian Cazares was applying to grad school, he had participated in at least three diversity initiatives at the University of California Berkeley aimed at supporting underrepresented students in STEM (science, technology, engineering and math).

“And still,” he said, “I didn’t really feel like the initiatives followed through because I was never connected with a good mentor who looked like me who could provide me with career advice. There was never anyone I could have an honest conversation with.”

After completing an undergraduate degree in cognitive science at UC Berkeley in 2014, followed by a post-baccalaureate research experience at the University of Pennsylvania, Cazares enrolled in the Neurosciences Graduate Program at UC San Diego School of Medicine in 2016. As a first year student in the program, he wrote an article for the local [NeuWriteSD blog](#) exploring the idea of providing one-on-one mentorship to underrepresented minority students. Cazares knew, however, that he didn’t want to wait for someone else to do something—he wanted to get the ball rolling himself.

“I just Googled ‘How to start a student organization at UCSD,’” Cazares said with a laugh. “It was shockingly easy.”

With the help of his fellow first year friends, Maribel Patino, Kevin White and Pamela Riviere, Cazares decided to launch Colors of the Brain—a program run by graduate students to provide mentorship and resources to underrepresented minority students who are interested in STEM careers and want to apply to graduate school.



Co-founder Christian Cazares launched Colors of the Brain in 2016 to connect underrepresented minority students interested in STEM careers with graduate student mentors

Launched in 2016, Colors of the Brain is more than just a place for students to grab pamphlets and learn about funding opportunities—it’s a space for underrepresented minority students to receive advice and information from students who have already walked this path.

The graduate students running Colors of the Brain all come from underrepresented and/or first-generation backgrounds, and all of them want to share what they know with other underrepresented minority students interested in careers in STEM. They were motivated by the desire to give other students access to the things they struggled with themselves.

“Students want to know, how do I apply for grad school? What do admissions committees look for?” said Patino. “Most of the resources that already exist for this come from people who haven’t gone through this, or who went through it a long time ago, so it’s hard for students to get a modern perspective on grad school applications. And it’s even harder for

underrepresented students to know who to talk to, or how to prepare their essays—if you don’t know someone who can give you the inside scoop, you don’t know what you should or shouldn’t share.”

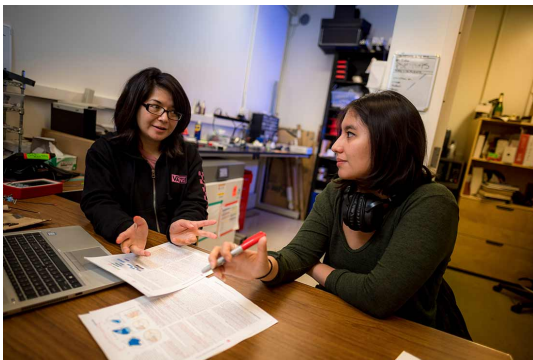
So, the Colors of the Brain team decided to start by simply connecting undergraduates interested in graduate school with current grad students who could act as mentors and answer any questions the undergrads might have.

One of their first mentees, Miryam Palomino, immediately saw the value of the program.

“I met one of the founders in a class I was taking,” she said, “We met up for coffee, and talked about my career goals. It was exactly what I needed, even though I didn’t realize I needed it!”

Now, Colors of the Brain offers tailored workshops to help students understand the graduate school admissions process, including a personal statement writing workshop where attendees can receive individual feedback on their admissions essays

“We can really work with students on building their application,” said Patino. “It can be especially helpful for first-generation students because sometimes they’re reluctant to share their experiences—they’re worried that it might make them seem out of place in research. But we really encourage people to share their personal stories because it’s important for programs to know who you are and where you came from.”



Co-founder Maribel Patino (left) discusses a scientific paper with Miryam Palomino, a former mentee

It’s difficult for the organizers to know exactly how many participants they have because of the high turnover; students get advice on grad school applications, and then move on to those grad programs. But for the students who do participate, the program has lasting impacts.

“When the founders shared their backgrounds and paths to graduate school with me, I felt like they were uniquely capable of understanding my path,” said Palomino. “It opened my eyes to all the ways I lacked

support in my efforts to become a brain scientist. They were essential to some of my best decisions; they pointed me to resources I wouldn’t have found alone. Even today, I often call them when I am feeling uncertain about my path.”

The most popular event they host each year is the fall graduate admissions panel every November. There, attendees can ask students and faculty on graduate admissions committees for advice and feedback on how to prepare their applications and get ready for interviews.

“At the panel, students can ask anything,” said White. “They can get those tips that you don’t hear anywhere else, and the admissions committee members can be really candid.”

In the spring, Colors of the Brain offers other kinds of resources, such as hosting discussions on what to do if you’re not quite ready to apply to grad school and want to take a gap year, how to apply for fellowships, and even workshops on how to use the popular biomedical citation website PubMed and efficiently read scientific papers.

“We try to provide whatever resources students will find useful, or what they want to learn about,” said Cazares. “We usually end up hanging out after the events, too, to have personal conversations with the attendees. We’re willing to meet with folks any time, to have a coffee and a conversation, and help them through the application process.”

It’s those one-on-one conversations that sometimes seem to have the biggest impact. “We had coffee and, immediately, I felt my efforts so far were validated,” said Palomino. “More than anything, they gave me roadmaps to the application process, and these had been a black box before. They have edited my applications to conferences and helped me think through my career choices, and just been all around great to me.”

It’s important to the team that their efforts support students through the entire process; Colors of the Brain aims to help anyone who is interested explore their career interests in STEM, and have candid conversations with others who share similar experiences.

“Sometimes there’s a lot of energy and enthusiasm around supporting minorities in STEM, but lots of those resources are targeting people who already have one foot in the door,” said Patino. “We’re trying to open the door and show that everyone is welcome, and you don’t need to have already been an expert to prepare for a graduate program. Some students don’t even know that grad school is a career option for them.

“A lot of the resources that already existed aren’t specific enough—such as the minority student resource center is great, but it can’t help with the nitty gritty of applying for a STEM Ph.D. program. And the career center resources are helpful, but can’t always address the challenges that face underrepresented minority students when applying for grad school. We’re very

specifically trying to show that being an underrepresented minority in STEM doesn't have to be a barrier, and helping students access the resources they need to make them competitive applicants for grad school."

For the team, it's not just about providing resources for undergrads—it's also about creating a space for graduate students of color to connect, socialize and share experiences, and to give back to the community.

"I went to a historically black college," said White, "So as an undergrad, I saw a lot of people of color teaching science and doing research. When I came to UC San Diego, I realized that very few people here see people of color doing science, so I wanted to make myself visible, and help show that there are diverse graduate students in STEM."



As a former mentee, Miryam Palomino credits Colors of the Brain with giving her a road map to apply to graduate school

That visibility makes a difference for aspiring scientists. "When the founders approached me, I didn't know what I didn't know," said Palomino. "I just wanted to be a brain scientist so bad, I was trying my best to get there, but I couldn't realistically see the goal. Having mentors who are like you is unlike any other support. There is empathy and a great sense of 'you can do it too.' "

Cazares says he was also partially motivated by his personal desire for career development resources. "I wish something like this existed, but for grad students," he said. "It would be so great to connect faculty or postdocs of color with graduate students, to help fix the leaky pipeline. But people get so focused on their research, and it's hard to make time for mentorship. Like it's great that we can help get URMs into graduate programs, but without resources to support them, it's hard to keep them in grad school."

Though such a resource doesn't yet exist for them, the Colors of the Brain team are dedicated to making sure that their work continues to support URM students interested in grad school for a long time to come.

"We're working really hard to build the community and normalize this program," said Cazares. "We've got an increasing number of minority grad students coming into the graduate program, and we're working to get some of the more junior students involved in leadership roles in the organization, so that Colors of the Brain will continue to exist when we're gone."

To learn more about Colors of the Brain and sign up for their upcoming events, visit their [Facebook page](#).