

Tulane alumna Monique Cola: Scientist and principal

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Alumna Monique Cola, who earned a PhD at Tulane, traded in life as a scientist for a different kind of academia: as a high school principal. Cola leads Sci High in New Orleans. (Photo by Paula Burch-Celentano)

HIGH SCHOOL PRINCIPAL

Monique Cola (G '04) trained as a neuroscientist, then pivoted to an academic career — for the love of research. Now, as principal of Sci High, she encourages high

schoolers to be STEM-literate and to consider STEM careers.

“I guess all along I had been preparing myself to do this, seeing what students’ weaknesses and strengths were when they came into the postsecondary classrooms.”

Monique Cola, Sci High principal

This summer Cola joined Sci High — officially The New Orleans Charter Science and Mathematics High School — after having worked in administrative positions at Xavier University of Louisiana and Delgado Community College. That the neuroscientist would end up in a high-school office, with a lone Florence flask on a windowsill to remind her of her previous life, is not by accident. She took this job in order to contribute to the development of the next generation of scientists.

“I guess all along I had been preparing myself to do this, seeing what students’ weaknesses and strengths were when they came into the postsecondary classrooms. I always said, ‘What could high schools be doing better to make sure these students are prepared?’ Now I get to prepare those students to go to postsecondary,” she said. “I have the unique perspective of knowing what’s expected on that side, knowing what students should be doing.”

The 500-student, open-enrollment school welcomes any high schoolers who want to work hard and focus on STEM (science, technology, engineering, math), Cola said. The students can choose from a variety of electives like engineering, robotics, digital media, video, computer science and biomedical science, a crime-scene-investigation type course that delves into forensics. Sci High has a maker space and advanced placement courses. It uses curricula from Project Lead the Way, a national nonprofit that enhances STEM skills for grades preK-12. There is CTE (career technical education) instruction for those students who want it.

“We take kids of varying levels of academic achievement and try to give them a nurturing and rigorous environment,” she said. “We expect a lot of them, and they step up to the plate.”

NEUROSCIENTIST

Years ago, the research life chose Cola, when as a recent graduate of Pitzer College, she took a job as an associate at Tulane School of Medicine, doing basic research in

a neuroscience lab, where she studied connections of the brain in nonhuman primates. She benefited from the mentorship of the principal investigator, who was also a woman. Research would continue to fulfill Cola for 25 years.

After years of training medical and graduate students at the medical school, Cola pursued a terminal degree in neuroscience. She received her PhD from Tulane in 2004.

“I loved doing [basic science] research, but I knew I wanted to do something that was clinically more relevant,” she said. “My postdoctoral research involved using MRI to study cognitive dysfunction in stroke patients and in patients with Alzheimer’s disease.

“I was particularly interested in African-Americans because of all the co-morbidities we have: diabetes, hypertension. Does [Alzheimer’s] look different in African-Americans? Do we have early onset? Is the disease worse?”

As a neuroscientist, “I never wanted to teach,” Cola insisted. “I was fine in my lab.”

After Hurricane Katrina, many of the neuroscience faculty members hadn’t returned to the city, so she went into the classroom.

“I loved it!” she said.

By then Cola was also part of Tulane’s neuroscience faculty; she worked in cognitive neuroscience research until she departed for Xavier, where she trained students to conduct their own research projects at that university’s Biology Resource Center. All along, she wanted to be a role model for underrepresented students such as African-American girls, whom she saw very few of in advanced college STEM courses.

Although she no longer has enough time to teach regularly, Cola still intends to give neuroscience lectures and perform outreach activities.

To be global citizens, students will need to be STEM-literate, Cola said, especially if they hope to solve large-scale problems and change lives.

“I encourage them to [be tech-savvy] in a way that is different from just looking at their phones,” she said. “[I want them to] understand how the phone works. With the

challenges and opportunities facing the world, our students cannot afford to be spectators.”

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