For as long as Lillian Murphy can remember, her mother has been in pain. In addition to suffering from endometriosis, she was the victim of a hit-and-run accident.

“My mom has overcome so much, it’s part of the reason I’m interested in doing biomedical research in neurological disorders,” Murphy said. “There are so many questions to ask and the fact that there’s someone I care about personally, who could benefit from knowing more about how the nervous system works, is definitely a motivator.”

Soon after arriving at Sacramento State, Murphy connected with Biology Professor Kimberly Mulligan and applied to work in her lab. Their research was focused on identifying environmental factors that may confer risk or increase the severity of neurological and developmental disorders in humans, like autism and Fragile X syndrome.

Murphy juggled a busy schedule in addition to her research. She served as a Peer Assisted Learning (PAL) facilitator at Sacramento State, helping hundreds of students who were struggling in their science classes. She also worked as a swim coach and helped care for her family, all while pursuing her degree in molecular and cellular biology.

After seeing Murphy’s dedication and abilities, Mulligan encouraged her to apply for the Summer Undergraduate Research Experience (SURE) award. This program, which is unique to Sacramento State, provides funding to support projects in which faculty and undergraduate students work together on research.

The SURE award gave Murphy the financial support she needed to leave her coaching job and work full-time in the lab. This extra time advanced her research and allowed her to present her findings at various conferences, including the annual California State University Program for Education and Research in Biotechnology. “The financial support I got to do research has been a big part of my life,” she said.

In 2019, Murphy earned the prestigious Glenn Nagel Award, given for the best undergraduate research across the entire California State University system. When she graduated in 2020, she was awarded the President’s Medal, the University’s most prestigious student award.

Murphy was accepted to numerous graduate programs throughout the country, including Harvard University, and chose UC Berkeley to pursue her dream of becoming a neurobiologist.

“My mom is a driving factor. She has had chronic pain her whole life, I would hope to help develop a treatment for others who suffer from it. I want to improve the lives of others.”

—Lilian Murphy