



BYU PHOTO

FULFILLING STUDENTS' POTENTIAL THROUGH CAREER AND RESEARCH OPPORTUNITIES

One reason for the Neuroscience Center's exponential growth in the last 20 years is its dedication to helping students find jobs, internships, and research opportunities. Internships have become a new focus, especially as the major is growing. Hopkins explains, "We have really started pushing internships with our students . . . to broaden their point of view about what they can do with their degree."

Kirwan has also seen the benefit of internship opportunities and reports, "We do a great job of placing people in top programs—three-quarters of our majors are going on to medical or dental school, . . . going to grad schools and research programs." In addition to medicine, recent graduates have started careers in education, business, engineering, and more.

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—DR. BROCK KIRWAN

Creating research opportunities for students is a priority, and neuroscience faculty members mentor over 150 students with their research in their labs each year. These research opportunities also lead to jobs and enhance students' classroom experience.

Toolson has conducted research with Kirwan for over three years and has supplemented her academic learning with hands-on experience. Working in the memory and decision-making lab, Toolson says, "We do a lot of fMRI research, and it's been really cool to learn how an MRI machine actually works at a basic level and how to analyze that data."

Hopkins finds this mentored research especially beneficial because students from various disciplines are collaborating with other neuroscience students on research, and their different backgrounds and training help them learn a great deal from each other.

Students can also participate in the Neuroscience Club, which currently has over 100 members. Enoch Council, the student club president, says that the organization "gives students opportunities to understand what the major is about and what you can do after graduation."

One of the main activities held by the club is Food for Thought, where a group of 15 students are invited to a catered dinner with a professor or another professional working in neuroscience. Council says that Food for Thought is "a good networking opportunity; you can listen to really intelligent people talk about their research and ask them questions."

Perhaps one of the greatest impacts that the Neuroscience Center can have on students is a better understanding of each person's potential, both temporal and spiritual. As Kirwan says, "I think studying the brain tells us a lot about who we are and what our unique abilities are, both as humans and as children of our Heavenly Father. There is a reason that the brain looks the way it does and operates the way it does, and that allows us to do some pretty amazing stuff. . . . I think that people are amazing, specifically because they have amazing brains." 



FUN FACTS ABOUT THE BRAIN

"Dolphins actually sleep with one hemisphere of the brain asleep at a time. For a dolphin who is underwater, they must be constantly swimming, and so they'll have REM sleep with half their brain while their other half is still awake."

—ANNELISE TOOLSON



"If you are told to move your arm from point A to point B, there is an unlimited number of [ways] to do so, but everyone will do it the same way. Your brain automatically minimizes both effort and error in any of the movements you make, which is why your bodily movements are fluid."

—ENOCH COUNCIL

"You don't grow new neurons after you are born, except in two places: One is in the olfactory bulb, where your sense of smell is, and the other one is in your hippocampus, which is the part of your brain involved in learning and memory."

Current thinking is that as you learn about new things throughout your lifetime, you need new cells to represent those new memories, so that's why you grow new neurons in these two places. As to the other bit about smell, your olfactory sensory neurons actually poke down into your nasal cavity, so when you breathe in, your sense of smell is from the interaction of molecules in the air with those neurons themselves. The neurons are exposed directly to the air, so they get exposed to toxins and things like that. [Because of this], they die off pretty quickly, so you grow new neurons to replace the ones that die."

—DR. BROCK KIRWAN

