SOP Sample for PhD in Neuroscience – New Zealand

Sensory perception inspired my interest in neuroscience. As a classically trained vocalist, I first became fascinated by how auditory stimuli evoke emotional responses, which grew into a passion for understanding how sensory perception connects the physical and the mental worlds. Opening up the "black box" between sensory stimuli and behavior has become my main intellectual drive in investigating the brain. Researching the mechanisms underlying these processes has been incredibly rewarding, and compels me to delve deeper into the neurobiological complexities of the brain, underlying my resolve to pursue a career in neuroscience. With the opportunities afforded to me through a Ph.D., I hope to contribute to research in the field of sensory perception.

As a sophomore at Bella College, I investigated the role of oral stimulation of sweet taste on pancreatic insulin release in Dr. Marie's lab. We were surprised to find that a mouse model deficient for the P1r3 sweet taste receptor, despite being unable to detect sweet taste, produced a robust insulin response similar to wild-type mice when licking sugar solutions. These results suggested that oral-stimulated insulin release occurs through a pathway independent of conscious perception of sweet taste. It was thrilling to see how our work suggested a new pathway for transducing information about sugars and the input underlying insulin release, even opening up the door to a new mechanism of chemosensation.

Include further research and additional information related to work

I was inspired by everyone's intelligence and motivation and able to see a career path in research for myself more clearly than ever before. After graduating, I was determined to work in research full-time. I joined the lab of Dr.John Thomas. Working with Dr.Sony, I investigated the role of tonic dopamine levels in regulating motivation. I was responsible for this project on every level, from contributing to the experimental design to executing each protocol, requiring me to draw from all my previous research experiences. I learned stereotaxic surgery for cannula guide implantation, how to perform *in vivo* microdialysis on awake, behaving animals, developed a new method for histological evaluation of probe placement, and taught myself Matlab to design new analyses for behavioral data.

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In order to best contribute to the leading questions at the frontiers of neuroscience, I am committed to approaching my own research from an interdisciplinary standpoint to arrive at the most innovative approaches and conclusions. For this reason, I am drawn to the Radeon University graduate program for its encouragement of multidisciplinary collaborations, and its leading and scientifically diverse faculty. Radeon University's wide array of strong sensory perception research, including the labs of investigators such as Professors Lilly, Feroza and Genner offer an excellent fit for my research interests and a range of opportunities to better understand the complex interactions between fields of neuroscience. As a graduate student, I also plan to engage with organizations like the Science Communication and Media Group and WISeR, because public perception of science, on local and global levels, as well as supporting women in the sciences are extremely important causes to me. With a Ph.D. from Radeon University's graduate program and experience with the exceptional investigators and unique interdisciplinary scientific community at Radeon, I will be well prepared to pursue innovative directions in my research and a successful career as a scientist.

Disclaimer: Please note that the names of students, referees, companies, universities and designations used in the essay are completely fictitious and any resemblance to any actual person is purely coincidental.