



**CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY**

Name(s) Mina L. Abbassi	Project Number 36344
Project Title Paw Dominance in Dogs: The Brain, the Paw, and the Dog	
Abstract Objectives/Goals The objective of this project is discover whether dogs have a dominant paw that they prefer over the other, and whether this correlates to the dominant side of their brain. Methods/Materials Three different tests were conducted on ten dogs with each test being repeated twenty times. Test One was to roll a ball towards the dogs and observe whether they used their paws to capture it. Test Two was to have a clear plastic cup, one for each dog, covering some treats and to observe whether the dogs used their paws to free and eat the treats. Test Three was to position the dogs outside of a door and have someone on the other side of the door call to them. It was then observed whether the dogs used a paw to push open the door. Results To determine dominant handedness, I figured out which paw was used more by each dog, and in one case, by how much. I calculated that 60% of the ten dogs tested (six out of ten) were dominantly right handed, while 30% of the ten dogs tested (three out of ten) were dominantly left handed, half as many as were right handed. However, 10% of the ten dogs tested (one out of ten), used both paws almost the exact same amount of times, and was therefore determined to be ambidextrous. Conclusions/Discussion I conclude through experimentation and background research that dogs do have a dominant paw and that it is, indeed, correlated to the dominant side of the dog's brain. By knowing which paw the dog prefers and then using this information to learn which side of its brain is more dominant, one can determine its likely temperament and learning style. This is helpful when training dogs for multiple tasks in life, such as guiding the disabled, training to be a police or search-and-rescue dog, or simply helping a pet dog learn obedience training. Knowing one's dog in this manner can also help one predict how it will react in social situations in the home and community.	
Summary Statement By observing their natural behavior in response to three different experiments, I found that dogs do possess a dominant paw that correlates to the dominant side of the dog's brain.	
Help Received I designed and conducted all of the experiments myself, with the actual work supervised by Christine Ducey. I received research approval before conducting any experiments from Lea Schroeder, DVM.	