



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Megan E. Reese	Project Number J1925
Project Title What Is the Prevalence of Roundworms and Hookworms in Young Companion Dogs versus Young Dogs in Shelters?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of my experiment was to determine if puppies in shelters or companion puppies have a greater prevalence of roundworms and hookworms. This is significant because these intestinal parasites are zoonotic, or transmittable to humans. I wanted to make people aware of these dangers and I also wanted to see whether people should be more cautious when acquiring dogs from one of the two sources.</p> <p>Methods/Materials I collected over 100 fecal samples from shelter and companion dogs less than six months of age. Each sample was put through an extensive laboratory procedure. I used a sodium nitrate solution, which was denser than the parasite ova. The ova rose to the surface, where a cover slip was placed. I transferred the cover slip to the microscope slide and viewed the specimen under the microscope, looking for hookworm and roundworm eggs. I recorded my results. I used gloves while performing my procedures.</p> <p>Results My data showed that shelter puppies have a significantly higher prevalence of roundworms and hookworms. I did not have an equal number of shelter and companion dog samples so I compared percentages. Eleven percent of companion puppies and 42% of shelter puppies tested positive for these parasites.</p> <p>Conclusions/Discussion My hypothesis was supported by my data. There is a greater prevalence of roundworms and hookworms in shelter puppies than in companion puppies. I think that shelter dogs may have a higher prevalence of parasites because of the densely populated kennels and the shelter deworming programs may not have been implemented properly. A follow up project would be to study and compare the deworming practices of shelters to determine which program is most effective and suggest improvements.</p>	
Summary Statement My project successfully demonstrated that shelter puppies had a higher prevalence of roundworms and hookworms than companion puppies.	
Help Received My parents provided transportation. My mother initially helped me identify the parasite ova. My dad helped me assemble my board. My science fair coach answered my questions about presenting my project. Dr. Claude and Becky Phene helped me with statistical analysis.	