



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Jennifer D. Hall	Project Number J1414
Project Title Fast Food Crisis	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals I did this project to find out if there was a certain way or amount of time to cook a hamburger to reduce the chance of keeping the harmful bacterias found in ground beef.</p> <p>Methods/Materials The materials I used in this project were: cotton swabs, petrie dishes, agar, oven, microwave, oven mitts, beaker, clamps, foil, agar baker, pan, stove, wooden spoon, stop watch, paper plates, napkins, trash can, ground beef (hamburger meat), and a refrigerator.</p> <p>Conclusions/Discussion As I come to the end of my project, I concluded that if you bake a hamburger at 350 degrees, for twenty minutes, until it is well done, or if you broil a hamburger for ten minutes, until it is well done, then you will not get any kind of bacteria in your meat. I also concluded that the worst state to eat a hamburger is when it is rare and has been cooked by boiling it. The worst way to cook a hamburger is to fry it. Even when it is well done, it still has a lot of bacteria in it. The second worst way to cook a hamburger would be to boil it. The third worst way to cook a hamburger is to nuke(microwave)it. The second best way to cook a hamburger would be to broil it. The best way to cook a hamburger would be to bake it. My hypothesis was that I thought that it would be safest to eat hamburger when it was cooked well done, and cooked in high temperatures. Take an oven for instance, if you cook a hamburger in an oven, your chances of receiving bacteria in your meat might be slim-to-none because the heat is so hot, that it kills all the bacteria. My hypothesis was correct. The best way would be to bake a hamburger until it was well done. There was no bacteria found found in a hamburger that was bake until it was well done. There was also no bacteria found in a hamburger that was broiled until it was well done, but the best way to cook a hamburger would be to bake it because it has less baceria when it is cooked rare and medium than a hamburger that is broiled until it is rare or medium. The significance of my project and data is that, now, if fast food restaurants bake there hamburgers, then it will reduce the chance of people receiving dangerous bacteria that can get them sick or even kill them. This is helping the world to be a safer place.</p>	
Summary Statement My project is about trying to find a way to cook a hamburger that is safe to eat.	
Help Received Mother helped to buy all supplies; Mr. Susman helped to prepare me for the fair.	