Testing the Effectiveness of Natural Remedies versus Synthetic Antibiotics against Salmonella choleraesuis

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The purpose of this experiment provides research on the use of natural remedies instead of antibiotics against Salmonella choleraesuis. This helps society by providing a solution for a major problem in third world countries and provides a solution for antibacterial resistance. In third world countries, Salmonella is a major problem that many developed countries ignore. With this research to find an alternative for expensive antibiotics, it provides under-developed countries a solution to a death leading illness. Antibacterial resistance is also a rising problem that is leading to some bacterial infections becoming incurable or more expensive antibiotics are necessary to overcome the bacterial infection. We began by swabbing agar prepared plates with Salmonella choleraesuis fields and placing paper disks that contain one of the four treatments. The plates were then incubated for 48 hours at 37 degrees celsius. After the incubation period, the diameter of the zone of inhibition that formed around the paper disk was measured. Our conclusion was based on the comparison of the diameter that formed around all of the paper disks. The results showed the oregano had the largest zone of inhibition. Our hypothesis was proven incorrect as we stated that garlic would have the largest zone of inhibition. However, oregano worked significantly better. Oregano inhibited the bacterial growth in a larger area than any other solution tested. This supports that oregano is a possible solution and alternative treatment to inhibit the growth of Salmonella.

Awards Won: