Analyzing the Antibiotic Properties of Snake Venom, Phase 1

Smith, Cody

The purpose of this investigation was to determine the effectiveness of Agkistrodon piscivorus leucostoma (Western Cottonmouth), Crotalus atrox (Western Diamondback Rattlesnake), and Dispholidus typus (Boomslang) snake venoms as anti-microbial agents against Escherishia coli, Staphylococcus epidermis, and Bacillus cereus. For experimentation in this investigation sterile disks were soaked in each snake venom and sterile distilled water (for the control), and placed on a petri dish of either Escherichia coli, Staphylococcus epidermis, Bacillus cereus, or sterile distilled water (for the control). The dishes were then incubated at 37 degrees Celsius. At six hour increments over a 72 hour period, petri dishes were observed and the zones of inhibition were recorded in millimeters. With a large quantity of these tests showing statistical significance, it is very possible that Boomslang against Bacillus and Staph, Diamondback against Staph and E. coli, and Cottonmouth against Bacillus, Staph, and E. coli are all possible antibiotic solutions to fight these bacteria. I am not able to fully accept my hypothesis, however I can conditionally accept it because, while not all of the tests showed antibiotic properties, most of the tests did.