Streptococcus pneumoniae nearly caused the death of my father. He caught a strain of pneumonia, was hospitalized and put on a lung bypass machine (E.C.M.O.) for it. That event lead me to ask this question: are there natural agents that can potentially terminate this bacteria?

In order to reach its answer, I streaked some LB agar petri dishes with streptococcus pneumoniae and applied my agents to a sterile piece of paper placed directly in the middle (on top) of my agar. To take my experiment further, I attempted to grow the bacteria in a living organism: a chick embryo, otherwise known as in ovo.

Even after plating my bacteria, cutting out a chunk of it, placing it in the embryo, labeling the egg and examining the results, the ovo experiment failed. Even when my experiment failed, my petri dish experiment produced promising results. My positive controls had the best voids of inhibition (as they should have), my negative control had no antimicrobial properties whatsoever (as it should have) and Tea Tree Oil proved to be very antibacterial with its largest void of prominent inhibition out of all of the natural agents, with the natural honey running a close second due to its even larger but not as terminating void of inhibition.

This experiment causes me to conclude that Tee Tree Oil and all-natural honey independently or as a possible mixture should be looked into further for their medicinal uses and anti-microbial properties.