**The prevalence of antibiotic resistance in *Staphylococcus Aureus* versus antibiotic-sensitive *Staphylococcus Aureus* within the Berea College Community**

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This research project investigated the prevalence of antibiotic-resistant *Staphylococcus Aureus* versus antibiotic-sensitive *Staphylococcus Aureus* within the Berea College community. Bacteria of the *Staphylococcus* genus is part of our healthy human flora. When our human flora is exposed to pathogenic bacterial strains, such as *S. aureus,*the normal skin flora’s beneficiary bacteria, such as *Staphylococcus epidermis*, will attack the foreign pathogens. If the *S. aureus* infects the tissues or wound site, it could cause localized infections, abscess, pneumonia, or joint/bone infections. Antibiotics are typically used to treat or prevent certain bacterial infections and could be considered powerful drugs that kill bacteria or slow their growth. The problem is the inappropriate use of antibiotics, such as *S. aureus*, has led to the development of antibiotic-resistant strains. This antibiotic resistance eliminates the effectiveness of antibiotics allowing the bacteria to survive and continue replication. The purpose of my study was to investigate the prevalence of *S. aureus* on human skin and determine the sensitivity of the bacterium to antibiotics. The results of this study demonstrates that no single antibiotic worked for 100% of the isolates and different isolates of *S. aureus* demonstrates different patterns of antibiotic sensitivities. The researchers attribute the multiple drug-resistant strains of *S. aureus*to the pervasive over-use and over-prescription of antibiotics.