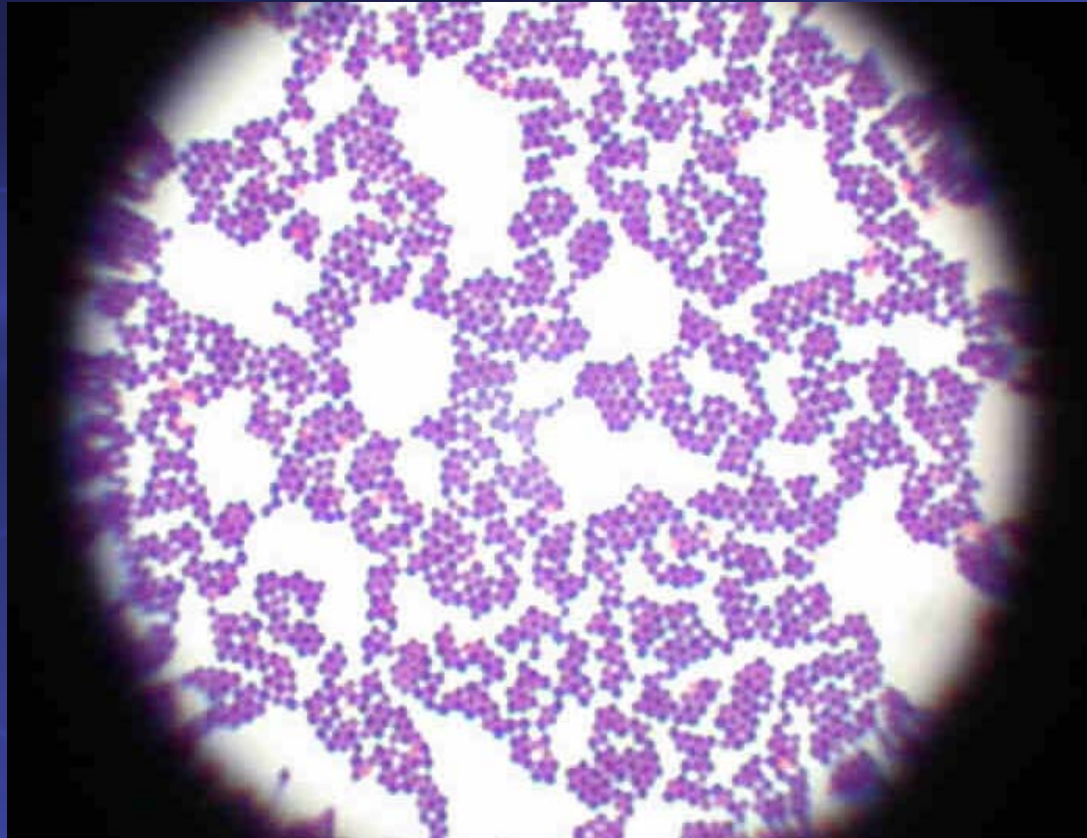


The Effect of pH Stress on Antibiotic Susceptibility in *Staphylococcus aureus*

by Katie T. Hickey & Susan H. Rado



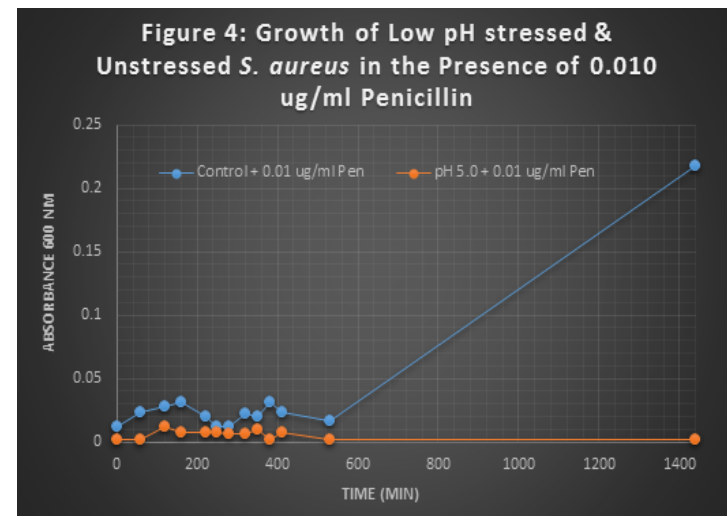
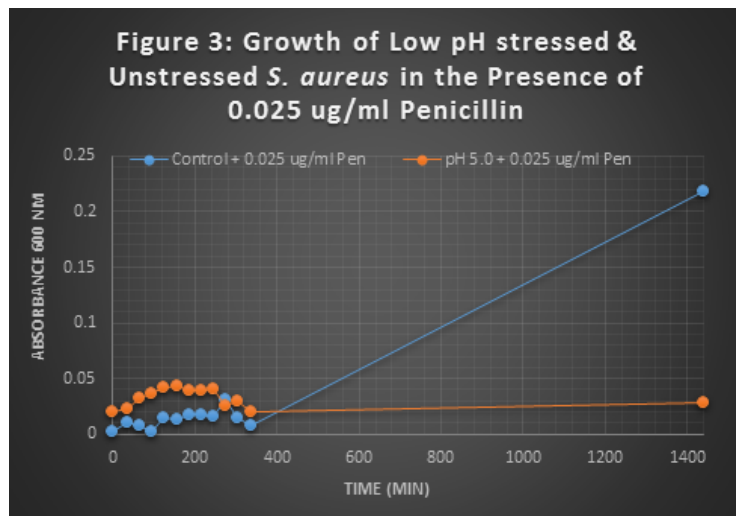
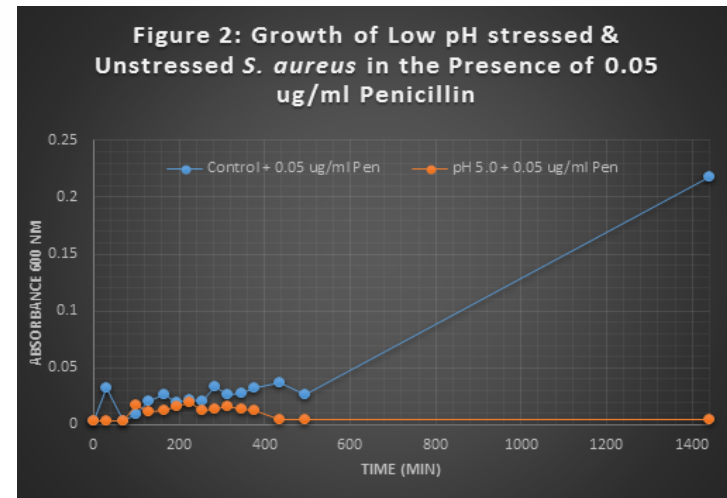
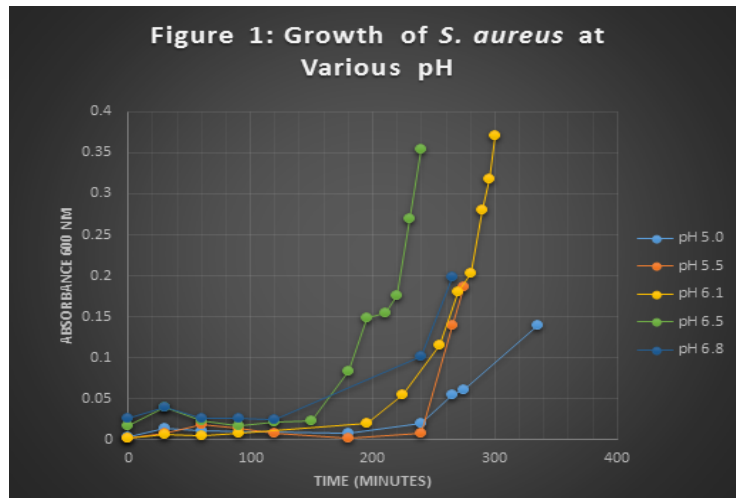
Staphylococcus aureus

A gram-positive bacterium that is normal surface flora in a large percentage of humans, as well as an opportunistic pathogen. It is known to cause urinary tract infections and to colonize the gastrointestinal tract.

The purpose of this study was to determine the effect of prior exposure, and adaptation, to low pH stress by *Staphylococcus aureus* on penicillin susceptibility.

A pH of 5.0 was chosen.

Cells previously stressed by pH 5.0 did not show growth after 24 hours in the presence of any of the penicillin concentrations, however all unstressed cultures grew.



This study is the first to suggest that low pH stress may in fact render gram-positive bacteria less resilient to the challenge presented by Beta-lactams.