

## **Abstract**

One hundred and fifty strains of *Staphylococcus aureus* were tested for mouse virulence. Eighteen strains killed mice in less than 120 h when  $10^9$  cells were injected intraperitoneally, while similar injections of 130 strains failed to kill. The known virulence of five strains for cattle agreed with their virulence for mice and the virulence of 11 strains for embryonated eggs correlated well with both murine and bovine virulence. Neither nuclease, fibrinolysin, and hemolysin production, nor mouse-plasma coagulase activity correlated well with virulence and none of the high-virulence strains were demonstrably encapsulated. Possession of both gelatinase activity and litmus milk reducing ability correlated well with virulence. Rapidity of growth in batch or continuous culture agreed completely with virulence for seven high- and seven low-virulence strains. The importance of a rapid growth rate for high virulence is indicated, and growth rate in vitro is predictive of virulence for embryonated eggs, mice, and cattle.