SALT STRESS AS A DETERMINANT OF BETA LACTAM RESISTANCE IN STAPHYLOCOCCUS AUREUS

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What effect does prior exposure to salt stress have on antibiotic resistance in *Staphylococcus aureus*?
S. aureus in nutrient broth

Absorbance (A600nm)

Time (min)
Fig #1: Effect of Varying NaCl Concentrations on Growth of *S. aureus* in TSB
Fig#2: Effect of Varying Concentrations of Penicillin on Unstressed S. aureus in TSB
Fig #3: Effect of Varying Concentrations of Ampicillin on Unstressed *S. aureus* in TSB

Aborbance (A600nm) vs. Time (min)

- .05 µg/mL
- .075 µg/mL
- .1 µg/mL
Fig #4: Unstressed & Salt Stressed *S. aureus* in TSB + Penicillin

- **.05 µg/mL of Penicillin + 7.5% NaCl**
- **.075 µg/mL of Penicillin + 7.5% NaCl**
- **.05 µg/mL Penicillin**
- **.075 µg/mL Penicillin**

**Absorbance (A600 nm)**

**Time (min):** 0, 30, 60, 90, 120, 150, 180, 210, 240, 270, 300, 330, 360, 375, 390, 410, overnight
Fig #5: Unstressed & Salt Stressed *S. aureus* in TSB + Ampicillin

![Graph showing the absorbance (A600nm) over time for different concentrations of Ampicillin with and without 7.5% NaCl.](image)
Previous exposure to salt stress increases resistance to penicillin & ampicillin in *Staphylococcus aureus*. 