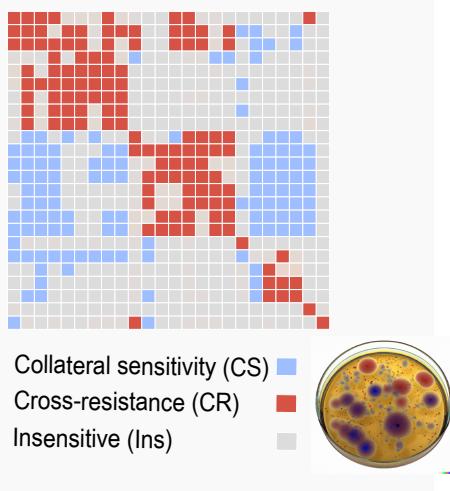
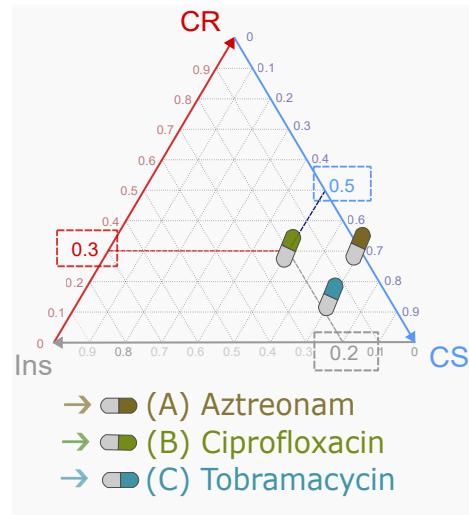


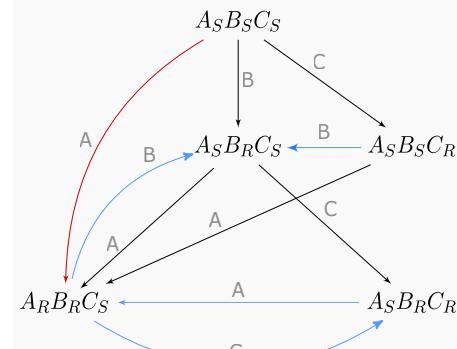
## Step 1: Experimental Data



## Step 2: Ternary Optimization



## Step 3: Mutation Network



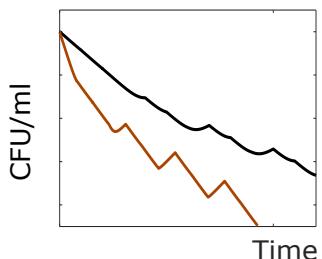
## Step 4: Computational Analysis



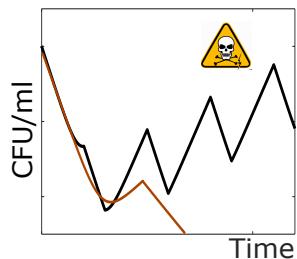
- Selection of Antibiotics to maximize collateral sensitivity
- Data Driven Evolution Model
- Computing Optimal Drug Cycling

## Step 5: Predicting potential failing of antibiotics

Likely Successful Therapy  
(Optimal CS)



Likely Failing Therapy  
(Limited CS)



Potential Failing Therapy  
(Poor CS)

