Research Title

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Motivation/Background

- Ubiquitous threat of antibiotic resistance
- Investigate effect of different cellular transformation rates on antibiotic resistant bacterial population growth
- Plasmids

Diagram of cell with plasmids

Simulation Methods

- Combined approach of Kinetic Monte Carlo simulation and numerical modeling
- Gillespie algorithm
- Well-mixed population
- Three cases
  - Constant α
  - Linear α
  - Recycled α

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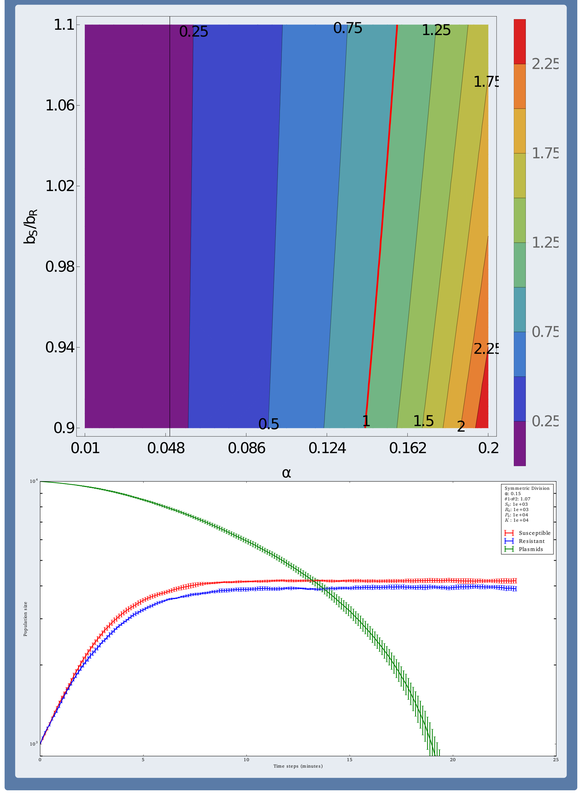
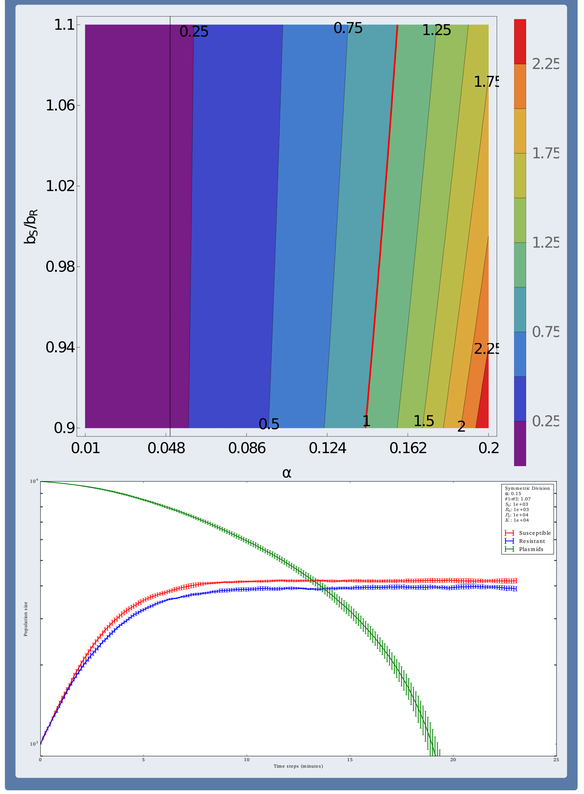
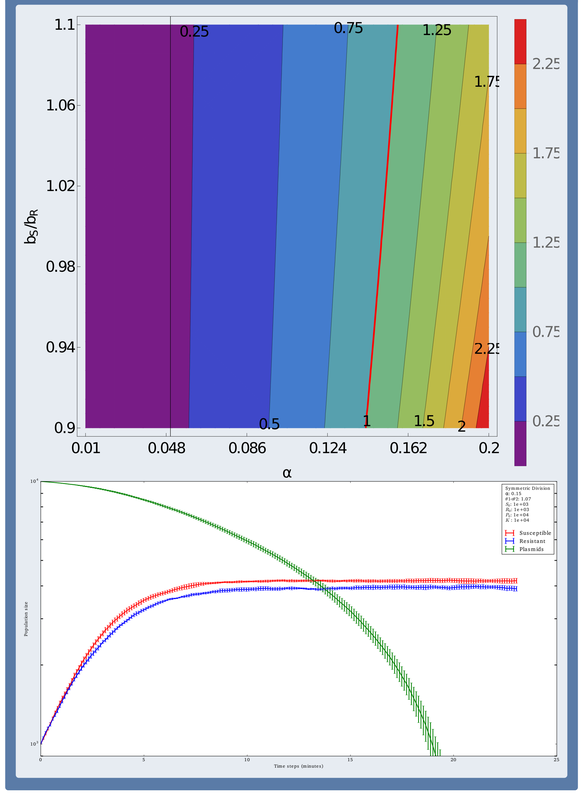


Linear α



Recycled α



Conclusions

- Combined approach of Kinetic Monte Carlo simulation and numerical modeling
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Acknowledgements

Thank you etc etc

References

- Source 1
- Source 2