

Research Title

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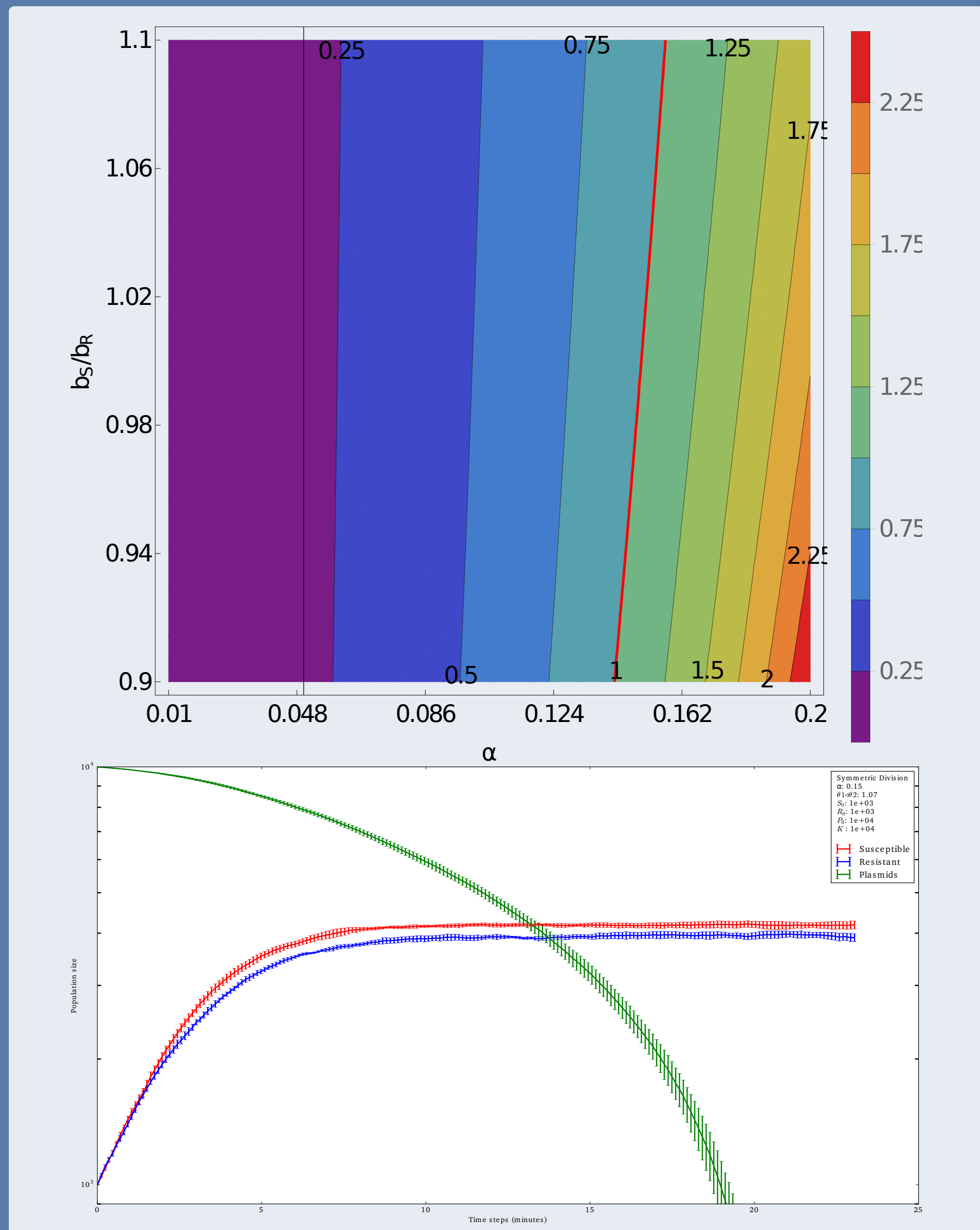
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Motivation/Background

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

Diagram of cell with plasmids

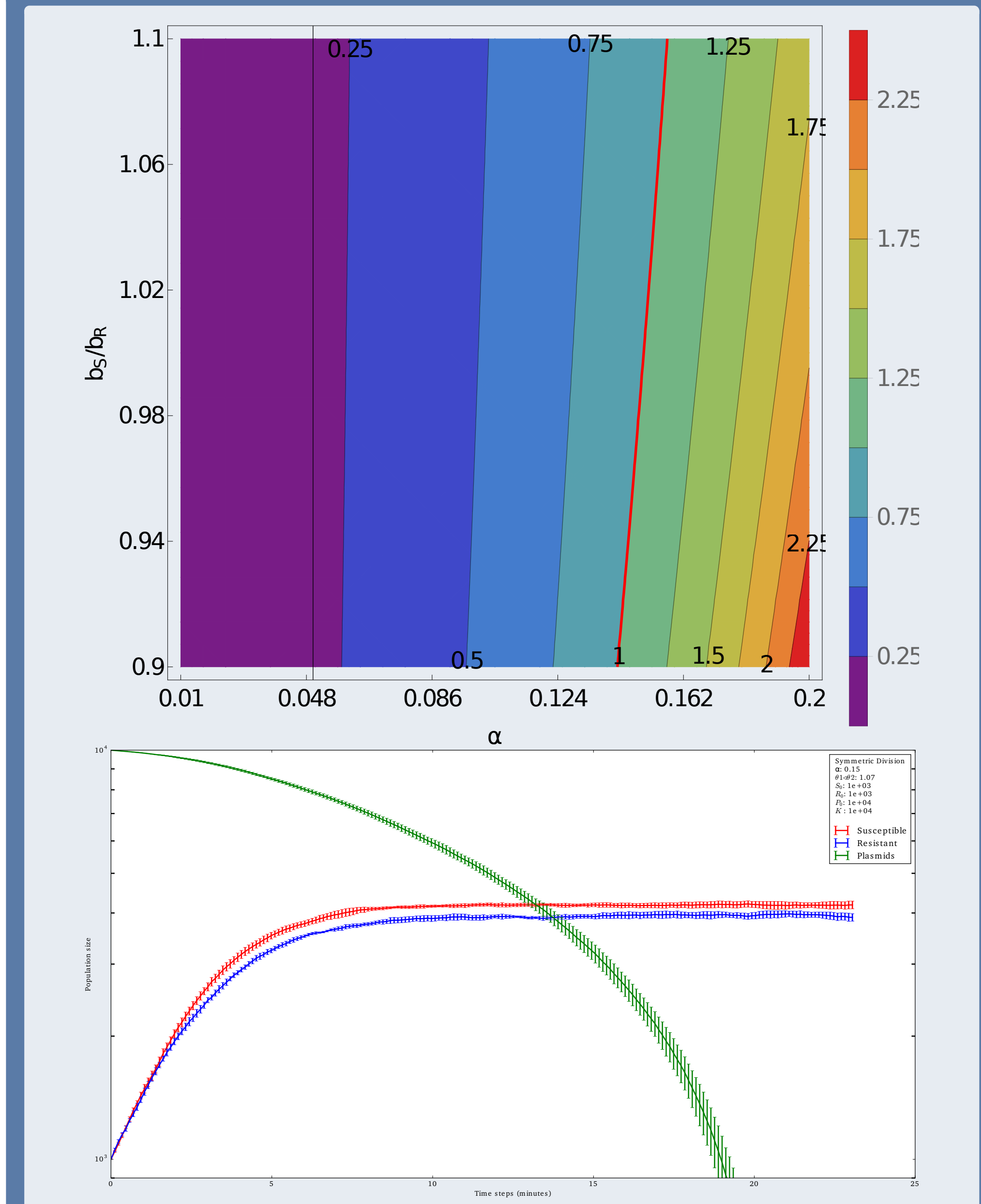
Constant α



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

Linear α



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