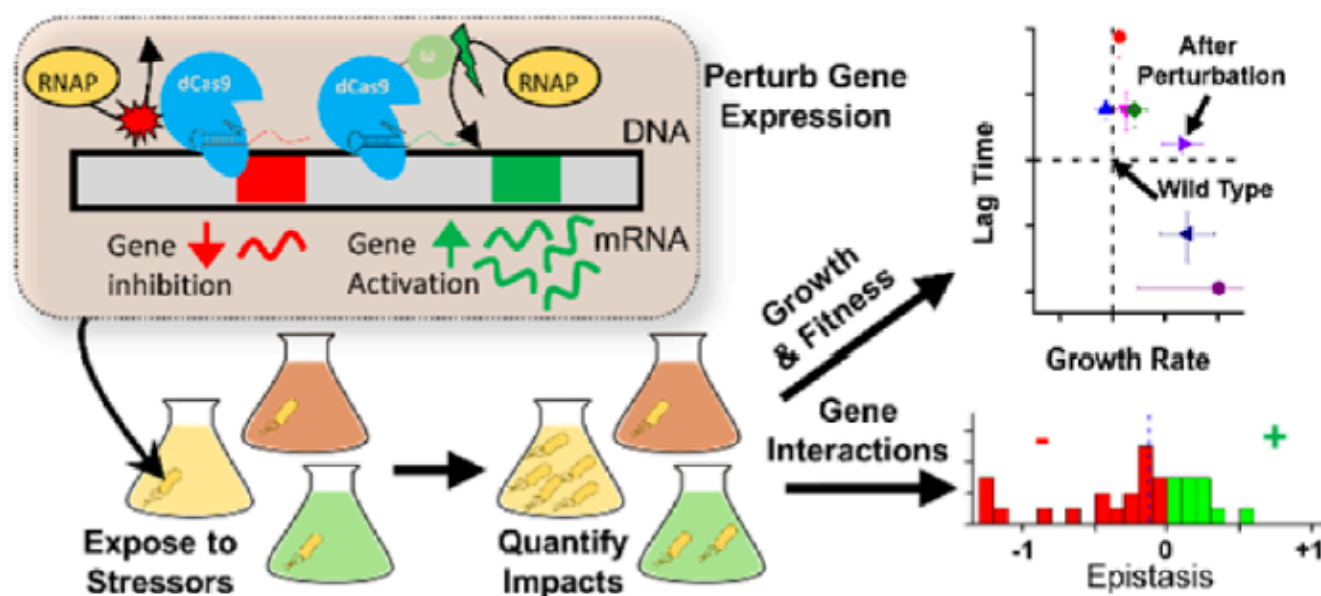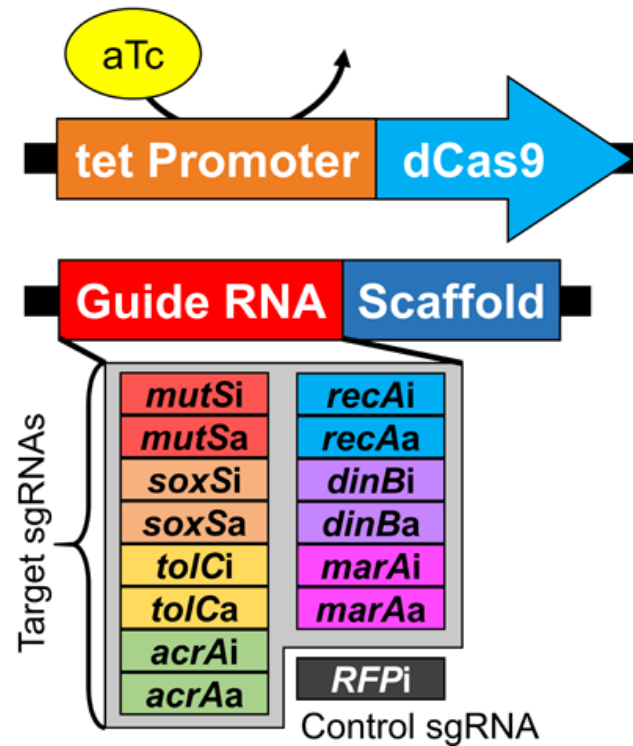# CRISPR Perturbation of Gene Expression Alters Bacterial Fitness under Stress and Reveals Underlying Epistatic Constraints
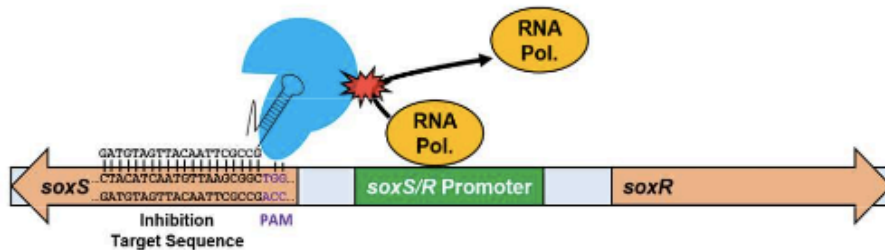
Peter B. Otoupal,[†] Keesha E. Erickson,[†] Antoni Escalas-Bordoy,[†] and Anushree Chatterjee[*,†,‡]
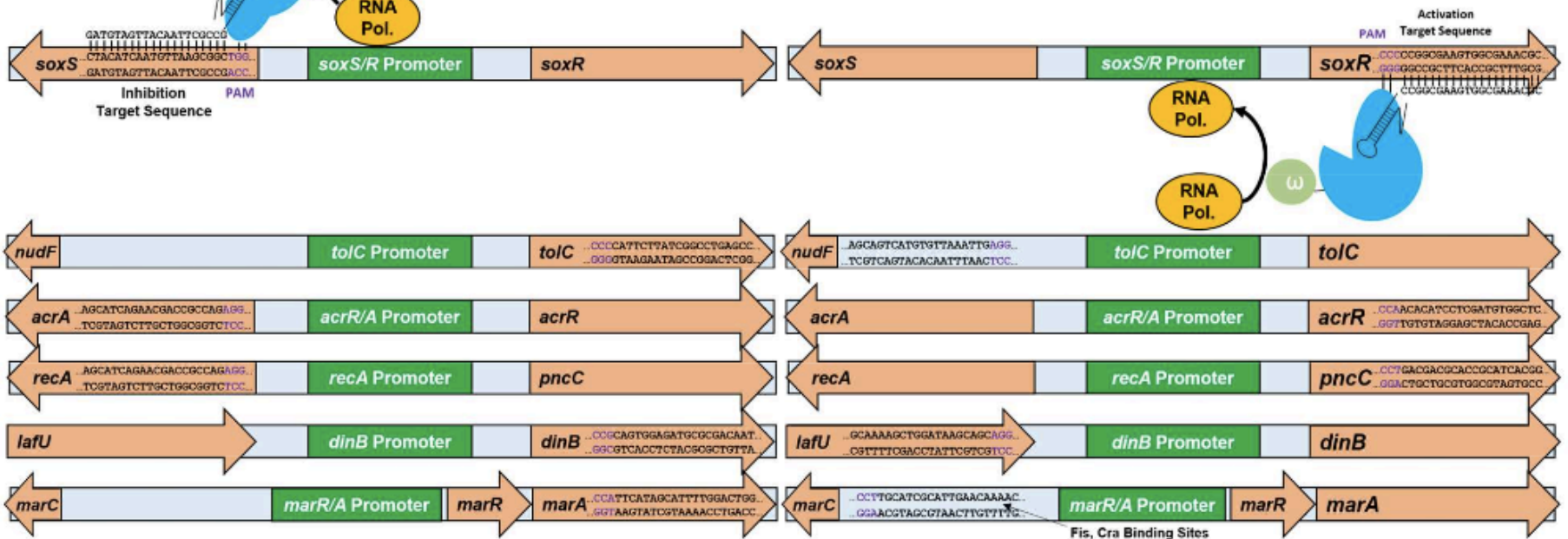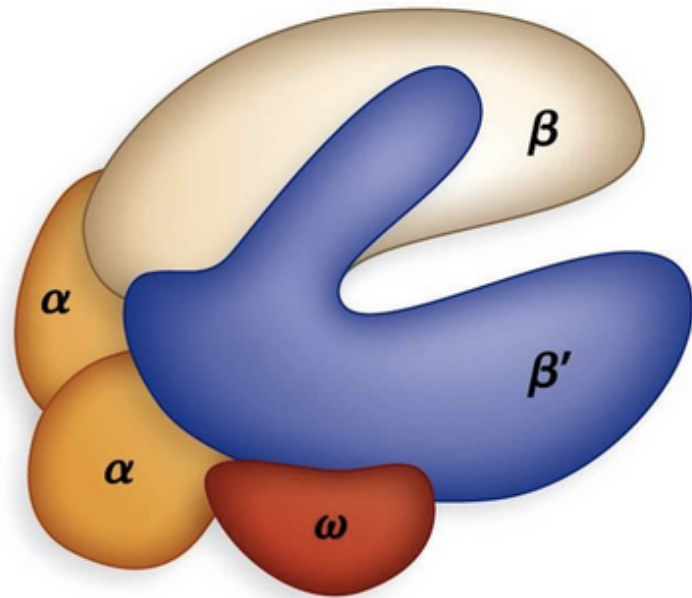
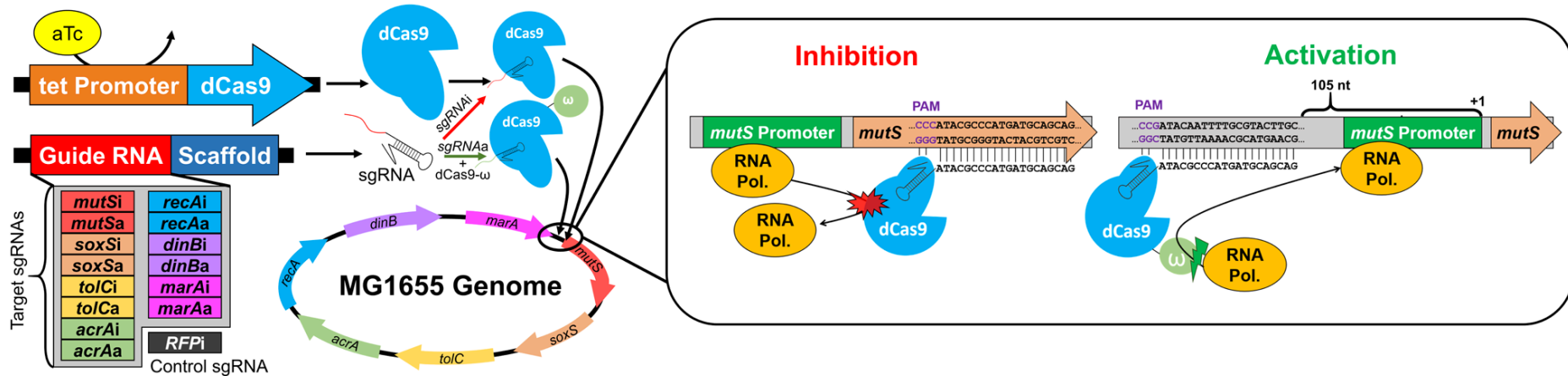# target gene selection and gRNA design

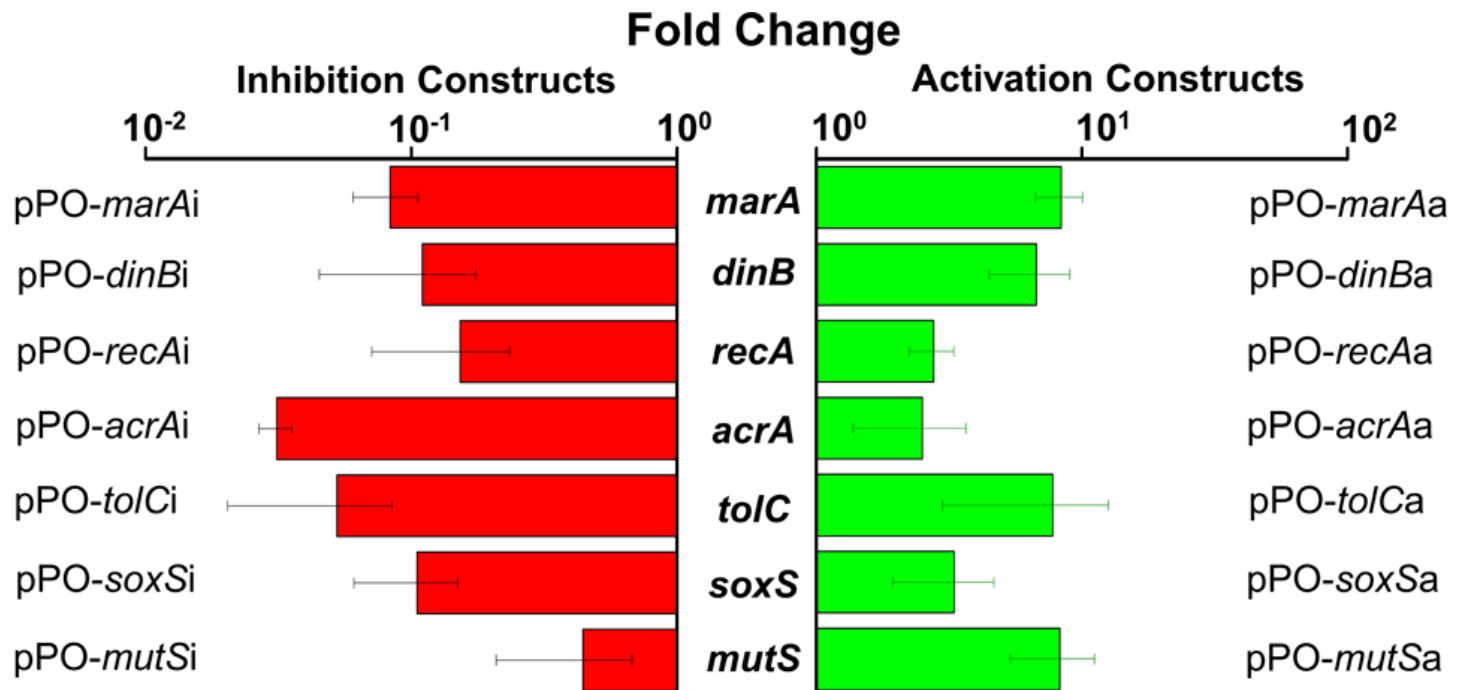strategy for inhibition   strategy for activation
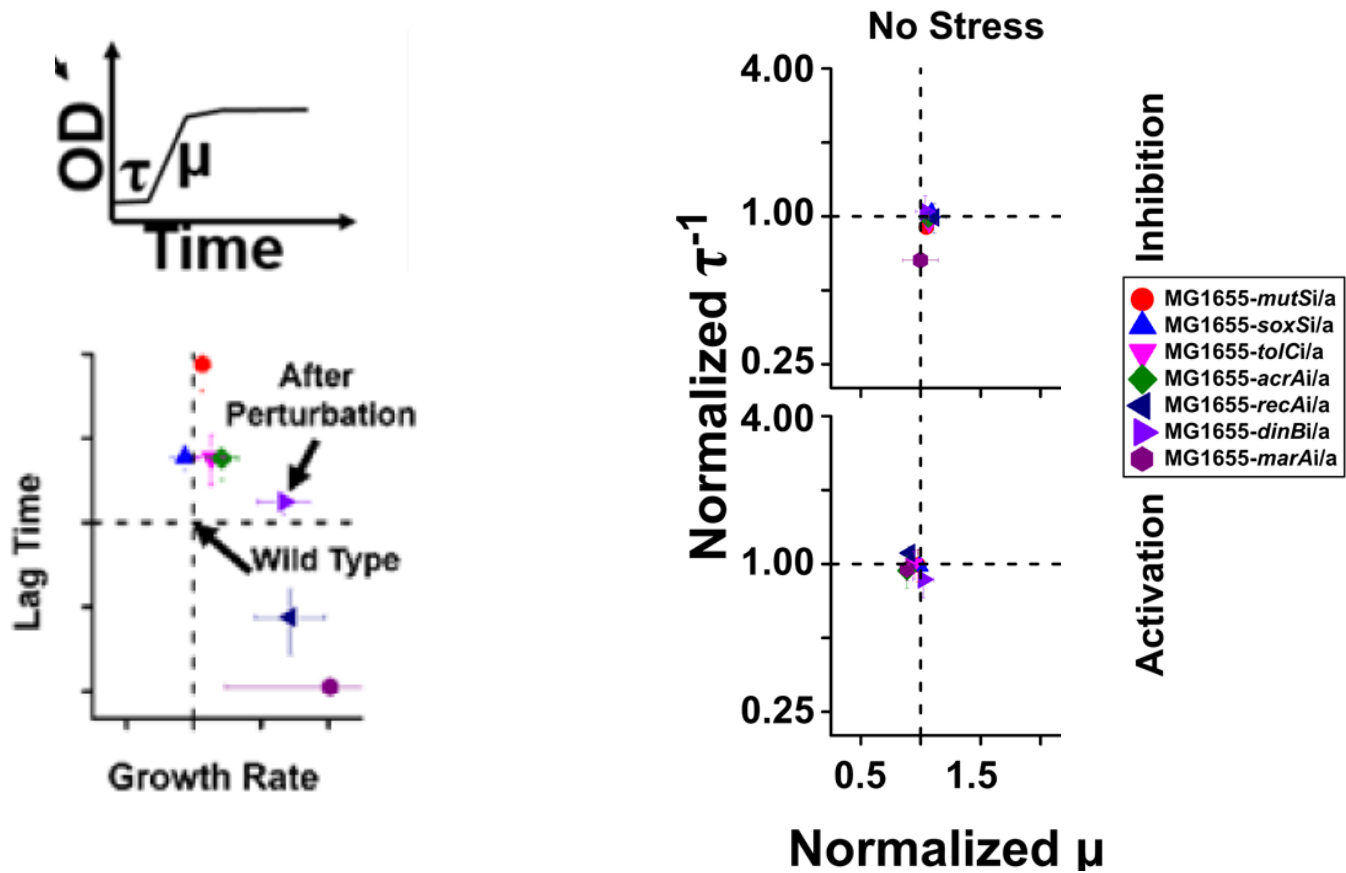
bacterial RNA polymerase

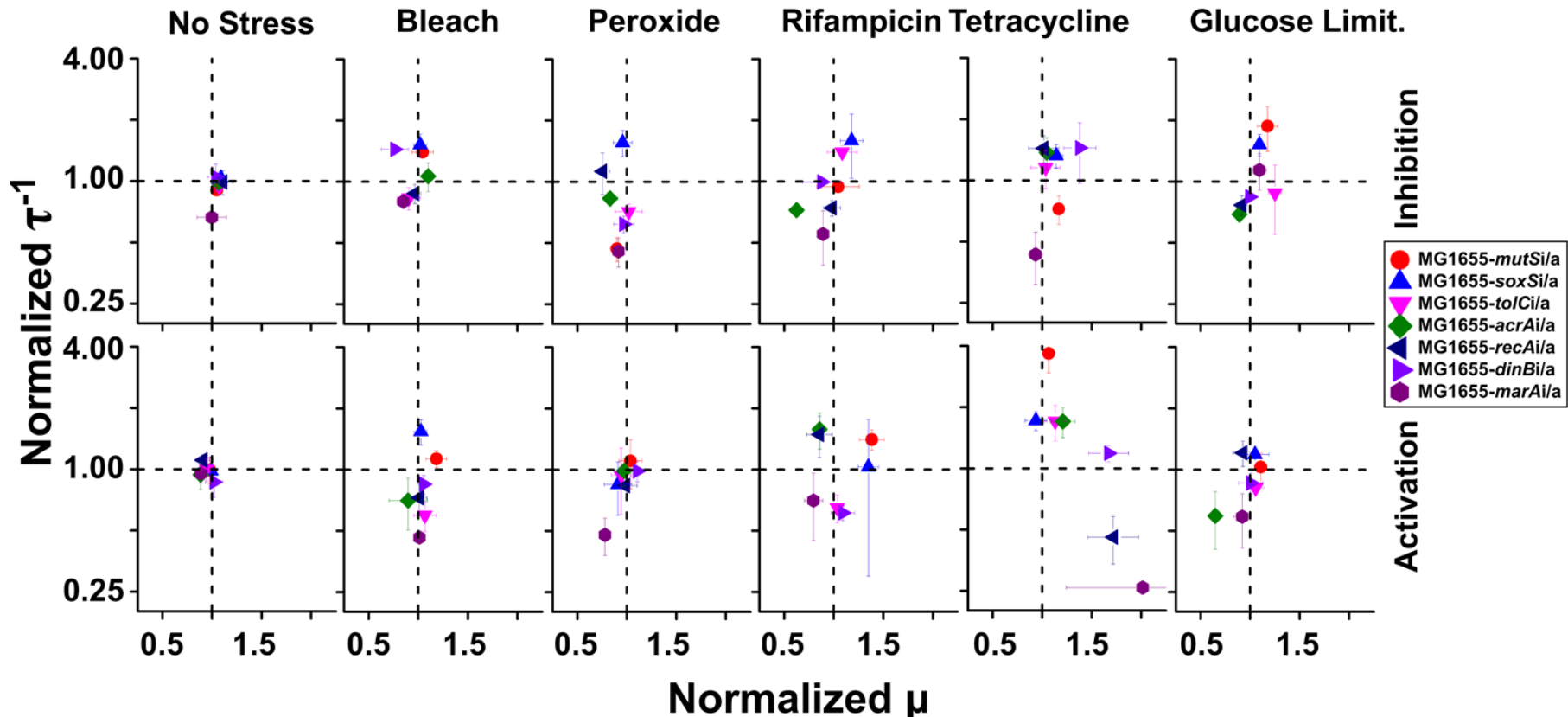# dCas9-based system for inhibiting / activating gene expression

confirmation of gene inhibition / activation
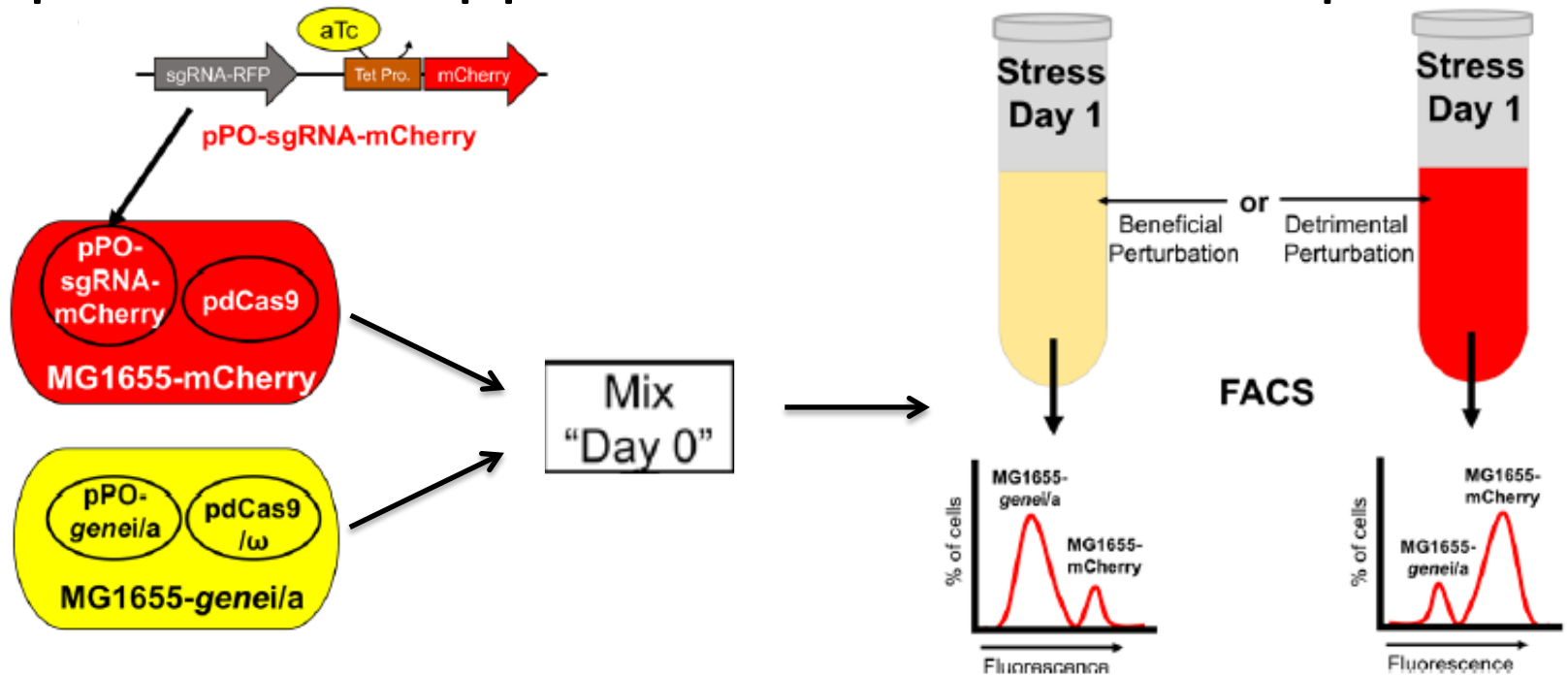
data and analysis – normalized fitness

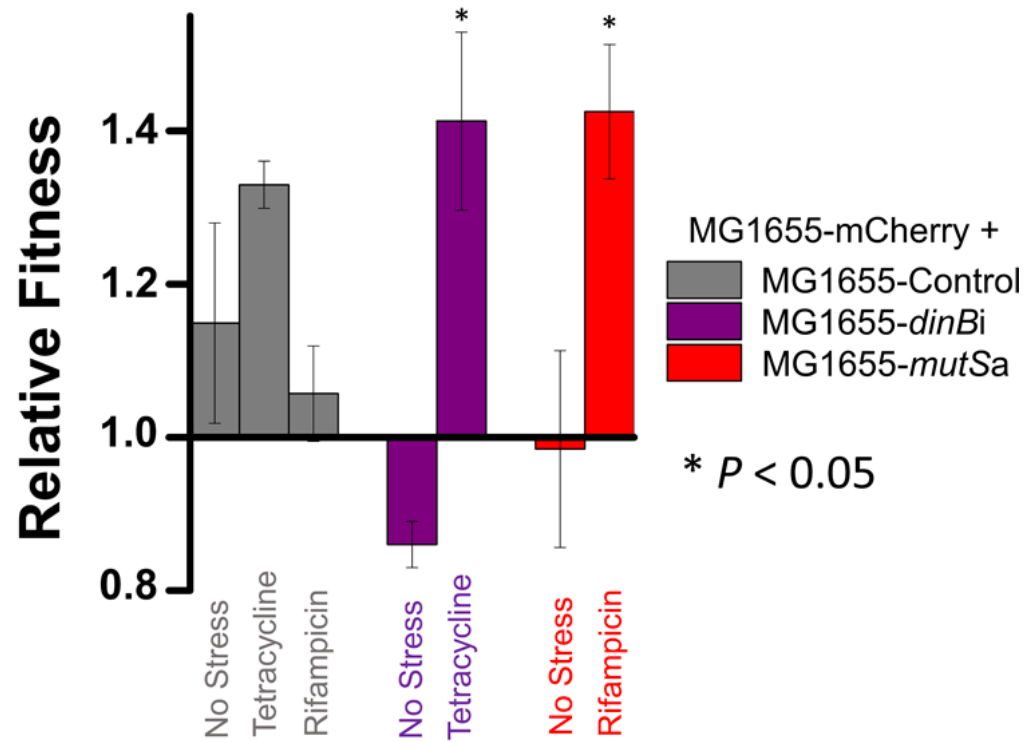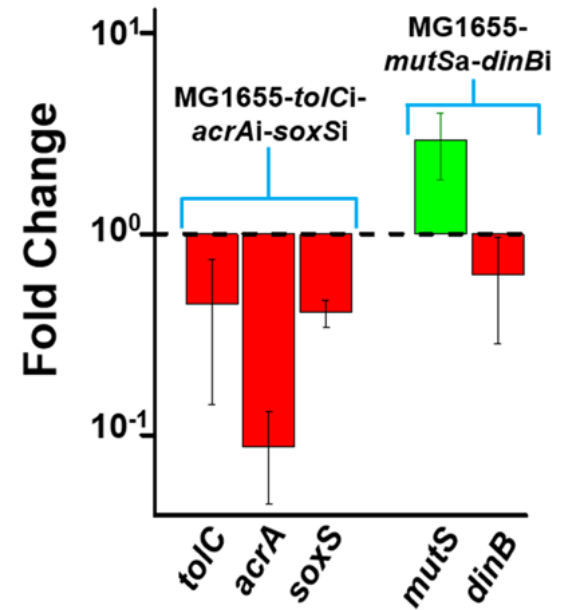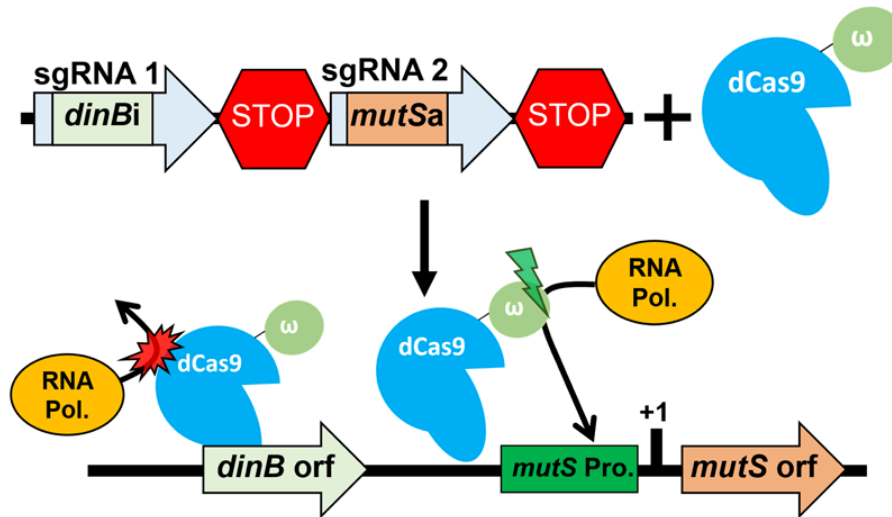# examining fitness in response to gene perturbation
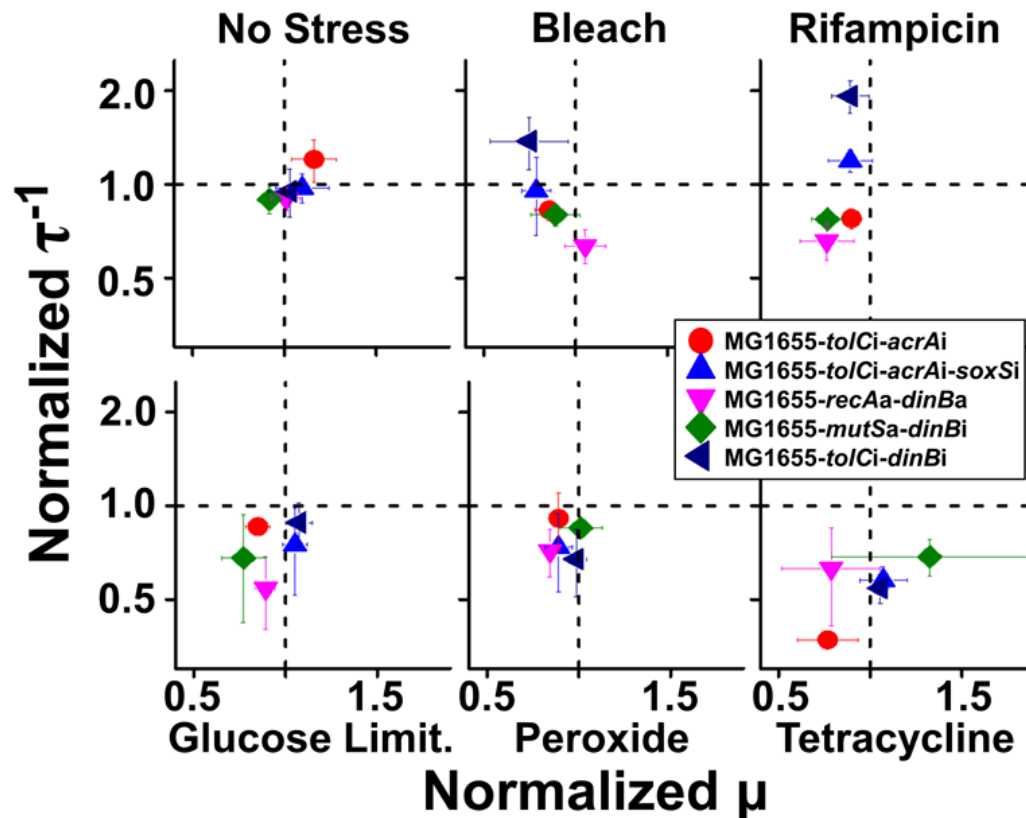
experimental approach – co-culture competition

support for fitness results

experimental approach and confirmation – multiple gene perturbation

examining fitness with multiple gene perturbations
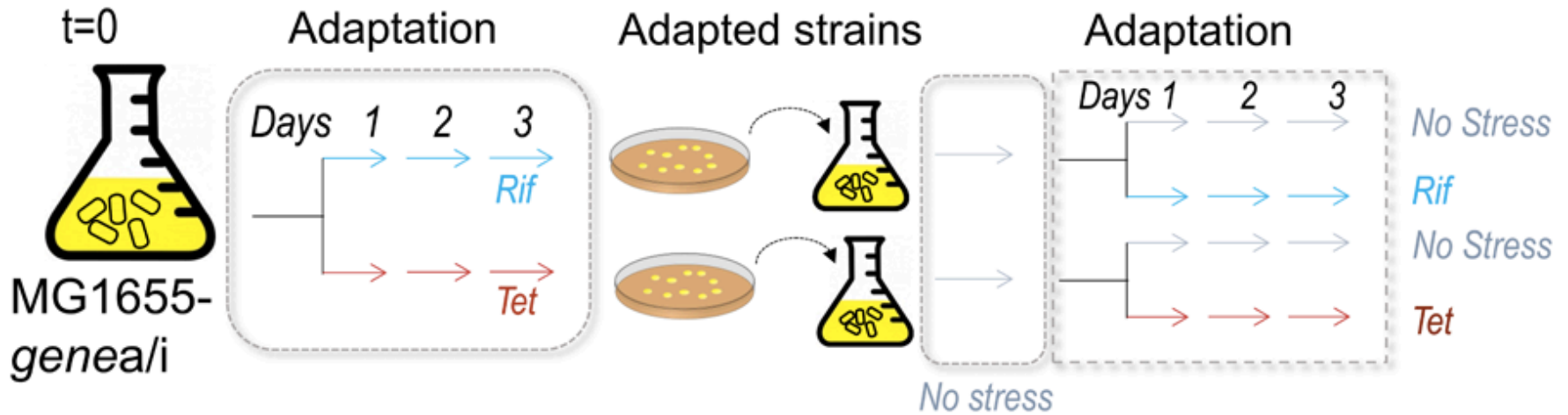
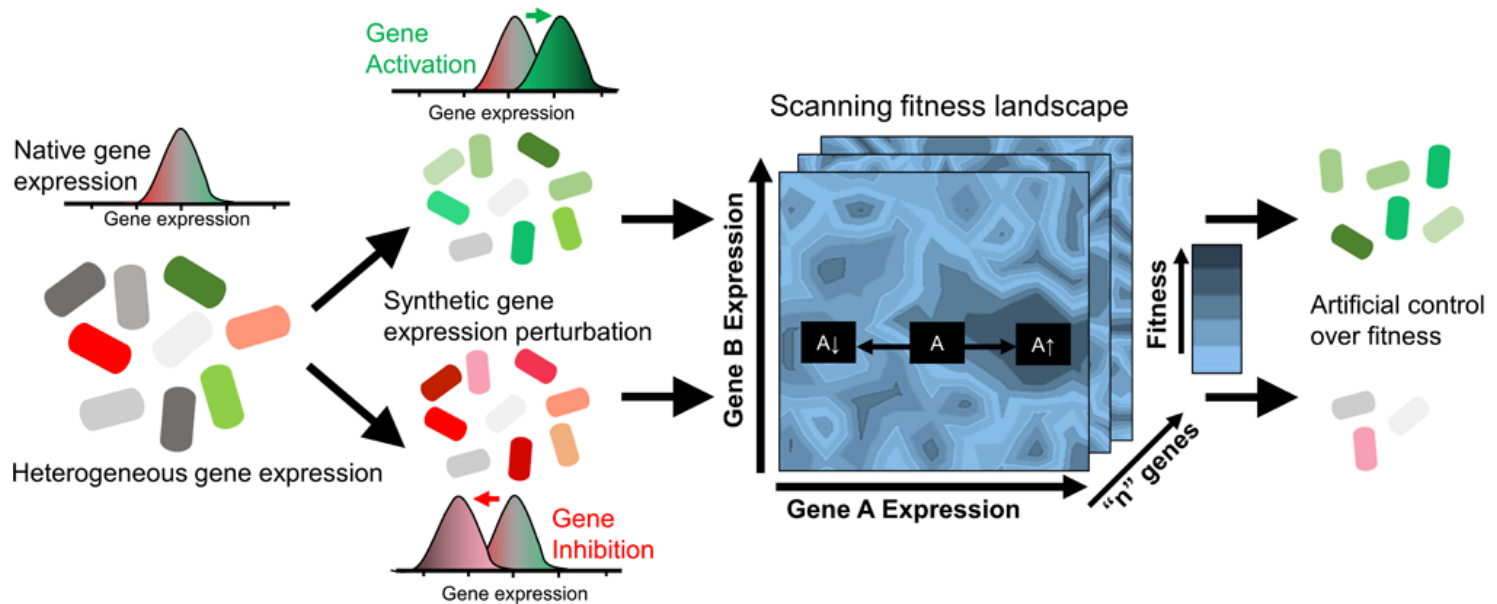Are the authors conclusions about their research supported by the data?

Notes for your journal club slides

- Break apart figure panels
  - Only include important / relevant information
- Ease into complex data figures
  - Drop in / show one 'piece' at a time
- Don't discuss every figure
  - Use figures that assist in telling a cohesive story
- Include 'safety net' slides
  - Details that may benefit during Q & A

experimental approach –

experimental approach –

experimental approach –