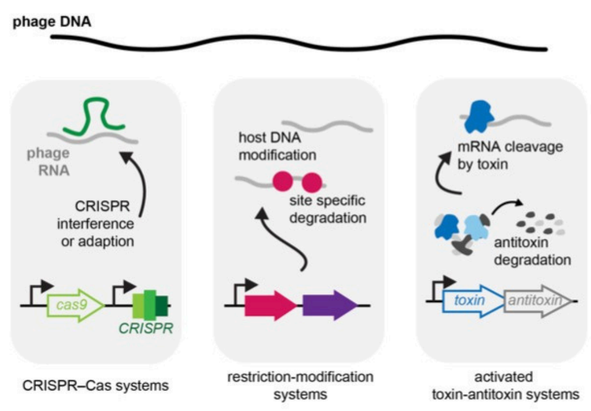
Julia Tanquary

Ph.D. Candidate, Biochemistry, Cell and Developmental Biology
Third Year ARCS Scholar
Goodhew/McGonigle Award

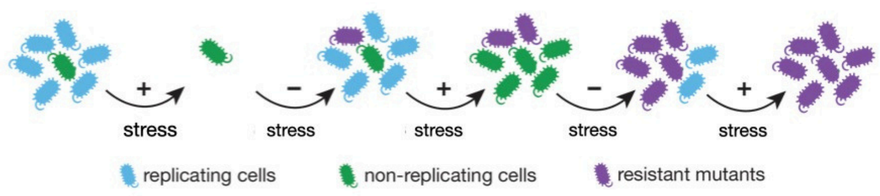
EMORY UNIVERSITY

Endogenous activation of a bacterial toxin

Bacteria exhibit diverse responses to foreign pathogens

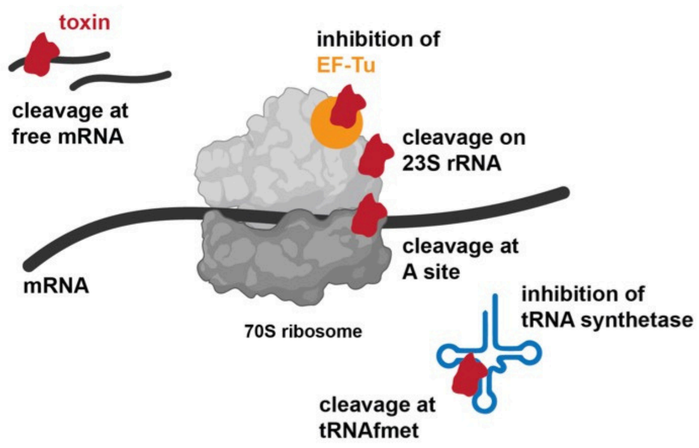


How do bacterial toxins confer survival in the presence of stressors?

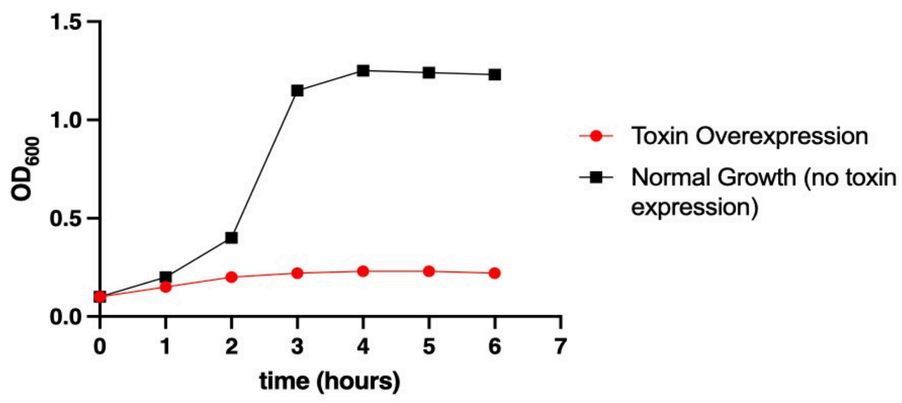


Bacterial toxin-antitoxins halt growth and cells become non-replicating

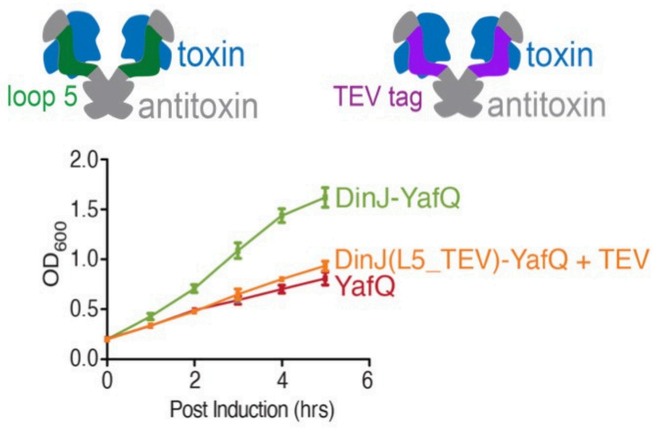
Toxins target important cellular RNAs to halt growth



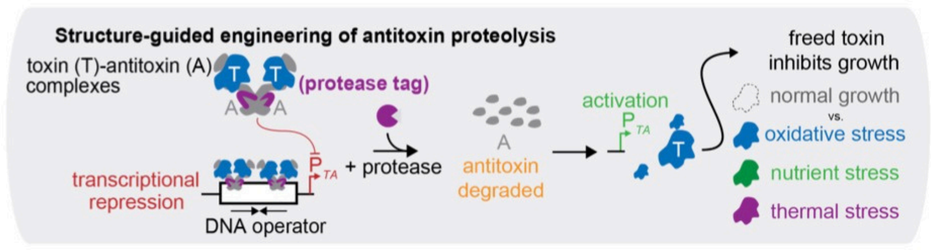
The function of chromosomally-encoded toxins is unknown as toxin overexpression is bactericidal



Loop 5 of DinJ is critical for suppressing YafQ toxicity



Engineering an inducibly activated toxin to study the endogenous tole of bacterial toxins



In collaboration with Marcin Grabowicz's lab, Department of Microbiology & Immunology

REFERENCES: Ruangprasert et al., Mol Micro 2017.

ACKNOWLEDGEMENTS: Dunham Lab NSF GRFP ARCS National Institutes of Health Training Grant (1T32GM135060-01)

Scholar Awards Celebration
November 15, 2023

SCHOLAR AWARDS CELEBRATION ARCS FOUNDATION ATLANTA

Igniting Innovation in Georgia