

## **Micro 201**

Dove Lecture 6, Class 24: Second messengers

April 25<sup>th</sup>, 2019

### Overview

This class will focus on bacterial second messengers. We will discuss how cAMP, ppGpp, and c-di-GMP exert their regulatory effects, with a focus on c-di-GMP (see review by Hengge). How c-di-GMP can influence gene expression by binding to a riboswitch will also be considered. This will be followed by a discussion of the Krasteva et al paper describing how c-di-GMP influences the activity of a key transcription regulator in *Vibrio cholerae*.

### Paper for Discussion

1. Krasteva et al., (2010) *Vibrio cholerae* VpsT regulates matrix production and motility by directly sensing cyclic di-GMP. *Science* 327, 866-868.

2. The supplementary information for the Krasteva et al paper is essential reading. Note we will cover Fig. S3AB and Fig. S6.

### General Review

3. Hengge R. (2009) Principles of c-di-GMP signalling in bacteria. *Nat. Rev. Microbiol.* 7, 263-273.