

## **Micro 201**

Dove Lecture 4, Class 21: RNA Degradation

April 16<sup>th</sup>, 2019

### Overview

This class will focus on RNA degradation in bacteria. The introduction will consist of a brief review of RNA degradation (based on the Condon review), with some consideration of the RNA degradosome—a multiprotein complex that exists in certain bacteria. This will be followed by a discussion of a paper from the Belasco lab detailing the discovery of a protein that plays an important role in mRNA degradation by modifying the 5'-end of mRNA. The paper reveals an unexpected similarity between RNA decay in prokaryotes and eukaryotes.

### Paper for Discussion

1. Deana A, Ceesnik H, Belasco JG. (2008). The bacterial enzyme RppH triggers messenger RNA degradation by 5' pyrophosphate removal. *Nature* 451, 355-358.
2. The supplementary information for the above paper is provided as essential reading (we will discuss Figs S1, S2 and S5).

### Background Reading

3. Condon C. (2007) Maturation and degradation of RNA in bacteria. *Current Opinion in Microbiology* 10, 271-278.