

CONCEPT: BACTERIAL AND VIRAL CHROMOSOME STRUCTURE

- Bacterial and viral chromosomes are much _____

- ☐ They have different characteristic than eukaryotic chromosomes

Bacterial Genetic Material	Viral Genetic Material
Circular chromosomes	Single or double-stranded
DNA	DNA or RNA

- ☐ There are **DNA binding proteins** that _____ to the DNA

- HU and H1 proteins are similar to *histone* proteins found in eukaryotic chromosomes

- They package a lot of DNA into a small area

- ☐ The circular chromosomes contain a few structural components

- The **origin of replication** is where replication begins

- The chromosome contains repetitive sequences

- Often they are **intergenic regions**, which are untranscribed regions between genes

PRACTICE

1. True or False: Bacteria and viruses can use RNA as their genetic material.
 - a. True
 - b. False

2. What is the name of the bacterial chromosomal region where replication begins?
- a. Transcription start site
 - b. Origin of DNA copying
 - c. Polymerase initiation site
 - d. Origin of replication