

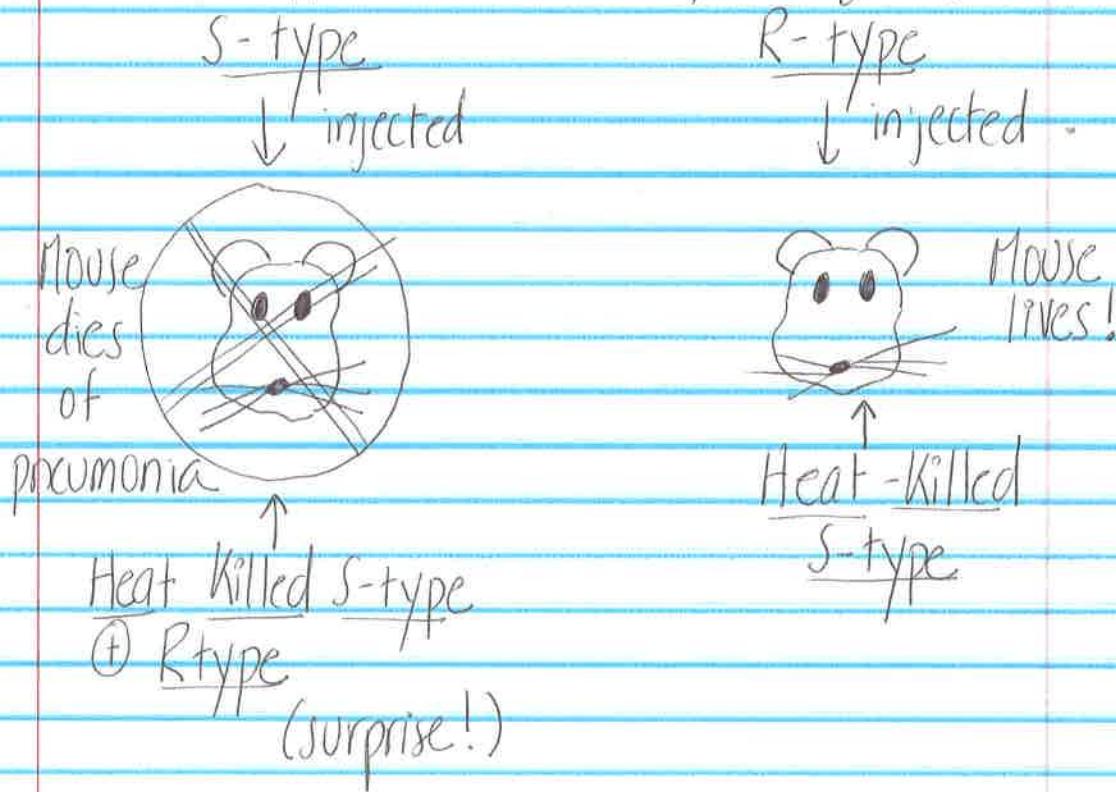
DNA Discovery as the Code for Genes.

Frederick Griffith - 1928

Investigating bacteria that produce pneumonia.

Disease causing bacteria = S-type smooth edged colonies

Harmless type of bacteria = R-type rough edged colonies



S-type cells transformed R-type into disease causing cells.

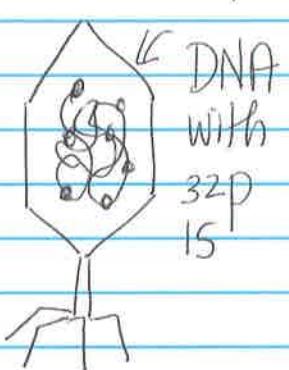
The ability to cause disease was inherited by offspring so Griffith concluded the transforming factor had to be a gene.

Hershey + Chase Experiment

1952 Alfred Hershey + Martha Chase

studied viruses - bacteriophages - type of virus
that infects bacteria.

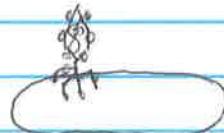
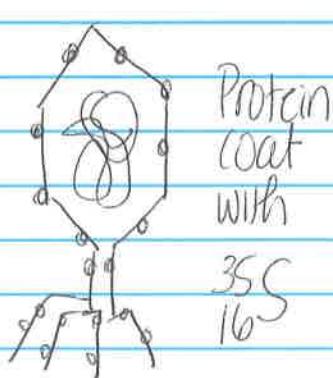
Viruses attach to the surface of a bacterium
+ inject genetic information to make copies
of bacteriophages.



Phage infects
bacterium.



Radioactivity
detected
inside.



Phage infects
bacterium.



No radioactivity
detected.

Conclusion: DNA, not protein coat was
transmitting genetic information.



DNA stores + transmits genetic information
from one generation to the next.

Three Roles of DNA

- 1) Stores genetic information.
- 2) Copies information (replicates) during cell division.
- 3) Gene expression is coded in DNA & carried out through cellular mechanisms.