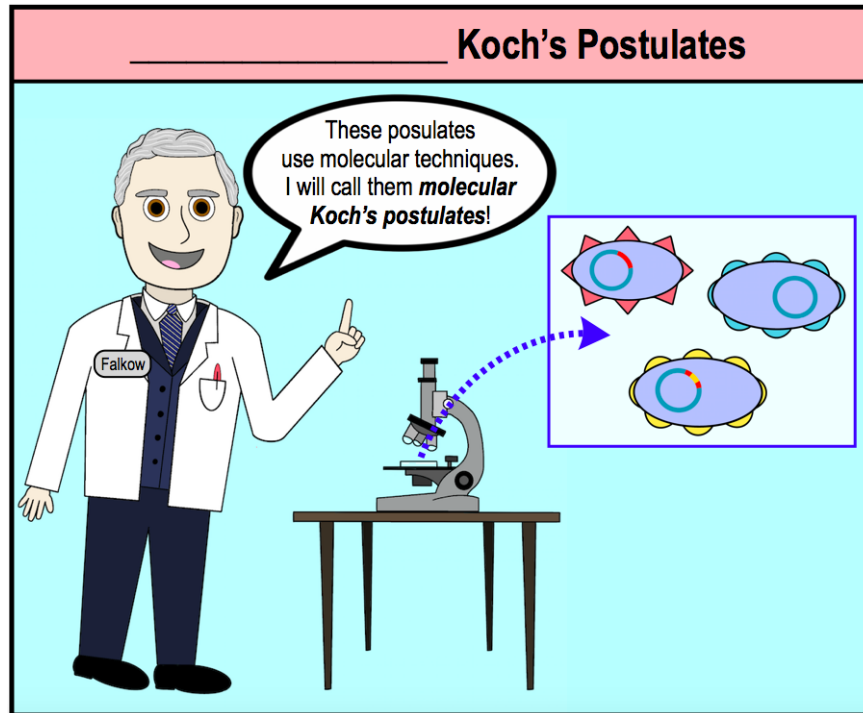


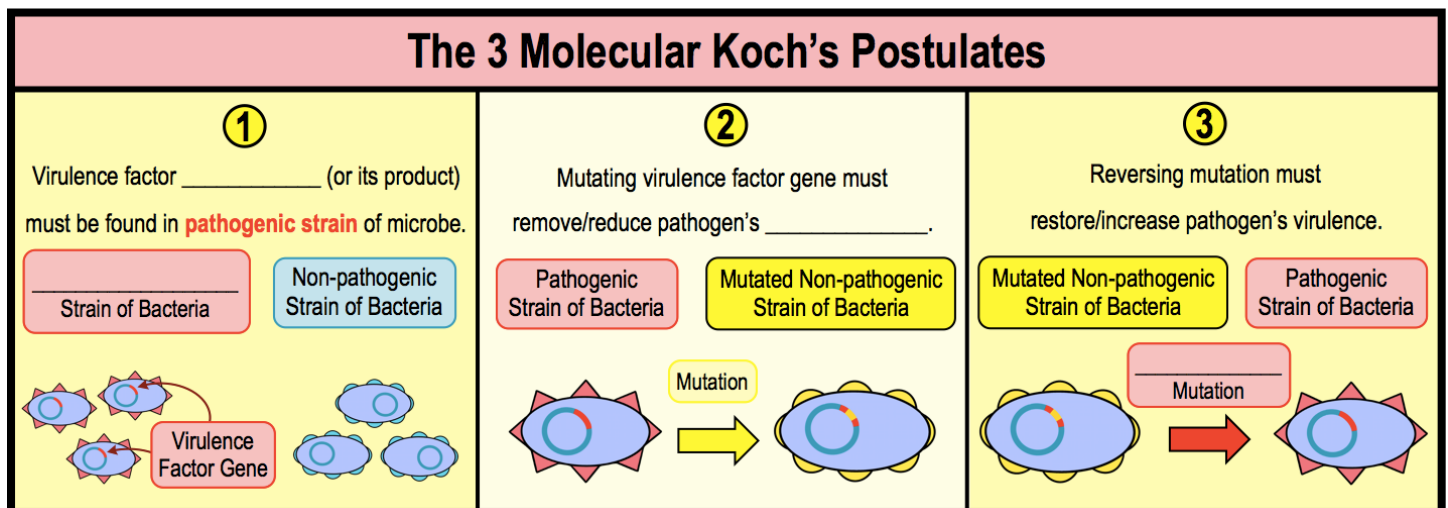
CONCEPT: MOLECULAR KOCH'S POSTULATES

- In 1988, Stanley Falkow proposed a revised set of Koch's postulates which are known as *molecular Koch's postulates*.
 - **Molecular Koch's Postulates:** used to identify the _____ cause of a microbe's *virulence factors*.
 - Recall: **virulence factors:** specific _____ of an organism that allow it to cause disease.
 - Explains why some microbial strains can be pathogenic (while others are not) based on their *virulence factors*.



The 3 Molecular Koch's Postulates

- There are _____ **Molecular Koch's Postulates** used to identify virulence factors in a pathogenic microbe:



CONCEPT: MOLECULAR KOCH'S POSTULATES

PRACTICE: Which of the following answers is *not* a reason why Dr. Falkow developed *molecular* Koch's postulates?

- a) Koch's original postulates possessed many limitations.
- b) Genetic technology and microbial studies have vastly improved and grown since Dr. Koch's research.
- c) Pathogenic microbes cannot be cultured on laboratory medium.
- d) Molecular Koch's postulates allow a more detailed investigation into how pathogens cause disease.

PRACTICE: Virulence factors include which of the following answers?

- a) Toxins found in the outer-membrane of certain species of bacteria.
- b) Bacterial capsules that allow the bacterium to evade phagocytosis by immune cells.
- c) Proteins on the surface of a virus that allows the virus to bind to the host cell's surface.
- d) A and B only.
- e) All of the above.

PRACTICE: Which of the following answers describes virulence factors of a pathogen?

- a) Traits of a pathogen that allow it to successfully reproduce outside of a host.
- b) Traits of a pathogen that allow it to successfully cause symptoms in its host.
- c) Traits of a pathogen that allow it to successfully colonize within its host.
- d) A and B.
- e) B and C.
- f) All of the above.