

Unit 3 C21 Worksheet 16  
Where Do Viruses Come From?

1. What is the key to viruses success?
2. What are the key components of a virus structure?
3. Why do we think viruses have been around since the beginning of life?
4. How do viruses work?
5. How can the genes of a virus become a molecular fossil? Can these viral genes embedded into your genetic code be used as a clock?
6. How much of the human genome consist of bits of viral genes accumulated over millions of years?
- 7 What is the virus first model hypothesis?
8. What is the virus escape hypothesis?
9. What is the virus regressive model hypothesis?
10. Are virion alive?

I do not want you to think about virus as being either alive or dead. They are neither. A virus is a particle that can be active or inactive. It is active when it enters a living cell, uses the cell's energy, and the cell's organelles to reproduce. When the virus is outside a cell then the virus is inactive.

Virus are very specific. They only may infect specific type of animals, plants, or bacteria. In humans a virus may only be able to bind to a particular type of transmembrane protein of a cell. This is the case with SARS-Co19. This virus binds to the ACE2 protein on type II lung cells of the alveoli. This is why it produces an acute respiratory disease.