

VIRUSES

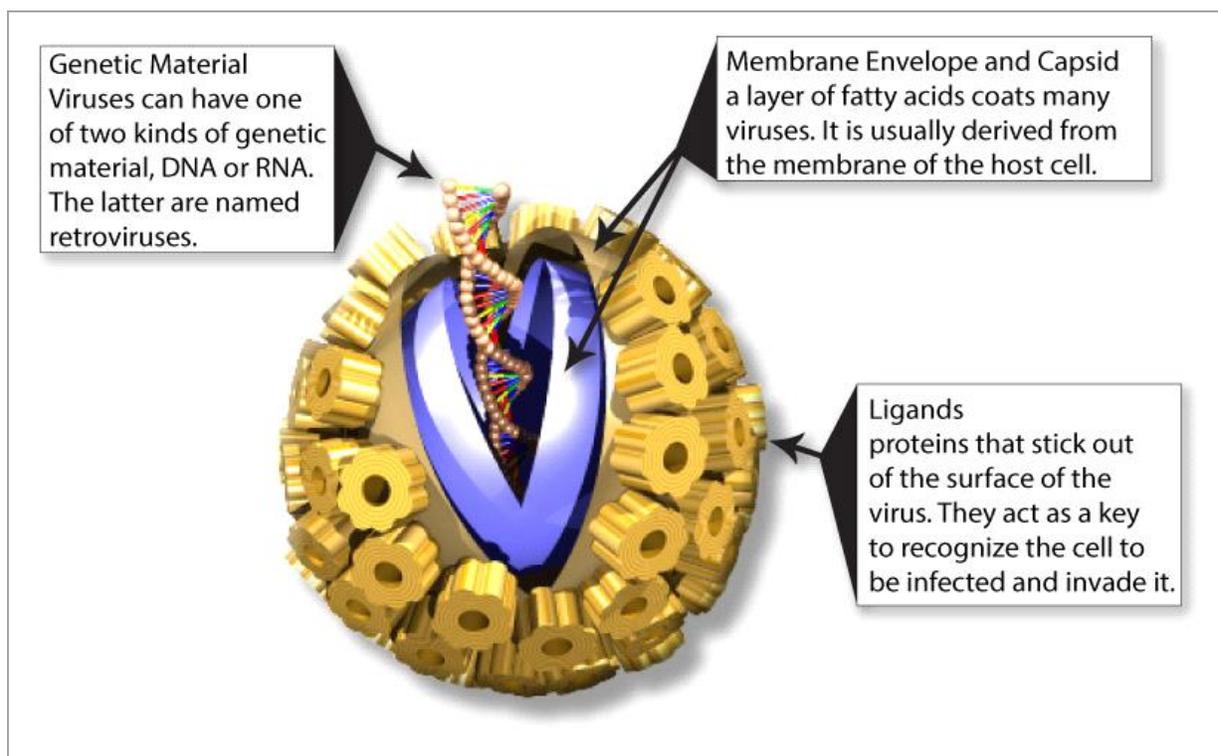
Viruses are infectious organisms consisting of DNA or RNA enclosed in a protein coat called a capsid.

Some viruses have an extra membrane envelope while others are non-enveloped.

The virus invades the host cell, takes it over, causing it to make copies of the viral DNA or RNA which destroys the host cell releasing new viruses.

Bacoban offers a quick contact time which kills (3-5minutes) against bacteria, mycobacteria, sporicidal fungi, as well as being highly effective against enveloped and more virulent non-enveloped viruses including Norovirus, Adenovirus, Rotavirus, Bovine feline calicivirus and many more.

The Virus Structure



Unlike bacteria, viruses are not cells but rather small infectious agents that replicate only inside the living cells of organisms. Since they do not have cell walls, their DNA or RNA is contained in a protein coat.

Although enveloped and non-enveloped viruses are virulent, non-enveloped viruses tend to have a higher resistance to chemical and physical procedures as well as environmental influences.

This requires particularly powerful disinfectants like **Bacoban's** long term surface disinfectant cleaner that can eliminate these kinds of viruses.

How Do Viruses Operate?

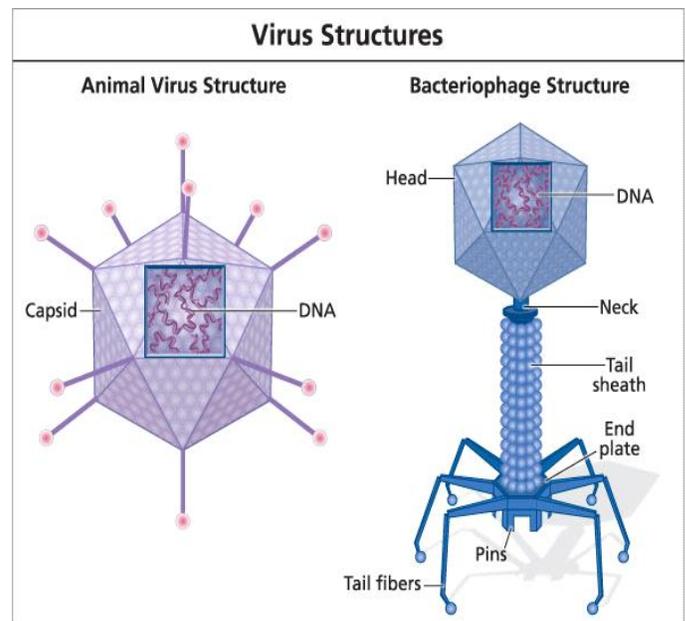
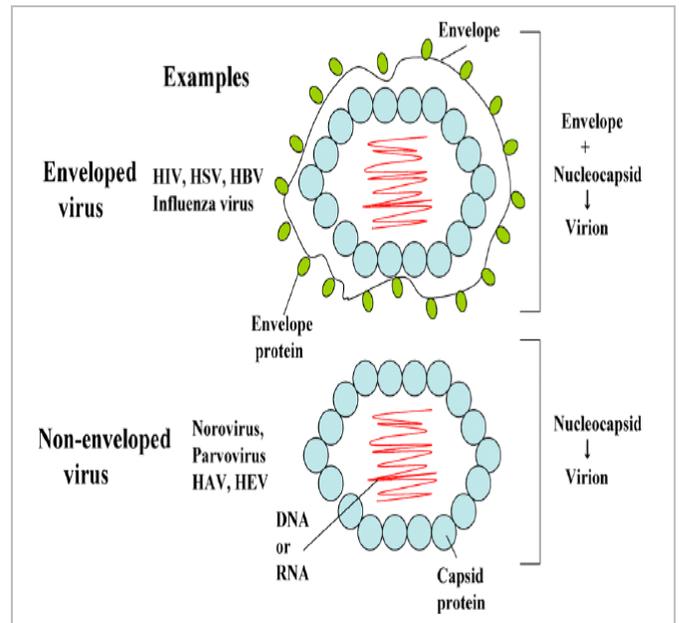
The virus invades the host cell, takes it over, causing it to make copies of the viral DNA or RNA which destroys the host cell, releasing new viruses. In this way viruses are unique because they are only alive and able to multiply inside the cells of other living things.

The virus particle attaches itself to the host cell before penetrating it. This then allows the virus to use the host cell's ingredients to copy its own genetic material before leaving the host cell once the process is complete.

This process slowly uses up the host cell's membrane leading its to cell death. Once the virus leaves the host cell it is ready to enter a new cell and multiply.

What enables a virus to remain active and infectious?

- It must be able to attach to the host cell.
- It must be able to inject its material into the host cell.
- It must be able to replicate.



Surface disinfection against viruses?



- **Bacoban** breaks down the virus protein shell and destroys its injection function so there is no way for it to penetrate the host cell.
- The virus no longer recognizes the host, so it cannot attach to it.
- **Bacoban** prevents the virus from being able to replicate.
- **Bacoban** offers a quick contact time killing (3-5minutes) bacteria, mycobacteria, fungi, as well as being highly effective virulent enveloped and non-enveloped viruses including Norovirus, Adenovirus, Rotavirus, Bovine feline calicivirus and many others.

Bacoban has been extensively tested and certified by experts including the Fresenius Institute and is available for use including medical facilities, food service operations, hotels, public transport and any high traffic area that needs long term disinfectant protection.

Conventional disinfectants are immediately effective, however, their efficiency is limited to their contact time. Unwanted bacteria and viruses begin forming almost immediately, minutes after a surface cleaning. Using a highly innovative "**Controlled Release**" mechanism, the universally accepted active ingredient responsible for **Bacoban's** antimicrobial effects is released from the nano-structured matrix only when required - allowing for a '**closure**' in the hygienic gap, protecting the treated surface from microbial growth and drastically reducing cross contamination between disinfection periods.

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| • Staphylococcus Aureus | • Proteus Vulgaris |
| • H3N8, H1N1, H5N1 | • Adenovirus |
| • Candida Albicans | • Rotovirus |
| • Pseudomonas Aeruginosa | • Coronavirus |
| • Escherichia Coli | • Bovine Viral Diarrhea Virus |
| • Salmonella | • Legionella Pneumophila |
| • Aspergillus Niger | • Vaccinia Virus |
| • Bovine Feline Calicivirus | • HIV, HBV, HCV |
| • Vaccinia Virus Strain Elstree | • Bacillus Cereus |
| • Herpes Simplex | • Clostridium Difficile |
| • Enterococcus Hirae | |