Editorial Note On: Clinical virology

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is an interdisciplinary journal that aims to address the social, economic, and medical aspects of HIV/AIDS infection from the inception of virus transmission through therapy, cure, awareness and advancements in the medical technologies for the effective management of HIVAIDS**.**

Clinical virology is the study of viruses and virus-like agents, including their classification, disease-producing properties and genetics. It is often considered a part of microbiology or pathology.

Virologist Education and Training:

- Virology is a subdivision of Biology, so, you need an undergraduate degree in Biology. ...
- A graduate with a Bachelor of Science in Microbiology is qualified to work at various research and technical positions, including veterinary microbiologist, research assistant and food microbiologist.

Diagnostic virology has now entered the mainstream of medical practice. Multiple methods are used for the laboratory diagnosis of viral infections, including viral culture, antigen detection, nucleic acid detection, and serology.

A major branch of virology is virus classification. Viruses can be classified according to the host cell they infect: animal viruses, plant viruses, fungal viruses, and bacteriophages (viruses infecting bacteria, which include the most complex viruses).[3] Another classification uses the geometrical shape of their capsid (often a helix or an icosahedron) or the virus's structure (e.g. presence or absence of a lipid envelope).[4] Viruses range in size from about 30 nm to about 450 nm, which means that most of them cannot be seen with light microscopes. The shape and structure of viruses has been studied by electron microscopy, NMR spectroscopy, and X-ray crystallography.

The second defense of vertebrates against viruses, cell-mediated immunity, involves immune cells known as T cells: the body's cells constantly display short fragments of their proteins on the cell's surface, and if a T cell recognizes a suspicious viral fragment there, the host cell is destroyed and the virus-specific T-cells proliferate. This mechanism is jump-started by certain vaccinations. Every lethal viral disease presents a paradox: killing its host is obviously of no benefit to the virus, so how and why did it evolve to do so? Today it is believed that most viruses are relatively benign in their natural hosts; some viral infection might even be beneficial to the host.[9] The lethal viral diseases are believed to have resulted from an "accidental" jump of the virus from a species in which it is benign to a new one that is not accustomed to it (see zoonosis). For example, viruses that cause serious influenza in humans probably have pigs or birds as their natural host, and HIV is thought to derive from the benign non-human primate virus SIV.

As most viruses are too small to be seen by a light microscope, sequencing is one of the main tools in virology to identify and study the virus. Traditional Sanger sequencing and next-generation sequencing (NGS) are used to sequence viruses in basic and clinical research, as well as for the diagnosis of emerging viral infections, molecular epidemiology of viral pathogens, and drug-resistance testing. There are more than 2.3 million unique viral sequences in GenBank.[12] Recently, NGS has surpassed traditional Sanger as the most popular approach for generating viral genomes.