



Retrovirus: A Virus that forms due to RNA but not DNA

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INTRODUCTION

Retroviruses are a class of diseases that have been grouped together based on how they are structured and how they imitate inside a host. In addition to HIV, the virus that causes AIDS, there are two more retroviruses that have the potential to cause human disease. The viruses go by the designations human T-lymphotropic virus type 1 (HTLV-1) and human T-lymphotropic virus type 2 (HTLV-II). Sexual contact, coming into contact with contaminated blood or tissue, or transmission from an infected mother to her unborn child during pregnancy or childbirth are all ways that these viruses can be spread from one person to another.

DESCRIPTION

Any of the several Retroviridae family viruses, which normally carry their genetic material as ribonucleic acid (RNA). The protein reverse transcriptase, which was discovered freely in 1971 by American virologists Howard Temin and David Baltimore, gave rise to the name retrovirus. When reverse transcriptase turns RNA into deoxyribonucleic acid (DNA), it reflects a reversal of the normal direction of cellular transcription (DNA into RNA). Through the activity of reverse transcriptase, the genetic material of a retrovirus can be irreversibly incorporated into the DNA genome of an infected cell. In the organic sciences, the chemical is frequently used to combine properties.

Retrovirus RNA is converted by reverse transcriptase into proviral DNA, which is subsequently incorporated into the DNA of the host cell. Retroviruses are linked to gradual ailments in creatures as equine irresistible paleness and the development of cancer and other malignant growths in creatures. Human T-cell lymphotropic virus type 1 (HTLV-1) is a retrovirus that causes the cancer adult T-cell leukaemia (ATL), which affects humans. Additionally, it can lead to HTLV-1-related myelopa-

thy/tropical spastic paraparesis (HAM/TSP), a neurological disorder. Although it has been suggested that HTLV-2, a virus that is extremely similar to it, causes modest neurological abnormalities, no evidence has been provided that it also harms people. It is estimated that some 20 million people worldwide are infected with HTLVs, yet only a small number of these infected persons actually spread ATL or HAM/TSP. Human immunodeficiency virus (HIV), sometimes known as AIDS, is a retrovirus that causes acquired immunodeficiency syndrome in humans. A retrovirus called Simian immunodeficiency virus (SIV), which affects chimpanzees and gorillas, is related to HIV.

CONCLUSION

Endogenous retroviruses (ERVs), which are persistent elements found in many animal genomes, are common. Extinct, or "fossil," viruses that make up ERVs share a genetic structure with modern retroviruses. ERVs (hence referred to as HERVs) have dispersed throughout human DNA during the history of human evolution. They make up between 1 and approximately 5% of the human genome and are passed down starting with one generation and continuing onto the next. It is believed that HERVs may have had an impact on some aspects of the evolution of the human genome. They have also been connected to a number of human diseases, such as multiple sclerosis. The first human retrovirus discovered was HTLV-1, which was identified and isolated in 1979 by American virologist Robert C. Gallo and colleagues. The virus was initially isolated in 1983.

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CONFLICT OF INTEREST

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