

Retroviruses and Retroelements

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Course overview: Retroviruses are a large group of positive sense RNA viruses unified by a unique and ancient replication strategy. In addition to the well known infectious retroviruses, the genomes of mammals, including humans, are heavily populated by retroviral like elements. This is a course encompassing the biology of infectious retroviruses such as HIV, the human immunodeficiency virus and related elements in mammalian genomes. Students will learn about the structure, genetics, biology, evolution and diseases associated with retroviruses and endogenous retroelements.

Tentative course outline:

DAY 1

1. morning lecture

Retroviral classification replication and expression

2. Afternoon lecture

Retroviruses and disease

DAY 2

3. Morning lecture

Endogenous retroviruses, LINES and SINES

4. Afternoon lecture

Retroviral and retroelement evolution and cellular defence mechanisms