

Epigenetic Mechanisms Involved in the Occurrence and Development of Infectious Diseases

Authors : Frank Boris Feutmba Keutchou, Saurelle Fabienne Bieghan Same, Verelle Elsa Fogang Pokam, Charles Ursula Metapi Meikeu, Angel Marilyn Messop Nzomo, Ousman Tamgue

Abstract : Infectious diseases are one of the most important causes of morbidity and mortality worldwide. These diseases are caused by micro-pathogenic organisms, such as bacteria, viruses, parasites, and fungi. Heritable changes in gene expression that do not involve changes to the underlying DNA sequence are referred to as epigenetics. Emerging evidence suggests that epigenetic mechanisms are important in the emergence and progression of infectious diseases. Pathogens can manipulate host epigenetic machinery to promote their own replication and evade immune responses. The Human Genome Project has provided new opportunities for developing better tools for the diagnosis and identification of target genes. Several epigenetic modifications, such as DNA methylation, histone modifications, and non-coding RNA expression, have been shown to influence infectious disease outcomes. Understanding the epigenetic mechanisms underlying infectious diseases may result in the progression of new therapeutic approaches focusing on host-pathogen interactions. The goal of this study is to show how different infectious agents interact with host cells after infection.

Keywords : epigenetic, infectious disease, micro-pathogenic organism, phenotype

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