

Abstract

HTLV-1 and FeLV are retroviruses, which are able to transform host cells and cause cancer, mostly leukemia, in infected organism. Belonging to Retroviridae family and both using very similar genome, these viruses developed different ways to reach transformation of infected cells. While FeLV uses insertional activation close to cellular proto-oncogenes in order to regulate transcription of these genes or carries cellular oncogene in its genome, HTLV-1 codes viral proteins which are able to regulate many processes of the cell. One of these proteins is Tax, which regulates many events in the cell, such as signalization, cell cycle, apoptosis and others. Another protein responsible for oncogenesis is HBZ, which is transcribed from antisense strand of proviral DNA. In the end HTLV-1 and FeLV strategies causing cancer are compared with some other leukemic retroviruses in order to show, that molecular strategies described on examples of HTLV-1 and FeLV are more or less common also for other oncogenic retroviruses.

Key words: HTLV-1, FeLV, transformation, leukaemia, tumor, oncogene