

## Euro Virology 2018 & Influenza 2018: AIDS process from the perspective of evolution - Zajac Vladimir - Cancer Research Institute BMC- SAS

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Despite great success within the diagnostics and therapy of AIDS, there are many unanswered questions. Without giving the answers to those questions more successful treatment of patients cannot be expected. The idea that HIV itself is an etiological agent liable for AIDS is usually accepted. It is generally accepted that human immunodeficiency virus (HIV) is that the etiological agent of acquired immune deficiency syndrome. As indicated by this case, HIV was moved to people from contact with goofs off 35–50 years back Notwithstanding this case has not been adequately affirmed epidemiologically. The spread and incubation period of the plague epidemic has led to the theory that the Black Death was caused by hemorrhagic viruses.

The strong argument for this prediction is an incontrovertible fact that it is impossible to prevent the worldwide spread of AIDS, especially in Africa. The data resulting in the conclusion that HIV alone is that the etiologic agent liable for AIDS is usually accepted. According to this claim, virus was transferred to humans from monkeys in Africa through random contacts 35-50 and according to recent reports even 100 years ago. This claim, which became dogma, however, has not been sufficiently confirmed and is unacceptable from epidemiological, statistical point of view and also by sense. If we would like to maneuver forward the analysis of AIDS process, we would like to travel deeper into the history of mankind and check out to spot how was evolve the state of health of humankind. From the evolutionary point of view, the most important changes within the human health condition occurred during a series of epidemics, particularly in Europe and thus the adjacent parts of Asia and Africa.

The largest epidemic of plague - the Black Death - was caused by the bacterium *Yersinia pestis*. Started in 1346 in Italy from where it spread throughout Europe then to Asia. Population after epidemic decreased by 30 to 50%. In 2001, epidemiologists S. Scott, Ch. Duncan and S. Kohn proposed a theory according to which the "Black Death" may have been caused by hemorrhagic viruses. This rendition relates to the methods for human-to-human transmission, speed, and force of the pestilence. Based on our results, we assume that HIV is extremely likely an inseparable a part of man since the start of our existence. These results and thus the next analysis have led us to propose a theory that the "Black Dead" epidemic within the 14<sup>th</sup> century was attended, additionally to *Yersinia pestis* and other factors, and thus , in our opinion, it'd be HIV.

This epidemic took place in Europe, parts of Asia and North Africa, but not in America and sub-Saharan Africa. The casualties of the Black Death pestilence were people with a harmed framework because of infringement of beneficial interaction between the prokaryotic and eukaryotic realm in their body. The epidemic was so devastating, because resulted also within the elimination of HIV carriers. Those who survived had delta 32 mutation in the CCR5 co-receptor, which is predominantly expressed in T cells, macrophages, dendritic cells, and eosinophils. Mutation CCR5-Δ32 protect participants from *Yersinia pestis* infection, but the variola virus and HIV infection, as well. The "Black Dead" epidemic leads to a rise within the number of CCR5 delta 32 mutations within the Caucasus population to 10%, in some areas to 15-20%.

The combination of these two agents has made the epidemic so devastating and leads to the removal of HIV carriers in the Caucasus population. In Sub-Saharan Africa, this epidemic did not occur, so HIV was not removed from the population. Therefore, there is no CCR5Δ32 mutation and the HIV level in the population is much higher than in other parts of the world. Statistically, it is confirmed that locations with a higher frequency of CCR5-Δ32 allele are much lower "Black Death" mortality. This epidemic on the other side as "sanitary process" led to the restoration of balance between the two kingdoms in the human body and to the recovery of most of the human population.

IN Sub-Saharan Africa, this pestilence and ensuing "sanitation process" has not occurred, that is the reason HIV-related hereditary data has not been killed inside the populace. Therefore, there is no CCR5Δ32 mutation during this population and therefore the level of HIV genetic information is far above in other parts of the planet. Options to remedy this situation in Sub-Saharan Africa are under discussion. Affirmation of the introduced speculation can bring new knowledge into AIDS, particularly in Africa, and open up additional opportunities in diagnostics and treatment of this disorder.