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### Participation of bacteria and yeasts in the AIDS process: evolutionary view

Te have identified HIV-like sequences homologous with HIV-1 isolates for about 90% and HIV-like proteins in bacteria/ yeasts in a cohort of 80 AIDS patients from Slovakia, USA, Kenya and Cambodia. Based on these results, we assume that HIV is an integral part of humans from the beginning of our existence and bacteria and yeasts are natural hosts of HIV, thereby affording affinity to T cells. The results obtained and the subsequent analysis have led us to believe that on the epidemic of "Black Dead" in the 14th century participated except Yersenia pestis and other agents, and thus in our view he is HIV. This version corresponds to the means of human-to-human transmission, speed and intensity of the epidemic. This epidemic took place in Europe, parts of Asia and North Africa, but not in America and sub-Saharan Africa. The victims of the Black Death epidemic were individuals with a damaged immune system due to violation of symbiosis between the prokaryotic and eukaryotic kingdom in their body. The epidemic was so devastating, because resulted also in 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. A mutation to prevent participants from Yersenie pestis infection, but the smallpox virus and HIV infection, as well. The "Black Dead" epidemic results in an increase in the number of CCR5 delta 32 mutations in the Caucasus population to 10%, in some areas to 15-20%. 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 epidemic and subsequent "sanitation process" has not taken place and that's why HIV-related genetic information has not been eliminated in the population. Therefore, there is no CCR5 $\Delta$ 32 mutation in this population and the level of HIV genetic information is much higher than in other parts of the world. Options to remedy this situation in Sub-Saharan Africa are under discussion. Confirmation of the presented hypothesis can bring new insight into AIDS, especially in Africa, and open up new possibilities in diagnostics and therapy of this syndrome.

#### Biography

Vladimir Zajac has completed his PhD. in 1982 at the Cancer Research Institute of Slovak Academy of Sciences in Bratislava (Slovakia), where he worked as the Head of Department of Cancer Genetics from 1996 to 2010. He joined the Medical Faculty of the Comenius University as Associate Professor of Genetics in 2007. He has published 72 papers mostly in reputed journals and he was editor of the book "Bacteria, viruses and parasites in AIDS process" (InTech, 2011).

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