

The Role of Bacteria in Viral Transmission

Zajac V*

Former scientist at the Cancer Research Institute, BMC, SAS, Bratislava, Dubravska cesta 9, 84505 Slovakia

Received: 01 July 2020

Accepted: 16 July 2020

Published: 18 July 2020

*Corresponding author:

Vladimir Zajac, Former scientist at the Cancer Research Institute, BMC, SAS, Bratislava, Dubravska cesta 9, 84505 Slovakia, Tel: +421908281354, E-mail: vladimir.zajac@savba.sk

1. Abstract

Every virus is a parasite. They exist by themselves. He is envious of your wearer. This is the basic condition of its existence. What living cell carries viruses? Based on work with bovine leukosis virus (BLV) in the stables, we monitored the course of infection in healthy animals and concluded that a bacterial cell can be the host of the virus. We tested this assumption and confirmed the results. This idea was then tested on the HIV model in the laboratory of Prof. Flossie Wong-Staal, UCSD. Even with this virus, we have been able to prove that its host may be bacteria. In throat swabs from Kenya and Cambodian HIV positive children, HIV was detected in commensal bacteria and also in yeasts *Candida albicans*. Based on these results and indications, we conclude that all viruses are transmitted by bacteria or by yeasts. If all, the corona virus. By destroying the bacteria carrying the viruses, the virus ceases to exist. If this idea is confirmed, many, if to all viral infections can be stopped.

All viruses, including COVID-19, are parasites. They cannot exist by themselves and fully depend on their carriers. This is the basic condition of their existence. Very little is still known about how they can jump from one species to another and finally spread to humans.

After all, a parasite must have its host, a living cell. It is generally claimed that a virus can exist for as little as 2-5 seconds during which it spreads to another species. But this goes against the basic dogma that a virus cannot exist without a living cell. Naturally, tracking these viral journeys is not easy and has not been fully researched. However, this is a key issue, the solution of which can lead to a fundamental reversal in how we view viruses.

What living cell carries viruses? We have been looking for an answer to that question for over 30 years, when we started working on the diagnosis of leukosis in cows caused by bovine leukemia virus (BLV) with the aim of its nationwide eradication in Czechoslovakia. A stable was set up in the Veterinary College, in which the progress of infection to healthy animals was monitored. Eventually, we concluded that only bacterial cells can be vectors of transmission of the virus and its hosts. This theory was experimentally tested and the results confirmed.

Consequently, based on the project for NIH, were started analyzing host cells of HIV in the laboratory of prof. Flossie Wong-Staal (UCSD, USA). In this model, too, the bacterial cells of the intestinal tract were found to be the host of the virus. Evidence was confirmed at the DNA level by hybridization and PCR using commercial, diagnostic primers and consequent sequencing. At the protein level, HIV-like proteins were confirmed by Western blotting using commercial monoclonal antibodies against HIV antigens [1-10]. In the swabs of HIV-positive children from Cambodia and Kenya, HIV was found in commensal bacteria, but it is also often found in the yeast *Candida albicans* [4 -7].

Based on these results, it was concluded that many, if not all viruses can be transmitted by bacteria, or by yeast. So can a corona virus. It should be ascertained whether the current pandemic has been caused by bacteria or corona virus-containing yeast. It is likely that such corona virus is transmitted to humans and travels further to the recipient cells of the respiratory and intestinal tract. Upon contact of the viral tentacles with the ACE2 receptor, the virus is released and pe-

netrates the recipient cell of the respiratory tract and the process of tissue destruction begins.

A virus, just like a parasite, is not a full-fledged biological form and thus hard to fight. Its main weakness is that it is hosted by bacteria or yeast. Bacteria are a complete biological form and they can be eliminated. By destroying bacteria carrying a virus, the virus ceases to exist. Thus, many viral infections can be stopped.

To verify this conception, a throat swab needs to be collected from an infected person. The swab is transferred directly to bacterial growth medium (LB) and the culture is incubated overnight at 37°C. The tampon is also applied to agar, blood agar, or other richer growth medium. Individual grown bacterial colonies will be determined by RT PCR for corona virus. Subsequently, it will be analyzed to which antibiotics the bacteria containing the corona virus are fully sensitive. The optimal antibiotic is administered to the patient. Under normal circumstances, it is expected that the results may be known within 10 days. Patients should be given probiotics and prebiotics after the antibiotic treatment.

The proposed approach of identification and treatment of corona virus infections is very rapid. The most important aspect is starting the treatment at the earliest opportunity. By finding a suitable antibiotic to kill the virus-containing host cells, we can immediately intervene straight at the beginning of the disease process. In this way, we also eliminate virus-containing bacteria that have entered the intestinal tract, thus removing the potential reservoir of the virus and preventing a recurrence of the infection process, called the second wave of infection. Last but not least, the great advantage of the given treatment method is the fact that expensive vaccines, which are still being developed, are not needed.

2. Acknowledgment

Author is grateful to L. Wachsmannova, S. Ciernikova, K. Hainova, Z. Adamcikova and V. Stevurkova for participation in this work. I am also grateful to Vladimir Mocko and M. Mego for stimulating discussion and support. This work was supported by these grants: APPV-06-46-11, VEGA 2/0096/11 and VEGA 2/0170/13. This publication is also the result of the project implementation: SF ITMS project code: 26240220058 supported by the Research & Development Operational Programme funded by the ERDF.

References

1. Zajac V, Kovac M, Ciernikova S, Mego M, Rauko P, Stevurkova V et al. Detection of HIV sequences in colon bacteria of AIDS positive patients. *Clin. Microbiol Infec.* 2005; 11: 53.
2. Zajac V, Mego M, Kovac M, Stevurkova V, Ciernikova S, Ujhazy E et al. Testing of bacteria isolated from HIV/AIDS patients in Experimental models. *Neuro Endocrinol Lett.* 2006; 27: 101-4.
3. Zajac V, Stevurkova V, Matelova L, Ujhazy E. Detection of HIV-1 sequences in intestinal bacteria of HIV/AIDS patients. *Neuro Endocrinol Lett.* 2007; 28: 591-5.
4. Zajac V, Adamcikova Z, Holec V, Hainova K, Stevurkova V, Matelova L et al. Chapter in a book: *Microbes, viruses and parasites in AIDS process*. Printed in INTECH. 2011; 375-90.
5. Zajac V, Matelova L, Liskova A, Mego M, Holec V, Adamcikova Z et al. Confirmation of HIV-like sequences in respiratory tract bacteria of Cambodian and Kenyan HIV-positive pediatric patients. *Med Sci Monit.* 2011; 17, 154-8.
6. Hainova K, Mego M, Wachsmannova L, Adamcikova Z, Stevurkova V, Krcmery V et al. Microflora of intestinal and respiratory tract in AIDS process, *J Antivir Antiretrovir.* 2013; 15: 1-6.
7. Hainova K, Adamcikova Z, Ciernikova S, Stevurkova V, Krcmery V, Zajac V et al. Detection of protein homologous with HIV-1 antigens in bacteria of positive patients - phase II. *Neuro Endocrinol Lett.* 2014; 35: 101-6.
8. Zajac V. The fundamental role of bacteria and yeasts in AIDS progression. *J Vaccines Vaccin.* 2014; 5: 4.
9. Wachsmannova L, Ciernikova S, Majek J, Mego M, Stevurkova V, Zajac V et al. Internalization property of intestinal bacteria in colon cancer and HIV/AIDS patients. *Neuro Endocrinol Lett.* 2016; 37: 245-50.
10. Zajac V. Evolutionary view of the AIDS process. *J Int Med Res.* 2018; 46: 4032-8.