



(RESEARCH ARTICLE)



## A way to eliminate the novel coronavirus and stop the COVID-19 epidemics: A new idea

Vladimir Zajac \*

*Cancer Research Institute, BMC, SAS, SAV, Dúbravská cesta 9, 84505, Bratislava, Slovakia.*

GSC Biological and Pharmaceutical Sciences, 2022, 18(02), 011–014

Publication history: Received on 29 December 2021; revised on 31 January 2022; accepted on 02 February 2022

Article DOI: <https://doi.org/10.30574/gscbps.2022.18.2.0055>

### Abstract

To the question: why there is so much novel coronavirus in wastewater worldwide is the general answer that it is because the body gets rid of the virus. Thus, as the virus leaves the body, the body cleanses and gradually gets rid of the virus. That would be a logical statement, but it is not true. Based on our results so far, part of the virus leaves the body, but the body does not get rid of it.

The virus can settle in the intestinal tract and can remain in its carrier there for a very long time, even years. The presence of the virus in the intestinal tract can be confirmed by RT PCR for a new coronavirus from rectal swabs

**Keywords:** Novel coronavirus; Carriers; Bacteria; Intestinal tract; Rectal infections

### 1. Introduction

When working with bovine leukosis virus (BLV), in addition to monitoring the infection by detecting antibodies to the virus, we also monitored the transmission of the infection from sick animals to healthy animals. After several years of research, I came to the conclusion that the virus can be hosted by bacteria. We experimentally tested this assumption and confirmed the results. Subsequently, the idea was tested on the HIV model in the laboratory of prof. Flossie Wong-Staal (UCSD, USA). This virus has also been found to be hosted by bacteria or yeast. Evidence was confirmed at both DNA and viral protein levels.

### 2. Results

Based on the results of more than 30 years of work with viruses BLV and HIV [1- 12], rectal swabs were taken from persons who overcame the infection with a novel coronavirus at the Institute of Clinical Microbiology of the University Hospital Nitra under the guidance of prof. MUDr. Anna Liskova, PhD. [16]. The results of the RT PCR test confirm that out of a group of 30 subjects, only five patients (17%) did not show signs of the presence of a new coronavirus in the rectum 12-23 days after infection. The remaining 25 subjects (83%) still had coronavirus in their rectum more than 12-23 days after infection. The results show that in the vast majority of patients who survived the infection, the virus is still present in the stool and thus in their intestinal tract and also indicates that an interval of 2-4 weeks after infection is sufficient to cleanse the intestinal tract of the virus. Based on the results of the HIV/AIDS system, it can be assumed that the number of coronavirus carriers in the intestinal tract will decrease over time and will be between 35-45%. It is this form of virus transmission that may answer the question of what is the mechanism of induction of the second but also other waves of infection.

\* Corresponding author: Vladimir Zajac

Cancer Research Institute, BMC, SAS, SAV, Dúbravská cesta 9, 84505, Bratislava, Slovakia

### 3. Discussion

After transmission to humans, the coronavirus travels to cells of the respiratory tract that contain the ACE2 receptor. Upon contact of the viral tentacles with this receptor, the virus penetrates the cell of the respiratory tract, where a tissue destruction process occurs. After overcoming the infection in the lung cells by conventional drug-based treatments, ventilation, activation of the immune system, the infection in the lungs is suppressed and the patient is cured. The virus leaves the respiratory tract after this therapy. However, part of the viral load in the carriers may pass into the intestinal tract, where it may settle for a longer period of time. Based on our results in the HIV system, they can survive for months and years there, and under optimal conditions, they can multiply. After overgrowth in the intestinal tract, the novel coronavirus can enter the body, infect the host *de novo* and also infect other people [13- 16]. This also explains the reinfection of people who have been re-infected despite vaccination. Vaccines work in the respiratory tract, where they prevent the virus from attacking lung cells. However, if the virus enters the intestinal tract, vaccines are not effective there, which is generally the case for all viral infections. For this reason, a reliable and effective HIV vaccine has not yet been developed.

People after infection may become carriers of the coronavirus and can infect others not only by excreting the coronavirus from the mouth, nose, but also stool [17-22]. History provides us with much evidence of the importance of fecal disposal and disinfection during epidemics. This important approach has been proven many times throughout history and has helped to overcome epidemics. It is incomprehensible why this possibility of transmitting the infection is absolutely marginal in the current epidemic. We have improved in the successful prevention of droplet transmission of this infection through face masks, spacings and hand washing. But we do not yet sufficiently prevent rectal infection. It is necessary to appeal for the rapid disposal of excrement, disinfection of toilets (especially outdoor ones) also with the use of UV emitters, ventilation, careful rectal washing and finally washing and disinfection of hands. These measures should be taken wherever there are shared toilets - social service homes, schools, workplaces, hospitals, airplanes, and buses. Also in households, especially in those where people live after infection. Therefore, there is generally so much novel coronavirus in wastewater worldwide. It is most necessary to implement these measures, especially in areas where there is no public water supply and central waste, where the waste goes to septic tanks, or even to sewers.

---

### 4. Conclusion

The coronavirus has been found in the stools of infected people in several laboratories, which has been explained by the virus leaving the body and clearing the virus [17- 22]. But this is not the case. The virus leaves the body in most infected people, but in some of them it still remains in the intestinal tract in the carrier, where it can exist for a long time. So far, no one but us has detected the presence of the virus in the intestinal tract 15-25 days, or longer, after overcoming the infection. This is a very important finding that may delay the resolution of the novel coronavirus-induced epidemic.

The detection of a novel coronavirus in the intestinal tract of people who have overcome the infection raises a fundamental question: in what form is the virus in the intestinal tract? A virus as a parasite cannot exist on its own, cannot be reproduced and cannot be transmitted to another organism. Therefore, it must have a carrier in which it can multiply and mutated without limitation. So what carriers does the virus use to persist in the intestinal tract? Coronavirus has been found in the nematodes and this may be one of the forms of carrier. This parasite can be eliminated by an antiparasitic such as ivermectin. However, the situation is most likely not so simple, as it is not easy to imagine that the virus is being transmitted *en masse* in nematodes. These may be carriers such as bacteria or yeast or other one-cellular organisms. However, their elimination can be complicated due to their expected variability. By identifying the carrier or carriers of the virus and their subsequent elimination, we also eliminate the virus. This will eventually lead to an end to the epidemic. So far, this is the only way to stop viruses.

What should be done to verify the proposed therapy?

Rectal swabs from individuals who were infected more than 2-12 months ago and RT PCR for novel coronavirus. If the results of RT PCR are positive, we can stop the epidemic after the identification of the virus carrier and its liquidation together with the virus.

---

## Compliance with ethical standards

### *Acknowledgments*

Author is grateful to A. Liskova and H. Komjathy for support and stimulating discussion. 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.

### *Disclosure of conflict of interest*

The authors declare that there is no conflict of interest.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

---

## References

- [1] V Zajac V, Kovac M, Ciernikova S, Mego M, Rauko P, Stevurkova V, Stanekova D, Mokras M. 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, Gajdosik A, Gajdosikova A. Testing of bacteria isolated from HIV/AIDS patients in Experimental models. *Neuro Endocrinol Lett.* 2006; 27: 101-104.
- [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: 591–595.
- [4] Zajac V, Adamcikova Z, Holec V, Hainova K, Stevurkova V, Matelova L, Krcmery V. Chapter in a book: *Microbes, viruses and parasites in AIDS process*. Editor: Vladimir Zajac. Printed in INTECH. 2011; 375-390.
- [5] Zajac V, Matelova L, Liskova A, Mego M, Holec V, Adamcikova Z, Stevurkova V, Shahum A, Krcmery V. Confirmation of HIV-like sequences in respiratory tract bacteria of and HIV-positive pediatric patients. *Med Sci Monit.* 2011; 17: 154–158.
- [6] Hainova K, Mego M, Wachsmannova L, Adamcikova Z, Stevurkova V, Krcmery V, Zajac V. 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. Detection of proteins homologous with HIV-1 antigens in bacteria of positive patients - phase II. *Neuro Endocrinol Lett.* 2014; 35: 101–106.
- [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. Internalization property of intestinal bacteria in colon cancer and HIV/AIDS patients. *Neuro Endocrinol Letters.* 2016; 37: 245–250.
- [10] Zajac V. Evolutionary view of the AIDS process. *J Int Med Res.* Oct 2018; 46(10): 4032-4038.
- [11] Vladimir Zajac. Can CCR5 delta 32 mutation be a proof of possible HIV participation in the Black Dead epidemic? *Journal of Clinical Microbiology and Infectious Diseases.* 2020; 3(3).
- [12] Vladimir Zajac. An Overview on the Fundamental Role of Bacteria and Yeasts in AIDS Progression. *Current Topics in Medicine and Medical Research.* 2020; 3(2).
- [13] Vladimir Zajac. Elimination of the new coronavirus and the prevention of the second wave of infection. *World Journal of Advances Research and Reviews.* 2020; 08(01): 148-150.
- [14] V Zajac. The Role of Bacteria in Viral Transmission. *Japanese Journal of Gastroenterology and Hepatology.* 2020; 4(8): 1-2.
- [15] Vladimir Zajac. The irreplaceable role of coronavirus carriers in its transmission and in second wave of infection. *World Journal of Advances Research and Reviews.* 2021; 09(03): 226-228.
- [16] Anna Liskova and Vladimir Zajac . Identification of a new coronavirus in rectal swabs from persons infected 15-25 days ago. *World Journal of Advances Research and Reviews.* 2021; 10(01), 356–359.

- [17] Chen N, Zhou M, Dong X, Qu J, Gong F, Han Y, et al. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *Lancet*. 2020; 395: 507–13.
- [18] An Tang, Zhen-Dong Tong, Hong-Ling Wang, Ya-Xin Dai, Ke-Feng Li, Jie-Nan Liu, Wen-Jie Wu, Chen Yuan, Meng-Lu Yu, Peng Li, Jian-Bo Yan . Detection of Novel Coronavirus by RT- PCR in Stool Specimen from Asymptomatic Child, China *Emerg. Infect. Dis.* Jun 2020; 26(6): 1337-13392020
- [19] Chen Y, Chen L, Den g Q, Zhang G, Wu K, Ni L, Yang Y, Liu B, Wang W, Wei C, Yang J, Ye G, Cheng Z. The presence of SARS-CoV-2 RNA in the feces of COVID-19 patients. *J Med Virol.* Jul 2020; 92(7): 833-840.
- [20] Du W, Yu J, Liu X, Chen H, Lin L, Li Q. Persistence of SARS-CoV-2 virus RNA in feces: case series of children. *J Infect Public Health.* 2020; 13(7): 926-931.
- [21] Thakur AK, Sathyamurthy R, Velraj R, Lynch I, Saidur R, Pandey AK, Sharshir SW, Kabeel AE, Hwang JY, GaneshKumar P. Secondary transmission of SARS-Co-2 through wastewater: Concerns and tactics for treatment to effectively control the pandemic. *J Environ Manage.* 19 Apr 2021; 290: 112668.
- [22] Goodwin L, Hayward T, Krishan P, Nolan G, Nundy M, Ostrishko K, Attili A, Cárceles SB, Epelle EI, Gabl R, Pappa EJ, Stajuda M, Zen S, Dozier M, Anderson N, Viola IM, McQuillan R. Which factors influence the extent of indoor transmission of SARS-CoV-2? A rapid evidence review. *J Glob Health.* 3 Apr 2021; 11: 10002.