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# Fight against covid-19 and setting new research tasks

V. Nastasenko \*

Kherson State Maritime Academy, Kherson, Ukraine.

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#### Abstract

The SARS-CoV-19 (COVID-19) coronavirus pandemic poses a threat to all of humanity, and this threat is currently growing as new and more aggressive strains of it emerge. Therefore, the fight against it is an important and urgent task. The traditional ways of solving it by vaccination, disinfection and quartzing have problems and significant drawbacks, which are limited by the time and conditions of action, and most importantly, they require large expenditures of intellectual, labor and technical-economic resources. At the same time, vaccination is still acting in catch-up with new strains, which leads to local periods of lack of immune protection, in which the only method of protection is used - this is the introduction of restrictions. The main goal of the work performed is to find other effective ways to combat COVID-19. The initial research methods are biophysical. Scientific novelty and the results of the work. The analysis showed that destruction of viruses this can be achieved by the by inducing resonant frequencies created by an external electromagnetic field. On this basis, the first task was formulated - the search for the range of such resonant frequencies, as well as the second task - the search for the range of frequencies that activate the virus in order to exclude the appearance of such range in the developments of systems and devices surrounding people. These tasks are presented for wide discussion by the scientific community, government and non-government health authorities of all world countries in this work. It's of would create the basis for their quick solution.

Keywords: External physical fields and energies affecting viruses; Destruction of viruses by resonant vibrations.

#### 1. Introduction

The work relates to the spheres of biophysics and virology, in particular – to the effect of external (induced) physical fields on bacteria and viruses.

The SARS-CoV-19 coronavirus (hereinafter COVID-19) pandemic poses a threat to all of mankind, and this threat is currently constantly growing. Recently, many mutations of the virus have appeared that are more aggressive and harmful than its original strains. At the same time, they are constantly and very quickly updated.

Therefore, the fight against COVID-19 concerns every non-indifferent person and scientist, and any possible variant of this fight, including that proposed in this work, is worth careful consideration and detailed analysis of all its capabilities. This is explained by the fact that vaccination as a traditional way does not solve all problems. It can provide individual protection for a person, but it does not allow the virus to be destroyed in the environment, even with the development of herd immunity in  $\frac{2}{3}$  of the world's population. This immunity has a limited duration, which requires re-vaccination.

Disinfection with chemicals and ultraviolet light can destroy it, but they also have their drawbacks and limitations in their application. For example Disinfection with ultraviolet light (quartzing) kills everything of total. Including cells of our body have damage. Therefore, at the time of its holding, everyone must leave the premises. Including the person,

\* Corresponding author: V. Nastasenko

Kherson state maritime academy, Kherson (Ukraine).

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with is carrier of COVID-19 viruses. When he returns to this room, quartzing will be useless. A similar problem arises when using chemical disinfection. Therefore, the destruction of COVID-19 must be constantly.

This leads to a large investment of time, labor and material and technical resources. During vaccination, the problem is complicated by the fact that the virus constantly mutates and new more aggressive and harmful strains appear. Therefore, constant development of new vaccines is required, which is mainly of carried out in the catching up, with new strains in pursuit of them. This leads to local periods of lack of immune protection in people, the fight against which is possible only by introducing restrictions that are unfavorable both for residents and for the economy of all countries of the world. To develop herd immunity in the inhabitants of the Earth, billions of vaccinations are required. With mutations of the virus, this process becomes endless and requires the involvement of new intellectual, labor and material and technical resources, which are diverted from other important areas of the development of human life and activities.

Hence, it is necessary to search for new more effective ways, which is an important and urgent scientific and practical task posed in this work.

# 2. Methods for doing work

Biophysical methods are accepted as basic. One of them is the virulent effect of physical fields on the life and activity of viruses. In this case, the initial factor for the analysis of this problem is the presence of physical fields of biological organisms and their cells. It is based on the phenomenon of resonance, leading to an abrupt increase in the amplitude A of sustained forced vibrations of a system or object, when the frequency  $\omega$  of the external influence of vibrations on them approaches any of the frequencies  $\omega$  of their natural vibrations [1]. The phenomenon of resonance is widely used in engineering for the mechanical destruction of materials and structures created from them [1]. Biophysical processes occurring in microorganisms give reason to assume the possibility of vibrational and resonant effects on bacteria and viruses, followed by their mechanical destruction.

The possibility of a vibrational resonance effect on bacteria and viruses was substantiated at the beginning of the 20th century by scientists Alexander Gurvich (Russia) and Royal Rife (USA) [2, 3]. These works are considered controversial, but the personal experience of the author presented in [4] gave a positive result, which was confirmed by many other researchers. Herewith, high-frequency vibration antiparasitic devices (AP) created based on the patent [5] and mass-produced by the DETA-ELIS "DeVita" holding (Russia-Germany) were used.

A feature of these devices is the physical-mechanical creation of ultra-high frequency vibrations. A feature of these devices is the physical-mechanical generation of vibrations with a super-high frequency (SHF)  $\approx$  50 MHz, which makes it possible to have a destructive resonance effect on most bacteria, viruses, parasites, and fungi that live in humans and cause diseases.

An example of such an effect of induced vibration frequencies on Euglena Veridic in water is shown in Figure 1, its destruction occurs at the weakest point – food input and output.

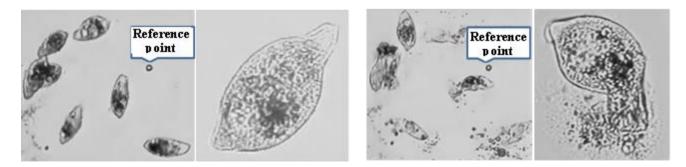


Figure 1 The state of microorganisms before (a) and after (b) exposure to induced fields with a frequency of 1.15 kHz (photo provided by DETA-ELIS "DeVita" holding <u>www.deta-elis.ru</u>).

Despite the controversy about the reality of filming these processes, their falsification during the period of these filming (the 50s of the XX century) is practically impossible, since there were no computer graphics that could recreate them so realistically.

A peculiarity of these processes is that for other microorganisms, with their natural vibration frequency not coinciding with the induced one, the phenomenon of resonance and other harmful effects and consequences do arise.

Within the framework of the data presented, there is reason to believe that external (induced) physical fields will have a selective resonant effect on COVID-19 and other viruses. Therefore, the next goal of the work performed is to justify the need for a broad study of such an impact.

#### 3. Anticipated results of the work and their discussion

The lack of personal available facilities to carry out the above-mentioned studies induces formulating them in this work, as the task for other researchers. Therefore, the scientific novelty of the work performed is the formulation of tasks and conditions for researching the impact of physical fields on COVID-19 and other viruses.

The expediency of such studies is evidenced by the fact that the presence of vibrations and the possibility of their perception are characteristic at the cellular level for biological organisms, and at deeper levels of material world: molecular, atomic and that of elementary particles. These levels are characterized by the dualism of states in which their of substance and wave (field) properties are manifested. It should be noted that nuclear magnetic resonance is widely used in science and technology [6] and systems for its implementation have been created, which can be the basis for further development of devices needed to combat COVID-19.

Physical fields and resonant vibrations are also characteristic of objects of higher levels – it's the micro and macrocosm. Gravitational and electromagnetic fields are an integral part of the more of higher levels of the Universe. All planets and their satellites, stars and galaxies, their clusters, and the Universe as a whole have them. The presence of gravitational waves created in the Universe by various of physical processes and objects has been repeatedly confirmed experimentally since 2014. It was for the discovery of these waves, without determining their numerical parameters, that the Nobel Prize in Physics 2017 was awarded [7]. The numerical values of the parameters of the waves of the gravitational field of the Universe were found by the author of this work in [8, 9], and the possibility of their unified with electric and magnetic fields was also proved in [10 - 12]. This indicates their combined influence to all objects of the material world. The totality of the above data indicates the need to take into account and study physical fields in all material objects of the macro, micro, and nanoworld, to which COVID-19 belongs. Therefore, physicists of the world engaged in research in these areas should provide their assistance in the fight against coronavirus.

The method proposed in this work is associated with the identification of the frequency range (wavelengths) of induced vibrations at which the resonance of the COVID-19 viruses occurs.

Researchers from the Massachusetts Institute of Technology have found that the virus envelope quickly degrades at frequencies of 25 and 50 MHz, both in water and air [13].

Complete destruction of the virus is possible at wavelengths commensurate on his sizes, which are 80 ... 120 nm [14]. The resonant wavelength  $\lambda$  of the induced electromagnetic fields must be multiple of these dimensions. Therefore, the assumed range of vibrations will be the value of the frequency v, which is determined by the dependence:

$$\nu = \frac{c}{\lambda} = \frac{0.3 \cdot 10^9 (\frac{m}{s})}{80 \dots 120 \cdot 10^{-9} (m)} = 3.75 \dots 2.5 \cdot 10^{15} (s^{-1}), \tag{1}$$

Where: c – is the speed of light in vacuum:  $c \approx 0.3 \cdot 10^9$  m/s.

Such a frequency of oscillations of electromagnetic waves is created by semiconductor circuits with a transition layer thickness of 1 crystal lattice, which is technically achievable at the present time.

However, this creates a contradiction between the vibration frequencies  $25 \dots 50 \cdot 10^6$  Hz and  $3.75 \dots 2.5 \cdot 10^{15}$  Hz. This can be explained by the fact that the frequencies  $3.75 \dots 2.5 \cdot 10^{15}$  Hz refer to the destruction of the virus as a "mechanical" object, and it is a biophysical object that has its own biophysical field, the dimensions of which are of the value (2):

$$\lambda = \frac{c}{\nu} = \frac{0.3 \cdot 10^9 (\frac{m}{s})}{25 \dots 50 \cdot 10^6 (s^{-1})} = 12 \dots 24(m), \tag{2}$$

Therefore, the destruction of the virus is possible already at the stage of interaction of waves of these electromagnetic fields, which gives new information about the virus that requires additional research. There is reason to believe that from this level, direct and feedback fields with the virus are possible. Therefore, it is also possible to create electronic devices that detect viruses in a space.

This research requires 2 conditions: 1) the presence of sources for the formation of ultrahigh frequencies (systems for reading and recording information of modern computers can be taken as the initial ones), 2) the presence of virus strains. Therefore, it is already the case that there exists a real opportunity to carry out research to identify resonant frequencies for COVID-19.

## 3.1. Such opportunities can be provided

In Russia: 1) Moscow – at the Research Institute of Epidemiology and Microbiology named after honorary academician N.F. Gamaleya [15], who has COVID-19 strains and created the Sputnik V vaccine, and at the Scientific Research Universities of the Physics and Technology Profile of the Russian Academy of Sciences, who has of created systems frequencies.

2) Novosibirsk – at the Federal Budgetary Institution of Science "State Scientific Center of Virology and Biotechnology" Vector" [16], where work is carried out with COVID-19 strains, and at the branch of National Russian Academy of Sciences.

Similar facilities are available for laboratories in the United States and other leading of scientifically developed countries of the world.

Therefore, the setting of the first task comes down to organizing, conducting, and financing these studies. Now, it is the most important time when it is necessary to quickly carry out in-depth research and end the debate about the effectiveness or ineffectiveness of the resonance destruction of COVID-19 and other viruses and microorganisms. If intellectual resources and funds will be wheel allocated for such research, which were allocated for the creation of vaccines, the result is possible within a year.

The main advantages of the resonant method:

- Universality regardless of the internal mutations of the virus (the main impact is related to the size of the virus, which is easier to determine than other of its parameters, and select the necessary vibrations for them).
- Possibility of action only in areas of risk of infection while a person is in them.
- Constancy or periodical constant of action in these areas, for example: 1 ... 20 minutes of switching on, which alternate after 1 ... 20 minutes of switching off, without interruptions and withdrawals from this zone of people, (which is typical for the method of quartzing). Therefore, such an action will apply to all new carriers of COVID-19, which fall into the zone of resonant vibrations at any time.

The setting of the second task is connected with the fact that, in addition to the frequency range of COVID-19 suppression, there may be a range of frequencies activating it. The baseline for the research may be 5G and 6G communication frequencies. The developers of these systems declare that there is no such influence, but the final conclusion can only be made at the official level by the International Health Organization. I am not aware of such a conclusion, signed by authoritative scientists and high-ranking government officials, who will be responsible for their conclusion before people and God.

The work carried out is against the pogrom of such stations and condemns any such action. All decisions and further actions should be legal, based on a full range of scientific research, the main criteria being their impartiality, publicity, and availability of information for the general public. They are easier to do than resonance studies because 5G and 6G systems are available.

It should be noted that the frequency of oscillation of the waves of the induced electromagnetic field, which activates the work of COVID-19, exists regardless of whether it coincides with the frequency of 5G or 6G, or not. Therefore, it must

be identified in order to exclude its occurrence in the development of any new technical systems. Against the backdrop of government restrictions and the associated losses in the tourism and restaurant business, such restrictions for electronic corporations may be appropriate and solidarity. Fighting the pandemic is more important to the public than the extra profits generated by these companies.

Thus, the formulation of the first and second tasks of this work is presented for a wide discussion of the scientific community and government agencies of all countries of the world. Their relevance and the importance of early implementation are beyond doubt, which requires the creation of working scientific groups and funding for their work.

Thereafter can be create and further implement industrial production and widespread distribution of collective and individual electronic devices that ensure the destruction of COVID-19 by inducing resonant frequencies and vibrations. Such devices will be similar to the simplest smartphones, and in the future – flash drives to computers. Therefore, they can be executed like medallions. Moreover, microchips that create such a frequency can be introduced into all smartphones and this creates ample business opportunities for manufacturers who produce them in the millions. These devices do not belong to the therapeutic ones, which eliminates numerous problems of their use. They are only disinfecting, and the treatment should be carried out according to already worked out methods.

Thereafter can be create and further implement industrial production and widespread distribution of collective and individual electronic devices that ensure the detection and destruction of COVID-19 by inducing resonant frequencies and vibrations. Such devices will be similar to the simplest smartphones, and in the future – flash drives to computers. Therefore, they can be executed like medallions. Moreover, microchips that create such a frequency can be introduced into all smartphones and this creates ample business opportunities for manufacturers who produce them in the millions. These devices do not belong to the therapeutic ones, which eliminates numerous problems of their use. They are only detecting and disinfecting, and the treatment should be carried out according to already worked out methods. They also do not reject vaccination and the need to produce and improve vaccines. However, they can reduce the cost of intellectual and material and technical resources for these works.

Despite the complexity of a number the principles put forward, the experience accumulated earlier allows us to consider them highly effective [4]. Given the relevance and importance of COVID-19 problems for all mankind, their solution should be as fast as possible. With the threat of the third and new waves of a pandemic caused by COVID-19 mutations, for which the initial period of the struggle is associated with the introduction of restrictive measures that are unfavorable for the population and business of all countries of the world, the pace of work should be no less than for work on the creation of vaccines.

Similar principles of exposure and instrument design are possible for other viruses.

On the basis of the proposed principles of combating and disinfecting COVID-19, an application was filed for an invention of Ukraine [17], for which, within the framework of its convention priority, it is possible to file applications for patents in other countries. Cooperation in this area is proposed.

## 4. Conclusion

- In the conditions of rapid mutations of COVID-19, which further become more aggressive and harmful, the development of vaccines is usually lagging behind their appearance, therefore periods of insecurity of people, are created, and constant new expenditures of intellectual and material-technical resources are required to solve these problems.
- Within the framework of the known studies on the influence of induced electromagnetic frequencies and vibrations on bacteria and viruses, there are resonant frequencies, both destroying and activating them; therefore, their identification is necessary for COVID-19.
- Under conditions of limited opportunities for vaccination, disinfection with chemicals and ultraviolet light, the proposed way to combat COVID-19 using resonance frequencies from induced physical fields and vibrations may be more effective than existing ones.
- The main advantage of the proposed method of resonant action on viruses its versatility depending on the virus dimensions and regardless of its internal mutations, which reduces the cost of intellectual and material and technical resources to achieve them.

- Constancy or constant period of action (1 ... 20 minutes of switching on, which alternate after 1 ... 20 minutes of switching) will apply to all new carriers of COVID-19 who fall into zone of resonation vibrations.
- A complete solution to the problem of combating COVID-19 is possible with a combined application of all ways: vaccination, disinfection with chemicals and ultraviolet light, and resonance frequencies from induced electromagnetic fields.

## **Compliance with ethical standards**

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Disclosure of conflict of interest

There is no conflict of interest.

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