

## LETTER TO THE EDITOR

## An Invisible Virus Has Made Visible Many Underestimated Problems in Medical Education and Research

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### Dear Editor,

In days of Global and national stress-tragedies, when what we considered to be a stable value is shaken, our eyes turn to a critical rethinking of the past. Today's reality needs more than ever not only urgent practical procedures, restrictions, etc., but a very deep and unified concept and strategy based on sound philosophy and analyses.

Evidence-based practical action is the philosophy of our behavior today. But do we have enough evidence and what are they? This is the question that still has no definite answers.

Medicine is rightly proud of many of its achievements. But today, her pride is overshadowed by her inability to defeat a microscopic invisible enemy of human health. We must be honest: it turned out that medicine is strong in new modern technologies, but it is powerless to manage an invisible enemy, massively threatening the health of the Planet. It turned out that medicine is poorly prepared for surprises – not only to meet them, but also to anticipate them.

Medicine is an art of probability and it must permanently prove the most probable predictions and the most effective actions.

Now, by accident, the means used are mainly from the middle of the twentieth Century, from this classic epidemiology that we had forgotten. But now we are not the twentieth Century, and the media constantly suggests to us as fateful paths “social distance” and “social isolation”. Are these the main or only means of saving the population in the 21st Century? And how will a society live through social isolation?

The wise people have always given the formula “We are all in God's hands”, in crisis situations. This formula actually reflects a fundamental natural law – only the great Nature, of which we are a part, will save us. Even the great Hippocrates advised the doctor: “Support the forces of nature”.

And against viruses, the greatest power of Nature is in ourselves – in our immune system. Yes, but caring for the nation's immunity would be an even more difficult task for politicians and medical professionals, because it implies larger measures for a rational style and standard of living. But how can this happen?

Preventive medicine has been on the periphery of the minds of health policymakers, in recent decades. It is formally mentioned in International (World Health Organization & United Nations Children's Fund, 2018) and national strategies, but it is not a de facto priority and pales in comparison to the dictates of clinical medicine. The message of the famous Russian surgeon Nikolai Pirogov that says “the future belongs to preventive medicine” (Komarov & Fishman, 2019; Pirogov, 1961), wait for the future, yet.

In the modern research and especially in medical education is extremely underestimated the discipline of epidemiology of infectious diseases, sunk in the shadow of the so-called epidemiology of non-communicable diseases. For 4-5 decades, physicians have been taught that infectious diseases as a cause of death have gone down in history – which was a fact for some time, but now life tells us that history is a cycle, that medical science is far from health prognosis.

Future doctors are extremely limited in their training and education on preventive and health-organizational disciplines such as health policy and management, promotion of health, public health culture and health behavior, hygiene, immunology, nutrition, medical globalization, medical prognosis etc.

Obviously, medical science and education also need accelerated creativity and development of new medical disciplines and directions, along with modern technologies.

Against this background, it is not surprising that worldwide there is no unified proven concept of an active offensive strategy in the fight against viruses in general. The big hope is for the vaccines now! But we already lost more than 1 397 139 lives, out of 59 204 902 confirmed cases of COVID-19, reported by WHO Globally, so far (25 November 2020) (World Health Organization, 2020), due to the small creature and we continue loosing every minute more and more.

It is quite difficult to predict what future lessons the current pandemic with the COVID-19 virus will give us. But we will allow the conviction that two lessons are already visible today:

1. The need for an urgent cardinal revolution in the scientific and educational sector of medicine is already felt. Recent research in this area makes this belief even more grounded (Melnyk, Pypenko, & Maslov, 2020).
2. Global awareness of the need to urgently mobilize the entire scientific medical potential of the Planet to discover a new preventive and curative era in the fight against viruses, similar to the victory over smallpox, malaria, etc., but especially similar to the antibiotic era created by Fleming in 1928.

Escape and hide from viruses should be replaced by a successful victory over them.

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