

Unusual phenomena caused by COVID-19 from the point of view of physics of life.

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Abstract

Emergence of COVID-19 virus opened a path to a new paradigm of the health care. COVID-19 introduced many problems which were not known before. The impact is huge and requires a new approach to the knowledge about physics of living systems. The scientists are looking for understanding of the principles of molecular dynamics and more.

We used our knowledge in biomechanics, psychomechanics and practical experience in clinical psychology to analyze COVID-19 dynamics and forecast its potential impact on human health, including higher psychological levels, using chronobiological approach. The physics of life allows broader view for investigation of new phenomena.

Our aim is to help medical doctors and researchers to look for better health solutions.

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INTRODUCTION

Emergence of Severe Acute Respiratory Syndrome Coronavirus (SARS-COVID-19) marked (paved the way to) a new era in the cross-species transmission of severe respiratory illness. Since then, several strains, including influenza A H5N1, H1N1, H7N9, Middle East Respiratory Syndrome (MERS) CoV and now COVID-19 have emerged from animal populations causing considerable disease and mortality.

According to the researchers, who worked with these strains, the sequence data alone provides minimal insights [1] to identify viral impacts of human health and future threats. Incomplete understanding of physics of life, of molecular dynamics makes the search for new drugs difficult and risky. Researches are looking for more knowledge about life processes at tiniest levels. Scientists believe that they know no more than 7% of the information about the micro world.

We will study pathogenicity of COVID-19 from the point of view of physics of life, bio informational and biomechanical principles.

1. COVID-19 metagenomic

Metagenomic data of the original species implicated in COVID-19 differs from previous domesticated sources for influenza A H5N1, H1N1, H7N9. The wild nature of bats, their specific diets, toxicity, viral and parasitic internal landscape, their reversed chronobiological cycles (compared to human), specific remote senses of echolocation changed viral metagenomic information. COVID-19 became more invasive, aggressive and destructive.

The analysis of internal environment of bats shows that their Red Blood Cells, RBC, are smaller than human , higher in number and have higher efficiency to manage oxygen exchange during such energy consuming activity as flight is[2].

The genetic material of bats is acquainted with the genetic material from cimids, whose saliva components contains special molecules that neutralize haemostatic answers of host body. This is mostly apyrase, an inhibitor of Factor Xa, responsible for the coagulation cascade (Valenzuela et al. 1996), and nitrophorin that enables nitric oxide (NO) transports (Valenzuela et al. 1995). These molecules thus halt immune system response and help to avoid blood coagulation. One of the reasons why some bat species are not infested by cimicids in the wild may be a stronger immune defense and the higher number of white blood cells (eozynofiles or neutrofiles).[2]

Thus the novel spike protein derived from bats genetic material demonstrated robust viral replication. We cannot exclude other components contributing to COVID's conflicting behavior.

2. Physics: General principles

Physics of living systems, molecular dynamics, energy, information interaction belong to the most sophisticated problems to be researched yet.

Let us apply A. Einstein's "*Philosophy of Geometry*" to study Nature from the point of view of geometry first and then to "fill it with Physics"[3]. It initiated the search for a better theory, Unified field theory. The search for a "more advanced quantum theory" has been successfully continued by the well known Russian physicist Gennady Shipov, who solved A. Einstein's two problems and proposed the equations of Physical Vacuum [4].

$$\nabla_{[k} \sigma^{i]} - T_{[k} \sigma^{i]} - \sigma^{[i} T^{+}_{k]} = 0, \quad (A^s)$$

$$R_{kn} + 2\nabla_{[k} T_{n]} - [T_k, T_n] = 0, \quad (B^{s+})$$

$$R^+_{kn} + 2\nabla_{[k} T^+_{n]} - [T^+_k, T^+_n] = 0. \quad (B^{s-})$$

- ∇ - symbol nabla or a vector differential operator
- $i, k, n, \dots = 0, 1, 2, 3$ - coordinate indices
- σ^i_{AB} - spinor matrices, generalizing Pauli's matrices in a case of the curved and twisted space,
- R_{ACln}, R^+_{BDkn} - spinor matrices of Riemannian curvature
- sign + - means Hermitian adjoint
- T_{kCE}, T^+_{kBD} - Carmeli's matrices, spinor torsion matrices, that describe Dirac's spin and anti-spin.

Thus we have *Geometry filled with physics* and expressed in mathematical language.

The universal principles will help in our studies of the physics of living systems. The above principles can be applied to the higher levels related to psychophysics.

The strategic vision will help us in our study of viral behavior and mechanics of viral propagation, events of transfer and editing the genetic info, inverting the host's proteins and twisting their genetic code.

Without understanding the life processes at this fundamental level, it will be hard to find the appropriate solutions in healthcare

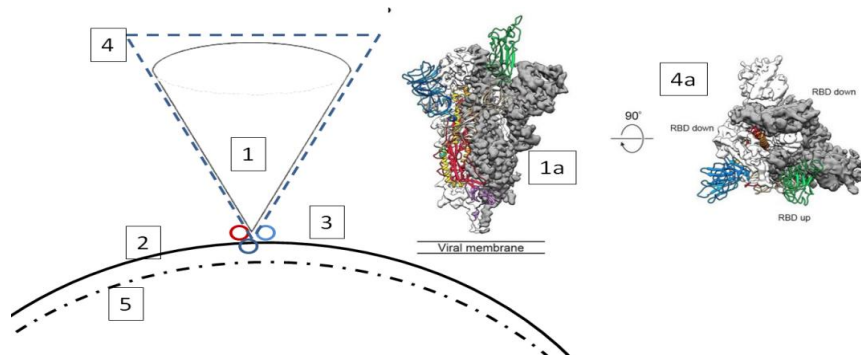
COVID-19 produced huge impact on healthcare system, therapy methods. Doctors faced unusual events and are waiting for urgent explanations of several phenomena caused by COVID-19 infections. They want to know what are the causes of:

1. Severe hypoxemia and the loss of oxygen in the human lungs and other tissue.
2. Stroke events during infection with COVID-19
3. Unknown earlier side effects

3. Molecular motion and energy

Understanding the principles of Biomechanics [5] will help to understand COVID-19 spike's propulsion into the host cells and the induced effects.

Let us review the event how the virus approaches its target.

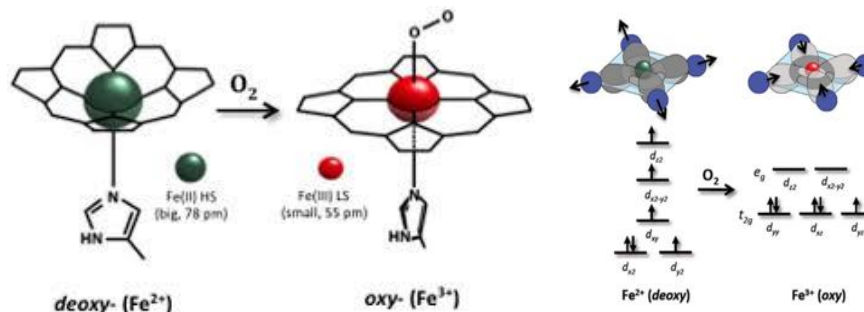


Picture 1. COVID-19 Spike concept: Spike (1) binds to a host receptor on the cellular membrane(2), 1a. Spike's protein structure, three points indicate sensors and a path (4), dotted line (5) around spike is associated with its energy field produced by rotating elements of the spike (4a), dotted line (5) is associated with weakening immune response of the host cells.

The spinning components of the viral spike sense and find an attractor or an appropriate entry spot (spin-anti spin principle), rotate and invert the spatial elements of the host's membrane, inject viral components to start replication and infectious process. The binding and fusion processes are complex: needed strength of conformational signals, sufficient binding surface, energy, fit in Time, etc. If we want to stop this propagation, we have to find the appropriate solutions to repel viral impacts at this stage.

In a host's body virus affects Hemoglobin (Hb) ability to bind up to oxygen causing hypoxemia. Porphyrin rings (picture 2) with their Alfa and Beta groups are responsible for fixing positive Iron atoms (Fe²⁺, Fe³⁺) in their center and binding to O₂ or CO₂.

Accelerated motion of COVID spike impacts the motion of Porphyrin dynamic group, disrupts energy and Real Time stability. Loss of the stability of dynamic group causes its elements to disassemble. Oxygen cannot bind, Iron forms toxic clusters, etc. That induces hypoxemia and causes Multiple Organ Dysfunction Syndrome.



Picture 2. The moving system resembles 4 dimensional gyroscope described by Descartes mechanics []. The energy of the center of mass is created by the spinning components (Alfa and Beta groups moving as in 4-D gyro with spin and anti spin) that secures stability of motion and perception of neural signals in Real Time.

The loss of stability disrupts mechanical functions, energy failure and informational transfer at many levels of the host. Do all the credits go to COVID's system or the host's living system is weakened?

The present methods by hyperbaric oxygen therapy may induce viral activity with severe side effects. It could be better to add a little Helium as in decompression sickness. Helium looks as a perfectly compensated "machine" and does not need to join with other elements.

Supply of "hot molecular oxygen" is a good health protection for respiratory system and relaxation of endocrine system. Simple advise: it is good to breathe over steam for few minutes (cautious – not to burn the skin and close eyes). Steam will activate molecular dynamics in human air ways, form natural sweat in the tissue, improve electron bonding as well as relax the kinetic shock and enhance the functions of important hypothalamic and cerebral areas. Enhance respiratory functions.

4.Psychophysics

Problem 2. Sudden stroke during COVID infection.

In our previous study we have described Psycho mechanics states during stroke events [5, 6], picture 3. The paralysis (often due to stress or infection) of the certain cerebral areas (A, C) affects assembly of insulin receptors(D).. The picotechnological model of an insulin receptor IL-34 shows the motion of its elements (the little dots present electrons (D)). Insulin receptor moves according to DM principles (B): spin and anti spin. It cannot be assembled, if it cannot receive a specific neural signal from the Executive level (C). The blockage of insulin receptor in Real Time interferes with blood sugar management processes. Therefore we observe incidences of diabetes during stroke events. Diabetes can disappear after the patient's recovery.

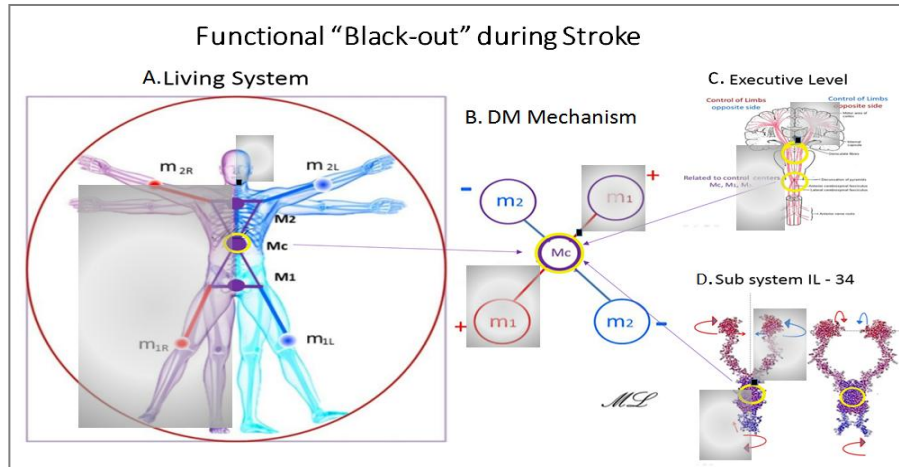
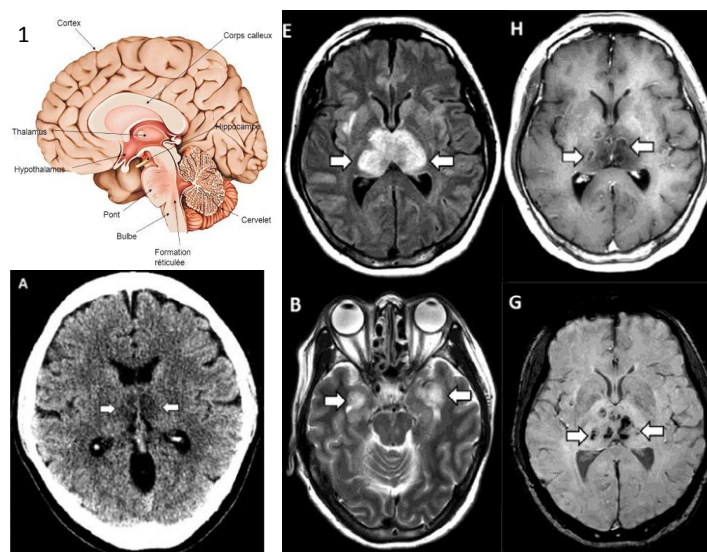


Figure 3. Zones with phases of blocked (inhibited) neurosignals are marked in gray color.

How it is related to COVID-19? From the description of the researchers we learn that COVID-19 infects brain areas causing Acute Hemorrhagic Necrotizing Encephalopathy.



Picture 4. 1. Brain areas for references; A. CT of the patient's brain, the arrows show the affected areas with thalamic lesions; MRT: B,G,E,H. arrows show lesions of the medial sections of the temporal lobes, thalamus, hemorrhage (black dots) and ring-shaped accumulation of a contrast agent (ring-shaped light areas). **Credit: Brent Griffith et al. / Radiology 2020**

The picture 4 shows CT and MRI images with lesions of thalamus, temporal lobes, hemorrhage (black dots) and ring-shaped accumulation of a contrast agent (ring-shaped light areas). The sudden stroke could be caused by COVID-19 infection of specific brain areas.

5. Physics of Time



Problem 3. Unknown side effects caused by COVID-19

COVID-19 has the ability to reach the central brain areas, thalamus and nuclei of hypothalamus. These areas act as hub-like exchanges of information. They control main life function, such as relaying of sensory signals, including motor signals to the cerebral cortex, and the regulation of consciousness, sleep, and alertness, circadian rhythms. Chronobiological processes are directly related to immune system functions, respiration, growth and cellular decay, and are adjusted (entrained) to the local environment by external cues called zeitgebers (from German, "time giver"), which include light, temperature and redox cycles.

The ability of COVID-19 to infect central nervous, endocrine system allows it to translate its genetic content to the main life forming centers of the host.

As remarked above the wild animals like bats have the specific genetic codes related to their own biological rhythms (reversed cycles compared to human), toxic and parasitic internal landscape. Thus the editing of human information by the reversed viral content may cause serious conflicts resulting in cytokine storm.

Let us have a look at the operational system that controls the informational exchange and sequence of events in the living systems. The simplified presentation is adduced from the earlier author's articles about the biomedical research and laboratory measurements.

	Systems/ Levels	A. Human	B. Viral	C. Forecast of COVID-19 impacts on human health	
		Healthy Functions (at stability levels)	Viral Functions (approximation)	Mild	Severe (compromised human system expected)
EXTERNAL	9. Time of Universe	Direct interaction Sun, air, water, natural elements,	Indirect interaction (through human)		Interruption (by action of virus)
TIME	8. Time of 'I'	Chrono- biological cycles Circadian rhythms Formation of living matter	Chrono- biological cycles	Partial impact	Reversed living processes in Real Time, impairments of perception, impacts on functions at all levels
PSICHOTECHNOLOGY	7. PSI	I- Self, PSI Sense (Soul), Auto immune 	Limited to... Programmed to destroy	No impact	Depression Tiredness
	6. Strategy	Will, Decision making, Optimism (will for better life) 	"programmed" to reproduce itself Reprogram new host's motion groups	No impact	Confusion, Fear



	5. Info Sensory		Viral sensory system	Mild	Reversed perception, Loss of different senses
	4. Executive motor functions		Order to propagate	Mild	Reversed perception, Feeling dizzy, Can lead to stroke,
BIOMECHANICS	3. Global	Global groups polarity, precession, libration	Global groups Proteins		Reversed Loss of balance Feeling weak
	2. Complimentary	Compound group	Binding to host's motion groups		Reversed
	1. Basic Propulsion systems	R-Center-L	Propel forwards (path)		Reversed

Table 1. Concept of the operational levels of the living systems: A. Human system, B. COVID-19, C. Forecasts of the potential impacts on human health: mild and severe.

Any living system exists in Real Time of the External Universe. All the internal events of the living system are also managed in Real Time of the Internal Universe. They are synchronized.

The sophisticated operational system synchronizes and regulates the functions of different levels and groups of a living system in the orderly manner to secure its optimum functions and survival. Retardation or acceleration cause unbalances and can lead to diseases. Time is life forming Reality for various matter and at various levels [7].

The Healthy states depend upon the synchronized regulation of all the levels and dynamic systems.

From the above table we can clearly see that by editing Time processes COVID virus can reverse all the life functions of the host. That can explain the complexity of the impacts, side effects, mutations, etc. Of course, this process depends upon the host's health state.

Some remarks about unusual behavior of COVID-19 virus have to be done. Mainly longsighted invaders have their perspectives for their survival. Meanwhile some versions of COVID-19 seemed to have another purpose. They act aggressively, but aim for upgrade of their systems by going into brain areas. They reach areas responsible for formation of chronobiological functions and control of higher levels of host's living system. Thus it is difficult to define them as non alive. And this event should not be ignored.

It is important to understand how human living system works in order to avoid high risks, while playing with unknown factors. It may lead to unwanted and uncontrollable results and cause a huge damage to humanity.

The development of new drugs, vaccines have to consider the physics of life, if scientists are looking for success.

Applying the above knowledge we are also testing the potential solutions for protecting human health from aggressive guests. Without going into our *know-how details*, we achieved success in producing an organic solution, which works according to the intricate Vacuum equations, balances the quantum energy, following the Natural Laws of Life. Our purpose was to stop viral propagation by the optimizing chronobiological functions of the host's brain cells.

Conclusion

This article was written with the purpose to provide some knowledge about physics of life for finding better health solutions in critical time of pandemic, when everybody faces unusual behavior of COVID-19 virus and are looking for new knowledge.

We have discussed some the main principles of molecular dynamics that explains the phenomena of hypoxemia, stroke incidences, insulin receptor dynamics and unusual phenomena of cytokine storm. The new understanding of Time forming living systems and the ability of COVID-19 reverse chronobiological rhythms in a host is sending warning signals to humanity.

The questions of healthy well being and even survival became the priority at present. We will discuss them in the next article.

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Competing interests

The author declares no competing interests.

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