



# Evaluation of the Interaction of Corona-Nanoparticles (SARS-Cov-2) and Water Using Emointelligence Equation

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## Abstract

### Abstract

Our recent theory point to the implication of water in the modulation of emotion using emointelligence equation in Eukaryotes (Human or Animal) and Prokaryotes (SARS-CoV-2). Interestingly, the interpretation of emointelligence equation based on Emotion modulation via water (E) and Intelligence (I) in Eukaryotes and Prokaryotes show that in the case of  $\text{Log}(E \text{ Euk}/E \text{ Prok}) = 0$  we have  $\text{Log}(I \text{ Euk}/I \text{ Prok})$  near 10 and  $E \text{ Euk}/E \text{ Prok} = 1$ . In addition, good health could be a result of physiological hydration and stability of  $E \text{ Eukaryotes}/E \text{ Prokaryotes}$  ratio (R) near 1. The present manuscript aim to help scientific community to better understand the implication of the level of Human or Animal hydration in the physio-pathogenicity of SARS-CoV-2 and the genesis of COVID-19. Our analysis point to the presence of possible link between water, hypoxia and SARS-CoV-19 pro-pulmonary complications via angiotensin-converting enzyme 2 (ACE2) playing a key enzymatic component of the renin-angiotensin-aldosterone system.

**Keywords:** SARS-CoV-2; COVID-19; ACE2; Renin-angiotensin-aldosterone system; Nanotoxicity

## Introduction

Coronavirus disease 2019 (COVID-19) induced by SARS-CoV-2 can be considered as a unusual phenomenon to biomedical community especially its unusual mechanism of pathogenicity related to possible implication of hydration of Human or Animal in virus nanotoxicity. COVID-19 are exceptional disease leading to important lethality [1]. SARS-CoV-2 cytotoxicities could be related to several physicochemical properties of cells especially in lung via ACE2 receptors [2]. We propose a detail overview of hydration mechanisms implicated in SARS-CoV-2 cytotoxicity in accordance to recent data, showing that structure of the virus in the cytoplasm of three day post-inoculation cells is about 70–90 nm in intracellular organelles, especially in vesicles [3].

Coronaviruses are enveloped with single stranded positive sense RNA genomes and four structural proteins (nucleocapsid, envelope, membrane and spike). The Spike (S) protein (about 20nm) forms club-shaped protrusions that stick out all over the virion, resembling a crown or the sun's corona similar to desert plants suffering from dehydration stress. SARS-CoV-2 possess high surface (S) area compared to volume (V) (S/V ratio) and nanoscale implicated in inflammation [4]. SARS-CoV-2 attacks human angiotensin converting enzyme 2 (ACE-2) in numerous tissues especially ciliated bronchial, epithelial cells and type II pneumocytes. The present receptor ACE2 was implicated in water management in the Human and Animal body via a mechanism known as Renin-angiotensin-Aldosterone and it is important to point that good hydration is important for all age groups and

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especially in COVID-19. We discuss in the present manuscript a new model based on body hydration level in order to understand why children are more resistant to COVID-19 than adult.

### Emointelligence Equation Applied to SARS-CoV-2: Possible Modulatory Effects of Water on Emotion

Health could be understood as living systems coherence or harmony especially the ratio Eukaryote/Prokaryote (SARS-CoV-2). The debate has now shifted from the question of whether hydration is involved in possible modulatory effects of water on emotion in Prokaryote-Eukaryote. The good health could be associated to the stability or equilibrium between Eukaryotes and Prokaryotes values giving a ratio (R) near one. This ratio stability could be controlled by a probable implication of positive or negative values of alpha or emotions via water in Prokaryote and Eukaryote. Thus, every disruption in water and emotion induce different ratio values such as ratio  $<1$  or ratio  $>1$ . The mathematical resolution of emointelligence equation could be based on three values ( $R<1$ ,  $R=1$ ,  $R>1$ ) of the ratio of Emotion and water in Eukaryotes and Emotion Water and Emotion could determine the nature of interaction between Prokaryote and Eukaryote during stress especially hydric stress, xenobiotic exposure, and electromagnetic field exposure such as WIFI. Nowadays, we believe that emointelligence algorithm describe good health with a harmony between water, E Euk and E Prok and diseases results for disharmony. The early death cases of COVID-19 outbreak occurred primarily in elderly people, possibly due to a dehydration and a fall of alpha values and emotions leading to a weak immune system that permits faster progression of viral infection. Our theory point to the existence of possible connectivness between Prokaryote and Eukaryote to

maintain ratio values near 1 via water and emotion, indicating that Prokaryote-Eukaryote provides algorithm stability and health status.

### Angiotensin-converting Enzyme-2 (ACE2) Properties in COVID-19

Recent research point to the implication of Angiotensin-converting enzyme-2 (ACE2) host receptor for severe acute respiratory syndrome such as SARS-CoV-2. In Human and Animal physiology, ACE2 is a pivotal counter-regulatory enzyme to ACE by the breakdown of angiotensin II, the central player in the renin-angiotensin-aldosterone system (RAAS) involving blood pressure regulation, electrolyte homeostasis and good hydration in all age groups. Major effects of Ang II include vasoconstriction, renal sodium reabsorption and potassium excretion, aldosterone synthesis, blood pressure elevation and induction of inflammatory and pro-fibrotic pathways [5,6]. Many mechanisms or nanomechanisms have been associated with both altered ACE2 expression and COVID-19 severity and progression, including age, sex, ethnicity. Recent data confirm the established role of ACE2 expression and activity in COVID-19 pathogenesis. Additionally, ACE2 was present on vascular endothelial cells and smooth muscle cells in all organs studied. In the kidney, ACE2 was strongly expressed in the brush border of proximal tubular cells and moderately or weakly in parietal epithelial cells and podocytes, whereas ACE2 staining was weak or negative in glomerular endothelial cells and mesangial cells. Furthermore, we previously noted that endothelial ACE2 was upregulated in the glomerular and interstitial capillaries in kidney diseases.



*Figure 1: Comparative morphologic study between SARS CoV-2 and desert plant (Cactus).*

### Water in Mitochondria and SARS-CoV-2

Point that mitochondria has a potential to produce and recycle its own metabolic water independently to the drinking water [7]. During COVID-19 pandemy, we must be hydrated but we have to drink water when we are thirsty because drinking too much can

interfere with the body's ability to recycle the low deuterium water we are producing in our mitochondria. Researchers discuss how the oldest populations (over 100 years) lived in higher altitudes well adapted to hypoxia and low deuterium content [8]. SARS-CoV-2 can interfere with water in cells via ACE-2 and different nanomechanisms inducing hypoxia and decrease energy

production in cells and metabolic rate in endotherm compared to hibernant and poikilotherm. SARS-CoV-2 also could disrupt mitochondrial quantum vacuum leading to a fall of energy in cells via quantum destabilization of hydrogen ions. Interestingly, hydrogen protons in water and gas are compromised by deuterium, hence deuterium depletion is a critical process to maintain health and resist to the nanotoxic effects of SARS-CoV-2. In man, the water lost from the lungs is generally greater than the total production of metabolic water. In general, the only advantage of fat over carbohydrate under conditions where desiccation is that a smaller weight will have a higher calorific value and will give more water of metabolism than the same weight of carbohydrate. The SARS-CoV-2 as nanoparticles could induce mitochondria toxicity indirectly by iron released from Heme or a different cluster Fe-S between virus and Heme activating Fenton reaction and probably disrupt water mitochondrial production. Interestingly, mitochondria are considered as a major cell compartment relevant to possible SARS-CoV-2 nanoparticle toxicity.

### Morphology of SARS-CoV-2 and Desert Plants

The SARS-CoV-2 morphology with different spikes could be compared to desert plants like Cactus. These plants have to survive in deserts where the water is scarce. Therefore, these desert plants probably as SARS-CoV-2 need to avoid those pores to lock the minimum levels of moisture they have. Hence, these leaves do not have pores and the leaves become hard with dry spines or thorns. These thorns conserve water by not letting out the moisture content at all. The greener part of the bottom part of a leaf has a minimum activity which helps the plant to survive. Desert plants need to use the little water they have frugally [9].

### Conclusion

Our analysis of COVID-19 suggest for the first time as far as we know that SARS-COV-2 as nanoparticles inducing mitochondria toxicity probably via endogen water production disruption. Moreover, SARS-CoV-2 toxicity could be related to hydration in endotherm species compared to hibernant and poikilotherm. The implication of age, gender, overweight and ethnicity to COVID-19 must be confirmed by future studies related to endogen mitochondrial water. Virus could use nanomechanisms to induce hypoxia, water mitochondria depletion via generation of Heme-virus clusters mitigating microcoagulation. The most important question is whether Human or Animal hydration could play a key role in SARS-CoV-2 nanotoxicities.

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