

Antiviral Effects of Nano Colloidal Silver, Water Catholyte, Oxidant with Methylene Blue: Possible Effects of Influence over Coronavirus SARS-CoV and SARS-CoV-2 with Disease COVID-19

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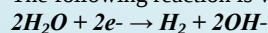
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ABSTRACT

Antiviral effects of water catholyte: The electrolyzer has two parts, which are separated with semipermeable membrane. The anolyte is obtained at the anode and is acidic fraction. The catholyte is obtained at the cathode and is the alkaline fraction. Phylogenetic and comparative analysis of SARS-CoV E shows that TMD consists of the two nonpolar, neutral amino acids, valine and leucine. They lead to a strong hydrophobicity to the E protein. In SARS-CoV there is an interaction between E and S proteins. The interaction is via disulfide bonds. The C-proteins are positively charged. Viral infections occur mainly by C-terminus of target proteins.

The following reaction is valid for the interaction of Catholyte and the virus:



In this reaction, is possible the free electrons (Ignatov, Gluhchev, Karadzhov, Mosin, Popova, Miloshev et al.) are released that neutralize the positively charged C-proteins, which are responsible for the viral infections. The doses are high and the achieved effects are significant. Catholyte with strong antiviral effect are needed the following values:

Daily dosage: for pH=9.5 ORP $\geq$ (-650) mV; for pH=10.0 ORP $\geq$ (-500) mV; for pH=10.5 ORP $\geq$ (-450) mV of drinking water per day.

Antiviral Effects of Oxidant with Methylene blue: Methylene blue has inhibiting action on viral replication (Oz et al., 2011). Its chemical formula is as follows: $C_{16}H_{18}ClN_3S$. Oxidant contains – 1% “methylene blue”: ($C_{16}H_{18}ClN_3S$), 1% caffeine; 1% benzoic acid (C_6H_5COOH). There results of Methylene blue (MB) with West Nile virus, AIDS-related Kaposi's sarcoma and RNA viruses and also progeria. When entering mitochondria, Methylene blue (MB) acts like an additional electron source. It is firstly reduced to MBH₂ by the NADH-dehydrogenase of complex I and then re-oxidized back to MB by cytochrome c. cycling between those two forms facilitates electron transportation for ATP synthesis, the major function of the mitochondria. Currently available results for SARS-CoV, demonstrate that the virus affects the mitochondria in order to suppress the immunity of human body (Nelemans, 2019) (Schoeman, Fielding) Oxidant stimulates the mitochondrial function and ATP.

Daily dosage: 15 mg-16 mg of MB

Antiviral Effects of Nano Colloidal Silver Ag⁺: The nano colloidal silver with size 5 nm of Ag⁺ has got inhibiting effect over respiratory enzymes of the micro-organisms by building into the reaction center of the enzymes. Thus, it prevents the further alteration of the enzymes (Dondysh, 1964). Colloidal silver makes physical changes in the bacterial membrane, like the membrane damage, which can lead to cellular contents leakage and bacterial death interact with and potentially disturb the functioning of bio molecules such as proteins and enzymes (Mosin, Ignatov, 2013). The coronavirus replicase was recently predicted to employ a variety of RNA processing enzymes. The colloidal silver Ag⁺ inhibits such copying of the enzyme RNA-dependent RNA polymerase. In, and in this way are neutralized the effects of SARS-CoV-2, and in this way the effects of COVID-2019 are neutralized. In order to obtain colloidal silver with method of electrolysis with silver anode (Mosin, Ignatov, 2013) the following ingredients are required:

Daily dosage: 5 µg micro g per 1 kg body weight, ex. 5 µg x 70 kg body weight = 350 µg = 0.00035 g.

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