

The Japanese Alternative to Hydroxychloroquine: Zinc + Hinokitiol

Published: June 9, 2020 at 7:25 p.m. ET

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Jun 09, 2020 (AB Digital via COMTEX) -- Much of what makes Hydroxychloroquine effective in combination with Zinc is believed to be its Zinc Ionophore capability. That is, the ability for Hydroxychloroquine to transport Zinc into cells and inhibit viral replication. Hinokitiol is also a Zinc Ionophore and was discovered in Japan in 1936. Hinokitiol is naturally occurring and draws its advantage from having low toxicity, hence, its wide inclusion in consumer oral care products. It is also an approved food additive in Japan, with 'Hinoki Clinical jp' selling Hinokitiol based products since 1956. Hydroxychloroquine requires a prescription, alternatively Hinokitiol can be purchased in consumer oral care products without restriction in both the EU and the USA.

Antiviral Properties of Zinc

The antiviral activity of Zinc depends on the intracellular availability of Zinc. In vitro, Zinc doses of > 2 µM inhibits replication of SARS-CoV by inhibiting RNA-dependent RNA polymerase Zinc. Zinc also has direct antiviral properties that include stimulation of a variety of antiviral signaling events. For example, Zinc levels have been associated with inhibition of IFN-13 signaling, actions which may moderate cytokine storm associated with worse outcome in patients infected with SARS-CoV.

Role of Hinokitiol

Hinokitiol (hk) is a Zinc ionophore that accelerates the uptake of Zinc inside the cell. This action increases the concentration of intracellular Zinc, potentiating its antiviral activity. The continuous presence of Zinc ionophore such as hk is required for Zinc ions to maintain the antiviral properties. At doses of >0.2 µg/ml hk directly inhibits viral and bacterial activities. A coronavirus disinfectant patent reported that a content of 0.02 to 0.2% by mass hinokitiol was effective.

Conclusion

Available evidence suggests that a combination of Zinc and Hinokitiol are synergistic in inhibiting growth of viruses including SARS-COV. [Dr ZinX Oral Spray](#) is a novel patented oral formulation (Patent number: 2020900820) consisting of Zinc and Hinokitiol. Dr ZinX has the potential to reduce the viral load in oral mucosa, reducing chances of human-human transmission and severity of COVID-19.

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