

# THE WINE DOCTOR

## IMMUNE BOOST WITH RESVERATROL: Combatting current and future infections

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The world is currently in the grips of the Coronavirus Pandemic. It is not the first pandemic and certainly will not be the last to infect the world – think of the Spanish Flu in 1918-19, the Asia Flu in 1957-58, the Hong Kong Flu in 1968-69 and the Swine Flu in 1976. These were all variations of the Influenza virus.

With the rise in mass global air travel came the possibility of the rapid spread of infections – especially viral pathogens causing respiratory infections. The first of these emerging, rapidly spreading infections was the Severe Acute Respiratory Syndrome, or SARS coronavirus, infection in 2003; which was followed in 2012 by the Middle East Respiratory Syndrome, or MERS coronavirus (CoV). Now we are confronting the Covid – 19 pandemic.

Because these pandemics are mainly caused by viruses, we have to rely on our immune system to fight them off, because they are not bacterial infections which could be killed by antibiotics. There are only a few different types of antiviral drugs and they are usually expensive.

So how can we improve our immune system to protect us from these various infections – now and in the future? Not smoking is a good start because most infections eventually cause a respiratory system infection such as pneumonia which can kill the infected person. Staying fit and healthy are also very important; maintaining normal metabolic health, as well as eating a healthy diet rich in anti-oxidants. This is where RESVERATROL comes into its own.

An article was published in 2017, in BMC Infectious Diseases, showing how Resveratrol was able to control the MERS CoV infection in vitro – that is in laboratory experiments. The article was entitled, “ Effective inhibition of MERS CoV infection by resveratrol” by Lin, S. C. et al . It identified the various ways that Resveratrol was able to not only inhibit MERS CoV infection but also other emerging RNA viruses.

Another recent pro-Resveratrol article was published in 2019 in Nutrients entitled, “Influence of Resveratrol on the Immune Response.” by Malaguarnera, L et al. This article also identified various ways Resveratrol was able to boost our immune system. The article concluded – “The effects of this biologically active

compound on the immune system are associated with widespread health benefits for different autoimmune and chronic inflammatory diseases.”

For the biochemists and medically trained – the various possible antiviral mechanisms postulated by which Resveratrol inhibits viral infections include the following:

1. Activate ERK 1 / 2 signaling pathway
2. Enhance SIRT 1 signaling – both of these help cell survival and DNA repair in response to DNA damage from the virus.
3. Down-regulating FGF -2 signaling which would counter viral induced apoptosis or cell death.
4. Inhibiting inflammatory cytokines by interfering with the NF [nuclear factor] -kappa B pathway.
5. Reducing cleaved Caspase 3 levels. Caspase 3 cleavage occurs in cell apoptosis.

In summary - Resveratrol promotes cell survival and reduces viral induced apoptosis.

The various possible mechanisms for Resveratrol boosting the immune system’s response to infection and chronic inflammatory diseases include the following:

1. As above – Resveratrol targets SIRT 1, NF – kappa B and inflammatory cytokines
2. Targeting adenosine monophosphate kinase
3. Enhances anti-oxidant enzymes
4. Suppresses TLR or Toll Like Receptor which causes inflammation
5. Suppresses pro-inflammatory gene expression

In summary – Resveratrol enhances the immune system via the many different biological mechanisms listed above.

The best way to get your daily Resveratrol needs is by consuming either ‘The Wine Doctor’ Resveratrol Enhanced Wine (REW) or ‘Reselixir’ REW; because the best way to absorb Resveratrol is via the buccal mucosa or the lining of the mouth; which is what happens when you drink Resveratrol as a wine and not as a capsule or tablet.