Rapid Response:

Hope and knowledge, after all, is very contagious—more contagious than this virus.

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During the last several months the world has watched as CoVid-19 spread. With countries imposing various degrees of containment and quarantine, pandemonium set in before the announcement of a pandemic by the WHO on 11 March 2020 - as fear spread faster than the virus.

Let us take a moment to reflect on what we know and what we can learn from this virus.

FIRST – What we know about CoVid-19.

This Coronavirus is behaving exactly like a virus. This means it is transmitted in specific ways: it attaches to certain tissues within the body and its goal is not to kill its host but to survive within the host.

If we knew nothing more, that should be enough to calm our fears and promote cooperation among all of us. That should be enough to halt the run on store products and stop the price gouging of toilet paper, tissue, hand cleaner, and other items, while calmly promoting restoration of the stock market, the world economy, and our countries.

This virus is transmitted by people sneezing or coughing on you. Masks are for those people who are coughing and sneezing—for them to wear to reduce their coughing or sneezing their virus upon you—not for you to wear when you're not the one coughing or sneezing. This behavior of everyone wearing masks doesn't stop the spread; in fact, it may increase the potential for warm moist areas for the virus to survive and it promotes unnecessary fear.

(1) A major method of spreading the virus includes touching your face with your hands and then spreading the virus by touching others, as well as increasing the likelihood of further infecting yourself with more of the virus.

(2) The virus attaches itself to the lungs and GI tract, where IgA is primarily responsible for addressing immunologic responses. This means we know what to look for and what to treat, allowing those who are sickest to be best taken care of. This is why we see the immune-compromised elderly and those with heart and lung problems most susceptible.

(3) Viruses don't try to kill their host: if they were successful at that, it would prevent them from reproducing themselves and surviving.

SECOND – What we can learn from CoVid-19.

CoVid-19 presents us with a unique opportunity to learn and potentially develop new treatments for IgA disorders, CAD, and cancer.

While this virus is clearly harmful—especially to those whose health is already limited (including the "elderly" and people with serious health problems)—it is important to note even in the face of this adversity what we can learn from this virus.

(1) First, CoVid-19 is primarily a virus that attacks the pulmonary and gastrointestinal systems of the body. Although the emphasis has been placed on the development of pneumonia, it can also cause diarrhea. The significance of this, at least initially, is the importance IgA plays in the immunologic defense of our bodies. Thus, CoVid-19 presents us with a unique opportunity to better understand the role of IgA. The potential discoveries—as with most—may hold the key to understanding and treating other life-threatening diseases [1-3].

(2) Secondly, coronary artery disease (CAD) is an inflammatory process and as explained by the first author; bacteria, viruses and other infectious diseases can be involved in the development or progression of CAD [4,5]. It is possible that not only are some of the deaths associated with CoVid-19 due to pneumonia... but also due to CAD, especially given the increased incidence of deaths in the elderly and individuals with co-morbidities. Therefore, an understanding of CoVid-19 may hold potential insights and treatment options for CAD.

(3) Thirdly, Coronaviruses get into the cells of our bodies via a receptor on our cells coded for by the ACE2 gene. This gene is involved in the angiotensin converting enzyme (ACE) pathways involved in high blood pressure. We also have information suggesting that vitamin D may be important in regulating this by reducing the renin-angiotensin system (RAS) itself [6-8]. It is also true that CoVid-19 pneumoniae may respond favorably to certain anti-malaria drugs, which appear to increase the production of interferon and inhibit stimulation of toll-like receptors [9-11]. This information may provide treatment options for those who are most critically ill at this time.

(4) Finally, and not the least important, CoVid-19 has an unusually large amount of ribonucleic acid (RNA) compared with most viruses. It is thought that viruses tend to have less RNA due to problems associated with replication of the RNA. The greater the amount of RNA, the greater the potential for errors in replication and self-extinction of the virus. CoVid-19 is unique! What we have started to learn is that CoVid-19 appears to have within this additional RNA the genetic information to correct the errors in replication, thus avoiding this extinction process. CoVid-19 appears to have the ability to correct errors introduced and restore the correct original genetic code. The ability to correct transcription and translation errors in human cellular genetic material - resulting from insults to the genome, causing mutation changes [6] resulting in increased metabolism and regional blood flow differences [4,14] eventually resulting in cancer [8,13-15] – by understanding how CoVid-19 is able to do this, could provide us with a unique opportunity to better understand and potentially treat cancer and CAD [16].

Humanity is scrambling to address an invader attacking our very immunologic system. This very invader—if we don't lose sight of the forest for the trees—presents us with the potential to better understand and treat CAD, Cancer and our immunologic system–including, but not limited to, IgA disorders.

As the United States and other countries allocate money for testing, containment, and treatment —including potential vaccination—let us not lose sight over the possible lessons and knowledge being provided to us by CoVid-19. Let us hope and ask that our governments will look at both the forest and the trees and provide money to investigate what CoVid-19 has to teach us about CAD, Cancer, and these IgA disorders, and not merely do a knee reflex and miss the opportunity to investigate this evolutionary information being presented to us by CoVid-19.

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