ISSN: 2577 - 8005

Opinion Article

Medical & Clinical Research

# The COVID 19 Desire for Cure - Exahusting Quest for Remedy, Mutations and Cytokine Storms

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**Submitted**:09 July 2020; **Accepted**: 14 July 2020; **Published**: 24 July 2020

## Foreword

With the intent to cure the elusive disease, the Corona Virus (SARS COV-2) propulsion can be thought to project to cases of neurodegenerative diseases [1]. Standard features of inflammation (redness, edema, fever, pain). The loss of function and immunological response involved in the production of specific antibodies against Aggression Agent. The inflammatory response is not always sufficient, and the process can progress to a chronic inflammation. On-steroidal anti-inflammatory drugs (NSAIDs) are now the main family of drugs used to treat Inflammation but often, they show gastric and cardiovascular side effects. This situation is an incentive towards a search for new molecules to treat Inflammation. Many plants mostly used against inflammatory processes, so they are potential sources of new bioactive molecules. Among the various chemical classes of natural bioactive products, Flavonoids - a group of polyphenolic compounds - show exceptional promise. Flavonoids are widely distributed throughout the plant kingdom and are pharmacologically important, especially for their action Inflammation and immune system [2]. This article describes various aspects of the inflammatory process and its treatment, with a special people Focus on the anti-inflammatory activity of flavonoids. And other polyphenolic antioxidants present in fruits, for example [3]. With the intent to cure the elusive disease, one may consider that the coronavirus virus eradication (SARS COV-2) is projecting to cases of degenerative diseases. One might focus on suppressing the body immunity and cytokine overproduction by the much-desired curing agents [4].

When the virus enters the body, it passes mainly in the respiratory and digestive tract. The virus then binds to specific receptors located across the epithelial cells to enter these cells. Viral replication within the cells results in cell damage and cell death. The result is the release of specific signaling molecules that alert the local immune system. Illustration of the initial stage of Covid-19 infection: SARS-CoV-2 virus particles that bind to specific receptors across cells. Shutter stock highlighting the initial stage of Covid-19 infection: SARS-CoV-2 virus particles that bind to specific cell surface receptors. Shutterstock Immune cell armies are then sent to initiate an antiviral response. Some of these cells specialize in detecting and identifying the virus, while others cause a specific immune attack. The immune response causes the release of cytokines, chemokines and antibodies, which can often defeat the virus, and the patient recovers.

Sometimes the immune system is dangerous on high alert and over-responsive. In this case, the immune cells have a particularly strong inflammatory response -one that goes beyond what is necessary to kill the virus. This particularly powerful attack releases a massive amount of cytokines and chemokines throughout the body, resulting in a cytokine storm that causes widespread Inflammation and tissue damage in patients with severe Covid-19. One of the causes of an abnormal immune response and causing an immune response lies in the digestive tract. Millions of interactions continually occur between the immune system and trillions of non-dangerous microbes living in the body. These interactions educate the immune system how to function, and more importantly, how not to respond to infectious microbes. Could that help explain why some people are more likely to develop uncontrolled Inflammation after Covid-19infection?

Coronaviruses (CoVs) affecting the upper respiratory tract were first identified in humans in mid-1960 [5, 6]. In late 2002, there was the emergence of a life-threatening CoV of atypical pneumonia, named severe acute respiratory syndrome CoV (SARS-CoV). While the Gulf region and the rest of the country are pecking at the face of a global epidemic, many people are still wondering exactly what COVID-19 is, how dangerous it is and how likely it will be. The disease-causing virus has disrupted the social and economic fabric of the world since it was first discovered in China last year, forcing schools and businesses to close travel restrictions, and entertainment, sports events and all major cancellations cancelled.

## How deadly is COVID-19?

A: The COVID-19 mortality rate is unknown because researchers do not have reliable data on how many people were infected, especially in the United States, where only a small percentage of people were tested. Overall, 6.8% of patients reporting COVID-19 worldwide have died, according to data reported on April 20 by

the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University. However, the percentages vary depending on the person's age. A Chinese analysis of more than 72,000 cases found that the mortality rate was 14.8% for people over 80 and 3.6% for people aged 60-69. This was 0.2% among people under 40.

But these lessons are influenced by a variety of factors, including a person's place of residence. A study in the United States estimated a mortality rate of 10% to 27% for those aged 85 and over, 3% to 11% for people 65 to 84, and 1% to 3% for patients 55 to 64. Estimated deaths in the United States, states Less than 1% among people under 54. Severe and fatal cases appear to be extremely rare in infants and young children; however, they have been reported. Children can also spread the virus to others. But what is the science behind this epidemic, and how far should we be concerned? Here are some common questions [7].

To most people, the COVID-19 looks easy. It takes time - up to five days to two weeks - to cause symptoms if it ever happens [7]. Unfortunately, this is precisely what makes the coronavirus such a dangerous affair [8]. At a time when an infected person is asymptomatic or mildly ill, they can transmit the virus to dozens of other people through droplets of water caused by a cough or sneeze, passed on to the skin and other surfaces. One person in South Korea, known only as 31, transmitted the virus to more than 1,100 people Part of what makes the Covid-19 epidemic so breath-taking is that it's hard to know how the virus will affect every single person [9]. Although most people infected with the coronoid virus - 81%, according to the American Center for Disease Control and Prevention (CDC) - show up with little or no symptoms, others may find themselves relying on breath to breathe or no longer breathing [10].

However, as researchers continue to investigate the disease, they have begun to understand which populations it tends to hit the hardest. Here are the factors that increase a person's chance of suffering from severe Covid-19 symptoms, at least as researchers now understand them. Recently, researchers have seen something (pdf) somewhat surprising: In countries where people are required to get the Calchet-Green (BCG) vaccine, one of the oldest in the fight against tuberculosis, there have been fewer cases and deaths than COVID-19. In countries most affected by the disease, such as Italy, the Netherlands, and the US, there are no universal vaccination programs; others, such as Iran, have programs that are too new to the elderly population.

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Now, researchers in countries like Australia and the Netherlands are starting trials to see if the BCG vaccine can prevent and reduce the severity of Covid-19. It is not the first time researchers have found that the BCG vaccine works to combat non-TB disease. It is used to treat early bladder cancer and prevents leprosy. And perhaps most relevant to COVID-19, one study found that the vaccine also reduces the severity of the virus's lower lung infections. Now, researchers in countries like Australia and the Netherlands are starting trials to see if the BCG vaccine can prevent and reduce the severity of Covid-19. The assumption that the human immune system can confine the virus, as in chicken pox, for instance, might be proven wrong. Both Korean and British experts say that the virus can hit twice, at least [11, 12]. The coronavirus may "reactivate" in people cured of the disease, according to the Center for Disease Control and Disease Prevention in Korea.

About 51 patients defined as a healer in South Korea tested positive again, the CDC said in a briefing on Monday. Instead of contracting again, the virus may have reactivated in these people, given that they tested positive again shortly after, they were released from the closure, said Jong Onkung, executive director of the Korean CDC.

"While we put more weight on the restart as a possible cause, we are doing extensive research on this issue," said Jong [13]". There have been many cases when treated during treatment will look at another negative and positive day". Worldwide, we hope for a return to vaccine normality, the "ultimate weapon," as cited by sources like Dr. Anthony Pauchi, director of the National Institute of Allergy and Infectious Diseases. The virus that causes Covid-19.

A lot will depend on how the virus changes. In general, there are two ways in which mutations can be expressed.

1. The virus is unable to evade a vaccine
2. Mutations make vaccines less effective over time.

While evolutionary stagnation is possible comforting, there are also disturbing signs. First, most AA changes. Discovered are some of the latest samples reported outside of China, thus implying that changes in AA will be part of the viral adaptation. Second, the 8 AA mutations appear to be clustered as if one AA mutation might be causing it.

Purchase another one. Third, and of particular concern, is the most successful AA mutation at ORF8 position 28144 garden. This mutation occurs once in the 13 samples (7.8%) collected before January 5, all from Wahan. In the 42 samples Collected after January 10, all from outside Wahan, the mutation was observed in 18 samples (43%). Whereas this jump may. It looks amazing; the sample size is too small to provide strong statistical confidence.

Hence, our call for more data is Very relevant here, as the 28144 mutation may be very dangerous or not. Moreover, the second most A successful AA mutation, although found in only 5 of the 55 specimens, is widely distributed among external specimens [14, 15]. RNA viruses have evolutionarily tuned replication ability to balance genetic stability and diversity requirements. Responsibility RNA virus replication fidelity has been attributed to RNA-dependent RNA polymerases, with mutations RdRps for multiple RNA viruses that are shown to alter fidelity and steal virus replication and virulence. Coronaviruses (CoVs). They are the only known RNA viruses encoding proofreading exonucleosis (nsp14-ExoN), as well as other replicates involved. Regulated loyalty. This report shows that CoV RdRp (nsp12) probably functions in replication fidelity; the one that matters of the CoV RdRp nucleotide selectivity map to similar structural regions of other unrelated RNA viral polymerases; and for CoVs, nsp14-ExoN proofreading activity is epistatic for the faithful RdRp function. Positive-sense RNA viruses encode RNA-dependent RNA polymerases (RdRps) are essential for genomic replication. Excluding.

The treatment effects of antiviral Inflammation on the nervous system were reportd already a decade ago in the research. "Simian Immunodeficiency Virus-Infected Macaques Treated with Highly Active Antiretroviral Therapy Have Reduced Central Nervous System Viral Replication and Inflammation but Persistence of Viral DNA", by British scientists. Of the large iridoviruses, such as coronaviruses (CoVs), RNA viruses lack proofing and are therefore dependent on RdRps. Control loyalty and loyalty selectivity. CoVs encode exonuclease proofing in non-structural protein 14 (nsp14-ExoN), which gives ten times more constant growth than other viruses. It is not known to what extent CoV Polymerase (nsp12-RdRp) participates in replication fidelity. We sought to determine if homology modelling could detect Determinants of nucleotide selectivity and fidelity in CoV RdRps. We demonstrated the hepatitis virus in CoV painting (MHV) nsp12-RdRp structure and uploaded it to resolved picnic corneal RdRp structures. Mutations for past loyalty change [16, 17].

Detected in the Coxsackie B3 virus (CVB3) were mapped to the nsp12-RdRp model structure and then engineered into MHV genome with [nsp14-ExoN ()] or inactivated [nsp14-ExoN ()] ExoN. In this method, we identified two mutations. Giving resistance to 5-fluorouracil (5-FU) mutants: nsp12-M611F and nsp12-V553I. For nsp12-V553I, we also. Demonstrate resistance to 5-azacytidine mutant (5-AZC) and decrease mutation accumulation. Resistance to 5-FU and The decrease in the number of genomic mutations was effectively masked by nsp14-ExoN proofreading activity. These results are indicative which is likely that nsp12-RdRp functions in the regulation of fidelity and that despite low sequence retention, there are constant factors of RdRp
Nucleotide selectivity is conserved across RNA viruses. The results also indicate that, with regard to nucleotide selectivity, nsp14-ExoN is epistatic to nsp12-RdRp, consistent with its proposed role in a multi-protein proofreading complex. Corona Virus (COVID-19).

## USA: Another Corona Eruption is Expected in winter - which will be more difficult

The head of the Infectious Disease Control Center in the US warns of another outbreak this winter, which will put a strain on the US health care system [18]. Because many countries around the world have struggled to contain the outbreak of the virus, Singapore appears to be at the top of the crisis. For weeks, the Asian state recorded a low number of infections and implemented only a partial lockout, which included banning international arrivals and sticking to large public gatherings, but keeping schools and restaurants open. But in early April, things took a turn for the worse after finding new infestation files in crowded immigrant dorms on the outskirts of the city.

## How Singapore went from being applauded for its coronavirus response to facing an alarming second wave with thousands of new cases

Since then, Singapore has recorded more than 3,000 cases in just the past four days, forcing the government to take even stricter measures than before, according to The Guardian [19]. I see the resignation of the Minister of Health today as an inevitable step for him. The very fact that economic considerations outweigh the need to preserve health and public life are the ones that have made it impossible for him to continue in his responsibility. In Singapore, there was a situation similar to that currently established in Israel. The Minister Litzmann of Health knows this too.

## Check every Israeli to avoid the second COVID wave 19, the senior economist reads

Dan Ben-David from the shoresh. Institute for Socio-Economic Research says the effort will be hard and expensive, but it is worth avoiding financial ruin in a new outbreak [20]. Prof. Dan Ben-David said that because of Israel's relatively small population and the lack of open borders with neighbors, it is uniquely focused on trying blanket tests. Israel's current plans to alleviate the restrictions imposed to prevent the epidemic "are a pile of improvised patches based on partial tests and abdominal sensations, "the report says. Take a bath in the world in the coming year."

Elsewhere in the world, the pressure for increased testing is increasing. One of the world's largest foundations, the Rockefeller Foundation, has proposed a national action plan to test COVID-19 for America, which will test 30 million people a week.

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