

# The Inside Story of Coronavirus Pandemic

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## Abstract

Coronavirus are RNA virus of the order of the *Nidovirales* of the family *Coronaviridae*. The average incubation period for coronavirus infection is 5 days, with an interval that can reach up to 16 days. Influenza H1N1, H5N1, Sars, Mers, Ebola, Coronavirus, are all zoonotic viruses, that is, they have been transmitted to humans by animals. For data on the number of infected 83000, 151767, 167518 and 173344 on March 1, 16, 18 and 19, 2020, respectively, released by WHO (World Health Organization), the number of dead  $d$  and infected  $i$  confirmed according to the data released daily on the network, rises exponentially to the initial  $d_o$  of dead and  $i_o$  infected initially confirmed,  $d = d_o.e^{0.049.t}$  and  $i = i_o.e^{0.0409.t}$ , respectively, where  $t$  is equal to the number of days, for  $t = 1$  to  $n$ . Although the development and production of the potential vaccine has been incredibly rapid, its evaluation will take considerable time. All participants will be followed for 12 months after the second dose to collect the data that researchers initially need to find out if it is safe and effective.

## Introduction

Coronavirus are RNA virus of the order of the *Nidovirales* of the family *Coronaviridae*. The subfamily consists of four genera *Alfacoronavirus*, *Betacoronavirus*, *Gammacoronavirus* and *Deltacoronavirus*. *Alfacoronaviruses* and *Betacoronaviruses* only infect mammals. *Gammacoronaviruses* and *Deltacoronaviruses* infect birds and can also infect mammals. The coronavirus was isolated for the first time in 1937. However, it was in 1965 that the virus was described as coronavirus, due to the profile under microscopy, looking like a crown as proposed by Tyrrell as a new genus of virus. [1-5]

The SARS-CoV, MERS-CoV and COVID-2019 virus are highly pathogenic *Betacoronaviruses* and responsible for causing respiratory and gastrointestinal syndrome. In addition to these three, there are four other types of coronavirus that can induce disease in the upper respiratory tract in immune compromised individuals, as well as affect children, young people and the elderly. All coronavirus that affect humans are of animal origin. [1-5]

The average incubation period for coronavirus infection is 5 days, with an interval that can reach up to 16 days. The transmissibility of patients infected with SARSCoV is on average 7 days after the onset of symptoms. However, preliminary data from the new Coronavirus (COVID-19) suggests that transmission may occur, even without the appearance of signs and symptoms. [1-5]

## Development

So far, there is not enough information on how many days before the signs and symptoms that an infected person starts transmitting the virus. Influenza H1N1, H5N1, Sars, Mers, Ebola, Coronavirus, are all zoonotic viruses, that is, they have been transmitted to humans by animals.

The more people on the planet, the closer we are to living with each other. With a world population of 7.7 billion people and geometric growth, it means more people in smaller spaces, therefore, a greater risk of exposure to disease-causing pathogens. Currently, about three out of four new diseases are zoonotic.

Our worldwide demand for meat is increasing and animal production is expanding as different parts of the world enrich and develop a taste for a diet rich in animal protein. The world is more connected than ever, but we still don't have a global health security system capable of responding to a threat at its source.

To contain the outbreak, it depends on the government of the country where it originated, and a failure is evident. The planet Earth has rich biological diversity and virus can cope in all types of ecosystems and climate; even they are able to survive through mutation [6-66].

According to Chinese scientists, the pangolin, a small mammal at risk of extinction, may be the animal that transmitted the new coronavirus to man. After testing about 1,000 samples of wild animals, the scientists determined that the genomes of the virus sequences in pangolins were 99% identical to those of the patients.

On the basis of data on the number of infected persons 83000, 151767, 167518 and 173344 on March 1, 16, 18 and 19, 2020, respectively, released by WHO (World Health Organization),

$$d = 79,580. e^{0.0409.t} , (1)$$

for  $t = 1$  to 20.

The number of dead  $d$  and infected  $i$  confirmed according to the data released daily on the network, rises exponentially to the initial  $d_o$  of dead and  $i_o$  infected initially confirmed, Eq. (2) and Eq. (3), respectively, where  $t$  is equal to the number of days, for  $t = 1$  to  $n$ , therefore

$$d = d_o. e^{0.049.t} \quad (2)$$

$$i = i_o. e^{0.0409.t} . \quad (3)$$

Under this situation, the dollar has soared high and stock exchanges are oscillating. There is rush on markets for financial security, where someone wins, someone loses. Money does not exist, only financial speculation, virtual numbers, where the one who commands is who is behind a keyboard, typing, manipulating, dictating the rules, of a virtual war for economic power. While the human population as mere spectators, manipulated, by the system of which they are part, are thrown from side to side, in the struggle for survival, in the face of the global system.

It is not feasible for the market to eliminate a population, because if it does, there is no consumption. It is not feasible to solve a problem, cure a disease, as the pharmaceutical giants are, the giants of manufactured products. The economy cannot stop; its flow must be continuous, in one direction, like entropy. The system must control the markets and the population. But in an economic versus bacteriological war, if the complete system loses control, the virus will dominate, but it will not eliminate the entire population, otherwise it will have no means to spread.

A vaccine has already been obtained and is being tested. The vaccine cannot cause Covid-19 and does not contain the virus, as is the case with some other vaccines. Instead, it contains a small piece of genetic code called mRNA, which scientists extracted from the virus and then expanded in the laboratory. In this case, the mRNA encodes the viral protein "spike", which is vital for the coronavirus to gain access to human cells. The researchers hope that the vaccine will stimulate the immune system to attack the virus, preventing the development of the disease.

The mRNA-1723 vaccine was not tested in mice before the start of clinical trials in humans, an incredibly rare occurrence that has proved controversial. Some experts are insisting that the gravity and urgent need for the current situation justifies the move, while others are concerned that it could violate various ethical and safety standards and put study participants at greater than normal risk.

Although the development and production of the potential vaccine has been incredibly rapid, its evaluation will take considerable time. All participants will be followed for 12 months after the second dose to collect the data that researchers initially need to find out if it is safe and effective.

## Conclusion

For data on the number of infected 83000, 151767, 167518 and 173344 on March 1, 16, 18 and 19, 2020, respectively, released by WHO (World Health Organization), the number of dead  $d$  and infected  $i$  confirmed according to the data released daily on the network, rises exponentially to the initial  $d_0$  of dead and  $i_0$  infected initially confirmed,  $d = d_0 \cdot e^{0.049 \cdot t}$  and  $i = i_0 \cdot e^{0.0409 \cdot t}$ , respectively, where  $t$  is equal to the number of days, for  $t = 1$  to  $n$ . A vaccine has already been obtained and is being tested. The vaccine cannot cause Covid-19 and does not contain the virus, as is the case with some other vaccines. Instead, it contains a small piece of genetic code called mRNA, which scientists extracted from the virus and then expanded in the laboratory. In this case, the mRNA encodes the viral protein "spike", which is vital for the coronavirus to gain access to human cells. The researchers hope that the vaccine will stimulate the immune system to attack the virus, preventing the development of the disease.

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