



The Inside Story of Coronavirus Pandemic

Ricardo Gobato^{*1,2} and Abhijit Mitra³

¹SEED/Parana, Laboratory of Biophysics and Molecular Modeling Genesis, Brazil

²Green Land Landscaping and Gardening, Seedling Growth Laboratory, Brazil

³Department of Marine Science, University of Calcutta, Kolkata, India

***Corresponding author:** Ricardo Gobato, SEED/Parana, Laboratory of Biophysics and Molecular Modeling Genesis, Brazil.

Received Date: April 09, 2020

Published Date: May 14, 2020

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_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 . 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 [6-64].

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).

$$d = 79,580 \cdot e^{0.0409 \cdot t} \quad (1)$$

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_0 of dead and i_0 infected initially confirmed, Eq. (2) and Eq. (3), respectively, where t is equal to the number of days, for $t = 1$ to n , therefore

$$d = d_0 \cdot e^{0.049 \cdot t} \quad (2)$$

$$i = i_0 \cdot e^{0.0409 \cdot t} \quad (3)$$

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.

Acknowledgment

None.

Conflict of Interest

No conflict of interest.

References

1. Sufia Zaman, Utpal Pal, Ricardo Gobato, Alekssander Gobato, Abhijit Mitra (2018) The Changing Trends of Climate in Context to Indian Sundarbans. Parana Journal of Science and Education 4(7): 24-28.
2. Suresh Kumar Agarwal, Sitangshu Roy, Prosenjit Pramanick, Prosenjit Mitra, Ricardo Gobato, et al. (2018) Parana Journal of Science and Education 4(5): 15-20.

3. Ricardo Gobato, Marcia Regina Risso Gobato (2018) Evidence of Tornadoes Reaching the Countries of Rio Branco do Ivaí and Rosario de Ivaí, Southern Brazil on June 6, 2017. *Climatol Weather Forecasting* 6(4) DOI: 1000242.
4. Ricardo Gobato (2019) New Nano-Molecule Kurumi and Raman Spectroscopy using ab initio, Hartree Fock Method. *Am J Biomed Sci & Res* 2(4) AJBSR.MS.ID.000594.
5. Creative Commons (CC-BY 4.0) (2020) *The Free Encyclopedia*.
6. Ricardo Gobato, Marcia Regina Risso Gobato, Alireza Heidari (2019) Rhodochrosite as Crystal Oscillator. *Am J Biomed Sci & Res* 3(2) DOI: 10.34297/AJBSR.2019.03.000659.
7. Ricardo Gobato, Marcia Regina Risso Gobato, Alireza Heidari (2019) Calculation by UFF method of frequencies and vibrational temperatures of the unit cell of the rhodochrosite crystal. *International Journal of Advanced Chemistry* 7(2): 77-81.
8. Ricardo Gobato, Marcia Regina Risso Gobato, Alireza Heidari (2019) Rhodochrosite as Crystal Oscillator.
9. Ricardo Gobato, Marcia Regina Risso Gobato, Alireza Heidari, Abhijit Mitra (2019) Rhodochrosite Optical Indicatrix. *Peer Res Nest* 1(3) PNEST.19.08.020.
10. Ricardo Gobato, Marcia Regina Risso Gobato, Alireza Heidari, Abhijit Mitra (2019) Rhodochrosite Optical Indicatrix.
11. R Gobato, MRR Gobato, A Heidari A Mitra (2018) Spectroscopy and Dipole Moment of the Molecule $C_{13}H_{20}BeLi_2SeSi$ via Quantum Chemistry Using Ab Initio, Hartree-Fock Method in the Base Set CC-pVTZ and 6-311G** (3df, 3pd). *American Journal of Quantum Chemistry and Molecular Spectroscopy* 2(1): 9-17.
12. R Gobato, MRR Gobato, A Heidari (2019) Raman Spectroscopy Study of the Nano Molecule $C_{13}H_{20}BeLi_2SeSi$ Using ab initio and Hartree-Fock Methods in the Basis Set CC-pVTZ and 6-311G** (3df,3pd). *International Journal of Advanced Engineering and Science* 7(1): 14-35.
13. A Heidar, R Gobato (2019) Evaluating the Effect of Anti-Cancer Nano Drugs Dosage and Reduced Leukemia and Polycythemia Vera Levels on Trend of the Human Blood and Bone Marrow Cancers under Synchrotron Radiation. *Trends in Res* 2 (1): 1-8.
14. A Heidari, R Gobato (2019) Assessing the Variety of Synchrotron, Synchrocyclotron and LASER Radiations and Their Roles and Applications in Human Cancer Cells, Tissues and Tumors Diagnosis and Treatment. *Trends in Res* 2(1): 1-8.
15. A Heidari, R Gobato (2019) Pros and Cons Controversy on Malignant Human Cancer Cells, Tissues and Tumors Transformation Process to Benign Human Cancer Cells, Tissues and Tumors. *Trends in Res* 2(1): 1-8.
16. A Heidari, R Gobato (2019) Three-Dimensional (3D) Simulations of Human Cancer Cells, Tissues and Tumors for Using in Human Cancer Cells, Tissues and Tumors Diagnosis and Treatment as a Powerful Tool in Human Cancer Cells, Tissues and Tumors Research and Anti-Cancer Nano Drugs Sensitivity and Delivery Area Discovery and Evaluation. *Trends in Res* 2(1): 1-8.
17. A Heidari, R Gobato (2019) Investigation of Energy Production by Synchrotron, Synchrocyclotron and LASER Radiations in Human Cancer Cells, Tissues and Tumors and Evaluation of Their Effective on Human Cancer Cells, Tissues and Tumors Treatment Trend. *Trends in Res* 2(1): 1-8.
18. A Heidari, R Gobato (2019) High-Resolution Mapping of DNA/RNA Hypermethylation and Hypomethylation Process in Human Cancer Cells, Tissues and Tumors under Synchrotron Radiation. *Trends in Res* 2(2): 1-9.
19. R Gobato, MRR Gobato, A Heidari (2019) Storm Vortex in the Center of Paraná State on June 6, 2017: A Case Study. *Sumerianz Journal of Scientific Research* 2(2): 24-31.
20. R Gobato, MRR Gobato, A Heidari (2019) Attenuated Total Reflection-FqSSourier Transform Infrared (ATR-FTIR) Spectroscopy Study of the Nano Molecule $C_{13}H_{20}BeLi_2SeSi$ Using ab initio and Hartree-Fock Methods in the Basis Set RHF/CC-pVTZ and RHF/6-311G** (3df, 3pd). An Experimental Challenge to Chemists. *Chemistry Reports* 2(1): 1-26.
21. R Gobato, MRR Gobato, A Heidari, A Mitra (2019) New Nano Molecule Kurumi- $C_{13}H_{20}BeLi_2SeSi/C_{13}H_{19}BeLi_2SeSi$, and Raman Spectroscopy Using ab initio, Hartree-Fock Method in the Base Set CC-pVTZ and 6-311G** (3df, 3pd). *J Anal Pharm Res* 8 (1): 1-6.
22. R Gobato, MRR Gobato, A Heidari (2019) Evidence of Tornado Storm Hit the Counties of Rio Branco do Ivaí and Rosario de Ivaí, Southern Brazil. *Sci Lett* 7(1): 32-40.
23. Moharana Choudhury, Pardis Fazli, Prosenjit Pramanick, Ricardo Gobato, Sufia Zaman, et al. (2019) Sensitivity of the Indian Sundarban mangrove ecosystem to local level climate change. *Parana Journal of Science and Education* 5(3): 24-28.
24. Arpita Saha, Ricardo Gobato, Sufia Zaman, Abhijit Mitra (2019) Biomass Study of Mangroves in Indian Sundarbans: A Case Study from Satjelia Island. *Parana Journal of Science and Education* 5(2): 1-5.
25. Nabonita Pal, Arpan Mitra, Ricardo Gobato, Sufia Zaman, Abhijit Mitra (2019) Natural Oxygen Counters in Indian Sundarbans, the Mangrove Dominated World Heritage Site. *Parana Journal of Science and Education* 5(2): 6-13.
26. Ricardo Gobato, Victoria Alexandrovna Kuzmicheva, Valery Borisovich Morozov (2019) Einstein's hypothesis is confirmed by the example of the Schwarzschild problem. *Parana Journal of Science and Education* 5(1): 1-6.
27. Sufia Zaman, Ricardo Gobato, Prosenjit Pramanick, Pavel Biswas, Uddalok Chatterjee, et al. (2018) Water quality of the River Ganga in and around the city of Kolkata during and after Goddess Durga immersion. *Parana Journal of Science and Education* 4 (9): 1-7.
28. Ozan Yarman, Metin Arik, Ricardo Gobato, Tolga Yarman (2018) Clarification of Overall Relativistic Energy According to Yarman's Approach. *Parana Journal of Science and Education* 4(8): 1-10.
29. A Heidari, R Gobato (2018) First Time Simulation of Deoxyuridine Monophosphate (dUMP) (Deoxyuridylic Acid or Deoxyuridylate) and Vomitoxin (Deoxynivalenol (DON)) ((3 α ,7 α)-3,7,15-Trihydroxy-12,13-Epoxytrichothec-9-En-8-One)-Enhanced Precatalyst Preparation Stabilization and Initiation (EPPSI) Nano Molecules Incorporation into the Nano Polymeric Matrix (NPM) by Immersion of the Nano Polymeric Modified Electrode (NPME) as Molecular Enzymes and Drug Targets for Human Cancer Cells, Tissues and Tumors Treatment under Synchrotron and Synchrocyclotron Radiations. *Parana Journal of Science and Education* 4(6): 46-67.
30. Ricardo Gobato, Marcia Regina Risso Gobato, Alireza Heidari, Abhijit Mitra (2019) Hartree-fock Methods Analysis Protonated Rhodochrosite Crystal and Potential in the Elimination of Cancer Cells Through Synchrotron Radiation. *Radiation Science and Technology* 5(3): 27-36.
31. Ricardo Gobato, Ibtihal Kadhim Kareem Dosh, Alireza Heidari, Abhijit Mitra, Marcia Regina Risso Gobato (2019) Perspectives on the Elimination of Cancer Cells Using Rhodochrosite Crystal Through Synchrotron Radiation, and Absorption the Tumoral and Non-Tumoral Tissues. *Arch Biomed Eng & Biotechnol* 3(2) DOI: 10.33552/ABEB.2019.03.000558.
32. R Gobato, A Heidari, A Mitra (2018) Using the Quantum Chemistry for Genesis of a Nano Biomembrane with a Combination of the Elements Be, Li, Se, Si, C and H.
33. R Gobato, A Gobato, DFG Fedrigo (2014) Inorganic arrangement crystal beryllium, lithium, selenium and silicon. In XIX Physics Week. Commemorative Symposium on the 40th anniversary of the Physics Course at the State University of Londrina, Brazil.
34. R Gobato, Benzocaína (2008) a computational study, Master's thesis, State University of Londrina, Brazil.
35. R Gobato (2017) Study of the molecular geometry of Caramboxin toxin found in star flower (Averrhoa carambola L). *Parana J Sci Edu* 3(1): 1-9.

36. R Gobato, A Gobato, DFG Fedrigo (2015) Molecular electrostatic potential of the main monoterpenoids compounds found in oil Lemon Tahiti - (*Citrus Latifolia* Var Tahiti). *Parana J Sci Edu* 1(1): 1-10.
37. R Gobato, DFG Fedrigo, A Gobato (2015) Allocryptopine, Berberine, Chelerythrine, Copsitine, Dihydrosanguinarine, Protopine and Sanguinarine. Molecular geometry of the main alkaloids found in the seeds of *Argemone Mexicana* Linn. *Parana J Sci Edu* 1(2): 7-16.
38. R Gobato, A Heidari (2018) Infrared Spectrum and Sites of Action of Sanguinarine by Molecular Mechanics and ab initio Methods. *International Journal of Atmospheric and Oceanic Sciences* 2(1): 1-9.
39. R Gobato, DFG Fedrigo, A Gobato (2015) Molecular geometry of alkaloids present in seeds of mexican prickly poppy. Cornell University Library. Quantitative Biology arXiv: 1507. 05042.
40. R Gobato, A Gobato, DFG Fedrigo (2016) Study of the molecular electrostatic potential of D-Pinitol an active hypoglycemic principle found in Spring flower Three Marys (*Bougainvillea* species) in the Mm+ method. *Parana J Sci Educ* 2(4): 1-9.
41. R Gobato, DFG Fedrigo, A Gobato (2015) Avro: key component of Lockheed X-35. *Parana J Sci Educ* 1(2): 1-6.
42. R Gobato, DFG Fedrigo, A Gobato (2016) LOT-G3: Plasma Lamp, Ozonator and CW Transmitter 38(1).
43. R Gobato (2016) Matter and energy in a non-relativistic approach amongst the mustard seed and the faith. A metaphysical conclusion. *Parana J Sci Educ* 2(3): 1-14.
44. R Gobato, A Gobato, DFG Fedrigo (2016) Harnessing the energy of ocean surface waves by Pelamis System. *Parana J Sci Educ* 2(2): 1-15.
45. R Gobato, A Gobato, DFG Fedrigo (2016) Mathematics for input space probes in the atmosphere of Gliese 581d. *Parana J Sci Educ* 2 (5): 6-13.
46. R Gobato, A Gobato, DFG Fedrigo (2016) Study of tornadoes that have reached the state of Parana. *Parana J Sci Educ* 2(1): 1-27.
47. R Gobato, M Simões F (2017) Alternative Method of RGB Channel Spectroscopy Using a CCD Reader. *Science and Nature* 39(2): 459-466.
48. R Gobato, A Heidari (2017) Calculations Using Quantum Chemistry for Inorganic Molecule Simulation BeLi_2SeSi . *Science Journal of Analytical Chemistry* 5(5): 76-85.
49. MRR Gobato, R Gobato, A Heidari (2018) Planting of Jaboticaba Trees for Landscape Repair of Degraded Area. *Landscape Architecture and Regional Planning* 3(1): 1-9.
50. R Gobato (2012) The Liotropic Indicatrix. Pp. 114, State University of Londrina, Brazil.
51. R Gobato (2009) universe of liquid crystals *Cadernos PDE, Paraná State Department of Education* 2: 1-15.
52. R Gobato, A Heidari (2018) Molecular Mechanics and Quantum Chemical Study on Sites of Action of Sanguinarine Using Vibrational Spectroscopy Based on Molecular Mechanics and Quantum Chemical Calculations. *Malaysian Journal of Chemistry* 20 (1): 1-23.
53. A Heidari, R Gobato (2018) A Novel Approach to Reduce Toxicities and to Improve Bioavailabilities of DNA/RNA of Human Cancer Cells-Containing Cocaine (Coke), Lysergide (Lysergic Acid Diethyl Amide or LSD), Δ^9 -Tetrahydrocannabinol (THC) [(-)-trans- Δ^9 -Tetrahydrocannabinol], Theobromine (Xantheose), Caffeine, Aspartame (APM) (NutraSweet) and Zidovudine (ZDV) [Azidothymidine (AZT)] as Anti-Cancer Nano Drugs by Coassembly of Dual Anti-Cancer Nano Drugs to Inhibit DNA/RNA of Human Cancer Cells Drug Resistance. *Parana Journal of Science and Education* 4(6): 1-17.
54. A Heidari, R Gobato (2018) Ultraviolet Photoelectron Spectroscopy (UPS) and Ultraviolet-Visible (UV-Vis) Spectroscopy Comparative Study on Malignant and Benign Human Cancer Cells and Tissues with the Passage of Time under Synchrotron Radiation. *Parana Journal of Science and Education* 4(6): 18-33.
55. R Gobato, A Heidari (2018) Using the Quantum Chemistry for Genesis of a Nano Biomembrane with a Combination of the Elements Be, Li, Se, Si, C and H. *J Nanomed Res* 7(4): 241-252.
56. SK Agarwal, S Roy, P Pramanick, P Mitra, R Gobato, et al. (2018) *Marsilea quadrifolia*: A floral species with unique medicinal properties. *Parana J Sci Educ* 4(5): 15-20.
57. A Mitra, S Zaman, R Gobato (2018) Indian Sundarban Mangroves: A potential Carbon Scrubbing System. *Parana J Sci Educ* 4(4): 7-29.
58. O Yarman, R Gobato, T Yarman, M Arik (2018) A new Physical constant from the ratio of the reciprocal of the Rydberg constant to the Planck length. *Parana J Sci Educ* 4(3): 42-51.
59. R Gobato, M Simões F (2017) Alternative Method of Spectroscopy of Alkali Metal RGB. *Modern Chemistry* 5(4): 70-74.
60. DFG Fedrigo, R Gobato, A Gobato (2015) Avrocar: a real flying saucer. Cornell University Library, arXiv: 1507.06916v1
61. M Simões, AJ Palangana, R Gobato, OR Santos (2012) Micellar shape anisotropy and optical indicatrix in reentrant isotropic-nematic phase transitions. *J Chem Phys* 137(20): 204905.
62. A Heidari, R Gobato (2018) Putrescine, Cadaverine, Spermine and Spermidine-Enhanced Precatalyst Preparation Stabilization and Initiation (EPPSI) Nano Molecules. *PJSE* 4(5): 1-14.
63. R Gobato, A Heidari, A Mitra (2018) The Creation of $\text{C}_{13}\text{H}_{20}\text{BeLi}_2\text{SeSi}$. The Proposal of a Bio-Inorganic Molecule, Using Ab Initio Methods for the Genesis of a Nano Membrane. *Arc Org Inorg Chem Sci* 3(4) AOICS. MS. ID. 000167.
64. R Gobato, A Mitra (2020) The Inside Story of Coronavirus Pandemic.