

Governance, Qualifications, and Ethical Standards in COVID-19 Research and Response

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Abstract. The COVID-19 pandemic has shown the incompetence of the leaderships of the World Health Organization, the National Institutes of Health, the Institute of Allergy and Infectious Diseases, the Center For Diseases Control, and Federal Drug Administration, Research Entities, including Research Universities, Medical Schools in the United States and around the world, and their paralysis and inability to mount decisive protocols to combat SARS-COV-2, the etiologic agent of COVID-19. More than 60000 deaths (still counting) in the United States alone and more than 20000 deaths (still counting) in each of the countries, including China, Italy, Spain, France, United Kingdom can be attributed directly to the actions (or inactions), incompetence and corruptions of these organizations. It is submitted that there must be a thorough investigation of the leaderships of all these incompetent and corrupt organizations. It is also submitted that derelict of duty, appointments of incompetent and unqualified personnel and acceptance of appointments when one is unqualified are forms of Misconduct and Fraud that must be severely sanctioned.

On or around March 19, 2020, the Director General of the World Health Organization's (WHO), Tedros Adhanom Ghebreyesus declared that the Corona Virus Disease (COVID-19) is a world-wide pandemic [1]. Only a couple of weeks ago earlier, on or around January 23, 2020, he declared with the support of the WHO leadership and that of the United States' Department of Health and Social Services, the National Institutes of Health, the National Institute of Allergy and Infectious Diseases, the Centers for Disease Control, and other National Agencies that COVID-19 was not a global health emergency and that there was no need to worry about COVID-19 globally. On or around February 3, 2020, the Director of the WHO stated that "the virus' spread outside China was minimal and slow" [2]. Only

on or around January 30, 2020, did the US Department of Health and Human Services [3] announced officially that COVID-19 was a Public Health Emergency. From January 30, 2020 until around March 20, 2020, the US National Institutes of Health, the National Institute of Allergy and Infectious Diseases and the Center for Disease Control and Prevention did not come up with any short-term and long-term strategy to deal with COVID-19, let alone any strategic thinking. The United States Government have also not been acting retroactively and have bungled many missed opportunities. On or around March 15, 2020, the Director of the National Institute of Allergy and Infectious Diseases, the National Agency tasked to fight all infectious diseases, including COVID-19 declared that there was no requirement for "domestic travel restrictions" and that they "have not been seriously discussed" [4]. On or around March 17, 2020, in front of the World's press, the Director of the National Institute of Allergy and Infectious Diseases stated that 'the United States screwed up the production of test kits to detect the SARS-COV-2, the etiologic agent of COVID-19, and neither he nor the President or the Center for Disease Control and Prevention was to be blamed for the screw-up" [5]. On or around February 26, 2020, the Director of the Center for Disease Control and Prevention stated that "the risk to Americans remains low and people should continue with their daily lives" and that he was not to be blamed for nor evacuating the cruise ship in which many people were infected with SARS-COV-2 [6]. Presumably, the Governor of the State of New York and the Mayor of the biggest city of the United States of America, Bill De Blasio were listening to what the Director of CDC was saying and did not do anything until it was too late. As of to-day (April 20, 2020), The United States occupy the top position in the world for the total number of individuals infected with SARS-COV-2 and the total number of deaths due to SARS-COV-2 infections, surpassing China where SARS-COV-2 is thought to have initially erupted. Even the New York State and the New York City have overtaken all other countries in the world for total number of individuals infected with SARS-COV-2 and the total number of deaths due to SARS-COV-2 infections. It was only on March 22, 2020, that the Governor of New York decided to order a lock-down [7,8]. Long before January 30, 2020, the United States Department of Health and Human Services and their umbrella organizations, the National Institutes of Health, the National Institute of Allergy and Infectious Diseases and the Centers for Disease Control and Prevention should have had

the "presence d' esprit" and strategic foresight to know that something like COVID-19 was coming sooner or later and spent billions of dollars to counter emerging threats like COVID-19 instead of pouring billions of dollars on useless research works that cannot be repeated by other Scientific Researchers or even by the Scientific Researchers who produced them in the first place [9-11]. Had they read or studied the "Theory of Chaos", they would have acted otherwise because pursuant to the "Theory of Chaos" and its tenets, the current COVID-19 was inevitable and predictable. They should also have at least read the "Art of War" by Sun Tzu.

On or around March 3, 2020, the Director of the NIH, Francis S. Collins declared in one of his blog entitled "Structural biology points way to coronavirus vaccine" [12] that (i) "there will be a potential vaccine against COVID-19" because some Scientific Researcher has determined the structure of the spike protein of COVID-19 by cryo-electron microscopy, (ii) "Preclinical studies in mice of a candidate vaccine based on this spike protein are already underway at NIH's Vaccine Research Center (VRC), part of the National Institute of Allergy and Infectious Diseases (NIAID). An early-stage phase I clinical trial of this vaccine in people is expected to begin within weeks. But there will be many more steps after that to test safety and efficacy, and then to scale up to produce millions of doses. Even though this timetable will potentially break all previous speed records, a safe and effective vaccine will take at least another year to be ready for widespread deployment", (iii) "An early-stage phase I clinical trial of this vaccine in people is expected to begin within weeks, (iv) "The NIAID is now working with the biotechnology company Moderna, Cambridge, MA, to use the latest findings to develop a vaccine candidate using messenger RNA (mRNA), molecules that serve as templates for making proteins. The goal is to direct the body to produce a spike protein in such a way to elicit an immune response and the production of antibodies. An early clinical trial of the vaccine in people is expected to begin in the coming weeks. Other vaccine candidates are also in preclinical development", and (v) "the risk of contracting COVID-19 in the United States is currently low". With respect to the pronouncements of the NIH Director, Francis S. Collins, in regard to the fact that he thinks that he can coax the human body to produce a protein that will elicit an immune response against COVID-19 via mRNA injection is like

the traveling salesman selling snake oil as a cure for all. First, the validity of using mRNA that produce one protein that will elicit an immune response against a whole virus is not proven. Second, the technology of using mRNA is still many years from being perfected. Third, a vaccine against COVID-19 using the mRNA antigens technology protocol will be available several years from now. Only recently, has there been a phase 1 clinical trials for mRNA vaccines against H10N8 and H7N9 Influenza viruses [13] and the research work for HIV-1 is still at its infancy [14]. It must be noted that there has not been any clinical trials for mRNA vaccines targeting SARS-COV since the 2002-2004 SARS outbreak [15]. Fourth, as noted by Morse et al. [16], the region of the interaction between the Spike Protein of SARS-COV and its receptor protein in human cells, ACE2 is highly prone to mutational events [17] which might hamper the efficacy of any developed therapeutics or vaccines that are based on targeting the Spike Protein of SARS-COV-2. What the United States Government and the whole world needs now are prophylactics and other remedies to alleviate the symptoms of COVID-19 and prevent death that is due to SARS-COV-2 itself and to the complications of COVID-19 (See below). It is clear that early intervention is quite successful at preventing death due to COVID-19 and SARS-COV-2. To mislead the gullible United States Government and the American Public is a "crime". The declaration of Francis S. Collins [12] that "the risk of contracting COVID-19 in the United States is currently low" shows how far removed he is from the current COVID-19 pandemic and reality. One cannot but conclude that the United States of America has a "bumbling idiot savant" who is overseeing our main National Biomedical Research Enterprise and therefore the health and well-being of the population of this country. What we need from the Director of the NIH is not what he is going to do in the future but what he did since the last SARS outbreak and the last flu pandemic, what he is doing now and what he is going to do tomorrow and the day after that. What we need from the Director of the NIH is a concrete list of currently available procedural interventions and protocols, prophylactics and other measures that he oversees and that can and will be made available to the Healthcare givers who are confronting the brunt of the COVID-19 onslaught immediately. (Look at what happened and is happening in Italy). If he cannot do that, it means that the over 40 billion dollars that he has been spending on behalf of the National Institutes of Health have been poured down the drain and wasted. What we need to know from the Director of the NIH is

why he did not do anything after the 2002-2004 SARS outbreak [18], the 2009 H1N1 flu pandemic that claimed over 12000 lives with over 60 million cases of infection in the United States alone [19], and the 2014-2016 Ebola eruption that killed 50% of those infected with the Ebola virus [20]. Does the NIH Director have anything to say about what he is doing now that can dramatically change what the American Public is going through now.

The Director of the National Institute of Allergy and Infectious Diseases, Anthony Fauci is another "bumbling idiot savant" who is running our first line of defense against the COVID-19 pandemic. On or around March 17, 2020, Anthony Fauci stated [5] to the world that neither he nor the Center for Disease Control and Prevention or the President was responsible for the production delay of kits to detect the virus that causes COVID-19, SARS-COV-2 because "a technical glitch resulted in the delay of usable tests in the U.S." and that "It was a complicated series of multiple things that conflated that just, you know, went the wrong way. One of them was a technical glitch that slowed things down in the beginning. Nobody's fault. There wasn't any bad guys there. It just happened". Just imagine, the United States going to war and the Generals find out that there has been a glitch in the production of essential parts of their fighter jets or war ships. An effective and useful General is someone who is a seasoned strategist and thinker, has read the "Art of War" and the "Theory of Chaos". He/She would have conducted many simulated war games before going to war to face the enemy. It is clear that the Director of the National Institute of Allergy and Infectious Diseases does not have what it takes to be an effective and useful general with the capability to win wars. The United States Government, the United States Congress and the American Public deserve to know why the Director of the National Institute for Allergy and Infectious Diseases did not learn anything from the 2002-2004 SARS outbreak [18], the 2009 H1N1 flu pandemic that claimed over 12000 lives with over 60 million cases of infection in the United States alone [19], and the 2014-2016 Ebola eruption that killed 50% of those infected with the Ebola virus [20]. Similarly, the Director of the Center for Diseases Control and Prevention, Robert Redfield must inform the United States Government, the United States Congress and the American People what he and his Agency have done, are doing and will do to fend off COVID-19 and the virus that causes

COVID-19, SARS-COV-2. Specifically, Robert Redfield must explain why he did not read and study the "Theory of Chaos" [21] and preempt what is happening now with COVID-19 and the virus that cause COVID-19.

At its simplest level, the basic tenets of the "Theory of Chaos" [21] can be summarized as follows: In the scientific world, Chaos which is defined as the State or Degree of Disorder or Entropy, is always increasing if there is no intervention. However, the engendered Chaos or Degree of Disorder is not the product of randomness but are predictable, can be studied up to a certain point prior to the state of Final Chaos when it is very difficult or virtually impossible to predict any outcome. and most importantly can be repertoried, simulated and analyzed. For example, all systems, including the universe are always expanding and predictable. However, the predictability is not infinite. There reached a point where it is not possible or impossible to predict the outcome. In the biological world as in the case of current COVID-19 pandemic that is caused by the virus, SARS-COV-2, the Chaos or Degree of Disorder, i.e all the confusions, mishaps, inefficiencies, mistakes, infections, deaths, including the inefficiency, non-professionalism and inaptitude of the bumbling "Idiots Savants" of the leadership of the WHO, United States Department of Health and Social Services, the National Institutes of Health, the National Institute of Allergy and Infectious Diseases, the Centers for Disease Control, and other National Agencies, the tantrums of the President of the United States of America exhibited on National TV, and the inabilities of the Governor of the State of New York and the Mayor of the City of New York to act, which we are now witnessing, are not the product of randomness but were predictable and could be studied and predicted because they are the products of initial triggering conditions and events that were overlooked or ignored. However, if there is no appropriate intervention, a point in the evolution of COVID-19 and SARS-COV-2 will be reached that will be almost impossible to predict. I sincerely pray and hope that we have not reached the point of irreversible unpredictability in the evolution of COVID-19 and SARS-COV-2 and that we can take appropriate rationalistic, professional and firm actions now. In practical terms, the "Theory of Chaos" states that before the point of irreversible unpredictability and ultimate and complete Chaos, Strategists and Thinkers with the necessary training and knowledge must study and repertory the small but nevertheless

important changes and signs that point to the coming state of unpredictability and ultimate, irreversible and complete Chaos [21]. In the current case of COVID-19 pandemic and SARS-COV-2 evolution, we have reached the point of near unpredictability because the leaders of the WHO, the US National Institutes of Health, the National Institute of Allergy and Infectious Diseases, the Center for Disease Control and Prevention, and other similar entities around the world have been derelict of their duties by not paying attention to small but important details with respect to the evolution of not just infectious viruses but also to the disease patterns that they cause. So far, they have compounded the state of Chaos and unpredictability by either taking the wrong actions or refusing to acknowledge that they are not fit to be in their positions. In 2015, despite the fact that he was not a Scientific Researcher, (I have read that he is a voracious and avid reader, learns very fast, and has become familiar with Molecular Biology by reading Molecular Biology Books and listening to experts in Molecular Biology), the Philanthropist and Head of the Bill and Melinda Gates Foundation, Bill Gates [22] predicted the following: (i) The world will not face a nuclear catastrophe. (ii) The greatest risk in global catastrophe is going to be a viral pandemic. (iii) We don't have a system that is set up to deal with a global viral pandemic. (iv) We will not be ready for the next global viral pandemic. (v) We must start to set up the system now. (vi) It will cost at most a few billion dollars to set up the system to deal with the next global viral pandemic. In his address [22], people were having a great time, laughing and most probably not taking him very seriously. What Bill Gates did not mention was that we also did not have the right leadership to set up the system to deal with the next global viral pandemic. What kind of leadership will declare on national television that they started to manufacture kits that were defective to detect SARS-COV-2 almost four months after the first detection of SARS-COV-2 infection and death due to COVID-19 [5].

What were the small but nevertheless significant factors that were overlooked and that contributed to the current state of Chaos and near unpredictability? Firstly, were the leaders of the WHO, the US National Institutes of Health, the National Institute of Allergy and Infectious Diseases, the Center for Disease Control and Prevention, and other similar entities around the world capable individuals who had the philosophical, mental and physical credentials, and qualification and experience to provide leadership and lead such

essential organizations. It is submitted that the answer is definitely in the negative. The Director of WHO, Tedros Adhanom Ghebreyesus was trained at the London School of Hygiene and Tropical Medicine and obtained a Ph.D. in Community Health, was Head of a Regional Health Bureau in Ethiopia and Minister of Health of Ethiopia before he assumed the Directorship of the WHO [1]. Is someone trained in Community Health with experience as the Minister of Health of Ethiopia, one of the poorest third world country fit to be the Director of the WHO with an annual budget of almost five billion US dollars. The position of the Director of the WHO not only requires technical know-how but also leadership quality with training in strategic abilities and war readiness. The average budget of the WHO in the last five years was around 4.5 billion dollars. The leadership of the WHO is requesting an increase in their annual budget to the tune of another 2.5 billion US dollars. That is a lot of money to waste! The annual budget of many countries do not surpass a few billion US dollars. What is laughable and a completely farcical is that with a budget of ~5 billion dollars per year, the Director of the WHO could not even afford to fly himself in and out of the Democratic Republic of Congo because the pilot refused to make a detour in a conflict zone. Another absurdity that showed that the Director of the WHO was completely ignorant of the requirement of his position and reality was that he tried to appoint the former dictator of Zimbabwe, Robert Mugabe as a WHO Goodwill Ambassador. Let us call spade a spade. No bona-fide Board of Directors of any company would be foolish enough to appoint a CEO with the qualifications of the current Director of the WHO to run a 5 billion dollar company let alone a 1 million dollar company. With respect to the current Director of the National Institutes of Health, Francis S. Collins, he has been the Director of the National Institutes of Health since 2009, that was almost 11 years ago. He was formerly a Professor at the University of Michigan School of Medicine, the Director of the National Institute of Human Genome Research Institute at NIH that oversaw the overly expensive sequencing of the Human Genome, a technician's job. It is not clear what is the forte of the Director of the NIH. What is clear is that he is not a strategist who had the foresight and force of personality to inspire any national campaign to fight the threat posed by COVID-19 and the cause of COVID-19, SARS-COV-2. The Director of the National Institute of Allergy and Infectious Diseases, Anthony Fauci, has been in his position since 1984. It is clear that the National Institute of Allergy and

Infectious Diseases desperately needs some spring cleaning. The Presidents of this country only get two terms of four years. Somehow, Anthony Fauci managed to keep his position for 36 years and he is still there. No bona-fide Board of Directors of any company would appoint for 36 years a CEO who cannot assure that there are enough kits that work to detect SARS-COV-2 or did not have the foresight to start a war against SARS-COV after the 2002-2004 SARS outbreak. It is simply incomprehensible and comedic. With a budget of over 40 billion US dollars, the National Institutes of Health and the National Institute of Allergy and Infectious Diseases were incapable of forecasting the extent of SARS-COVID-2 infection among the population so that the richest and most powerful country in the world would have an acute shortage of simple effective masks and gowns, not to mention enough Intensive Care Units with appropriate equipment to deal with the deluge of cases that are now overwhelming New York City and other parts of New York. It is true that New York City and New York State Health Officials and leadership have also been very slow at responding to the current pandemic. As far as the current Director of the Center for Disease Control and Prevention is concerned, he is a political appointee. One cannot blame him too much. However, with almost \$4.3 billion in funds for Infectious Diseases and Preparedness, the Center for Disease Control and Prevention is a very fat cow that must be degreased and run more efficiently. It is laughable that with that kind of funding, the Center for Disease Control and Prevention could not even co-ordinate the manufacture and distribution of proper and functional kits to detect SARS-COV-2, the virus that is the etiologic agent of COVID-19. The Country of South Korea seems to have done more in a short time to arm itself with enough kits to test a large proportion of its population compared to the United States. It is clear that the current Director of the Center for Disease Control and Prevention is not a seasoned General and Strategist with the right philosophical, mental and physical constitution that are required in his assigned duties. It is a reasonable question to ask whether the current Director of the Center for Disease Control and Prevention has read and studied the "Theory of Chaos" and the "Art of War". The above criticisms apply also to other leaderships of different jurisdictions in Europe and elsewhere. If you do not pay attention to details, do not read and study the "Theory of Chaos" and the "Art of War", you will stumble and risk creating the final step of

unpredictability and complete Chaos as enunciated in the tenets of practical aspects of the "Theory of Chaos".

A second small but nevertheless critical factor that the leadership of the WHO, the US National Institutes of Health, the National Institute of Allergy and Infectious Diseases, the Center for Disease Control and Prevention overlooked, has to do with lessons that should have been learned from the 2002-2004 SARS outbreak [18], the 2009 H1N1 Flu Pandemic that claimed over 12000 lives with over 60 million cases of infection in the United States alone [19], and the 2014-2016 Ebola eruption that killed 50% of those infected with the Ebola virus [20]. If the precepts of the "Theory of Chaos" and the "Art of War" were read, studied and applied, immediately after the 2002-2004 SARS outbreak and the 2009 H1N1 Flu Pandemic, the leadership of the WHO, the US National Institutes of Health, the National Institute of Allergy and Infectious Diseases, the Center for Disease Control and Prevention would have immediately instituted an action group of seasoned strategists and thinkers to come up with a short-term, a medium-term and long-term strategic plan of action. As Bill Gates suggested in 2015 [22], there was no doubt that the next pandemic of viral origin was going to happen. It was a question of how soon will it appear and cause great Chaos and Havoc. It would have cost at the most 10 billion US dollars, a relatively small sum compared to the 2007-2008 economic bail-out and the current economic life-line package of more than 1 trillion dollars (and more). The immediate short-term plan of action should have been the implementation of protocols for the (i) manufacture and distribution of rapid test kits for all agents that cause infectious diseases in humans, (ii) manufacture and distribution of equipment that are necessary to deal with an up-surge of infected individuals, including adequate gloves, masks, protective gears, and Portable Intensive Care Units, (iii) the hiring and training of professionals in Public Health and Medicine, (iv) research and development of prophylactics and vaccines against agents that cause infectious diseases, (v) implementation of war games to test readiness to deal with sudden upsurge of infected individuals, (vi) distribution of minimum guaranteed income during the pandemic period along the line and thought of Andrew Yang's proposal, (vii) dedicated attention and care of vulnerable individuals living in Care Services and who are homeless, (viii) care of individuals who are incarcerated (prisons are time bombs), (ix)

adequate distribution network of food and drinks for the population (the United States have stockpiled enough oil but somehow forgot to stockpile essential necessities like food, drinks, gloves, masks, ventilators, diagnostic kits and Portable Intensive Care Units), and (x) implementation of contingency plans to deal with students and people forced to stay at home. The list is not exhaustive. It would be the primary function of the instituted action group of seasoned strategists and thinkers to draw up the list and to implement.

A third small but nevertheless critical factor that the leadership of the WHO, the US National Institutes of Health, the National Institute of Allergy and Infectious Diseases, the Center for Disease Control and Prevention failed to recognize: The highly infectious SARS-COV-2 is different from its cousin, SARS-COV in that SARS-COV-2 has evolved very rapidly and can use their hosts to travel and jump continents. It never occurred to them that SARS-COV-2 could acquire the ability to remain viable for days on inert surface and to be transmitted from asymptomatic individuals [23-30] so that by the time carriers of SARS-COV-2 are screened for fever with a digital thermometer, they may have infected many individuals whom they have come into contact with already. The random testing of SARS-COV-2 by kits that function should be mandatory in order to gauge at the true extent of SARS-COV-2 infection within a population. Relevant data on asymptomatic carriers of SARS-COV-2 were available on or around January 30, 2020.

A fourth but nevertheless critical factor in the recovery of individuals infected with SARS-COV-2 that is being ignored in the arsenal of prophylactics that can be engaged in the treatment of COVID-10 and those infected with SARS-COV-2 is the use of Medicines prepared according to the Principles of Yin and Yang Herbal Medicine (Chinese Traditional Medicine or TCM). There are now several reports showing that Medicines prepared according to the Principles of Yin and Yang Herbal Medicine (Chinese Traditional Medicine or TCM), are quite effective at treating individuals infected with SARS-COV-2. Pursuant to the precepts of the "Art of War" every means must be employed to win a war. With the current COVID-19 pandemic, all avenues must be engaged to combat death due to SARS-COV-2 infection and COVID-19. Why are the leadership of the WHO, the US National Institutes of Health, the National Institute of Allergy and

Infectious Diseases, the Center for Disease Control and Prevention not advocating the use of Medicines prepared by the Principles of Yin and Yang Herbal Medicine (YYH Medicine) in addition to the use of molecular anti-Virals and drugs prepared according to the Principles of Molecular Medicine. Most importantly, why they are not learning from the experience of the Doctors and Scientific Researchers from China, Hong Kong, Macau, Taiwan and South Korea. In an article published in the highly influential Medical Journal, Lancet, Cinati et al. [31] showed that the compound, Glycyrrhizin from liquorice roots which is a key ingredients of Yin and Yang Herbal Medicines (YYH Medicine) used to treat patients infected with SARS-COV and SARS-COV-2 was quite effective at inactivating SARS-COV. Wang et al. [32] reported that a Yin and Yang Herbal Medicine Formula (YYH Medical Formula), Shufeng Jiedu Capsule in conjunction with anti-Virals, Lopinavir/Ritonavir (Kaletra) and Arbidol, was able to treat four patients infected with SARS-COV-2 and who had mild or severe pneumonia. Three of the four patents had much improved pneumonia associated symptoms and two patients were discharged with confirmed negative SARS-COV-2 by PCR. The molecular mechanism of actions of the YYH medical Formula is unknown. However, according to the Principles of Yin and Yang Herbal Medicine (YYH Medicine), the Yin and Yang Herbal Medical Formula (YYH Medical Formula), Shufeng Jiedu Capsule (SJC) targets the lungs. (It is indeed quite amazing that the Practitioners knew that they could use the Shufeng Jiedu Capsule (SJC) to target the lung diseases.). A very effective treatment for the treatment of lung diseases due to viral infection is the use of extracts of Bulbus Fritillariae Cirrhosae [33]. Other molecules obtained from Yin and Yang Herbal Medical Formula (YYH Medical Formula), including Baicalin, Scutellarin, Hesperetin and Nicotianamine which have been reported to possess molecular properties that could allow them to prevent the interactions between SARS-COV-2 and the human cell Protein Receptor ACE2 [34] which has been shown to be essential for SARS-COV-2 to gain entrance to its host cells in the lungs [35]. The use of Hydroxychloroquine for the treatment of COVID-19 [36-39] that was touted by President Donald Trump [40] has no more scientific foundation than Yin and Yang Herbal Medicine Formula (YYH Medical Formula) like Shufeng Jiedu Capsule (SJC) [32], Glycyrrhizin [31] as they have been reported to be effective at preventing the replication of SARS-COV and SARS-COV-2. Irrespective of the molecular Principles of Yin and

Yang Herbal Medicine (YYH Medicine), it must be noted that the current drug of choice for the treatment of Malaria, Artemisinin and derivatives were discovered following their purification from a Yin and Yang Herbal Medicine Formula (YYH Medical Formula), by Tu Youyou and co-workers [41,42] who were awarded the Nobel Prize for Physiology and Medicine in 2015 by the Nobel Committee. In the field of drug development, Tu Youyou can be regarded as the equivalent of Marie Curie who discovered Radium and the principles of Radiotherapy. It would not be too surprising if a useful and successful drug for the treatment of COVID-19 and SARS-COV-2 infection emerges from the centuries old recipes of Yin and Yang Herbal Medicine Formula (YYH Medical Formula) again.

On or around April 20 , 2020, this author [43] proposed a protocol consisting of treating individuals infected with SARS-COV-2 in an environment of high temperature, high humidity and constant far infrared irradiation. The hypothesis that elevated temperature, humidity and far infrared irradiation will significantly lower the viability, infectivity and virulence of SARS-COV-2 and that treatment of individuals infected with SARS-COV-2 in an environment of high temperature, high humidity and constant far infrared radiation will significantly enhance the recovery of individuals infected with SARS-COV-2 is based on sound Principles of Virology and analysis of current scientific data [44] could have been and can be tested within a very short time as implementation of its requirements is relatively simple to achieve. Moreover, the requirements of the hypothesis are relatively easy to implement as protocols for its implementation exist already. Instead, what we witnessed was billions of dollars wasted on all kind of "hocus pocus" treatment protocols and vaccines, including Hydroxychloroquine [46] which turned out to be a real dud [47-48], Remdesivir [49,50] which appears to be no better than Vitamin C [51-52], and Famotidine [53] that came out of someone's dream whose only scientific basis was the fact that some Doctors in Wuhan, China with zero scientific training and background informed him that poor people who used as heart-burn medicine fared better than supposedly rich folks who took and some "mickey mouse" computer simulation. On the one hand, the FDA are stating that approval of any medicine in the United States must be based on scientific evidence. On the other hand, the FDA allowed the use of Hydroxy-chloroquine for the treatment of COVID-19 without any proper clinical trials because of political pressure. The

FDA actually cautions that "Hydroxychloroquine and Chloroquine can cause abnormal heart rhythms such as QT interval prolongation and a dangerously rapid heart rate called ventricular tachycardia. These risks may increase when these medicines are combined with other medicines known to prolong the QT interval, including the antibiotic azithromycin . . ." [54]. It is a mystery as to how Northwell Health and Alchem got FDA approval and \$20.7 millions from the United States Advanced Research and Development Authority (BARDA) to run the clinical trial for the potential use of Femotidine for the treatment of COVID-19. Is it because the guy who dreamed up the whole idea works under Robert Kadlec, Assistant Secretary for Preparedness and Response at the United States Department of Health and Human Services.

Clinical trials for testing the safety and efficacy of Hydroxy chloroquine, and Femotidine for the treatment of COVID-19 will cost many millions of dollars that the American Public must pay while they starve. Billions will be spent on vaccines that do not and will not work. History informs us that it takes time to come up with new drugs that work. Cutting corners will be costly and dangerous. As far as vaccines are concerned, we only need to look at the effectiveness of anti-flu and anti-HIV-1 vaccines! It must be emphasized that the leaderships of the WHO, NIH, NIAID, CDC, FDA, and other similar agencies in other countries have been caught totally unprepared and are acting out of desperation. It is unimaginable and completely in the realm of the twilight zone that total total brain power of the WHO, NIH, NIAID, CDC, FDA, and other similar agencies in other countries could not come up with a single new drug to test [43]. It is equally unimaginable and in the realm of the twilight zone that the combined brain power WHO, NIH, NIAID, CDC, FDA, and other similar agencies of the world could not have foreseen that something like SARS-COV-2 would sooner or later emerged. They had SARS-COV, H1N1, MERS-COV and Ebola as warning signs that they should get off their fat asses and start engaging their brains. Unfortunately, they were too incompetents to act. The so-called elite scientific journals, including Science, Science Translational Medicine, Nature, Nature Medicine, Cell Reports Medicine, and several others also bear major responsibility and blame because they also sat on their "asses" and could not foresee SARs-COV-2 coming. Is it surprising that these so-called elite scientific journals were all caught unprepared with their pants

down. It is submitted that it is because they are all motivated by profit and are run by non-practicing scientific researchers with very shallow research credibility (most of their Editors in Chief have never run a laboratory as they only finished post-doctoral training) and little training and exposure to the history and philosophy of science, and to strategic thinking and action. It would not be a very big surprise if none read the Theory of Chaos and Art of War. One of them, Science stated that "A candidate treatment for COVID-19 has shown convincing—albeit modest—benefit for the first time in a large, carefully controlled clinical trial in hospitalized patients" [49,50]. Since when did Science become a mouth piece for the NIH and NIAID. The American People are not interested in a "convincing - albeit - modest benefit". For a budget of over 40 billion dollars per year, the American people are only interested in 100% cure of COVID-19. For your information, Mr Fauci, the American People are not interested in a "proof of concept". For 40 billion dollars per year, the American People are only interested in a 100% cure of COVID-19. According to Science and Dr Fauci, the results of the trial that was sponsored by the NIAID under the leadership of Dr Fauci, showed that at the most, patients who took Ramdesivir "recovered in an average of 11 days versus 15 in patients who received placebo". However Dr Fauci stated that "this positive trend did not reach statistical significance". Please Science and Dr Fauci, stop selling snake oil. Just as the Clinical trials conducted in China and by the maker of Ramdesivir, Gilead Sciences, the study sponsored by the NIAID showed that Ramdesivir was a bad drug as far as SARS-COV-2 and COVID-19 were concerned. Instead of admitting and stating that there was no significant difference between individuals infected with SARS-COV-2 and exhibiting symptoms of COVID-19 taking Remdesivir and those not taking it, Science and Dr Fauci committed Dishonest Scientific Report and perhaps also Scientific Misconduct by stating that Ramdesivir worked somewhat without any scientific data to back up their statement. When a clinical study showed that by agreed upon statistical test and statistical standard, there is no significant difference between those who take the drug and those who did not, it meant that the Drug did not work, not that "there was a positive trend". It is a shame that President Trump and his advisors who are not practicing Scientific Researchers allowed Science and Dr Fauci to state falsehood at the White House. In layman's term, the study conducted at tax payers expense that was sponsored by the NIH and NIAID showed that Remdesivir was not a cure

for COVID-19 and that there was 1 in 3 chances that patients infected with SARS-COV-2 with severe symptoms of COVID-19 would recover faster by about 3 days than those who did not take Remdesivir. However, 10% (1 in 10) of the Patients who did take Remdesivir is expected to die of COVID-19 which is higher than the 0.1 to 2 % (~2 in 100) of individuals infected with SARS-COV-2 who will die of COVID-19 if they did not receive Remdesivir treatment. Perhaps more disturbing is that Science and Dr Fauci failed to inform the President and his advisors that Gilead Sciences had separately conducted a fake clinical trial for the potential use of Remdesivir in which there was no proper control [52] just like the clinical trial for Hydroxychloroquine conducted by the French doctor, Didier Raoult [46]. Whether out of ignorance and incompetence or whether they were trying to mislead President Trump and his advisors who are not practicing Scientific Researchers, Science and Dr Fauci also failed to inform them and the American Public that a clinical trial that was published in the Journal Lancet [51] showed among others that (i) 14% (22 out of 158) of individuals infected with SARS-COV-2 and experiencing severe symptoms of COVID-19 who were administered Remdesivir died as opposed to 13% (10 out of 78) of those who were on placebo, (ii) there was no significant difference in viral load between those who were administered Remdesivir and those who were not, (iii) there was no significant difference on safety , and (iv) there was no significant difference in mortality among a subgroup (10 days v. more than 10 days from illness onset).

It is submitted that the leaderships of the WHO, DHHS, NIH, NIAID, CDC, FDA, similar agencies around the world, including China, Italy, Spain, France, Belgium, Netherlands, Sweden and United Kingdom have not only been caught unprepared but they are also guilty of derelict of duty. It must be noted that the countries including, Germany, Finland, Iceland, New Zealand, Singapore, Taiwan, South Korea and Australia must be given high marks for applying scientific principles in their response strategy for combating SARS-COV-2. The figures, including IP 10,000 or Number of Individuals Infected with SARS-COV-2 Per 10,000 Population and DP 10000 or Number of Deaths Per 10000 Individuals Infected with SARS-COV-2 speak for themselves [44,43]. Perhaps, it is because their response strategies were guided by seasoned practicing scientific researchers and not by talk but do nothing fake scientific researchers. It is further submitted that derelict of duty,

appointment of unqualified personnel, and accepting an appointment knowing that one is unqualified to perform are forms of Scientific Misconduct and Fraud [46] and must be severely sanctioned because in this case, their actions (or inactions) have led to more than one hundred thousand (still counting) deaths in our country alone, untold amount of sufferings and disruptions, and trillions dollars lost.

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