



# Pandemic Science: Does the Complexity of Nature Far Transcend Man's Ingenuity?

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## Short Commentary

During the year 2020 and the first two months of 2021 at least 25 million individuals in the USA manifested positive tests for SARS-CoV-2 infection. This interval was prior to achieving a substantial number of vaccinated individuals aimed at reducing the characteristic morbidity and mortality inherent to the Covid-19 pandemic. During this same interval, when nearly 500,000 pandemic related deaths were recorded in the USA, it was estimated that 100 million USA residents had probably already been infected with SARS-CoV-2. The general population in the USA numbers 340 million, and USA residents over age 65 number 50 million. Therefore, one can logically assume that 15 million individuals over age 65 had become infected with SARS-

CoV-2 by the end of February, 2021. If mortality from SARS-CoV-2 is linked to both advancing age and comorbid ailments, why didn't the other 14.5 million infected elderly individuals suffer an inexorable downhill fate?.

In part, the answer to that question encompasses a research topic known as antigen non-specific immune memory, also referred to as trained immunity. Prior childhood infections with various unrelated viruses can permanently prime the innate arm of one's immune system to react more swiftly and with greater effectiveness against coronaviruses. Common names for some of these childhood viral infections include chickenpox, German measles, regular measles, and mumps. But is anyone collecting and correlating data inherent to such a potential



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protective mechanism?. As a paradoxical extension of this, can trained immunity be nullified by all the multiple immunizations routinely administered to children to prevent such natural infections, thereby increasing adult Covid-19 morbidity and mortality? After all, within 15 months of age, a child in the USA has already received an average of 21 different vaccinations.

Trained immunity can also be a double-edged sword. If an individual is vaccinated against the above childhood ailments (e.g., MMR) or other infections (e.g., hepatitis, HPV) within two years of SARS-CoV-2 infectivity, the potential exists for more malignant Covid-19 disease manifestations. Is this paradox relevant for the more than 300 children in the USA who have died from multisystem inflammatory syndrome? An additional factor to be considered is the increasing prevalence of positive Anti-Nuclear Antibody tests (ANA) in asymptomatic normal individuals, which is now approaching 20% in individuals aged 13 to 19 (46 years ago this figure was 3%). Is this ANA phenomenon a reflection of immune dysfunction from environmental chemical contamination which, in itself, might then imply less protection against acute and chronic sequelae of SARS-CoV-2?

The replication process of SARS-CoV-2 is imperfect and borders on downright sloppiness. Mutations arise frequently and are causing considerable anxiety, morbidity and even mortality in the worldwide population regardless of vaccination status against original strains. Part of the reason that vaccines were never fully developed to SARS-CoV-1 eighteen years ago, nor to MERS six years ago (Middle Eastern coronavirus), is due to a phenomenon known as antibody dependent enhancement

Simply stated, there exists the paradoxical potential for a mutated SARS-CoV-2 strain to cause more serious illness in a previously vaccinated recipient compared to illness in individuals who were never vaccinated against the original infecting strain in the first place. This observation appears to conflict with recent advice promising blanket immunity to both original and mutant strains of SARS-CoV-2 with currently available vaccines. In addition, vaccination against SARS-CoV-2 was supposed to prevent the recipient from acquiring the virus in the first place, thereby (a) drastically reducing transmission to others, and (b) simultaneously drastically reducing replication dependent mutations. In reality, neither premise proved correct, as recent studies indicate (1) that a vaccinated individual can readily become infected with any strain and can readily transmit it to others; and (2) once infected, the total viral replication load reaches identical levels in non-vaccinated and vaccinated individuals, regardless of whether or not the latter is symptomatic. Reconciling these disparities seems even more complicated and disjointed when one considers five additional items: (1) four new mutated variants have been identified in New York City in July, 2021; (2) neutralizing antibody levels decline within three months of the final vaccination process; (3) there is a paucity of cellular immunity data after vaccination against SARS-CoV-2; (4) recent recommendations to resume face mask usage even in immunized individuals is certainly not inspiring confidence; and (5) the potential necessity for widespread "Booster" immunizations directed against mutated strains. It appears we are chasing an ephemeral target that may never be corralled, and such scenarios emulate the classic children's story "Bartholomew and His 500 Hats." Stated an alternate way, there does not appear to be any end in sight to what may be an evolving chaotic scientific exercise in futility. And which "booster" vaccine will prove to be the straw that broke the camel's back, whereby toxicity will eventually outweigh benefit and VAERS data will soar

to unacceptable levels?.

As of January, 2021, Sweden (a country with virtually no lockdowns) recorded 780 deaths per one million population. At the same time the USA recorded 1200 deaths per one million population. Some science analysts and advisors in the USA have guided this country into economic, social and psychological upheavals that now encompass an increase in suicides and collapsing athletic achievements. Individual intuitiveness is butting heads with scientific recommendations, the latter of which emanated from previously respected physicians who, in retrospect, initiated the original reckless viral gain of function research a decade ago. The goal was to preempt a potential future pandemic by genetically manipulating viruses, thereby paving the way for the subsequent prophylactic development of drugs and vaccines against them. But the genie got out of the bottle ahead of time, precipitating the current pandemic. Reputable virologists were publishing articles in reputable journals seven years ago warning of the dangers and stating that any government allowing such research to proceed was incompetent.

Nearly all patients in the past who recovered from infections caused by SARS-CoV-1 and MERS had their neutralizing viral antibody titers reach undetectable levels after eighteen months. It appears the same pattern will be realized following recovery from SARS-CoV-2 and/or antibodies generated by the new vaccines. Even if highly effective drugs designed to kill SARS-CoV-2 come to fruition, there is evidence that both symptomatic and asymptomatic infected individuals may indefinitely harbor the virus in their gastrointestinal tract after they have cleared it from other organs. In other words, SARS-CoV-2 will likely take its place alongside the other ten trillion bacteria, viruses, fungi and parasites that we all live in symbiosis with. We are potentially looking at survival of the fittest (i.e. Darwinian evolution). There are many parallels to this scenario, most notably the fact that by age twenty-five 95% of the population has acquired Epstein Barr virus even though the vast majority will never have manifested an infectious mononucleosis illness. Once EBV is in the body, 15% of one's entire immunologic repertoire is devoted to keeping it quiet. One wonders if the post-Covid-19 long haulers cannot quite achieve full immunologic control of SARS-CoV-2. Or has their infection in some manner triggered other anomalies such as: (a) mitochondrial dysfunction (i.e., impaired energy delivery due to abnormalities in quantum tunneling); or (b) widespread metabolomic and biochemical disruptions? Attributing long hauler phenomena solely to the presence of innumerable post-infectious autoantibodies seems to be a gross oversimplification of the problem. In a similar vein, cardiopulmonary rehab programs for long haulers appear limited in their efforts to reverse this morbidity. Perhaps researchers might consider implementing a ketone producing diet in these patients, because damaged mitochondria cannot multiply nor correct imbalance in the presence of carbohydrates.

Although more than 110,000 articles on the Covid-19 pandemic have appeared in peer-reviewed literature, it does not appear that the final chapter of SARS-CoV-2 devastation will be written anytime soon. At the present time there is no proven laboratory procedure that can demonstrate protection against this virus following either natural infection or immunization. In addition, vaccination against SARS-CoV-2 does not prevent one from asymptotically transmitting the virus to someone else. At the present time individuals cannot solely rely on "Science" to be their salvation – they must be their own advocates and pursue what makes sense to them. This is not synonymous with

throwing caution to the wind. President Theodore Roosevelt once stated that the survival of a democracy is highly dependent on the average citizen having detailed knowledge of complicated issues. SARS-CoV-2 and the Covid-19 pandemic clearly are complicated issues.

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