I am going to read a prepared statement regarding the outcome of a recent investigation directed against me by the Iowa Board of Medicine. An anonymous complaint was made to the Iowa Board of Medicine, which alleged that I disseminated misinformation about the COVID-19 vaccines. This anonymous complaint could have led to the suspension or a revoke of my medical license to practice medicine in Iowa. Two Iowa hospitals had revoked my hospital privileges last year before this complaint was made because I refused their COVID vaccine mandates. Those hospitals rejected my appeal for a religious exemption. I lost income as a result. This recent complaint to the Iowa Board of Medicine resulted in an investigation that could have further threaten my professional and financial livelihood. What was unique about my case is that the alleged misinformation was done out of a personal financial conflict of interest to promote our Institute's *Campaign for Cures* to develop a competitive vaccine that could be offered to religious consumers. The complaint against me had a high level of suspicion that it was motivated with anti-Catholic sentiment. I had to hire a lawyer to defend myself, but I am pleased to inform everyone that that the complaint filed against me was recently dismissed.

For those who do not know me, I am Dr. Alan Moy, the Co-Founder and President of Cellular Engineering Technologies, an IA biotechnology company that manufactures proteins and adult stem cells. I am also the Founder of the John Paul II Medical Research Institute, a non-profit medical research organization whose mission is to find cures for unmet medical conditions through the use of ethically non-controversial stem cells. I spent several years conducting medical research in academia in the field of cardiopulmonary disease. My research was funded by NIH, the American Heart Association and the American Lung Association. I have been recognized nationally and internationally as a physician-scientist and a leading pulmonologist. For the past 2 decades I have been involved in both industry and non-profit research focused on a variety of biotechnologies and expanding my research focus and interest beyond cardiopulmonary diseases.

The alleged public misinformation that I was accused of making was that the COVID-19 vaccines were ineffective to the extent that they could not prevent infection, nor stop viral transmission. If these facts were well known to the public, it would have had a profound effect on COVID-19 treatment, vaccine acceptance and vaccine mandates. To the best of my knowledge, I was one of the earliest scientists and physicians who publicly made these remarks, well before the vaccines were rolled out and before they were mandated by the government, educational institutions, businesses and even at the Vatican – the latter I am sad to say. I even communicated this opinion to the Trump Administration as early as June of 2020 through a letter to Secretary of Health and Human Services, Alex Azar.

The John Paul II Medical Research Institute conducts an annual *Campaign for Cures* to support medical research for its therapeutic priorities of neurodegenerative diseases, cancer, rare diseases and other unmet conditions that would benefit from adult stem cells. The Institute has been a global leader at the interface of developing ethical and cutting-edge biotechnologies to displace the need for embryonic stem cells and aborted fetal cells in the biopharmaceutical industry to address unmet medical needs for all healthcare consumers regardless of their religious affiliation or lack thereof. One of the problems in our current healthcare system is that it has been historically bias against religious healthcare consumers. Morally illicit cells are a major problem for religious consumers to the extent that these cells produce over 100 billion dollars annually of drug products for the pharmaceutical industry. Furthermore, it is anticipated that this market will double within 5 years. The COVID vaccines are a contributing part of that problem. The Institute has a track record of persistence in solving longstanding complex technical and ethically-controversial problems in the field of biotechnology.

At the beginning of the pandemic in January of 2020, I made several public efforts to promote early treatment in patients infected with COVID-19. In February of 2020, I published an editorial in *Doximity*, a social media platform for physicians, arguing for the use of anti-malaria drugs for treating COVID-19. I provided several scientific publications to support this rationale. I sent a letter of my findings to Dr. Anthony Fauci for consideration, which were ignored. I personally treated many patients with early treatment. None of those patients died nor had to be hospitalized.

At the onset of *Operation Warp Speed*, the US government supported several large biopharmaceutical companies to develop COVID-19 vaccines. It was apparent that many of the vaccines utilized aborted fetal cells in either the design, manufacturing or testing of these medicines. A significant fraction of Americans refused these vaccines on religious/moral grounds. Many people inside and outside the US contacted the Institute encouraging us to develop an ethical vaccine based on our track record of advancing ethical biotechnology. However, my initial concern was whether committing funds to COVID-19 vaccine research would jeopardize our established therapeutic priorities. As part of that decision-making process, I had to first ascertain whether there were major scientific flaws in the vaccine approaches supported by *Operation Warp Speed (OWS)*; and, if that was the case, determine whether the Institute could cost effectively make a meaningful scientific contribution to coronavirus vaccine research or contribute to some important public health value.

I reviewed hundreds of peer-reviewed papers on prior coronavirus vaccine research from the 2002 SARS outbreak and the 2012 MERS outbreak. I reviewed hundreds of papers on natural immunity in response to respiratory viruses and the types of immunity achieved with respiratory virus vaccines, which include our current influenza vaccines. While I freely admit that I could not predict the level of adverse side effects that *OWS* vaccines would later display, it was very clear to me as early as June of 2020 that all *Operation Warp Speed* vaccines would fail to prevent infection and viral transmission – key positions that our public health authorities and the government later claimed in order to promote vaccine adoption and subsequently justify vaccine mandates. I concluded that *OWS* vaccines would never prevent viral infection and transmission because they do not elicit what is called respiratory mucosal immunity (also known as innate immunity).

To prevent a respiratory viral infection and viral transmission, a vaccine has to be introduced via the respiratory tract to elicit a redundant antibody/cellular immune response that prevents/decreases viral replication to the extent that it reduces the viral load in respiratory secretions below a threshold where it cannot inflict disease. This immune response is quite different than the systemic antibody and T-cell response that is generally measured in clinical trials and has no impact on viral transmission. The former is the mechanism that produces natural immunity. Natural immunity is always more effective than vaccine-induced immunity because the respiratory track is challenged with a variety of viral antigens, which provides redundant immune protection even if new viral strains emerge. In contrast, *OWS* vaccines bypassed the respiratory tract when injected into the arm. These vaccines which are labeled as subunit approaches have narrow activity to only the spike protein and are particularly vulnerable as new strains emerge when mutations in the spike protein occur. This biological phenomena explains why the original mRNA vaccines increasingly failed as new variants emerged. What was never disclosed to the public was that these subunit approaches, which were based on delivering the spike protein via different modalities, were the same experimental approaches that failed with prior coronavirus outbreaks. Thus, to this day, we do not have a viable vaccine countermeasure against novel coronaviruses. This remains a national security threat from China despite billions of dollars of taxpayer money spent during the pandemic. I raised this concern in my letter to Secretary Azar. The only viable vaccine solution that could potentially come close to

natural immunity is an attenuated vaccine composed of a weakened viral strain delivered via the respiratory track that expresses multiple viral antigens.

I wrote a letter to Secretary Azar expressing my concerns about *OWS* in June of 2020. I was directed to speak to Mr. Paul Mango who was then the deputy director of HHS and Chief of Staff for the Secretary. I expressed the concern that the US government needed to support research in attenuated respiratory vaccine technology as a national security measure. Yet, it was clear from my conversation with Mr. Mango that there was little interest within OWS for this vaccine approach because it would take too long, and the Trump Administration was politically pressured to come up with a vaccine quickly by election time. Moreover, *OWS* was being led by Dr. Anthony Fauci who was bias towards promoting mRNA vaccine technology because of the patents that NIH owned in this field. It was clear that the US government was being short-sighted in its view towards attenuated vaccine research for respiratory viruses. Yet, the need for this research for the sake of future national security and improving our response to future outbreaks of novel respiratory viruses could not be ignored. For those reasons, I decided to include attenuated vaccine research as an additional priority of the annual *Campaign for Cures* even if the pandemic ended because future outbreaks will eventually occur again.

The Institute's attenuated vaccine research program against novel coronavirus consisted of 3 platforms: (1) creating whole genomic libraries of major COVID-19 variants as the backbone to create live attenuated vaccines; (2) creating libraries of COVID 19 genes to create non-replicating attenuated vaccines; and (3) creating immortalized human adult stem cells that could manufacture viral particles or vaccines. We created whole genomic libraries of the Kirkland (or Wuhan strain), alpha, delta and omicron strains. We created genetic libraries that encode for several major COVID-19 viral antigens. We created immortalized human somatic stem cells from neonatal cord blood and placenta tissue that expressed the ACE-2 receptor and a protein called TMPRSS2, both of which are prerequisite targets to replicate viral particles. We collaborated with the University of Iowa BSL-3 facility to conduct the experiments. We completed our initial research under budget and on time, and which had no adverse effect on our other research programs. In fact, our vaccine research program created technical milestones that benefited our other therapeutic research programs.

The first experiment was to see if live delta variant viruses could replicate in our immortalized neonatal stem cells. To our surprise, our neonatal stem cells were very resistant to viral replication. We only detected between zero to 10 viral particles despite the expression of ACE-2 receptor and TMPRSS2. In contrast, we detected tens of thousands of viral particles in cultured VERO cells- an established monkey cell line. We concluded that: (1) There is some additional factor, other than the ACE-2 receptor and TMPRSS2 that is necessary to cause a viral infection; (2) This factor could serve as a potential drug target for treating novel coronaviruses.; (3) these cell lines represent a potential cell model system to better understand the mechanisms of how human cells may evade coronavirus infection; and (4) these observations may explain why neonates and children are so resistant to infection. Clearly, further research is required and these observations have important public health implication on the topic of whether or not infants and children should be vaccinated against COVID. Yet, the data that we obtained did not support the notion that there is a biological rationale for vaccinating infants. Our results have not yet been published.

Returning to the matter of the Iowa Board of Medicine investigation, there was no basis to the claim that I disseminated misinformation against these vaccines because of a financial conflict of interest. My critique of the *OWS* vaccines was published in Catholic media outlets and social media outlets. This information was censored by social media companies. Unfortunately, my effort had little impact in dissuading the Catholic Church and established Catholic institutions from supporting vaccine mandates. Every public presentation

began with my financial disclosures which is a generally accepted professional norm- in contrast, Dr. Fauci never disclosed his financial disclosures to the public with his public push to promote mRNA vaccines. There was no way that our research would proceed fast enough to create a vaccine that could compete with *OWS* vaccines and provide a vaccine for religious consumers during the pandemic. Yet, I am convinced that attenuated vaccine technology will be superior in the long run than any subunit vaccine approach. There were decades of prior vaccine research that concluded that these subunit vaccines would fail. The actual misinformation did not come from me but among those within public health authorities, academia, government and legacy and social media that stated that these vaccines would prevent infection and prevent viral transmission. People like Dr. Anthony Fauci, industry and academic scientists knew this well-established scientific literature but chose to ignore it and make false claims. Many people suffered as a result, and now there is an understandable lack of confidence that the public has towards our medical establishment. At the end of the day, our defense was based on scientific truth, which led the Iowa Board of Medicine to the only viable conclusion to drop the investigation against me.