Declaration of Dr. Hooman Noorchashm, MD, PhD

I, Hooman Noorchashm, provide the following Joint Declaration and hereby declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct:

Background

1. I graduated from the Perelman School of Medicine at the University of Pennsylvania with a Doctorate degree in immunology and a Medical Doctorate in 2001/2002, under a "Medical Scientist Training Program" fellowship grant from the National Institutes of Health. I subsequently completed residencies in general surgery and cardiothoracic surgery from 2004-2013, first at the Hospital of the University of Pennsylvania and then at Harvard's Brigham and Women's Hospital. I also completed a post-doctoral research fellowship in Immunology and served as Principal Investigator on several Immunology research grants from the NIH. I have taught and practiced clinical medicine for nearly two decades. In addition to an academic career in medicine, I am an advocate for patient safety and medical ethics.

2. I have served on the clinical and research faculties at the University of Pennsylvania School of Medicine, Harvard Medical School Brigham and Women's Hospital, Thomas Jefferson University Hospital, and the Philadelphia VA Hospital. I have authored over 65 articles, abstracts, and reviews in peer-reviewed medical journals, including the New England Journal of Medicine, Journal of Immunology, Nature Medicine, American Journal of Transplantation, Critical Care Medicine, and Diabetes. I am currently a practicing physician with unrestricted medical licenses in the states of Pennsylvania and New Jersey. I have testified on numerous occasions before the Food and Drug Administration and state legislatures on issues related to medicine, immunology, patient safety, and patient's rights.

3. In 2013, my wife Dr. Amy Josephine Reed underwent a hysterectomy operation using a dangerous indiscriminate surgical procedure, which we later learned spread a misdiagnosed

uterine cancer and advanced it to stage 4 Leiomyosarcoma. She eventually died from complications related to indiscriminate, one-size-fits-all morcellation of her symptomatic uterine fibroid tumors.

4. Before her death, my wife and I began spreading awareness of this indiscriminate procedure's danger and advocating for patient safety and patient's rights. In recognition of those efforts, I received a Health Policy Heroes Award from the National Center for Health Research in 2015. This advocacy is fundamentally focused on the principles of ethical practice guided by the medical ethical ideas of "medical necessity" and "patient autonomy" – and a total rejection of non-personalized and algorithmic *"one-size-fits-all"* service line practices, wherein harm to minority subsets of patients is a near-certainty.

5. To continue the work that Dr. Amy Josephine Reed and I started, I founded the *American Patient Defense Union, Inc.* (APDU), an organization dedicated to advocating for patient rights and autonomy, preserving the integrity and sacred relationship between doctors and their patients, and protecting doctor and patient decisions about medical treatments from third-party influence.[1] This organization is involved with advocacy for, and defense of, individual patients or minority subsets of persons harmed by unsafe or unnecessary medical practices without adequate informed consent or inadequate evidence supporting their use.

[1] *See* Hooman Noorchashm, *Why Does Every American Need The American Patient Defense Union (APDU)?*, MEDIUM.COM (Oct. 17, 2017), https://noorchashm.medium.com/why-every-american-needs-the-american-patient-defense-union-apdu-2912e1fee5d4.

Jeanna Norris's Medical Condition

6. On August 20, 2021, Ms. Norris contacted me for a consultation on how to determine the status of her immunity to COVID-19. I agreed to review her case and provide my opinion.

7. During a phone call that same day, Ms. Norris informed me of the following relevant facts:

a. On November 19, 2020, she fell ill with a severe headache and a dry cough.

b. In the early morning hours of November 20, 2020, she was awakened by severe myalgias, arthralgia and a headache.

c. Ms. Norris undwerent a Rapid COVID Antigen test on November 21, 2020, which came back positive.

d. Her severe symptoms of body ache and headache lasted for 4 days and were not associated with any significant effects– these symptoms lingered for approximately 30 days.

e. Ms. Norris lost her sense of taste and smell on day 4-5 following onset of her symptoms. This sensory deficit lasted for approximately 30 days.

f. After an extensive discussion about her medical condition, I issued a prescription for full COVID-19 serological screening, which was conducted on August 20, 2021, at LabCorp. Ms. Norris underwent a blood draw that same day. I examined the results and, as expected, the test confirmed that Ms. Norris had previously recovered from SARS-CoV-2 and had both a positive IgG Spike Antibody assay and a positive SARS-CoV-2 Nucleocapsid result.

g. Ms. Norris' semiquantitative antibody reading measured 59.7 U/ml—approximately 70 times higher than the baseline level of <0.8 U/ml. This level is comparable to that I have seen empirically in many persons with acquired natural immunity to SAR-CoV-2 from a prior infection. In my opinion, Ms. Norris' spike antibody level is highly likely to be above the minimum necessary to provide adequate protection against re-infection from the SARS-CoV-2 virus.

Principles of Medical Ethics and Michigan State University's (MSU's) Vaccine Mandate

8. There are four basic principles governing medical ethics in the United States: (1) autonomy, (2) justice, (3) beneficence, and (4) non-maleficence.

9. A highly influential public health framework proposed by Childress, et al., lists five conditions that public health interventions must satisfy: (1) effectiveness, (2) proportionality, (3) necessity, (4) least infringement, and (5) public justification.[2]

10. The principle of necessity is reinforced by the principle of "least infringement," which requires that any intervention "seek to minimize the infringement of general moral considerations." In particular, "when a policy infringes autonomy, public health agents should seek the least restrictive alternative; when it infringes privacy, they should seek the least intrusive alternative."[3]

11. The principle of proportionality is also a defense against one-size-fits-all approaches that can cause harm in the context of medicine.

[2] James F. Childress, et al., *Public Health Ethics: Mapping the Terrain*, 30(2) J. LAW & MED. ETHICS 170 (2002).

[3] *Id.*

It is Medically Unnecessary for Ms. Norris to Undergo Vaccination Against SARS-CoV-2, and Forcing her to Do So Would Subject Her to an Elevated Risk of Adverse Side Effects

12. It is my opinion that undergoing a full course vaccination (two doses of an mRNA vaccination or one dose of the Johnson and Johnson [J&J] vaccine) is medically unnecessary and creates a risk of harm to Ms. Norris in light of her pre-established acquired immunity to SARS-CoV-2, while providing insignificant or no benefit to her or the MSU community.

13. A highly sensitive and specific antibody test has confirmed that Ms. Norris contracted and recovered from the SARS-CoV-2 virus. Her recent semi-quantitative antibodies screening test established that her level of immune protection remains high.

14. A series of epidemiological studies have demonstrated to a reasonable degree of medical certainty that natural immunity following infection and recovery from the SARS-CoV-2 virus provides robust and durable protection against reinfection, at levels equal to or better than the *most effective* vaccines currently available.[4]

15. For example, according to the Centers for Disease Control (CDC), in clinical trials the J&J vaccine provides an efficacy of only 66.3%—*far* below any measured efficacy of natural immunity to date.

16. Natural immunity protection to SARS-CoV-2 has already proven long-lasting and experience with prior coronaviruses strongly indicates that T-cell immunity provided by natural immunity could last years or even decades.

17. In my opinion, it is almost certainly true that natural infection provides broad-based protection against SARS-CoV-2 variants. Unlike vaccine-induced immunity, which is specialized

[4] Cites (Cleveland clinic, England, Israel, etc.); N. Kojima, et al., *Incidence of Severe Acute Respiratory Syndrome Coronavirus-2 infection among previously infected or vaccinated employees*, https://www.medrxiv.org/content/10.1101/2021.07.03.21259976v2 (July 8, 2021).

to target the Spike-protein of the original Wuhan variant of the SARS-CoV-2 virus, natural immunity recognizes the full complement of SARS-CoV-2 proteins, enabling it to provide protection against a greater array of variants. Emerging evidence is already confirming this immunological expectation.

18. Furthermore, based on my analysis of the clinical medical literature to date, undergoing a full course of vaccine treatment (two doses of mRNA or one dose of J&J vaccine) as required by MSU's vaccine mandate, in a setting of a prior infection and being immune, would expose Ms. Norris to an elevated risk of adverse effects, including serious ones, when compared with individuals who have never contracted COVID-19.

19. Any medical procedure carries the risk of adverse side effects. The SARS-CoV-2 vaccines are no exception. In many cases, the benefits of curing, mitigating, or preventing greater harm justifies undertaking a particular medical intervention notwithstanding any associated risk. But basic principles of medical ethics mandate that any potential benefits be weighed against the risks associated with the procedure. It is critical for any given medical treatment, including vaccination, to be delivered only in the setting of medical necessity in any given individual – and certainly if medical necessity is ruled out for any given medical treatment, forcing the treatment on any such person is unethical.

20. Because Ms. Norris has previously been infected with and recovered from SARS-CoV-2, in my opinion, a vaccination is unnecessary and could only subject her to the risk of harm with little to no tangible added benefit to her or the MSU community relative to "fully vaccinated" persons.

21. Additionally, it is becoming clear that undergoing vaccination in the setting of having had a prior infection subjects her to an elevated risk of adverse side effects compared to

those who have not previously been infected. Existing clinical reports indicate that individuals with a prior infection and natural immunity actually face an *elevated* risk of adverse effects from receiving the vaccine compared to those who have never contracted COVID-19.

22. According to a study in the medical journal *Life* (March 2021), "*our study links prior COVID-19 illness with an increased incidence of vaccination side effects* and demonstrates that mRNA vaccines cause milder, less frequent systemic side effects but more local reactions."[5] The elevated side effects identified in the article include events such as anaphylaxis, swelling, flu-like illness, breathlessness, fatigue, and others, some requiring hospitalization.

23. A study published in *The Lancet Infectious Diseases* (July 1, 2021) examined reports from 627,383 individuals using the COVID Symptom Study app. The authors reported a higher incidence of both systemic and local side effects from receiving the first vaccine dose for those who had previously been infected with COVID-19 compared to those who had not previously been infected.[6]

24. A study conducted at Mount Sinai Icahn School of Medicine also found among those receiving their first vaccine dose, "vaccine reactogenicity" was "substantially more pronounced in individuals with pre-existing immunity" than those who had not previously been infected and those with pre-existing immunity experienced "systemic side effects with a significantly higher frequency" than those who had not previously been infected.

[5] Alexander G. Mathioudakis, et al., *Self-Reported Real-World Safety and Reactogenicity of COVID-19 Vaccines: A Vaccine Recipient Survey*, 11 LIFE 249 (Mar. 2021).
[6] Cristina Menni, *Vaccine side-effects and SARS-CoV-2 infection after vaccination in users of the COVID symptom study app in the UK: a prospective observational study*, 21 LANCET INFECTIOUS DISEASES 939-49 (July 2021).

25. In addition, there are numerous nonsystematic reports of individuals who have had unusually severe adverse reactions to vaccination shortly after recovering from COVID-19 infections.[7]

26. Notably many of these studies focused on the adverse effects of receiving just the *first* dose of a vaccine. They do not examine the frequency or severity of receiving a second dose of a vaccine. This uncertainty is especially important in light of the widespread recognition that those with natural immunity gain no significant benefit from receipt of a second vaccine dose (as is required by MSU's mandatory vaccination policy).

27. It is a fundamental principle of immunology that "vaccinating a person who is recently or concurrently infected can reactivate, or exacerbate, a harmful inflammatory response to the virus. This is NOT a theoretical concern."[8] This applies to SARS-CoV-2 just as it does to any virus.

28. To date, none of the vaccines in current application have been systematically or adequately tested for safety or efficacy in individuals who have previously been infected and recovered from SARS-CoV-2. In fact, Covid survivors *have overall been largely excluded* from Phase III vaccine clinical trials.[9] Thus, any determination with respect to the safety profile of the vaccines in this population, of which Ms. Norris is a member, can only be inferred from clinical studies in the time since the vaccines have been put into widespread application.

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[7] *See Multisystem Inflammatory Syndrome after SARS-CoV-2 Infection and COVID-19 Vaccination*, 27 (Number 7) EMERGING INFECTIOUS DISEASE (July 2021) (Centers for Disease Control and Prevention Dispatch); *see also* Hooman Noorchashm, *CDC Knows Vaccine Associated Critical Illness and Myocarditis are Linked to Prior COVID-19 Infections*, MEDIUM.COM (Jun 2, 2021), https://noorchashm.medium.com/cdc-knows-vaccine-associated-critical-illness-and-myocarditis-are-linked-to-prior-covid-19-62942c39c5ca.

[8] Homman Noorchashm, *The Recently Infected and Already Immune DO NOT Benefit from COVID-19 Vaccination*, MEDIUM.COM (Jun 1, 2021), https://noorchashm.medium.com/the-recently-infected-and-already-immune-do-not-benefit-from-covid-19-infection-7453886e8c89.

[9] *See* Fabio Angeli, *SARS-CoV-2 vaccines: Lights and shadows*, 88 EUROPEAN J. OF INTERNAL MEDICINE 1-8 (2021).

29. A recent study from the state of Kentucky suggested that COVID-recovered individuals who undergo added vaccination enjoy some marginal added benefit relative to COVID-recovered persons who are not vaccinated. However, this study did not compare the risk of subsequent infection in COVID-recovered, vaccinated persons versus those who are COVID-naïve and "fully vaccinated."

30. The preponderance of evidence from other studies indicates that COVID-recovered individuals, in fact, enjoy the same level of protection from subsequent infection, perhaps more, when compared to persons considered "fully vaccinated" using the adenoviral or mRNA vaccines. This latter comparison is the only relevant comparison that could have possibly justified any discriminatory practice against COVID-recovered, already immune people relative to "fully vaccinated" persons – IF there was any real difference between the two groups.

31. Additionally, the Kentucky study did not address or attempt to quantify the magnitude of risk and adverse effects in its comparison groups. Yet, other studies have demonstrated that in fact, the rate of adverse vaccination events is significantly higher in persons previously infected. Overall, it is my opinion that though the Kentucky study may make a case for COVID-recovered persons being offered a choice to be vaccinated if they choose to enjoy added protection, it is not ethical for MSU, or any other institution, to use the CDC's Kentucky study results to institute discriminatory practices in COVID-recovered, already immune persons versus "fully vaccinated" persons. It is my opinion that the Kentucky study does not compare the appropriate groups to justify forced vaccination of and discriminatory practices against COVID-recovered Americans.

32. In contrast to the determination that Ms. Norris has reached after consultation with me, about the details of her personal situation and medical history, MSU is inappropriately, and in

violation of the rules governing medical ethics, imposing a "one-size-fits-all" vaccine mandate on her and every member of the MSU community who is in an analogous situation to her.

33. MSU does not know the details of Ms. Norris' situation and evidence of her existing immunity levels or potential for adverse effects, such as the results of any quantitative antibodies screening test.

34. MSU's vaccine mandate is forcing Ms. Norris to choose between following ethically sound medical practice on one hand and being subject to MSU's burdensome and punitive discriminatory practices – which includes being forced to socially distance, remain socially isolated, or undergo frequent COVID-19 testing – on the other. No American should be put in such a position.

35. As with all patients, Ms. Norris and her consulting physicians should determine her future course of medical treatment. Thus, I will continue to monitor Ms. Norris's antibody levels as SARS-CoV-2 variants arise and/or her immune protection starts to wane. A this point in time, it is my opinion that neither Ms. Norris nor the MSU community are at any higher risk of being infected because of her autonomous choice to delay or forego a booster vaccination at this time.

MSU's Goals in Promoting Community Safety Can Be Accomplished More Effectively and with Less Harm Through Alternative, Less-Restrictive/Coercive Means

36. Protecting the MSU community from COVID-19 transmission can be achieved without exposing COVID-recovered and already immune members of the community to the risk of harm, in contrast to MSU's current indiscriminate vaccination plan.

37. The emerging consensus in the clinical literature on the protective benefits of acquired natural immunity compared to the elevated risks of indiscriminately vaccinating these individuals has led me to propose the personalized #ScreenB4Vaccine initiative for individual

American who correctly believe that medical necessity is the underpinning of safe medical practice.[10] #ScreenB4Vaccine contains two elements: (1) testing for the presence of natural immunity through widespread antibody testing, and (2) a test for presence of an active infection, before vaccination.

38. In fact, growing recognition of the highly protective character of acquired natural immunity in preventing reinfection, along with the elevated risk of vaccinating those who have natural immunity, has recently led the European Union to recognize "a record of previous infection" as a valid substitute for vaccination.[11]

39. Certainly, the Israeli Green Passport system allows for COVID-recovered persons with evidence of antibody immunity to be treated identically to those "fully vaccinated."

40. In short, just because an individual is vaccinated does not guarantee she is immune and just because she is not vaccinated does not mean she is not immune. "Immunity," as assessed by the presence of antibodies to SARS-CoV-2 Spike protein, is at the core of protection from SARS-CoV-2 infection – not vaccination, *per se*.

41. Instead of focusing its policy on blanket vaccination, therefore, MSU's policy should instead focus on *immunity*, regardless of how it is obtained.

Conclusion

42. I call on MSU to act responsibly and, based on the principles of sound medical ethics and immunology, to recognize the importance of acquired natural immunity in providing protection equal to or better than existing vaccines. Such a policy would also acknowledge, and

[10] *See* Hooman Noorchashm, *What is #ScreenB4Vaccine? And Why Is It Necessary for Keeping Every American Maximally Safe in the COVID-19 Pandemic?* MEDIUM.COM (May 7, 2021), https://noorchashm.medium.com/what-is-screenb4vaccine-80b639c4984e.

[11] *See* Julia Buckley, *EU Digital Covid Certificate: Everything you need to know*, CNN.COM (June 9, 2021), https://www.cnn.com/travel/article/eu-covid-certificate-travel-explainer/index.html.

therefore avoid, the elevated risk of side effects from vaccination among those who have already survived a SARS-CoV-2 infection and are recovered within the past year.

Respectfully submitted,

/s/ Hooman Noorchashm

Hooman Noorchashm MD, PhD.