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Attorneys for Petitioners

UNITED STATES DISTRICT COURT OF CALIFORNIA

EASTERN DISTRICT - SACRAMENTO

Joy Garner, individually and on behalf of The Control Group; Joy Elisse Garner, individually and as parent of J.S. and F.G.; Evan Glasco, individually and as parent of F.G.; Traci Music, individually and as parent of K.M. and J.S., Michael Harris, individually and as parent of S.H., Nicole Harris, individually and as parent of S.H.,

Petitioners,

v.

DONALD JOHN TRUMP, in his official capacity as PRESIDENT OF THE UNITED STATES OF AMERICA,

Respondent.

Case No.: 2:20−CV−02470−WBS−JDP

DECLARATION OF LETRINH HOANG, DO IN SUPPORT OF MOTION FOR PRELIMINARY INJUNCTION, OR IN THE ALTERNATIVE REQUEST FOR ORDER TO SHOW CAUSE

Date: February 22, 2021
Time: 1:30 PM
Courtroom: 5
Judge: William B. Shubb

LeTrinh Hoang, DO Declaration

I, LeTrinh Hoang, DO, hereby declare:

1. I am a California licensed physician with a private clinical practice in Arcadia, California. My focus is pediatrics.

Professional Background & Medical Focus

2. I attended the University of California at Riverside I attended the University of California at Riverside with a B.S. in biology (4 years). I attended the University of New England, College of Osteopathic Medicine (4 years).

3. I trained in pediatrics at Loma Linda Children's Hospital (3 years). I've spent over 10 years studying and approximately 20 years in practice. Attached as Exhibit A is a true and correct copy of my Curriculum Vitae showcasing my extensive experience as a physician: teaching, speaking, writing, certifications and professional memberships. On the basis of my education and experience, I am qualified to provide the professional opinion in this declaration.

4. The true measure of health is how few medicines a patient is on. But after graduating from my MD/allopathic training program, I went out into the real world and was horribly disappointed. Overall, the children were not getting better and healing. They were continually getting sick and returning for pharmaceutical treatment. I was seeing the same illnesses over and over again and I kept having to write the same prescriptions over and over again. What I was conventionally trained to do was not consistent with my philosophy of pediatric health and wellness. My philosophy of a healthy child is one that doesn't get sick, or perhaps only gets mildly sick once a year (i.e, to properly exercise the immune system), one who doesn't need to see a specialist routinely and go to multiple doctors.

5. In my practice today, I see a sick child and I "clean them up." If I do a good job, parents see a calmer, happier child that doesn't need any medications.

6. As a pediatrician, I like spending time with my patients and their parents, the old fashioned way. I like figuring out the problems of the patient and the why.

7. I also treat adults for chronic pain. I love this practice. I get amazing results now that I have helped photographically document.

8. I love what I do because I enjoy treating the complicated cases. These are the patients who have "tried everything" and where "all the tests are negative". These truly are the medical mysteries that most doctors brush aside as "in your head." Or if they believe you really have the symptoms and they don't have the answers, then you are left to "cope and deal" with the pain.

Clinically Evaluating Vaccinated versus Unvaccinated

9. Through my work, I have learned to identify and treat injuries related to vaccination. I have observed that unvaccinated individuals are exponentially healthier than vaccinated. In particular, families that approach health the way that nature intended (i.e., foregoing vaccination, minimizing medical intervention, promoting breastfeeding) are the healthiest (i.e, quick recovery if they get sick) because they are most likely to have properly functioning immune systems. The immune system is undeveloped in newborns, so early vaccination is stoking a system that should be quiescent. Vaccination triggers autoimmune issues, allergies, and the like through a series of immune system mechanisms.

10. Vaccinated individuals are at much higher risk of recurring infections (i.e., ear infections, colds, flus, etc). The conventional “cure” for some of these recurring vaccine-related injuries is antibiotics, which then leads to a vicious cycle of dependence on vaccines and antibiotics to “help” the immune system. By contrast, the unvaccinated as a group are exponentially less likely to enter that vicious cycle because they have retained their naturally functioning immune systems.

Vaccine-Induced Herd Immunity Theory

11. As stated in Petitioners’ requests for judicial notice, herd immunity is a “theory regarding the proportion of subjects with immunity in a given population.” See John T, et al (2000). Herd Immunity and Herd Effect: New Insights and Definitions. *J Epidemiol* 16(7):601-6. doi: 10.1023/a:1007626510002. https://pubmed.ncbi.nlm.nih.gov/11078115/

12. If the vaccine-induced herd immunity theory was sound, the many outbreaks and transmissions that have occurred amongst the vaccinated within schools with 100% or almost 100% vaccination coverage would not occur. Those events are important demonstration of its invalidity. Perhaps the most famous of such events in California is a recent one that occurred at Harvard Westlake school, where 100% of the students who contracted whooping cough had received the

pertussis vaccine. Petitioners have also requested judicial notice of a quote published in *American Journal of Diseases of Children:* "These outbreaks, the known importance of carriers in the spread of diphtheria, and the demonstrated failure of toxoid to prevent the carrier state lead us to conclude that the concept of herd immunity is not applicable in the prevention of diphtheria. A high level of community immunization will not stop the transmission of diphtheria…" Citation: Miller *et al*. (1972). Diphtheria immunization. Effect upon carriers and the control of outbreaks. *American Journal of Diseases of Children* 123(3):197-199. https://doi.org/10.1001/archpedi.1972.02110090067004.

13. Harvard trained immunologist Tetyana Obukhanych, PhD has written extensively on the subject of the vaccine-induced herd immunity theory, finding:

> "Disregarding these realities of disease control and eradication, the unsubstantiated belief in herd immunity continues to influence vaccine-related legislation in many U.S. states and other countries. The notion of herd immunity is used as a trump card to justify any measures, often at odds with personal freedom of choice, aiming to increase vaccination compliance. An implicit assumption is that the availability of vaccine exemptions would somehow compromise this precious herd immunity, which public health authorities strive so hard to establish and maintain via mass vaccination.
>
> "Although the evidence for vaccination-based herd immunity is yet to materialize, there is plenty of evidence to the contrary. Just a single publication by Poland & Jacobson (1994) reports on 18 different measles outbreaks throughout North America [6], occurring in school populations with very high vaccination coverage for measles (up to 99.8%). In these outbreaks, vaccinated children constituted 30% to 100% of measles cases. Many more similar outbreaks occurring after 1994 are described in epidemiologic publications.
>
> …
>
> "The notion of herd immunity is based on a faulty assumption that vaccination elicits in an individual a state equivalent to *bona fide* immunity (life-long resistance to viral re-infection). As with any *garbage in-garbage out* notion, the expectations of the herd immunity theory are bound to fail in the real world."

Obukhanych, T. (2014) Herd Immunity: Can Mass Vaccination Achieve It? https://www.tetyanaobukhanych.com/herd_immunity.html. Attached as Exhibit B is a true and correct copy of such informative and well-cited article. This is the type of article from an impartial scientist that my integrative physician colleagues recognize as credible and reliable.

14. Even if one were to stubbornly entertain the false idea that mandatory vaccination is beneficial for herd immunity, one must still recognize that in countries such as the United Kingdom, Canada, New Zealand and Australia where there has not been mandatory vaccination, there has nevertheless been persistently high vaccination coverage, similar to that in the United States, and regardless of the extent to which that high coverage is the reason, there has been similar negligible to low rates of notifications of infectious diseases such as diphtheria, measles, mumps, rubella and meningococcal.

Petitioners Are Likely To Succeed On The Merits

15. I have personally observed that vaccines are causing an epidemic of chronic illness in my community, which is part of the pandemic of chronic illness across the United States. I have also observed that children who stop vaccinating can recover in time. There is hope to end the pandemic and restore natural immunity.

16. In Dec. 2020, I professionally examined the following materials filed in this lawsuit:

- Petitioners' Verified Petition
- Petitioners' Requests for Judicial Notice (Appendices 1-2)
- The Graph Exhibits Attached to Petitioners' Request to Utilize Demonstrative Evidence In Support of Motion for Preliminary Injunction
- The Declaration and Exhibits of Vicky Pebsworth, PhD in Support of Motion for Preliminary Injunction
- The Exhibits attached to the Declaration of Petitioner Joy Garner In Support of Motion for Preliminary Injunction

17. The pilot survey evidence presented in this case matches my personal observations as a physician. Vaccinations are causing population-wide immune system dysfunction, and the best evidence of such causation is the consistently extraordinary health of the unvaccinated.

Petitioners Are Likely To Suffer Irreparable Harm In The Absence of Preliminary Injunction

18. Another component of my practice involves working with unvaccinated families who face daily issues with discrimination on the basis of their status as unvaccinated individuals. The most common issues are families kicked out of other medical practices for not choosing

vaccination, and children kicked out of school for not vaccinating. Another pervasive problem has been the social stigma placed upon the unvaccinated, whereby they are vilified for exercising their right to informed refusal. And the vilification is nonsensical, because I have observed the unvaccinated are exponentially healthier than the vaccinated, less likely to spread infection, and overall better educated about good health practices, whereas the vaccinated are less likely to take precautions (i.e., personal responsibility) to prevent the spread of infectious disease because they presume falsely the vaccine has given them lifetime immunity. Most vaccinated individuals are unaware of the principle of waning vaccine induced immunity.

19. I am deeply concerned by the impending threat of Covid-19 mandatory vaccination that is emanating from miscellaneous bureaucrats. The discrimination and coercion against the unvaccinated is already at a fever pitch in my community (where the unvaccinated feel and act like 2nd class citizens, even like medical refugees who are being actively persecuted), so I am concerned that a new round of mandatory vaccination will push many healthy families over the edge to a point where they would be ineligible to participate in a health survey of unvaccinated individuals. Such a tipping point would be a tragic loss to science and the scientific method if no true control group can be surveyed across the country.

The Balance of Equities Weighs in Petitioners' Favor

20. I am a founding member of the nationwide nonprofit organization Physicians for Informed Consent (PIC). And as a physician, one of the common questions that I am asked is 'How do we protect the immunocompromised?' Attached hereto as Exhibit C is an educational document from Physicians for Informed Consent, with impeccable citations, proving that mandatory vaccination of the public is neither necessary nor helpful to protect the immunocompromised.

21. If given the opportunity to support a genuine health survey of unvaccinated patients, I would certainly support that scientific initiative and work with my patients and other PIC doctors to do so. I know first-hand that the unvaccinated hold the best evidence today of robust immune system health. I would be honored to help educate and notify PIC's hundreds of doctors (who are also opposed to mandatory vaccination) of the scientific opportunity to ethically survey the health of the unvaccinated as requested in the Verified Petition.

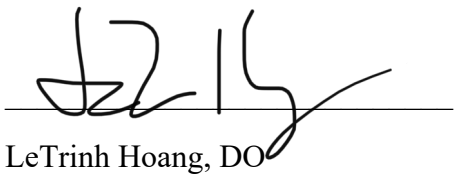
22. To balance the equities, one balances (a) the risk to society of respecting informed consent for unvaccinated individuals, and (b) the cost to society of exterminating the unvaccinated as a population. The first equity is noble, ethical, scientific, and calculated to save this Nation. On the other side of the scale is not an equity but an abhorrent relic of early 20th Century medicine by force, an idea so "good" it must be forced upon others.

The Requested Relief is Genuinely in the Public Interest

23. Our Nation is like a patient with indisputably diagnosed aggressive Stage III cancer that will be terminal if the cancer continues on the current trajectory. President Trump is like the nation's hospital director overseeing the physicians who are just now receiving the lab results proving the aggressive nature of that cancer. President Trump has discretionary authority regarding his next course of action regarding the physicians' recommendations to the patient, but the physicians must still respect their Physician's Oath to be aware of the patient's state of health and to recommend something defensible to save the patient's life, even if that something defensible is only to refer the patient to another physician (and indeed at that point, the patient's choice of care provider would be a political question). So the duty to save the patient's life is nondiscretionary (justiciable), but the choice of how to accomplish that goal is discretionary (political question).

24. The public interest requires good science to survey the health of the unvaccinated to save this Nation's life. Petitioners' Verified Petition and supporting evidence is the credible and appropriate method to save that life. I can scarcely think of a more genuine request in the public interest than to respect the Constitutional rights of the individual to save our Nation from enemies both foreign and domestic. I love this Nation and I want to see us thrive. I was born in Vietnam and fled from communism. I am a naturalized citizen, and a proud American.

I declare under threat of penalty of perjury under the laws of the United States of America that the foregoing is true and correct, and that this declaration was executed on the date set forth below in Arcadia, California.



12-12-20

LeTrinh Hoang, DO Date

Exhibit A

Curriculum Vitae

LeTrinh Hoang, D.O.
email: letrinh@doctorhoang.com

PRIVATE PRACTICE OFFICE LOCATIONS:
9/2003-current, Pediatrics & Osteopathic Manipulative Medicine
51 North Fifth Ave, Suite 201
Arcadia, Ca 91006
(626) 358-2500

9/2014- current, Pediatrics & Osteopathic Manipulative Medicine
955 Carrillo Drive, Suite 108
Los Angeles, Ca 90048
(323) 651-4454

EMPLOYMENT HISTORY:

3/03-8/03 Pediatric Per Diem
Rehka Sachdeva, M.D.
3236 Santa Anita
El Monte, Ca 91733

8/02-8/03 Pediatric Per Diem
Wignes Warren, M.D.
1433 West Merced #112
West Covina, Ca 91790

8/01-8/03 Pediatric Per Diem
Chanchal Dewan
12675 La Mirada Blvd. #415
La Mirada, Ca 90638

8/00-8/03 On-Call Physician
Pediatric Heme/Onc/BMT
City of Hope, National Cancer Center
1500 E. Duarte Road, Duarte, Ca 91010

5/01-12/01 Pediatric Attending, Per Diem
Riverside County Regional Medical Center, a Teaching Hospital
26520 Cactus Ave., Moreno Valley, Ca

11/99-4/02 On-Call Physician
NICU, level 3
Riverside County Regional Medical Center
26520 Cactus Ave., Moreno Valley, Ca

7/97-6/00 Loma Linda University Children's Hospital Residency Program
11234 Anderson Street
Loma Linda, Ca 92354

EDUCATION:
1998-6/00 Loma Linda Children's Hospital, Loma Linda, Ca
Pediatric Resident

1997-98 Loma Linda Children's Hospital, Loma Linda, Ca
Pediatric Intern
1994-1997 University of New England, College of Osteopathic Medicine
11 Hills Beach Road
Biddeford, ME 04005

Exhibit A

1992-93 worked in family business (wholesale nursery)

1988-92 University of California, Riverside
B.S. in Biology, Cum Laude

1985-88 Van Nuys High School, Van Nuys, Ca

LICENSURE:
1997 California, 20A7347

CERTIFICATION:
October 2000-2007 Pediatrics, American Board of Pediatrics

SPEAKING/TEACHING ENGAGEMENTS:
August 2019 -ACOFP-CA Annual Conference: lecture on Trauma OMT & Prolotherapy

April 2019-AOAPRM Annual Conference: lecture on Trauma OMT & Prolotherapy

April 2018- OMT station; AOAPRM Annual Conference

Oct 2015 Natural Prevention in the Winter and Flu Season, Inspired Parenting Magazine, Green Festival Expo, Los Angeles Ca

Marc h 2015 Pediatrics/OMM Clinical Preceptor (Nova University, COM)

August 2014 American College of Osteopathic Family Physicians-CA "Osteopathic Case Brainteasers" & "The Fussy Infant"

October 2013 Radio Interview on Osteopathy, Here's to Your Health, Internet Program

August 2013 American College of Osteopathic Family Physicians-CA "Pediatric Orthopedics" & "Practical Office OMT"

August 2012 American College of Osteopathic Family Physicians-CA "Pediatric Allergy"

OMM Coursework & Mentorship:
Jame Jealous, D.O., Biodynamics of Osteopathy
Stefan Hagopian, D.O., Biodynamics of Osteopathy
Herb Miller, D.O., private study groups
Stan Schiowitz, private study groups
Cranial Academy coursework

PUBLICATIONS:
November 2015 Osteopathy for Children, Hatherleigh Press

PROFESSIONAL ORGANIZATIONS:
December 2016 – founding member – Physicians for Informed Consent
May 2017 - member - American Osteopathic Association of Prolotherapy Regenerative Medicine

PROFESSIONAL INTERESTS:
11/01-11/02 volunteer: St. John's Well Child Center, 514 West Adams Blvd., LA 90007
6/01 medical preceptor w/Student's International Missionary Service, Peru
10/99-11/00 medical preceptor: SIMS, Ensenada, Mexico
6/00 medical preceptor: SIMS, Bolivia

Exhibit B

HERD IMMUNITY: CAN MASS VACCINATION ACHIEVE IT?

By Tetyana Obukhanych, Ph.D.

With endemic measles deemed eliminated in North America after prolonged mass vaccination efforts, we are being constantly reminded that reducing vaccination coverage of children would pose a risk of a reimported outbreak. We are also being persuaded that implementing strict vaccination compliance would prevent an outbreak and protect vaccine-ineligible infants and the immune-compromised via the *herd immunity* effect, attributed to vaccination.

There is no question that a disease outbreak can happen in a non-immune community, if a virus gets imported there. The real question is, how well can high vaccination compliance ensure herd immunity and protect a community from an outbreak?

Herd Immunity, in Theory and in Reality

Herd immunity is not an immunologic idea, but rather an epidemiologic construct, which theoretically predicts successful disease control or viral eradication when a certain pre-calculated percentage of people in the population becomes immune. A scholarly article on herd immunity states [1]:

"Along with the growth of interest in herd immunity, there has been a proliferation of views of what it means or even of whether it exists at all. Several authors have written of data on measles, which "challenge" the principle of herd immunity and others cite widely divergent estimates (from 70 to 95 percent) of the magnitude of the herd immunity threshold required for measles eradication."

Early research performed by Hedrich has been deemed instrumental to the idea that herd immunity is readily attainable. Hedrich analyzed measles outbreaks occurring in Baltimore, MD every 2-3 years between 1900 and 1931. He found that just prior to a major outbreak in that city, the proportion of susceptible children under the age of 15 was about 45-50%. At the end of any outbreak, the proportion of still susceptible children never fell below 32% [2]. Nevertheless, 95-97% of children experienced measles before they reached the age of 15 [3]. For this reason adults were immune from measles.

The finding that a rather large number of susceptible children routinely escaped measles during any particular outbreak gave optimism to the United States Public Health Service that herd immunity works at a threshold, which is considerably less than 100%. An official prediction was made that measles would be swiftly eradicated in the USA as early as 1967 by establishing and maintaining this readily attainable threshold via mass vaccination [4], which already started in 1963. This prediction failed to materialize and measles epidemics in the U.S. did not stop in 1967. The concept that vaccine-based herd immunity is readily attainable for the purposes of rapid disease eradication appeared to be invalid.

olved to justify the idea of vaccinating children against a very mild childhood disease,

not for their own benefit, but to protect a vulnerable but vaccine-ineligible segment of the population. For example, rubella is not dangerous for children. However, for pregnant women who have not become immune from rubella prior to pregnancy, the rubella virus poses a danger during the first trimester by increasing the risk of fetal developmental abnormalities (congenital rubella).

Perhaps with a good intention to immediately put an end to any risk of congenital rubella in their community, elementary school children were vaccinated *en mass* against rubella in 1970 in Casper, Wyoming. Ironically, nine months after this local vaccination campaign took place, an outbreak of rubella hit Casper, Wyoming. The herd immunity effect did not materialize and the outbreak involved over one thousand cases and reached several pregnant women, whereas recently vaccinated children were spared from rubella. The perplexed authors of the study describing this outbreak wrote [5]:

"*The concept that a highly immune group of pre-pubertal children will prevent the spread of rubella in the rest of the community was shown by this epidemic not always to be valid.*"

Disregarding these realities of disease control and eradication, the unsubstantiated belief in herd immunity continues to influence vaccine-related legislation in many U.S. states and other countries. The notion of herd immunity is used as a trump card to justify any measures, often at odds with personal freedom of choice, aiming to increase vaccination compliance. An implicit assumption is that the availability of vaccine exemptions would somehow compromise this precious herd immunity, which public health authorities strive so hard to establish and maintain via mass vaccination.

Although the evidence for vaccination-based herd immunity is yet to materialize, there is plenty of evidence to the contrary. Just a single publication by Poland & Jacobson (1994) reports on 18 different measles outbreaks throughout North America [6], occurring in school populations with very high vaccination coverage for measles (up to 99.8%). In these outbreaks, vaccinated children constituted 30% to 100% of measles cases. Many more similar outbreaks occurring after 1994 are described in epidemiologic publications.

What to Blame?

The medical establishment was quick to blame Mother Nature on frequent occurrence of measles outbreaks in highly vaccinated communities. It has been noticed that if vaccinated too early, an infant might fail to respond to the measles vaccine due to the inhibitory (and at the same time protective) effect of maternal antibodies transferred via the placenta. Before the 1990s, a single dose of the measles vaccine was on the childhood schedule in North America. To compensate for the potential "interference" of maternal immunity transfer with the first round of measles vaccination in some children, a double MMR (measles-mumps-rubella) vaccination strategy was introduced in the United States and Canada in the early 1990s.

Endemic measles got subsequently eliminated in North America, but in 2011 an imported measles outbreak – the largest so far in the post-elimination era – hit a community in Quebec, Canada with 95-97% measles vaccination compliance in the era of double vaccination against measles. If double vaccination is not enough to patch those early-age vaccination failures and ensure the elusive herd immunity, should we then look forward to triple (or, might as well, quadruple) MMR vaccination strategy to see how that might work out with respect to herd immunity? Or should we instead re-examine the herd immunity concept itself?

Faulty Assumption

The notion of herd immunity is based on a faulty assumption that vaccination elicits in an individual a state equivalent to *bona fide* immunity (life-long resistance to viral re-infection). As with any *garbage in-garbage out* notion, the expectations of the herd immunity theory are bound to fail in the real world.

Some relevant information about anti-viral immunity can be gleaned from experiments in research animals. Ochsenbein *et al.* (2000) conducted an experiment in mice [7], in which they compared the effect of injecting mice with two preparations of the vesicular stomatitis virus (VSV). They immunized mice with either unmodified VSV (live virus) or ultraviolet light-inactivated VSV incapable of replication (dead virus). Then they tested the capacity of the serum from the two groups of immunized animals to neutralize VSV (i.e., render VSV incapable of infecting cells) over the 300 day-span following immunization.

The injection of the live-virus preparation induced long-lasting capacity of the serum to neutralize the virus, which persisted for the whole duration of the study without any noticeable decline. In contrast, the injection of the dead-virus preparation

induced much lower levels of virus-neutralizing serum antibody titers to start with. Virus-neutralizing serum titers reached a peak at 20 days post-immunization and then started to wane rapidly. They went below the level detectable by the neutralization test by the end of the study.

The conclusion of this experiment was that a procedure that attenuates or inactivates the virus also diminishes its ability to induce long-lasting virus-neutralizing serum titers upon immunization of animals.

It should be noted that vaccines against viral childhood diseases are similarly prepared by first isolating a wild virus from a sick person, then rendering it artificially attenuated or inactivated to make a vaccine-strain virus. The attenuation or inactivation of a wild virus to become a vaccine-strain virus is done to reduce the likelihood of it inducing viral disease symptoms, although this happens anyway in some cases. The process of attenuation, while making a vaccine-strain virus "safer" than the original wild virus, as far as the induction of viral disease symptoms are concerned, also impacts the durability of vaccine-based protection.

The protective threshold for measles-virus neutralizing serum titers in humans can be estimated from the Boston University Measles Study [8] by Chen *et al*. A subsequent study [9] by LeBaron *et al.* further estimates how long it takes, after the receipt of the second MMR shot, for measles-virus neutralizing serum titers to drop below the protective threshold level. Let us examine these two relevant studies side-by-side.

The Boston University Measles Outbreak Study

In 1990, a blood drive was conducted among students of Boston University a month before the campus happened to be hit with a measles outbreak. Due to these natural circumstances, researchers happened to have access to blood samples of many students who either got measles or were spared from the disease during the outbreak. The measles virus-neutralizing serum titers were measured a month prior to and two months after the exposure. Pre-exposure titers (due to prior vaccination of these students in their childhood) could then be correlated with the degree of their current protection from measles: (1) no detectable infection or disease; (2) a serologically confirmed measles virus infection with a modified clinical course of disease; or (3) full-blown clinical measles. By the way, seven out of eight students who ended up getting full-blown measles, had been vaccinated against measles in their childhood, some twice-vaccinated.

The outcome of the Boston University measles outbreak study was the following:

(a) In all previously vaccinated students who experienced full-blown measles, pre-exposure measles-neutralizing titers were below 120;

(b) Seventy percent of students whose pre-exposure titers were between 120 and 1052, ended up having a serologically confirmed measles infection, but since their altered disease symptoms did not conform to the clinical measles case definition, they were categorized as non-cases during the outbreak;

(c) Students with pre-exposure titers in excess of 1052 were for the most part protected both from the typical clinical disease as well as the measles virus infection.

Subsequent Measles Vaccine Observations

The other study, by LeBaron *et al*. (2007), sought to determine the duration of measles virus-neutralization serum titers after the receipt of the second MMR booster. The study enrolled several hundred healthy Caucasian children from rural U.S. areas free of measles outbreaks for the duration of the study.

The study revealed that about a quarter of these children generated relatively high serum titers in response to MMR vaccination. The rest responded modestly to the booster, but some did very poorly. Although this particular study could not compare measles-neutralizing titers between vaccinated and naturally immune, the study by Itoh *et al*. (2002) has previously demonstrated that measles-neutralizing titers induced by vaccination are about nine times lower than those induced by natural infection [10]. Therefore even those individuals, who respond relatively well to the measles vaccine, do not reach the levels of measles-neutralizing titers achieved after natural infection.

Serum titers in all vaccinated children, regardless of being relatively high, moderate, or low, reached a peak in a month after the MMR booster, then came down in six months to the pre-booster levels and continued to decline gradually over the next 5-10

years of observation. Only about a top quarter of children (called high-responders) were able to maintain serum titers in excess of 1000 units 10 years following their second MMR booster, received at the age of five. This fraction of children is likely to be protected from the measles virus infection by the time they are adolescents.

The least efficient vaccine responders (bottom 5%) had their serum titers fall below 120 units within 5-10 years after the second MMR shot. This percentage of vaccinated children is expected to have full-blown, clinically identifiable measles upon exposure when they get a bit older. This is the reason why vaccinated (and even twice-vaccinated) people show up as disease cases in numbers equal to or even exceeding the unvaccinated cases in communities with very high (>95%) vaccination coverage.

Rapid loss of vaccine protection in low-responders is the reason for the paradox of a "vaccine-preventable" disease becoming the disease of the vaccinated. Such disease cases are not early-age vaccine failures due to maternal antibody interference, they are anticipated vaccine failures due to waning vaccine protection.

For the majority of MMR-vaccinated children, measles-neutralizing titers fall between 120 and 1000 by the time they reach adolescence. These children can acquire the measles virus upon exposure and be potentially contagious during an outbreak, although they might experience a modified course of disease and not be labeled as measles cases for the purposes of reporting. In fact, during the Boston University measles outbreak, many students with pre-exposure titers between 120 and 1052, who were officially categorized as non-cases, had some of the viral disease (flu-like) symptoms, including runny nose, cough, photophobia, headache, fever, and diarrhea. These sick "non-cases" ended up with high post-exposure serum titers for measles, just as the typical disease cases did, which is indicative of viral replication and, hence, transmission.

High Vaccination Compliance Does Not Result in Herd Immunity

Cases of the measles virus re-importation into North America after the eradication of the endemic virus had typically resulted in small or no sustained outbreaks in the last decade, in part due to the vigilance of the public health authorities in quarantine implementation. However, the 2011 imported outbreak of measles in Quebec, Canada characterized by de Serres *et al.* appeared to be ominously different [11]. Strict quarantine measures were not implemented, possibly because of the assumption that the region was well under the herd immunity effect due to an exceptionally high and uniform vaccination compliance for measles (95-97%). The consequences of relying on non-existent herd immunity as opposed to quarantine in curbing an imported disease outbreak were very telling.

Imported by a high-school teacher during the spring break trip abroad (himself vaccinated against measles in his childhood), the outbreak happened to spread swiftly from this index case, involved more than 600 individuals including 21 infants, and lasted for half a year. Nearly half of the measles cases in this outbreak were twice-vaccinated individuals. This high contribution of twice-vaccinated individuals to disease cases was revealed only by active case finding, performed by de Serres *et al.* On the other hand, passive surveillance has resulted in significant underreporting of measles among twice-vaccinated, thus skewing the official statistics.

Indicative of the gradually waning nature of vaccine-based protection, the contribution of twice-vaccinated children to disease cases increased with age. Twice-vaccinated cases constituted only 4.1% of the 5-9 age group, but 18% of the 10-14 age group, and 22% of the 15-19 age group. The study did not assess how many previously vaccinated individuals ended up getting the measles virus infection with a modified clinical course of disease and thus were not counted as disease cases for the purposes of reporting, yet were spreading the virus around in the community.

Can the Vaccinated Transmit the Measles Virus?

The medical establishment assumes that vaccinated children, if they themselves get virally infected or even develop full-blown (called breakthrough) disease, cannot transmit it to others. Some cite a paper published in the prestigious *Journal of American Medical Association* (*JAMA*) in 1973 as providing evidence for this assumption [12]. Indeed, the title of the article reads "Failure of Vaccinated Children to Transmit Measles." However, careful examination of the study design reveals that the study did not properly address the question it should have addressed: whether vaccinated children who definitely got infected during an outbreak did or did not transmit the virus to others, who were still susceptible to the virus.

The results of the *JAMA* study show that during an outbreak of measles in an Iowa community in the 1970s, which involved both vaccinated and unvaccinated children, non-sick vaccinated children were unlikely to transmit measles to their younger pre-school siblings, many of whom could have been recently vaccinated themselves and therefore not susceptible to measles anyway during that particular outbreak. The vaccination status of those younger siblings was not determined (or disclosed) by

the study. Curiously, the study data show that non-sick *unvaccinated* children also "fail" to transmit measles (which they obviously did not contract during that particular outbreak) to their younger pre-school siblings with undisclosed vaccination status. This makes it clear that vaccination status is not a predictor of viral transmission.

A recent study, based on the 2011 outbreak of measles in New York City, has clearly documented that a twice-vaccinated person (an adult) can transmit measles to other twice-vaccinated individuals [13].

Doing the Math

Let us now remind ourselves that the touted purpose of establishing herd immunity via a high degree of vaccination compliance is to be able to promptly cease any outbreak of a benign childhood disease so that a vulnerable but vaccine-ineligible population (i.e., infants or individuals taking immuno-suppressive medications) could avoid contracting the disease that is dangerous *only* at their age or given their state of the immune system. To prevent an outbreak, 70-95% of the population, according to very broad theoretical estimates, has to be truly immune – that is, *resistant to viral infection*, not just protected from developing the full range of symptoms that conform to the accepted clinical definition of the disease. However, 100% vaccination compliance can at best make only a quarter of the population become resistant to viral infection for more than a decade. This makes it apparent that stable herd immunity cannot be achieved via childhood vaccination in the long term regardless of the degree of vaccination compliance.

Is Revaccination a Solution to Waning Vaccine Protection Against Measles?

Typical variations in the gene pool (i.e., personal immuno-genetic profile) affect how efficiently vaccines get processed and presented to the immune system for the purposes of antibody production. This might be one of the reasons why only a fraction of healthy children respond well to vaccination (i.e., can generate and maintain relatively high measles-neutralizing titers for many years), whereas other healthy children respond poorly to vaccination. Would re-vaccinating those whose personal immuno-genetic profile does not favor high antibody production in response to the measles vaccine, correct their inherently low degree of vaccine-responsiveness? The research that attests to the futility of such an endeavor is gleaned from observations summed up by Dr. Gregory Poland [14]:

"*In studies of measles, post-immunization measles antibody in the 'low positive' range did not protect against clinical measles when subjects were exposed to the wild measles virus, whereas high levels were protective. Furthermore, non-responders to a single dose of measles vaccine, who demonstrated an antibody response only after a second immunization, were still six times more likely than were responders to a single dose of measles vaccine to develop measles on exposure to wild virus. Others examined 'poor responders,' who were re-immunized and developed poor or low-level antibody responses only to lose detectable antibody and develop measles on exposure 2–5 years later.*"

The answer is clear: poor responders to the measles vaccine remain poor responders to further vaccination and cannot rescue herd immunity. Having these data, why does the medical establishment insist that *vaccine-based* herd immunity is even possible, if only stricter or more frequent vaccination measures could be implemented? Why, for the sake of an unattainable idea, do mainstream pediatricians and public health officials pester those families who choose to shield their children from potential vaccine injuries or ensure their children's health via natural vaccine-independent strategies?

Self-Defeating Public Health Venture

The biomedical belief that a vaccine-exempt child endangers the society by not contributing to herd immunity is preposterous, because vaccinating every single child by the required schedule cannot maintain the desired herd immunity anyway. It is time to let go of the bigotry against those seeking vaccination exemptions for their children. Instead, we should turn our attention to the outcome of mass vaccination campaigns that lies ahead.

Mass vaccination of children initially achieves rapid results in disease reduction through attempted viral eradication only because it hitch hikes on top of the permanently immune majority of adults who acquired their immunity naturally in the pre-vaccination era. The problem is, however, that the proportion of vaccinated but non-immune young adults is now growing, while the proportion of the older immune population is diminishing due to age. Thus, over time mass vaccination makes us lose rather than gain cumulative immunity in the adult population. At this stage the struggle to control imported outbreaks is going to become an uphill battle regardless of vaccination compliance, with the Quebec measles experience of 2011 being a harbinger for more of such out-of-control outbreaks to come.

Mass vaccination eventually ceases endemic disease outbreaks by removing viral circulation in the community, instead of

inducing permanent immunity in the vaccinated. However, viral diseases, although reduced in incidence in many countries, are not fully eradicated from all parts of the world. A region-specific elimination of viral exposure at the time when the virus is present globally is hardly good news. Prolonged mass childhood vaccination is a measure of disease control that with time makes our entire adult population (but more importantly infants) more and more defenseless against the incompletely eradicated virus, which can be easily re-imported.

Why do the public health authorities choose to put so much effort into a self-defeating venture of non-uniform viral eradication?

Perhaps a bit belated, comes a theoretical recognition of the public health disaster we are heading toward [15]:

"*For infectious diseases where immunization can offer lifelong protection, a variety of simple models can be used to explain the utility of vaccination as a control method. However, for many diseases, immunity wanes over time…. Here we show how vaccination can have a range of unexpected consequences. We predict that, after a long disease-free period, the introduction of infection will lead to far larger epidemics than that predicted by standard models. These results have clear implications for the long-term success of any vaccination campaign and highlight the need for a sound understanding of the immunological mechanisms of immunity and vaccination.*"

It is time to wake up to the reality of our public health vaccination policies and their long-term implications.

Disclaimer: Information presented in this article is for educational purposes only and does not constitute medical advice.

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Exhibit C

Vaccines: What About Immunocompromised Schoolchildren?

PHYSICIANS FOR INFORMED CONSENT
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1. WHAT DOES IT MEAN TO BE IMMUNOCOMPROMISED?

Immunocompromised children have weakened immune systems that prevent them from optimally fighting infections on their own. Consequently, they may be at increased risk of complications from infectious diseases and require additional precautions and treatments.

2. CAN IMMUNOCOMPROMISED CHILDREN ATTEND SCHOOL?

The Immune Deficiency Foundation states, "Years ago, a diagnosis of a PI [primary immune deficiency] meant extremely compromised lives... Today, with early diagnosis and appropriate therapies, many patients diagnosed with a PI can live healthy, productive lives." Modern treatments have reduced the risk of many immunocompromised children so that they are able to attend school.[1]

Children who are not severely immunocompromised can attend school with the approval of their doctor.

3. CAN IMMUNOCOMPROMISED SCHOOLCHILDREN BE VACCINATED?

Immunocompromised schoolchildren have the option to receive all the vaccines licensed for children in the United States, except for the live virus vaccines (such as vaccines targeting measles, mumps, rubella, or varicella infections).[2] Although vaccination often results in protective levels of antibodies in immunocompromised children,[3-7] clinical vaccine safety trials typically exclude immunocompromised subjects.[8] In addition, vaccines have not been evaluated for their potential to cause cancer, genetic mutations or impaired fertility in the general or immunocompromised population.[9] Due to these limitations, it is not known whether the benefit of vaccinating an immunocompromised child outweighs the risk of vaccine injury to that child.

4. DOES THE VACCINATION STATUS OF OTHER SCHOOLCHILDREN POSE A SIGNIFICANT RISK TO IMMUNOCOMPROMISED SCHOOLCHILDREN?

The vaccination status of other schoolchildren does not pose a significant risk to immunocompromised schoolchildren for the following reasons (Table 1):

- Some vaccines cannot prevent the spread of the bacteria or viruses they target.
- Immune globulin (plasma containing antibodies) is available for immunocompromised children exposed to certain infectious diseases.
- Some infectious diseases rarely cause complications in immunocompromised schoolchildren.
- Not all infectious diseases are contagious.
- Some infectious diseases are not spread in schools.

Immunocompromised schoolchildren are not put at significant risk by the vaccination status of other schoolchildren.

Exhibit C

Table 1: Why the Vaccination Status of Other Schoolchildren Is Not a Significant Risk to Immunocompromised Schoolchildren

Some vaccines cannot prevent the spread of the bacteria or viruses they target.

Children vaccinated with the diphtheria, tetanus, and pertussis (whooping cough) vaccine (DTaP) or the inactivated polio vaccine (IPV) can still be infected with diphtheria-causing bacteria, pertussis bacteria, or poliovirus and spread them to others, even with mild or no symptoms of their own.[10-13] The influenza vaccines (TIV and LAIV) have not been observed to significantly reduce the spread of influenza.[14,15] About half of schoolchildren vaccinated with the measles, mumps, and rubella (MMR) vaccine can still be infected with measles virus and spread it to others, even with mild or no symptoms of their own.[16-19]

Immune globulin (plasma containing antibodies) is available for immunocompromised children exposed to certain infectious diseases.

Immune globulin (IG) is available for the prevention of severe symptoms in immunocompromised children exposed to measles or rubella (IG does not provide protection for fetuses of expectant mothers infected with rubella).[20,21] Varicella-zoster immune globulin (VIG) is available for the prevention of severe symptoms in immunocompromised children exposed to varicella (chickenpox).[22] Hepatitis B immune globulin (HBIG) and tetanus immune globulin (TIG) are also available for immunocompromised children.[2]

Some infectious diseases rarely cause complications in immunocompromised schoolchildren.

Fatal cases of mumps are very rare in schoolchildren (1 mumps death per 100,000 mumps cases),[23] and immunocompromised children have been observed to recover just as well from mumps as the general population.[24] Severe cases of pertussis or rubella rarely occur in schoolchildren, and being immunocompromised has not been observed to be a significant risk factor for complications of pertussis or rubella in schoolchildren.[25,26]

Not all infectious diseases are contagious.

Tetanus is not a communicable disease; that is, it cannot spread from person to person under any circumstances.[27]

Some infectious diseases are not spread in schools.

Hepatitis B is not spread by kissing, hugging, holding hands, coughing, sneezing, or sharing eating utensils,[28] and the main routes of hepatitis B transmission (sexual contact, injection drug use, or being born to an infected mother)[29] do not occur in school. Nearly all cases of *Haemophilus influenzae* type b (Hib) occur among children younger than 5 years of age; therefore, nearly all Hib transmission does not occur in school.[30] Human papillomavirus (HPV) is sexually transmitted and is therefore not spread in school.[31]

All references are available at physiciansforinformedconsent.org/immunocompromised-schoolchildren.

These statements are intended for informational purposes only and should not be construed as personal medical advice.

Exhibit C

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