March 4, 2019

Sundar Pichai
Chief Executive Officer
Google
1600 Amphitheater Parkway
Mountain View, CA 94043

Dear Mr. Pichai:

In his letter to you dated February 14, 2019, Congressman Adam B. Schiff suggests that your company has a responsibility to ensure that the information YouTube users see about vaccines is truthful and accurate. We, too, are highly concerned that the public is being misinformed about vaccines, and we agree that Google could play a positive role in helping to resolve this problem. But we strongly disagree that the means by which Google can do so is by preventing users from seeing information that calls into question government policies related to vaccinations. On the contrary, the means by which Google can help empower people to make an informed choice is to facilitate a free market of ideas and let users determine for themselves the value of content that appears Google or YouTube search results or recommendations.

For your company to take on the role suggested by Mr. Schiff, you would essentially be engaging in the practice of censoring information about vaccines on behalf of the government. There is no other way to logically interpret his letter, in which he expresses his expectation that your company will take measures to stop YouTube users from seeing what he calls "anti-vaccine" information, a term he treats synonymously with "medically inaccurate information about vaccines". Mr. Schiff expresses his concern that certain information might discourage parents from vaccinating their children, and he describes any such information as "a direct threat to public health".

Hence, his true criterion for determining what information constitutes a "threat" is *not* whether it is truthful and accurate, *but whether or not it accords with the goal of achieving high vaccination rates*. In a truly Orwellian fashion, he then defines any information that could undermine that goal as "medically inaccurate". He is, in short, employing the logical fallacy of begging the question. When he says that certain information threatens "public health", what he really means is that it threatens public health *policy*.

When Mr. Schiff decries "anti-vaccine" information and suggests that you should prevent YouTube users from seeing it, he is using the term inclusively of *any dissent from* or *criticism of* public vaccine policy, *regardless of the truthfulness and accuracy of the information*. This is again evident in the third paragraph of his letter where he worries that, "if a concerned parent consistently sees information in their YouTube recommendations that casts doubt on the safety or efficacy of vaccines, it could cause

them to disregard the advice of their children's physicians and public health experts and decline to follow the recommended vaccination schedule." Mr. Schiff is thus essentially defining as "misinformation" *any* information that might lead parents to conclude that strictly complying with the routine vaccine schedule recommended by the US Centers for Disease Control and Prevention (CDC) is not in the best interests of their child. In other words, an implicit assumption underlying Mr. Schiff's criterion for determining what constitutes "misinformation" is that the CDC is infallible in its vaccine recommendations. We emphatically disagree and must reject this assumption as totally illogical and unscientific.

Mr. Schiff would have you take steps to prevent "vaccine misinformation" from proliferating, but who is to decide what constitutes misinformation? Which party to the debate can claim a monopoly on truth? Evidently, Mr. Schiff views it as his own role as a government legislator to determine for us what information we should see. We disagree, however, that Congress should be involved in determining what information users of media platforms like YouTube are exposed to. Indeed, the US Constitution strictly limits Congressional powers to those expressly delegated and includes safeguards against such abuses under the First Amendment. Efforts to stifle discussion and debate about such an important issue constitute a serious threat to both our health and our liberty.

While he has assumed the role of arbiter of truth, the fundamental problem with his approach is illuminated by the fact that *Mr. Schiff has himself demonstrably presented you with misinformation about vaccines*.

To support his approach, Mr. Schiff argues that there is an "overwhelming consensus" in the scientific and medical communities "that vaccines are both effective and safe." This statement is misinformative for two reasons. First, science isn't done by formulating a consensus opinion, but by formulating and testing hypotheses that may very well challenge conventional thinking. Indeed, if science were done on the basis of consensus opinion, scientific progress would hardly be possible. Historical examples abound, and what's past is prologue. John Ioannidis is a professor of medicine at the Stanford University School of Medicine and a pioneer in the field of meta-research who's been described by the *BMJ* as "the scourge of sloppy science" and by *The Atlantic* as possibly "one of the most influential scientists alive". In a 2005 paper that is the most highly accessed the journal *PLoS Medicine* has ever published, and which the *BMJ* says "has achieved near legendary status", Ioannidis estimated that "the vast majority" of published findings in the medical literature may be false, and majority expert opinion "may often be simply accurate measures of the prevailing bias" rather than representing scientific truths.[1] As Dave Sackett, "the father of evidence based medicine", once quipped, "Half of what you'll learn in medical school will be shown to be either dead wrong or out of date within five years of your graduation; the trouble is that nobody can tell you which half—so the most important thing to learn is how to learn on

[1] John P. A. Ioannidis, "Why Most Published Research Findings Are False", *PLoS Medicine*, August 2005, https://dx.doi.org/10.1371%2Fjournal.pmed.0020124. John P.A. Ioannidis, Bio, Stanford University, accessed February 29, 2019, https://profiles.stanford.edu/john-ioannidis. "John Ioannidis: Uncompromising gentle maniac", *BMJ*, September 24, 2015, https://doi.org/10.1136/bmj.h4992. David H. Freedman, "Lies, Damned Lies, and Medical Science", *The Atlantic*, November 2010, https://www.theatlantic.com/magazine/archive/2010/11/lies-damned-lies-and-medical-science/308269/.

your own."[2] The suggestion that anyone who voices ideas that go against prevailing beliefs should be silenced is fundamentally contrary the scientific method. Mr. Schiff's statement about science is, in short, unscientific.

The second reason Mr. Schiff's blanket statement is misinformative is because it simply isn't true. There is no such consensus. The statement assumes that all vaccines are safe and effective for everybody, but what there is a scientific consensus about is that *that is absolutely not true*. Indeed, it is meaningless to treat "vaccines" *as a product concept* when speaking in terms of safety and effectives because each vaccine has a different profile. There is a risk-benefit analysis that must be done for each one. Not all vaccines are considered safe. Not all are considered effective. In the scientific literature, there is a great deal of uncertainty and debate about the safety and effectiveness of individual vaccines, as well as their combined effects and the long-term consequences of vaccinating children according to the CDC's schedule. If Mr. Schiff's statement were true, there could not exist vaccines that are no longer used today in the US because their potential risks were no longer considered outweighed by their potential benefits. And yet such vaccines *do* exist. This was precisely the case for both the live-virus oral polio vaccine (OPV) and the diphtheria, tetanus, and whole-cell pertussis vaccine (DTP).[3]

If we trust Mr. Schiff's statement, both of those vaccines must be "safe". Yet numerous studies undertaken in countries where the DTP vaccine is still used have found it to be associated with an *increased* rate of childhood mortality. This is an outcome known in the literature as a "non-specific effect", which can refer to any effect of a vaccine that goes beyond its intended protective effects against a targeted disease. The man credited with pioneering research into non-specific effects is Peter Aaby, an anthropologist and professor at the Epidemiological Research Unit of Statens Serum Institute in Denmark who in 2009 received Denmark's Ministry of Foreign Affairs' award as the fifth most significant Dane for work done in the area of fighting global poverty. As Dr. Aaby and his coauthors bluntly stated in a study of the effects of DTP vaccination on childhood mortality published in February 2017 in the journal *EBioMecidine*,

> DTP was associated with 5-fold higher mortality than being unvaccinated [with DTP]. No prospective study has shown beneficial survival effects of DTP…. It should be of concern that the effect of routine vaccinations on all-cause mortality was not tested in randomized trials. All currently available evidence suggests that DTP vaccine may kill more children from other causes

[2] Richard Smith, "Thoughts for new medical students at a new medical school", *BMJ*, December 20, 2003, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC300793/.

[3] Centers for Disease Control and Prevention, "Poliomyelitis Prevention in the United States: Introduction of A Sequential Vaccination Schedule of Inactivated Poliovirus Vaccine Followed by Oral Poliovirus Vaccine; Recommendations of the Advisory Committee on Immunization Practices (ACIP)", *MMWR*, January 24, 1997, https://www.cdc.gov/mmwr/preview/mmwrhtml/00046568.htm. Centers for Disease Control and Prevention, "Pertussis Vaccination: Use of Acellular Pertussis Vaccines Among Infants and Young Children Recommendations of the Advisory Committee on Immunization Practices (ACIP)", *MMWR* March 28, 1997, https://www.cdc.gov/mmwr/preview/mmwrhtml/00048610.htm.

than it saves from diphtheria, tetanus or pertussis. Though a vaccine protects children against the target disease it may simultaneously increase susceptibility to unrelated infection.[4]

The hypothesized explanations for this finding have to do with the differences between naturally acquired and vaccine-conferred immunity. Increasingly, we are learning from scientific research that there are opportunity costs associated with vaccination. As another illustration, studies have shown that getting an annual flu shot can actually *increase* risk of illness by denying individuals the opportunity to develop the superior immunity gained through natural infection. Whereas the vaccine is only designed to stimulate an antibody response, natural infection results additionally in the development of a robust cell-mediated immunity that protects against not only the infecting strain, but also other strains of influenza *and possibly even other viruses*. This is a benefit that the vaccine, unlike natural infection, does not confer.[5] It is a great cause for concern that public health officials simply do not take such opportunity costs into consideration when formulating public vaccine policies.

In addition to disregarding the variable profile of each vaccine, Mr. Schiff's statement ignores the variability in children's responses to vaccinations. The risk-benefit must be conducted for each vaccine *and for every individual child*. Not every child is at the same risk from a given infectious disease. Not every child will have the same immune response to a vaccine intended to prevent that disease. And not every child is at the same risk of harm from the vaccine. *That there are subpopulations of children who are at higher risk of being killed or permanently injured by vaccines is well recognized within the scientific community.*

In fact, there's a whole field of research called "vaccinomics" that seeks to better understand the individual differences in immune responses to vaccinations. A conceptual counterpart to this field is called "adversomics", which seeks to better understand the genetic and environmental factors that affect the individual risk of adverse outcomes from vaccinations. The term "vaccinomics" was coined by Dr. Gregory A. Poland, a world-renowned expert on vaccines, research scientist for Mayo Clinic, and editor-in-chief of the prestigious journal *Vaccine*. In a 2013 paper explaining these fields of research, Dr. Poland and his coauthors remarked that advances science are leading toward "the abandonment of a 'one size fits all' approach to vaccine dosing and delivery".[6]

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[4] Søren Wengel Mogensen et al., "The Introduction of Diphtheria-Tetanus-Pertussis and (OPV)… A Natural Experiment", *EBioMedicine*, March 2017, https://doi.org/10.1016/j.ebiom.2017.01.041.

[5] Danuta M. Skowronski, "Association between the 2008–09 Seasonal Influenza Vaccine and Pandemic H1N1 Illness during Spring–Summer 2009: Four Observational Studies from Canada", *PLoS Medicine*, April 6, 2010, https://doi.org/10.1371/journal.pmed.1000258. Rogier Bodewes et al, "Annual Vaccination against Influenza Virus Hampers Development of Virus-Specific $CD8^+$ T Cell Immunity in Children", *Journal of Virology*, November 2011, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3209321/. Benjamin J. Cowling, "Increased Risk of Noninfluenza Respiratory Virus Infections Associated with Receipt of Inactivated Influenza Vaccine", *Clinical Infectious Diseases*, June 15, 2012, https://doi.org/10.1093/cid/cis307.

[6] Gregory A. Poland et al., "Vaccinomics, adversomics, and the immune response network theory: Individualized vaccinology in the 21st century", *Seminars in Immunology*, April 2013, https://dx.doi.org/10.1016%2Fj.smim.2013.04.007.

Yet it is this very one-size-fits-all approach—the archaic paradigm upon which existing public vaccine policy has been constructed—that Mr. Schiff is determined to maintain. By favoring the status quo, he is opposing progress. He is simply behind the times and unknowledgeable of the science.

Continuing, Mr. Schiff states in his letter that there is "no evidence to suggest that vaccines cause life-threatening or disabling diseases". *But that is absolutely false.* For an uncontroversial example, it is because the live-virus oral polio vaccine can itself cause paralytic polio that it was discontinued from use in the United States.[7] Indeed, the CDC acknowledges that every domestic case of polio after 1979 was caused by the vaccine, which was eventually phased out in favor of the inactivated polio vaccine (IPV).[8] Even though the risk of getting polio from the live-virus vaccine had become greater than that from the wild virus, the Food and Drug Administration (FDA) in 1984 disturbingly advocated its continued use on the grounds that "any possible doubts, whether or not well founded, about the safety of the vaccine cannot be allowed to exist in view of the need to assure that the vaccine will continue to be used to the maximum extent consistent with the nation's public health objectives."[9]

Unfortunately, the public health objective of achieving high vaccination rates is not necessarily conducive to the objective of improving public health, and the same cognitive dissonance evident in the FDA's remark is reflected in Mr. Schiff's objection to information being shared on YouTube that isn't conducive to the government's goal of persuading or coercing parents through mandates to strictly comply with the CDC's routine childhood vaccine schedule.

For another uncontroversial example of a paralytic disease caused by a vaccine, the CDC acknowledges that the 1976 pandemic "swine flu" influenza vaccine was "clearly associated with an increased frequency of Guillain-Barré syndrome (GBS)", which is a paralytic disease resembling polio.[10] The manufacturers themselves likewise acknowledge this risk in their own products' package inserts. GlaxoSmithKline's insert for its Fluarix influenza vaccine, for instance, discloses that "The 1976 swine influenza vaccine was associated with an increased frequency of GBS."[11] The relevance of manufacturers disclosing this information in their package inserts about a vaccine that's no longer in use is that it's possible seasonal or other pandemic influenza vaccines could also in rare cases cause GBS. We just don't really know because the kinds of large clinical trials that would be necessary to confidently assess that risk haven't been done.

Mr. Schiff's false statement is all the more astonishing in light of the fact that the US government itself, under its "Vaccine Injury Compensation Program" (VICP), maintains a "Vaccine Injury Table" listing

[7] CDC, "Poliomyelitis Prevention in the United States", op. cit.
[8] Centers for Disease Control and Prevention, "Poliomyelitis", *Epidemiology and Prevention of Vaccine-Preventable Diseases* ("The Pink Book"), 13th Edition, April 2015, https://www.cdc.gov/vaccines/pubs/pinkbook/polio.html.
[9] Food and Drug Administration, Department of Health and Human Services, 21 CFR Part 630, "Additional Standards for Viral Vaccines; Poliovirus Vaccine, Live, Oral", Federal Register, Vol. 49, No. 107, June 1, 1984, 23004 – 23007, https://www.govinfo.gov/app/details/FR-1984-06-01.
[10] Centers for Disease Control and Prevention, "Influenza", *Epidemiology and Prevention of Vaccine-Preventable Diseases*, 13th Edition, April 2015, https://www.cdc.gov/vaccines/pubs/pinkbook/flu.html.
[11] GlaxoSmithKline Biologicals, Fluarix Package Insert, *FDA.gov*, accessed February 26, 2019, https://www.fda.gov/BiologicsBloodVaccines/Vaccines/ApprovedProducts/ucm112850.htm.

"injuries, disabilities, illnesses, conditions, and deaths" that can result from the administration of vaccines that have been recommended by the CDC for routine use in children. Listed injuries include anaphylaxis, encephalopathy or encephalitis, chronic arthritis, vaccine-strain measles viral disease in an immunodeficient recipient, intussusception, paralytic polio, and GBS.[12] As explained by the Department of Health and Human Services (HHS), which administers the program, if occurring within a given time frame post-vaccination, listed injuries "are presumed to be caused by vaccines unless another cause is proven."[13] As of November 2018, the government had awarded approximately $4 billion to petitioners under the VICP.[14]

The VICP is funded by an excise tax on every vaccine dose administered. It was established under the 1986 National Childhood Vaccine Injury Act, which granted broad legal immunity to pharmaceutical companies against injury lawsuits for vaccines on the CDC's routine childhood schedule. The government has thus effectively shifted the financial burden for vaccine injuries away from the pharmaceutical industry and onto the taxpaying consumers. This was done because vaccine injury lawsuits were threatening to put manufacturers out of business, and the government was concerned that this would risk the supply of vaccines and thus undermine the public policy goal of ensuring high vaccination rates. The legal immunity for vaccine manufacturers was upheld by the Supreme Court in 2011 on the grounds that certain adverse reactions to vaccines are "unavoidable" and "design defects" are "not a basis for liability." It is precisely the "unavoidability" of vaccine injuries that establishes "a complete defense" against lawsuits, given that the vaccine was properly prepared and accompanied with adequate warnings.[15] Consequently, a critical market incentive for pharmaceutical companies to develop safer and more effective methods of disease prevention has been eliminated.

Certainly, to inform parents about this compensation program and the legal immunity for vaccine manufacturers might cause them to think twice about vaccinating their children. Contrary to Mr. Schiff's criterion, *it does not follow that they shouldn't be informed*. Indeed, it is evident that Mr. Schiff doesn't want people to make an informed choice, but to obediently and unquestioningly comply with the CDC's recommendations.

Mr. Schiff's false statements are indicative of the problem of how the government systematically misinforms the public about vaccine safety and effectiveness. The CDC itself is a leading purveyor of

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[12] Health Resources & Services Administration, US Department of Health and Human Resources, "Vaccine Injury Table", *HRSA.gov*, accessed February 16, 2019, https://www.hrsa.gov/sites/default/files/vaccinecompensation/vaccineinjurytable.pdf. Centers for Disease Control and Prevention, "Appendix D: Vaccine Safety", *Epidemiology and Prevention of Vaccine-Preventable Diseases*, 13th Edition, April 2015, https://www.cdc.gov/vaccines/pubs/pinkbook/appendix/appdx-d.html.

[13] Health Resources & Services Administration, US Department of Health and Human Resources, "Frequently Asked Questions", *HRSA.gov*, September 2018, accessed January 9, 2019, https://www.hrsa.gov/vaccine-compensation/FAQ/index.html.

[14] US Department of Health and Human Services, *National Vaccine Injury Compensation Program Monthly Statistics Report*, November 2018, accessed November 30, 2018, https://www.hrsa.gov/sites/default/files/hrsa/vaccine-compensation/data/monthly-stats-nov-2018.pdf.

[15] Supreme Court of the United States, *Brueswitz et al. v. Wyeth LLC, FKA Wyeth, Inc., et al.*, February 22, 2011, https://www.supremecourt.gov/opinions/10pdf/09-152.pdf.

misinformation about vaccines. For example, a literature review by the prestigious Cochrane Collaboration on the safety and effectiveness of the influenza vaccine concluded that the fundamental assumptions underlying the CDC's universal flu shot recommendation are unsupported by the scientific evidence and, furthermore, that the CDC has deliberately misrepresented the science in order to support its policy.[16] This is a modus operandi of the agency.

One concern that parents have about some vaccines on the CDC's schedule is their use of aluminum as an adjuvant (a substance that increases the immune response), since aluminum is a known neurotoxin. To support its claim that the aluminum in vaccines "is not readily absorbed by the body", the CDC cites a study that actually acknowledges that aluminum particles from vaccinations are taken up by immune cells known as macrophages, which can transport the aluminum across the blood-brain barrier; that "aluminum accumulates in the brain"; and that by four weeks post-vaccination "only a fraction" of aluminum injected into the body from vaccinations will have been absorbed into the blood to be readily eliminated from the body through the urine.[17]

Another concern that parents have about vaccines is the use of a mercury-based preservative called thimerosal. This was phased out of most childhood vaccines starting in 1999, after it became known that the CDC was exposing children to cumulative levels of mercury with its vaccine schedule that exceeded the safety guidelines of the Environmental Protection Agency (EPA).[18] Thimerosal continues to be used in multi-dose vials of influenza vaccines, which the CDC recommends for pregnant women and children as young as six months. To support its claim that the form of mercury in vaccines (ethylmercury) is harmless and rapidly eliminated from the body, the CDC cites a 2004 review by the Institute of Medicine (now the National Academy of Medicine) that in fact described it as a "known neurotoxin" that "accumulates in the brain" and "can injure the nervous system."[19]

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[16] Tom Jefferson et al., "Vaccines for preventing influenza in healthy adults", *Cochrane Database of Systematic Reviews*, July 7, 2010, https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD001269.pub4. Referring to a 2009 CDC policy document outlining the agency's rationale for universal influenza vaccination, the Cochrane researchers remarked that "The CDC authors clearly do not weight interpretation by quality of evidence, but quote anything that supports their theory."

[17] Centers for Disease Control and Prevention, "Adjuvants help vaccines work better.", *CDC.gov*, updated October 22, 2018 and accessed November 6, 2018, https://www.cdc.gov/vaccinesafety/concerns/adjuvants.html. Robert J. Mitkus et al., "Updated aluminum pharmacokinetics following infant exposures through diet and vaccination", *Vaccine*, November 28, 2011, https://doi.org/10.1016/j.vaccine.2011.09.124. For more on how aluminum from vaccines accumulates in the brain, see also: Jean-Daniel Masson et al, "Critical analysis of reference studies on the toxicokinetics of aluminum-based adjuvants", *Journal of Inorganic Biochemistry*, December 28, 2017, https://doi.org/10.1016/j.jinorgbio.2017.12.015.

[18] Leslie K. Ball, Robert Ball, and R. Douglas Pratt, "An Assessment of Thimerosal Use in Childhood Vaccines", *Pediatrics*, May 5, 2001, https://doi.org/10.1542/peds.107.5.1147.

[19] Centers for Disease Control and Prevention, "Thimerosal in Vaccines", *CDC.gov*, updated October 27, 2015 and accessed December 18, 2018, https://www.cdc.gov/vaccinesafety/concerns/thimerosal/index.html. To support its claims, this page cites: Centers for Disease Control and Prevention, "Understanding Thimerosal, Mercury, and Vaccine Safety", *CDC.gov*, dated February 2013 and accessed December 20, 2018, https://www.cdc.gov/vaccines/hcp/patient-ed/conversations/downloads/vacsafe-thimerosal-color-office.pdf. This file cites: Institute of Medicine (IOM), Immunization Safety Review Committee, *Immunization Safety Review:*

So, if Google is going to start preventing the spread of vaccine misinformation, is it going to block links to pages from the CDC's website wherein such dangerously misleading claims are made? By Mr. Schiff's standard, as evidenced by his own false statements, misinformation is perfectly acceptable as long as it results in parents strictly complying with the CDC's recommendations. It is transparently only information that might lead to the opposite outcome, *regardless of its accuracy*, that Mr. Schiff has concerned himself with.

The major news media corporations, for their part, have taken it upon themselves to engage in public policy advocacy rather than journalism. To persuade parents to vaccinate their children strictly according to the CDC's schedule, for example, the *Washington Post* claims that no vaccine is added to the schedule "until it has been evaluated both alone and when given with the other current immunizations."[20] But that is *false.* To the contrary, as a 2013 review by the Institute of Medicine acknowledged, "existing research has not been designed to test the entire immunization schedule", and studies designed to examine the long-term effects of the cumulative number of vaccines or other aspects of the immunization schedule have not been conducted".[21]

To the same end, a recent *New York Times* editorial claimed that the aluminum and mercury in vaccines "are not toxic", despite both being uncontroversially recognized in the scientific literature as neurotoxins.[22] For example, the authors of a recent study published in the journal *Vaccine*, who write in defense of the continued use of aluminum as an adjuvant, acknowledged that "studies have clearly shown" that it "is toxic, especially for the central nervous system", and that "definitive conclusions" about the potential harms to children from aluminum-containing vaccines "cannot be drawn" *because that science hasn't been done*.[23] A meta-analysis published in *Neurochemical Research* in 2011 reviewed existing studies on low-dose mercury exposure from vaccines and found that all such studies to date had found evidence of neurotoxicity.[24]

So, if Google is going to start preventing the spread of vaccine misinformation, is it going to start blocking links to such deceitful articles from the *Washington Post*, the *New York Times*, and other mainstream news publications? The reality is that there is no serious treatment of this issue in the

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Vaccines and Autism (Washington, DC: National Academies Press, 2004), pp. 135, 136, 138; https://www.nap.edu/catalog/10997/immunization-safety-review-vaccines-and-autism.

[20] Lena H. Sun, "Why it's a bad idea to space out your child's vaccination shots", *Washington Post*, April 17, 2017, https://www.washingtonpost.com/news/to-your-health/wp/2017/04/17/why-its-a-bad-idea-to-space-out-your-childs-vaccination-shots/.

[21] Institute of Medicine, *The Childhood Immunization Schedule and Safety* (Washington, DC: National Academies Press, 2013), p. 6; https://www.nap.edu/catalog/13563/the-childhood-immunization-schedule-and-safety-stakeholder-concerns-scientific-evidence.

[22] Editorial Board, "How to Inoculate Against Anti-Vaxxers", *New York Times*, January 19, 2019, https://www.nytimes.com/2019/01/19/opinion/vaccines-public-health.html.

[23] Nicola Pincipi and Susanna Esposito, "Aluminum in vaccines: Does it create a safety problem?" *Vaccine*, August 2018, https://doi.org/10.1016/j.vaccine.2018.08.036.

[24] José G. Dórea, "Integrating Experimental (In Vitro and In Vivo) Neurotoxicity Studies of Low-dose Thimerosal Relevant to Vaccines", *Neurochemical Research*, June 2011, https://doi.org/10.1007/s11064-011-0427-0.

mainstream discourse, *which is precisely why it is so important for media platforms like YouTube to facilitate open discussion and debate about vaccines*.

Although a great deal more could obviously be said, we trust that by now you clearly see our point and won't belabor it. To sum up, there is indeed a serious problem today with respect to the propagation of misinformation about vaccines, but there are no greater purveyors of vaccine misinformation than the government and corporate news media. It is entirely inappropriate for elected government officials to be instructing media companies to censor criticism of entire categories of pharmaceutical products. This is particularly disturbing given the outsized dependence of both political classes and media outlets on pharmaceutical industry contributions and advertising revenue. It is absolutely imperative that critical and dissident voices *are allowed to be heard*. It is precisely to prevent government tyranny that the First Amendment to the US Constitution expressly guarantees the right to freedom of speech. Without prejudice to your company's right to determine your service's own terms of use, we believe that respect for this human right is the value that Google should be upholding, along with the right to informed consent, which is one of the most fundamental ethics in the practice of medicine.

On one point, at least, we wholeheartedly agree with Mr. Schiff, which is that this is an important topic that deserves all of our serious attention. It is regrettable that instead of seriously addressing the issue and substantively addressing parent's legitimate concerns, he has chosen instead to try to silence critical and dissident voices. We hope that Google will not do such a disservice to its users as to assist him in his efforts. We hope that instead of stifling debate, your company will recognize the value to society of facilitating the exchange of ideas that is so necessary for humanity to progress. Thank you for your time and consideration.

Sincerely,

Lyn Redwood, RN, MSN
President, Children's Health Defense