

# The Treatment of Viral Diseases: Has the Truth Been Suppressed for Decades?

Lee D. Merritt, M.D.

Since I started medical school in 1976, until 2020, I have heard the dogma that viral diseases are not treatable (with some exceptions such as antivirals for HIV/AIDS), certainly not with antimicrobials. My older son, a newly minted general surgeon, was educated much more recently, but with the same misunderstanding. Since viral diseases are not treatable, our only weapon is vaccination. A friend who spent his life as an academic university physician retiring in 2016 had never heard this fact either.

As the “pandemic” broke out, I constantly watched and read online publications. After reading about the Chinese, Indian, and Korean use of hydroxychloroquine (HCQ), an antimalarial agent, against coronavirus, within an hour I found more than 20 scientific papers, written in the last 40 years on the use of lysosomotropic agents—specifically chloroquine—to treat viruses. Like Rip Van Winkle, I suddenly awoke, after decades, to a completely new medical reality.

For example, “numerous investigations have reported in vitro antiviral activity of AZ [azithromycin] against viral pathogens with 50% inhibitory concentrations ranging from ~1–6  $\mu$ M, with the exception of H1N1 influenza,” write Damle et al.<sup>1</sup> They state that in vitro evidence suggests that AZ has antiviral properties at concentrations that are physiologically achievable with doses used to treat bacterial infections in the lung. Intracellular sequestration of AZ may prevent viral replication. AZ is being used against COVID-19, with the generally stated rationale being its antibacterial or antiinflammatory activity.

Antibiotics used in Lyme disease, including tetracyclines, macrolides, metronidazole, and ciprofloxacin, may have activity against a number of viruses.<sup>2</sup>

How could all our medical education “overlook” this basic science?

It may be difficult for non-physicians to appreciate the magnitude of this world-shaking scientific omission—and probable cover-up. It is the pharmaceutical equivalent of being told for 40 years the world is flat—only to have it conclusively exposed overnight to be round. This idea that viruses—like the current pandemic SARS-CoV-2 virus—can be killed by commonly used drugs—antibiotics, antimalarial, or antiparasitic agents—profoundly changes the practice of medicine.

## Influenza

The scientific paper that first got me thinking about a potential motive to hide this data concerns the in vitro inhibition of human influenza A virus replication by chloroquine (CQ).<sup>3</sup> It was published in 2006. This paper and others, including one published in 2005 about the effectiveness of CQ against SARS-CoV-1, the cause of severe acute respiratory syndrome,<sup>4</sup> show CQ, from which HCQ is derived, to be extremely effective against some viruses.

Given the supposed concern of health officials over deaths by influenza, why was the research into CQ not pursued? Consider that the entire \$69 billion-per-year vaccine industry is based on “preventing” viral diseases that are otherwise

“untreatable”—like viral influenza A, measles, etc. If a cheap and effective treatment is available for these illnesses, the entire vaccine industry crashes down like a house of cards.

Until the coronavirus pandemic, the Centers for Disease Control and Prevention (CDC) website has been a non-stop advertisement for vaccines—especially the influenza vaccine. We are constantly told in the news and commercials to “Get your flu vaccine!” because of the risk of death from the seasonal influenza virus.

According to the CDC, 80,000 people died in the U.S. last year from the flu. That itself is a lie. In truth, actual viral influenza accounts for only a fraction of those deaths. The CDC and World Health Organization (WHO) once reported real numbers of influenza cases—and most people assume they still do. But they actually report ILI or “influenza like illness,” and in the past they added the caveat that only 4–7 percent of ILI was influenza—the rest were other respiratory viruses. So, when they say 80,000 people died, only about 6,000 actually had viral influenza.<sup>5–10</sup>

Previously, in tables of ILI deaths, a small box at the bottom would tell you the percentage of ILI that is influenza. The CDC no longer does that, and currently, looking at multiple yearly reports, I am unable to determine the percentage of ILI that is true influenza from the CDC website. This distortion by reporting big scary numbers began when the flu vaccine became profitable through the use of adjuvants and “soft mandates”—i.e. pushing hospitals and police forces and other professions to vaccinate their staff to “protect the public.” Of course, the flu vaccine only works against flu—not other causes of ILI.

## Treatment vs. Vaccination in Other Viral Diseases

Vaccinating the entire nation against influenza to prevent 6,000 deaths is hard to justify, but the bigger lie is even worse. Based on the currently available science, it is probable that treatment with HCQ in patients with severe influenza and ILI could have saved millions of Americans from dying. And people within the inner circle of pharmaceutical research must have known this. Pharmaceutical firms employ thousands of virologists and infectious disease experts. Are we to believe they failed to read and pursue the relevant viral research? And, this is not just about influenza and SARS-CoV-2, but hepatitis, viral meningitis, equine encephalitis, shingles, human immunodeficiency virus (HIV), possibly leukemia, and other deadly known viral diseases. Were deaths from such viral diseases, over decades, an acceptable price for \$69 billion in yearly vaccine profits?

Vaccination began with smallpox, then polio. Then vaccination programs expanded to childhood viral illnesses, including usually benign ones such as mumps. Influenza then became the big vaccine target.

Along the way, teaching the immunology of communicable diseases to medical and nursing students got distorted. Most physicians today don't learn that the mortality of childhood

diseases in well-nourished, unvaccinated, First-World children was negligible prior to the advent of vaccines.<sup>11</sup> Nor do they understand the big difference between vaccine immunity and disease-acquired immunity. After recovery from measles or the flu or mumps or any other common viral illness, a person walks away with full-spectrum cellular and humoral immunity. The immune system is specifically and generally strengthened against a multitude of future diseases in ways we do not fully understand. Vaccine researchers concentrate on producing an antibody response, which is a very incomplete form of immunity.<sup>12</sup> Even repeated doses of such vaccines do not produce the true macrophage-mediated tissue immunity that is lifelong and usually fully protective against repeat disease exposure.

Worse yet, in some cases, vaccine-based immunity can worsen disease outcomes. With SARS and other illnesses caused by RNA viruses, vaccination has increased the risk of dying from a subsequent exposure to the virus. This is the result of “immune enhancement,” wherein the vaccine-produced antibodies actually hide the virus particles from the host’s immune system killer cells.<sup>13-15</sup> Rapid viral replication ensues causing fatal overwhelming disease. Cellular immunity from natural infection, on the other hand, is the kind of immunity that can save you from serious diseases like this novel coronavirus or the 1918 influenza.

Vaccination is not a panacea. It was once the last resort to the treatment of disease. In the age of huge vaccine profit it has become the first choice for every disease.

### COVID-19 and the War against Hydroxychloroquine

This begins to explain the uproar about HCQ. Never have I seen such political brawling over a legal pharmaceutical. When the current pandemic was starting to kill Americans in significant numbers, President Trump identified HCQ and azithromycin as having excellent cure potential. Around the world, doctors were speaking and writing about the great cure rate of COVID when these drugs were given early.<sup>16-24</sup> Sick patients from all over the world recounted having nearly immediate turn-around of the symptoms once they were started on the regimen. State Rep. Karen Whitsett, a Michigan Democrat, credits President Trump for saving her life by advocating for the use of HCQ.<sup>25</sup>

To my knowledge, neither governors nor boards of pharmacy have ever outlawed any legal drug—not even opioids like Oxycontin that cause about 30,000 deaths a year. But when it comes to HCQ and CQ, governors, medical boards, and boards of pharmacy in most states have either outlawed or limited the use of HCQ or threatened doctors with licensing board scrutiny.<sup>26</sup> Medical leaders from the CDC and National Institutes of Health (NIH) said HCQ might not work and proclaimed that we needed more study—ignoring the multiple scientific and position papers being published daily that demonstrate the benefit of HCQ.<sup>27</sup>

Dr. Anthony Fauci, an immunologist and head of the National Institute of Allergy and Infectious Disease (NIAID) of the NIH, has discouraged use of HCQ for COVID-19, but praised Middle East respiratory syndrome (MERS) treatment with HCQ in 2013.<sup>28-31</sup> In 2006 the *CDC’s own research* showed CQ to work against coronavirus in SARS-CoV-1, yet their current guidelines recommend against “high-dose use,” and does not discuss the low-dose regimens in use around the world.<sup>32-33</sup> Note also that on Apr 28, 2020, Dr. Fauci touted the positive findings for remdesivir, even though no randomized controlled studies have been completed. Why is he so strongly promoting the

\$3,600 remdesivir and almost totally ignoring the \$20 HCQ regimen, other than to say the latter is of “unproven benefit”?

Media acted in lockstep with corrupt politicians. They said HCQ was experimental. Not so—it has been around for decades, and approved by the Food and Drug Administration (FDA). Then, they claimed it was illegal for doctors to use HCQ off label. Wrong again. Nearly every doctor, every day, uses a drug “off label,” because, once FDA approved, drugs are not re-studied to add every potential benefit. And now scientific literature “hit pieces” against antimalarial drugs are being published and quoted. A recent *Los Angeles Times* headline, “Malaria drugs fail to help in coronavirus studies,” sensationalized a misleading study.<sup>34</sup> This study, done in Brazil, prescribed toxic, even lethal doses to very sick patients late in the disease when it was almost certain to be of no benefit.<sup>35</sup> The methodology was severely criticized by Brazilian scientists,<sup>36</sup> and alleged ethical violations are under investigation by Brazilian authorities.<sup>37</sup>

Since CQ and HCQ work by stopping viral replication, they can prevent viral damage to the heart, lungs, and other organs. However, they cannot improve organ damage that has occurred. While the Brazilian paper correctly reported that CQ did not change outcomes, this was a classic study designed to fail.

Since the 1950s, HCQ has been used for a variety of problems including a 1960 trial for angina pectoris based on the observation that HCQ reduced sludging due to agglutinated red blood cells in patients with vascular diseases.<sup>38</sup> While subsequent results in angina patients were reportedly negative, HCQ seems to reduce the incidence of cardiovascular diseases in rheumatic patients. In addition to its antiinflammatory properties, HCQ reduces cholesterol levels and the risk of Type 2 diabetes, and also has anti-platelet effects. In 2017, the OXI study was designed to determine whether treatment with HCQ, as compared with placebo, would reduce recurrent events among myocardial infarction patients.<sup>39</sup>

Millions have been treated with HCQ for malaria, and it is commonly given in long-term high-dose treatment of patients with rheumatologic disorders. Until now, the drug has been distributed with only a minor mention of the potential for cardiac arrhythmia. While other side effects are categorized as “very common,” “common,” or “rare,” cardiac issues are infrequent enough to be noted under “unknown frequency.” The Sanofi patient safety handout for Plaquenil states, “Heart problems or failure, cardiomyopathy, an enlarged or weak heart can occur if you take Plaquenil for long periods of time...” People with SARS-CoV-2 generally require only 5–14 days of treatment. So, why did the FDA only now issue a very public warning against the use of HCQ—citing cardiac rhythm issues?<sup>40-42</sup>

### Is There a Political Cover-up?

In the investigation of any political cover up, the question “Who knew what, when?” must be asked. Reference papers discussing CQ/HCQ and viruses, from all over the world, go back at least to 1982.<sup>43</sup> And there was much interest dating even into the 1970s about lysomotropic agents, i.e. chemicals that are selectively taken up into the lysosomes—the cellular organelle in which HCQ inhibits viral replication.<sup>44-46</sup>

Speculating about the possible motives for hiding such a powerful weapon against viral illness during this pandemic, some might suggest a “deep state” take-down of America. Or one could focus on conflicts of interest, suggesting that lead spokesman Dr. Fauci is an integral part of a vaccine coalition.

Specifically, the Global Vaccine Action Plan (GVAP) is a collaboration of the Bill and Melinda Gates Foundation and Dr. Fauci's NIAID. Dr. Fauci was also named to the Leadership Council of the "Decade of Vaccines" Council.<sup>47</sup> Although it is difficult to pin down all the financial details, we know that large sums of money are flowing from the Gates Foundation to and around NIAID projects, such as the 2019 partnership for "gene-based therapies against AIDS and Sickle Cell Disease, to which Gates contributed \$100 million.<sup>48</sup> Also, the Gates Foundation has contributed \$2.24 Billion to the "Global Fund," of which Dr. Deborah Birx, frequently at the White House panel discussing COVID-19 policy, is a board member.<sup>49</sup>

The recent congressional bill H.R. 6074 in the 116th Congress to develop drugs and vaccines for coronavirus is a \$3.1 billion windfall for drug companies, and also includes \$8.36 million to Dr. Fauci's NIAID for "training."<sup>50</sup> Moderna—one of the Gates-funded companies that is working on a coronavirus vaccine, is in partnership with NIAID<sup>51</sup> and getting special treatment. Moderna was allowed to bypass standard long-term animal drug testing, and roll out mRNA-1273 vaccine trials on humans on Feb 24 at the NIH, within months of the genetic decoding of the virus. Moderna's chief medical adviser, Tal Zaks, states, "I don't think proving this in an animal model is on the critical path to getting this to a clinical trial."<sup>52</sup> And on May 2020, after NIH fast tracked Moderna's vaccine human trials, Tal Zaks exercised stock options, selling 125,044 units of MRNA stock for \$1,526,787.<sup>53</sup>

None of this, however, explains the 40 years of medical misinformation and suppression of the pharmaceutical truth. To have covered up the knowledge for four decades that viruses could potentially be treated by antimicrobials required extensive effort:

- **Censorship.** It is likely that some scientists were never published again after authoring one paper on the antiviral benefits of CQ.
- **Buying silence of news media.** This is evident from the blackout across the political news spectrum concerning vaccine adverse effects. Pharmaceutical manufacturers provide the most lucrative advertising for both written and broadcast news programs.
- **Misdirection.** For years, pharmacology professors in medical schools have perpetuated lies of omission.
- **Lies by drug companies.** Merck was caught publishing its own "peer reviewed" journal to promote its drugs.<sup>54</sup>
- **Regulatory capture.** "Big Pharma" essentially owns the FDA by being its biggest funder and employing more than 58 percent of the FDA's upper-level regulators and administrators either before or after their tenure.<sup>55,56</sup>
- **Research funding.** Big Pharma is the major funder of nearly all "independent" drug research, and there is no incentive to research cheap/ less profitable solutions.

## Implications

The COVID-19 pandemic is calling attention to the potential for treating viral diseases with currently available drugs, and exposing long-available but ignored research. The implications of all this are very disturbing. Where have the virologists been, and the CDC "experts" who claim to care about influenza deaths? Has the burgeoning nearly trillion-dollar vaccine industry been built at the expense of patients' lives? Disregarding the sizeable database of vaccine injuries, and the controversy about the long-term danger of vaccines to the immune system, if HCQ or other drugs could have treated

viral illnesses cheaply and effectively, *there was never a need for vaccines to begin with.* As the WHO reportedly admitted, as recorded in a currently unavailable YouTube video from 2019 Vaccine Safety Summit, the "front line is becoming wobbly"—meaning doctors are less and less convinced that vaccines are safe and desirable.

Boris Yeltsin, as he was surrounded by Soviet troops on the steps of Moscow's Dom pravitelstva Rossii Federatsii (the Russian White House), opined, "You can sit on a throne of bayonets, but you cannot sit on it for long." It took 70 years for the truth about the murderous and corrupt Soviet regime to break through the propaganda, but when the masses of people understood, they tore down the Berlin wall. The wall of silence and coercion that has propped up a corrupt, and yes murderous, vaccine industry will hopefully now be dismantled by everyday physicians and patients who have awakened to the "biggest lie," and are beginning to say, "Yes, Virginia, antibiotics and other antimicrobials *do treat* viruses."

**Lee D. Merritt, M.D.,** practices orthopaedic surgery and anti-aging medicine in Omaha, Nebraska, and is a past president of AAPS. Contact: loganpod@gmail.com.

## REFERENCES

1. Damle B, Vourvahis M, Wang E, Leaney J, Corrigan B. Clinical pharmacology perspectives on the antiviral activity of azithromycin and use in COVID-19. *Clin Pharmacol Ther* 2020;108(2):201-211. doi: 10.1002/cpt.1857.
2. Stricker RB, Fesler MC. A novel plan to deal with SARS-CoV-2 and COVID-19 disease [published online ahead of print Apr 28, 2020] *J Med Virol* 10.1002/jmv.25945. doi: 10.1002/jmv.25945.
3. Ooi EE, Chew JS, Loh JP, Chua RC. In vitro inhibition of human influenza A virus replication by chloroquine. *Virol J* 2006;3(May 29):39. doi: 10.1186/1743-422X-3-39.
4. Vincent MJ, Bergeron E, Benjannet S, et al. Chloroquine is a potent inhibitor of SARS coronavirus infection and spread. *Virol J* 2005;2:69. doi:10.1186/1743-422X-2-69.
5. Stoller K. CDC—Influenza Deaths: Request for Correction (RFC). ASPE. Office of the Assistant Secretary for Planning and Evaluation. Available at : <https://aspe.hhs.gov/cdc-%E2%80%94influenza-deaths-request-correction-rfc>. Accessed Aug 8, 2020.
6. Dugan VG, Blanton L, Elal AIA, et al. Update: Influenza Activity—United States, October 1–November 25, 2017. *MMWR* 2017;66(48):1318–1326. Available at: [www.cdc.gov/mmwr/volumes/66/wr/mm6648a2.htm?s\\_cid=mm6648a2\\_w](http://www.cdc.gov/mmwr/volumes/66/wr/mm6648a2.htm?s_cid=mm6648a2_w). Accessed Aug 8, 2020.
7. National Syndromic Surveillance Program (NSSP). NSSP and NCIRD Assess ILINet Collaboration; Nov 8, 2019. Available at: [www.cdc.gov/nssp/partners/ilinet-collaboration.html](http://www.cdc.gov/nssp/partners/ilinet-collaboration.html). Accessed Aug 8, 2020.
8. Pennsylvania Department of Health. Outpatient Influenza-like Illness Surveillance Network (ILINet). Available at: [www.health.pa.gov/topics/disease/Flu/Pages/ILINet.aspx](http://www.health.pa.gov/topics/disease/Flu/Pages/ILINet.aspx). Accessed Aug 8, 2020.
9. Harrison P. Influenza or influenza-like illness: does it matter? *Medscape*, Feb 16, 2018. Available at: [www.medscape.com/viewarticle/892737#vp\\_1](http://www.medscape.com/viewarticle/892737#vp_1). Accessed Aug 8, 2020.
10. CDC. Glossary of influenza terms. Available at: [www.cdc.gov/flu/about/glossary.htm](http://www.cdc.gov/flu/about/glossary.htm). Accessed Aug 8, 2020.
11. Scheibner V. *Vaccination*. Victoria, Australia: Australian Print Group; 1993.
12. World Health Organization. Guidelines on clinical evaluation of vaccines: regulatory expectations. Revision of WHO TRS 924, Annex 1; 2016:26. Available at: [www.who.int/biologicals/expert\\_committee/Clinical\\_changes\\_IK\\_final.pdf](http://www.who.int/biologicals/expert_committee/Clinical_changes_IK_final.pdf). Accessed Aug 8, 2-20.
13. Peeples L. News Feature: Avoiding pitfalls in the pursuit of a COVID-19 vaccine. *PNAS* 2020;117(15):8218-8221. Available at: <https://doi.org/10.1073/pnas.2005456117>. Accessed Aug 8, 2020.
14. Stadler K, Masignani V, Eickmann M, et al. SARS—beginning to understand a new virus. *Nat Rev Microbiol* 2003;1:209–218 (2003). Available at: [www.nature.com/articles/nrmicro775#ref-CR50](http://www.nature.com/articles/nrmicro775#ref-CR50). Accessed Aug 8, 2020.
15. Monath, T, Gershman M, Staples JE, Barrett AD. Yellow fever vaccine, antibody dependent enhancement. In: Plotkin SA, Orenstein WA, Offitt PA. *Vaccines*. 6th ed. Elsevier; 2013:870-968. Available at: [www.sciencedirect.com/topics/immunology-and-microbiology/antibody-dependent-enhancement](http://www.sciencedirect.com/topics/immunology-and-microbiology/antibody-dependent-enhancement). Accessed Aug 8, 2020.

16. Broker TR, Todaro JM, Rigano GJ. An Effective Treatment for Coronavirus (COVID-19). Presentation in consultation with Stanford University School of Medicine, UAB School of Medicine and National Academy of Sciences researchers; Mar 13, 2020. Available at: <https://docs.google.com/document/d/e/2PACX-1vTi-g18ftNZUMRAj2SwRPodtscFio7bJ7GdNgbJAGbdf67WuRJB3ZsidgpidB2eocFHAVjL-7deJ7/pub>. Accessed Aug 8, 2020.
17. COVEXIT.com. Professor Didier releases the results of a new hydroxychloroquine treatment study on 1061 patients. *Méditerranée Infection*, Marseille; Apr 9, 2020. Available at: <http://covexit.com/professor-didier-raoult-releases-the-results-of-a-new-hydroxychloroquine-treatment-study-on-1061-patients/>. Accessed Aug 8, 2020.
18. Chen Z, Hu V J, Zhang Z, et al. Efficacy of hydroxychloroquine in patients with COVID-19: results of a randomized clinical trial. *MedRxiv*; Apr 10, 2020. Available at: [www.medrxiv.org/content/10.1101/2020.03.22.20040758v3](http://www.medrxiv.org/content/10.1101/2020.03.22.20040758v3). Accessed Aug 8, 2020.
19. Gao J, Tian Z, Yang X. Breakthrough: Chloroquine phosphate has shown apparent efficacy in treatment of COVID-19 associated pneumonia in clinical studies. *BioScience Trends Advance Publication*; Feb 18, 2020. doi: 10.5582/bst.2020.0104.
20. The Right Scoop. WATCH: NY Doctor says his hospital already using chloroquine for coronavirus patients and have had ZERO deaths. Lennox Hill Hospital, New York; Mar 20, 2020. Available at: <https://therightscoop.com/watch-ny-doctor-says-his-hospital-already-using-chloroquine-for-coronavirus-patients-and-have-had-zero-deaths/>. Accessed Aug 8, 2020.
21. Pavlich K. Thousands of doctors: yes, hydroxychloroquine works against Wuhan coronavirus. *Townhall*, Apr 6, 2020. Available at: <https://townhall.com/tipsheet/katiepavlich/2020/04/06/here-are-five-doctors-whose-patients-have-seen-recovery-with-hydroxy-chloroquine-n2566409>. Accessed Aug 8, 2020.
22. Vincent I. Doctors, pols urge earlier use of 'miracle' coronavirus drug cocktail. *NY Post*, Apr 11, 2020. Available at: <https://nypost.com/2020/04/11/doctors-pols-urge-use-of-miracle-coronavirus-drug-cocktail/>. Accessed Aug 8, 2020.
23. Garcia-Monzon LA. Clinical predictors and drugs associated with survival and hospital discharge in patients with Covid19; a cohort study. *ResearchGate*; May 2020. doi: 10.13140/RG.2.2.26151.37281.
24. Guilianini RW. Excellent news: hydroxychloroquine [+azithromycin, +zinc sulfate] treatment effective on 699 patients. *Common Sense*; Mar 28, 2020. Available at: [www.youtube.com/watch?v=1TJdjh\\_XG8&t=586s](http://www.youtube.com/watch?v=1TJdjh_XG8&t=586s). Accessed Aug 8, 2020.
25. Davies E. 'I do thank him': Democrat credits Trump with saving her life by touting coronavirus drug. *Sun*, Apr 7, 2020. Available at: <https://www.thesun.co.uk/news/11350000/michigan-democrat-trump-hydroxychloroquine-coronavirus-drug/>. Accessed Aug 8, 2020.
26. AAPs. State Restrictions on Prescribing HCQ. Available at: <https://docs.google.com/document/d/1cmqSaRhzGZn365vLdczqLYisLkXqQkqpZamo6JT124/edit>. Accessed Aug 10, 2020.
27. Kessler M. Sequential CQ/HCQ Research Papers and Reports January to April 20, 2020. Available at: <https://drkesslermd.wordpress.com/2020/04/30/sequential-cq-hcq-research-papers-and-reports-january-to-april-20-2020-executive-summary-interpretation-of-the-data-in-this-report-the-hcq-az-combination-when-started-immediately-after-diagnosis-app/>. Accessed Aug 8, 2020.
28. Hoft J. WOW! Dr. Fauci cheered hydroxychloroquine success treating MERS coronavirus in 2013...but today he's skeptical...that's weird? *Gateway Pundit*; Apr 4, 2020. Available at: <https://tinyurl.com/rxp938m>. Accessed Aug 8, 2020.
29. Dowling M. Dr. Fauci knew about hydroxychloroquine? *Independent Sentinel*, Apr 19, 2020. Available at: <https://www.independentsentinel.com/dr-fauci-knew-about-hydroxychloroquine/>. Aug 8, 2020.
30. Lovelace B Jr. Coronavirus: Dr. Anthony Fauci warns Americans shouldn't assume hydroxychloroquine is a 'knockout drug.' *CNBC*; Apr 3, 2020. Available at: <https://tinyurl.com/y2htxz4a>. Accessed Aug 8, 2020.
31. Gross MJ. CDC removes chloroquine from guidance on COVID-19 therapy. *Tampabay.com*; Apr 9, 2020. Available at: <https://tinyurl.com/y3ysqqj9>. Accessed Aug 8, 2020.
32. Vincent MJ, Bergeron E, Benjannet S, et al. Chloroquine is a potent inhibitor of SARS coronavirus infection and spread. *Virology* 2005;2(69). Available at: <https://doi.org/10.1186/1743-422X-2-69>. Accessed Aug 8, 2020.
33. NIH. What's new in the guidelines. COVID-19 Treatment Guidelines; Jul 30, 2020. Available at: [www.covid19treatmentguidelines.nih.gov/whats-new/](http://www.covid19treatmentguidelines.nih.gov/whats-new/). Accessed Aug 8, 2020.
34. Healy H. Malaria drugs fail to help coronavirus patients in controlled studies. *LA Times*, Apr 17, 2020. Available at: <https://tinyurl.com/y7cpaxqd>. Accessed Aug 8, 2020.
35. Borba MGS, Val FFA, Sampaio VS. Effect of high vs low doses of chloroquine diphosphate as adjunctive therapy for patients hospitalized with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection: a randomized clinical trial. *JAMA Netw Open* 2020;3(4):e208857. doi:10.1001/jamanetworkopen.2020.8857. Available at: <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2765499>. Accessed Aug 9, 2020.
36. Eberlin MN. Brazilian scientists and academics write an open letter on the "science" of the coronavirus pandemic. *Conexão Política*, May 25, 2020. Available at: <https://conexopolitica.com.br/ultimas/brazilian-scientists-and-academics-write-an-open-letter-on-the-science-of-the-coronavirus-pandemic/>. Accessed Aug 9, 2020.
37. De Andrade Zanotto PM. Letter to Howard Bauchner, Editor in Chief of *JAMA* and the *JAMA Network*, May 28, 2020.
38. Bruce R. The treatment of angina pectoris with Plaquenil: a preliminary report. *J Coll Gen Practit* 1964;7:290-294. Available at: [www.ncbi.nlm.nih.gov/pmc/articles/PMC1878016/pdf/jcgp00008-0154.pdf](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1878016/pdf/jcgp00008-0154.pdf). Accessed Aug 9, 2020.
39. Hartman O, Kovanen PT, Lehtonen J, Eklund KK, Sinisalo J. Hydroxychloroquine for the prevention of recurrent cardiovascular events in myocardial infarction patients: rationale and design of the OXI trial. *Eur Heart J Cardiovasc Pharmacother* 2017;3(2):92-97. doi: 10.1093/ehjcvp/pvw035.
40. Chico RM, Chandramohan D. Azithromycin plus chloroquine: combination therapy for protection against malaria and sexually transmitted infections in pregnancy. *Expert Opin Drug Metab Toxicol* 2011; (9):1153-1167. doi: 10.1517/17425255.2011.598506.
41. Lovelace B Jr. FDA issues warnings on chloroquine and hydroxychloroquine after deaths and poisonings reported. *CNBC*; Apr 24, 2020. Available at: <https://tinyurl.com/ybhjyc2v>. Accessed Aug 10, 2020.
42. Chen CY, Wang F-L, Lin C-C. Chronic hydroxychloroquine use associated with QT prolongation and refractory ventricular arrhythmia. *Clin Toxicol (Phila)* 2006;44(2):173-175. doi: 10.1080/15563650500514558. Available at: <https://pubmed.ncbi.nlm.nih.gov/16615675/>. Accessed Aug 10, 2020.
43. Yoshimura A, Ohnishi S, Kawasaki K, et al. Infectious cell entry mechanism of influenza virus. *J Virol* 1982;43(1):284-293.
44. Miller D, Lenard J. Inhibition of vesicular stomatitis virus infection by spike glycoprotein. Evidence for an intracellular, G protein-requiring step. *J Cell Biol* 1980;84(2):430-437.
45. De Duve C, De Barsey T, Poole B, et al. Lysomotropic agents. In: *Biochemical Pharmacology*. Vol 23. Pergamon Press; 1974:2495-2531.
46. Raley MJ, Schwacha MG, Loegering DJ. Lysosomotropic agents ameliorate macrophage dysfunction following the phagocytosis of IgG-coated erythrocytes: a role for lipid peroxidation. *Inflammation* 1997;21(6):619-628. doi: 10.1023/a:1027386206458.
47. WHO. Global health leaders launch decade of vaccines collaboration. Press release; Dec 2, 2010. Available at: [https://www.who.int/immunization/newsroom/press/news\\_release\\_decade\\_vaccines/en/](https://www.who.int/immunization/newsroom/press/news_release_decade_vaccines/en/). Accessed Aug 10, 2020.
48. Flagship Pioneering. Moderna therapeutics teams with Gates Foundation to advance mRNA-based antibody combination to help prevent HIV infection. Press release; Jan 12, 2016. Available at: [www.flagshippioneering.com/press/moderna-therapeutics-teams-gates-foundation-advance-mrna-based-antibody-combination-help](http://www.flagshippioneering.com/press/moderna-therapeutics-teams-gates-foundation-advance-mrna-based-antibody-combination-help). Accessed Aug 10, 2020.
49. The Global Fund. Board Members. Available at: <https://www.theglobalfund.org/en/board/members/>. Accessed Aug 10, 2020.
50. Redwood L, Holland M, Children's Health Defense Team. Dr. Fauci and COVID-19 priorities: therapeutics now or vaccines later? *Vaccine Impact*; n.d. Available at: <https://vaccineimpact.com/2020/dr-faucis-history-in-spending-billions-of-government-funds-on-vaccine-research-with-little-to-show-for-it/>. Accessed Aug 10, 2020.
51. Howley P. Fauci and Birx both have big-money Bill Gates conflicts of interest. *yourNEWS*, Apr 4, 2020. Available at: <https://yournews.com/2020/04/04/1548319/fauci-and-birx-both-have-big-money-bill-gates-conflicts-of/>. Accessed Aug 10, 2020.
52. Sentient Media. Mass killing of lab animals during pandemic calls into question necessity and cost of animal models; Apr 2, 2020. Available at: <https://tinyurl.com/y4gyl4d>. Accessed Aug 10, 2020.
53. Wallmine. Tal Zvi Zaks net worth; Aug 4, 2020. Available at: <https://wallmine.com/people/537/tal-zvi-zaks>. Accessed Aug 10, 2020.
54. Grant B. Merck published fake journal. *TheScientist*; Apr 29, 2009. Available at: <https://www.the-scientist.com/the-nutshell/merck-published-fake-journal-44190>. Accessed Aug 10, 2020.
55. LaMattina J. The biopharmaceutical industry provides 75% of the FDA's drug review budget. Is this a problem? *Forbes*, Jun 28, 2018. Available at: <https://tinyurl.com/yy3ukkrb>. Accessed Aug 10, 2020.
56. Bien J, Prasad V. Future jobs of FDA's haematology-oncology reviewers. *BMJ* 2016;354:i5055.