## Off

### 1NC

#### Interpretation: Debaters may not defend extra-topical plantexts.

#### Violation: They defend medical products which are not the same as medicines – diagnostic kits, medical masks, protective equipment – their solvency advocate says:

An effective response to COVID-19 pandemic requires rapid access to affordable medical products

including diagnostic kits, medical masks, other personal protective equipment and ventilators, as

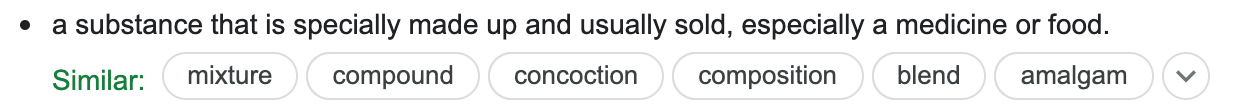
well as vaccines

#### Medicines treat diseases

Webster (Merriam Webster is America's leading and most-trusted provider of language information, accessed on 6-30-21, Merriam Webster, "Definition of MEDICINE,” https://www.merriam-webster.com/dictionary/medicine)// ww pbj

Definition of medicine 1a: a substance or preparation used in treating disease cough medicine

#### Preparation are not masks, diagnostic kits, etc, preparation in a medical sense, Oxford Dictionary:

[https://www.google.com/search?q=preparation&oq=preparation+&aqs=chrome..69i57j0i433i512j0i20i263i512j0i131i433i512j0i433i512l3j0i512l3.2307j0j4&sourceid=chrome&ie=UTF-8]

**a substance** that is **specially made** up **and** usually **sold**, especially a medicine or food

#### Standards:

#### 1]—Limits and Ground: Adding things outside of the res allows anything to become aff ground—bad because aff can add anything to the resolution and then neg has no predictable ground

ACTUALLY KILLS GROUND: A LOT OF THE RESPONSES TO VACCINE AFFS ARE THAT VACCINES AREN’T K2 SOLVE ETC BUT THEN THEY TAKE AWAY WHAT WE CAN READ BY INCLUDING THOSE THINGS IN THEIR PLANTEXT

#### 2]—Undermines TS education – since what we’re forced to deb8 about is outside the topic

#### 3]—Strat Skew: Skews Neg Time by either forcing us to debate about things we can’t predict or forces a CP that undermines Link UQ to any other portion of the strat.

#### PDIGM ISSUES:

#### DTD not DTA – since their case is contextualized around all of these medicines DTA is the same as DTD or they’ll be stuck with one advantage but then that’s structurally unfair since we spent time reading theory and responding to everything else. Also severance as punishment is illegitimate since

#### DTA is incoherent since they already gave the 1AC.

#### Use competing interpretations not reasonability:

#### A]—Use it for both fairness and education – it’s the only way that we can judge without bias a theory argument and it’s also the only way we can have a discussion about the implications of our theory argument regardless of what someone thinks.

#### B]—There’s no brightline to what is reasonable or not, so it’s impossible to tell, and using reasonability is thus infinitely regressive.

No rvis – 1—forces neg theory, 2—illogical b/c u don’t win for being not abusive, 3 – encrouages baiting

### 1NC

#### The biotech industry is strong now---it’s weathered the COVID storm.

Cancherini et al. 21 – Consultant in M`cKinsey’s Brussels office

Laura Cancherini, Joseph Lydon, Jorge Santos da Silva, Alexandra Zemp, “What’s ahead for biotech: Another wave or low tide?,” McKinsey & Company, April 2021, https://www.mckinsey.com/industries/life-sciences/our-insights/whats-ahead-for-biotech-another-wave-or-low-tide

Unlike most industries in these extraordinarily challenging times, biotech is experiencing a high. Executives in many other sectors are becoming more pessimistic about the outlook for their businesses as the global pandemic continues to spread.1 But the search to understand and find treatment or preventive solutions to COVID-19 has focused intense government, media, and public attention on science and medicine, reinforcing the perception that biotech acquisitions and partnerships represent a good investment.

In an effort to understand worldwide biotech financing in the context of the COVID-19 crisis, McKinsey analyzed the sector’s financial performance and interviewed 20 C-level executives from small and midsize biotechs and venture-capital (VC) firms.

The pandemic has had an enormous financial impact on many sectors, but biotech has weathered the storm: after a brief downturn early in the crisis, it recovered quickly (Exhibit 1). Between January 2020 and January 2021, the average share price for European and US biotechs increased at more than twice the rate of the S&P 500, and Chinese biotechs performed more than six times better, with their average share price more than doubling in a year. Overall, biotech is outperforming its sister industry, pharmaceuticals, as well as many household-name consumer-goods and technology companies.

With acquisitions, partnerships, IPOs, and fundraising still increasing, biotech’s star has, if anything, risen higher than it was before the pandemic. The industry’s response to the crisis, its record of innovation, and its reputation as a safe haven for investment have all served it well. But whether biotech can sustain this performance is open to question. This article looks at the industry’s record of growth, its resilience during the global pandemic, and the factors that could determine whether the biotech wave continues.

#### Biotech is key to climate change solutions---waiving IP rights decks it by setting a sweeping precedent that chills innovation.

Brand 21 – Assistant General Counsel and Director of Intellectual Property at the Biotechnology Innovation Organization

Melissa Brand, “TRIPS IP Waiver Could Establish Dangerous Precedent for Climate Change and Other Biotech Sectors,” IP Watchdog, May 2021, https://www.ipwatchdog.com/2021/05/26/trips-ip-waiver-establish-dangerous-precedent-climate-change-biotech-sectors/id=133964/

While the discussions around waiving intellectual property (IP) rights set forth in the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) are currently (and somewhat amorphously) limited to COVID-19 related drug and medical products, it is probably shortsighted to ignore the implications for other technologies critical to sustaining our environment and advancing a more healthful world. In fact, if we want to ensure continued investment in these technologies, we should be very concerned about the message conveyed by the international political tide: if you overcome a challenging scientific problem and your solution has the potential to save lives, be prepared to be subjected to intense political pressure and to potentially hand over your technology without compensation and regardless of the consequences.

The biotech industry is making remarkable advances towards climate change solutions, and it is precisely for this reason that it can expect to be in the crosshairs of potential IP waiver discussions. President Biden is correct to refer to climate change as an existential crisis. Yet it does not take too much effort to connect the dots between President Biden’s focus on climate change and his Administration’s recent commitment to waive global IP rights for Covid vaccines (TRIPS IP Waiver). “This is a global health crisis, and the extraordinary circumstances of the COVID-19 pandemic call for extraordinary measures.” If an IP waiver is purportedly necessary to solve the COVID-19 global health crisis (and of course we dispute this notion), can we really feel confident that this or some future Administration will not apply the same logic to the climate crisis? And, without the confidence in the underlying IP for such solutions, what does this mean for U.S. innovation and economic growth? United States Trade Representative (USTR) Katherine Tai was subject to questioning along this very line during a recent Senate Finance Committee hearing. And while Ambassador Tai did not affirmatively state that an IP waiver would be in the future for climate change technology, she surely did not assuage the concerns of interested parties.

International Pressure May Be Influencing Domestic IP Policy

The United States has historically supported robust IP protection. This support is one reason the United States is the center of biotechnology innovation and leading the fight against COVID-19. However, a brief review of the domestic legislation arguably most relevant to this discussion shows just how far the international campaign against IP rights has eroded our normative position. The Clean Air Act, for example, contains a provision allowing for the mandatory licensing of patents covering certain devices for reducing air pollution. Importantly, however, the patent owner is accorded due process and the statute lays out a detailed process regulating the manner in which any such license can be issued, including findings of necessity and that no reasonable alternative method to accomplish the legislated goal exists. Also of critical importance is that the statute requires compensation to the patent holder. Similarly, the Atomic Energy Act contemplates mandatory licensing of patents covering inventions of primary importance in producing or utilizing atomic energy. This statute, too, requires due process, findings of importance to the statutory goals and compensation to the rights holder.

A TRIPS IP waiver would operate outside of these types of frameworks. There would be no due process, no particularized findings, no compensation and no recourse. Indeed, the fact that the World Trade Organization (WTO) already has a process under the TRIPS agreement to address public health crises, including the compulsory licensing provisions, with necessary guardrails and compensation, makes quite clear that the waiver would operate as a free for all.

Forced Tech Transfer Could Be on The Table

When being questioned about the scope of a potential TRIPS IP waiver, Ambassador Tai invoked the proverb “Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime.” While this answer suggests primarily that, in times of famine, the Administration would rather give away other people’s fishing rods than share its own plentiful supply of fish (here: actual COVID-19 vaccine stocks), it is apparent that in Ambassador Tai’s view waiving patent rights alone would not help lower- and middle-income countries produce their own vaccines. Rather, they would need to be taught how to make the vaccines and given the biotech industry’s manufacturing know-how, sensitive cell lines, and proprietary cell culture media in order to do so.

In other words, Ambassador Tai acknowledged that the scope of the current TRIPS IP waiver discussions includes the concept of forced tech transfer. In the context of climate change, the idea would be that companies who develop successful methods for producing new seed technologies and sustainable biomass, reducing greenhouse gases in manufacturing and transportation, capturing and sequestering carbon in soil and products, and more, would be required to turn over their proprietary know-how to global competitors.

While it is unclear how this concept would work in practice and under the constitutions of certain countries, the suggestion alone could be devastating to voluntary international collaborations. Even if one could assume that the United States could not implement forced tech transfer on its own soil, what about the governments of our international development partners? It is not hard to understand that a U.S.-based company developing climate change technologies would be unenthusiastic about partnering with a company abroad knowing that the foreign country’s government is on track – with the assent of the U.S. government – to change its laws and seize proprietary materials and know-how that had been voluntarily transferred to the local company.

Necessary Investment Could Diminish

Developing climate change solutions is not an easy endeavor and bad policy positions threaten the likelihood that they will materialize. These products have long lead times from research and development to market introduction, owing not only to a high rate of failure but also rigorous regulatory oversight. Significant investment is required to sustain and drive these challenging and long-enduring endeavors. For example, synthetic biology companies critical to this area of innovation raised over $1 billion in investment in the second quarter of 2019 alone. If investors cannot be confident that IP will be in place to protect important climate change technologies after their long road from bench to market, it is unlikely they will continue to invest at the current and required levels.

Next on the Chopping Block

It is quite reasonable to be worried about the broad implications of a TRIPS IP waiver precedent. International campaigns to weaken IP rights seem to be taking hold in U.S. domestic policy. The TRIPS IP waiver discussions will not conclude in the near term and will not yield more shots in people’s arms. This is not even truly disputed, as our own administration acknowledges that the goal here is technology transfer abroad. Given the signaling that our Administration believes waiving IP rights is an appropriate measure to end global crises, it is proper to worry that facets of the biotech sector addressing climate change may be next on the chopping block.

#### Biotech innovation is uniquely key to combatting climate change.

McMurry-Heath 21 – Physician-scientist and the president and CEO of the Biotechnology Innovation Organization

Michelle McMurry-Heath, “To help solve climate change, look to the biosciences,” STAT News, May 2021, https://www.statnews.com/2021/05/21/climate-change-solutions-from-biosciences/

President Biden’s pledge to cut U.S. greenhouse gas emissions in half by 2030 is an admirable and ambitious undertaking. It’s nearly double the goal set by President Obama in 2015. And it establishes the United States as a world leader in battling climate change.

But reaching the president’s target in just under 10 years is a monumental task. It’s so big, in fact, that we’ll never get there by government action alone. No amount of vehicle efficiency standards, forest conservation efforts, or gas taxes can fully solve the problem.

We have to science our way out of it.

The biosciences, including biotechnology, will play a pivotal role in the fight against climate change. It is already leading the way on several fronts. According to a report from BIO, the organization I work for, the biotech industry’s green initiatives could mitigate the equivalent of 3 billion tons of carbon dioxide every year by 2030, or about half of the country’s annual CO2 emissions.

Take food, for example.

Food consumption — and production — is central to human existence. Global food production accounts for one-quarter of greenhouse gas emissions. A recent report from an international team of researchers concluded that even if all other fossil fuel emissions were eliminated, emissions from food production alone would prevent us from reaching a key goal of the climate change agreement signed in Paris: preventing the global temperature from rising more than 2 degrees Celsius.

Halting food production isn’t an option, so biotech companies are helping farmers become part of the climate solution. Take, for example, Boston-based Joyn Bio. It is engineering bacteria that pull nitrogen directly from the atmosphere. These microbes then pass the nitrogen to crops like wheat and corn, reducing the need to make, transport, and apply nitrogen fertilizers, which reduces greenhouse gas emissions.

Minnesota-based Acceligen is using a technique it calls precision breeding that improves the health of livestock while reducing their waste, greenhouse gas emissions, and water usage.

Biotechnology can also help protect food from climate change. As fungal and bacterial infections accelerated by human-driven environmental disturbances threaten to wipe out Cavendish bananas, Tropic Biosciences in the United Kingdom is using CRISPR gene-editing technology to engineer infection-resistant bananas.

Companies are also rethinking how food is packaged to reduce plastic pollution and open high-tech paths to broader adoption of biodegradables. This would be a game-changer in the interlinked fight to modulate climate change and protect the oceans.

Globally, 100 million tons of plastic are produced every year, 8 million of which ends up in the oceans. The production of plastic requires at least 8% of the world’s petroleum. Greenhouse gas emissions from plastic production and incineration could rise from the current 850 million tons a year to 3 billion tons a year by 2050. And discarded plastic that ends up in the ocean slowly breaks down in sunlight, releasing greenhouse gases and toxic microplastics.

Georgia-based Danimer Scientific — partnering with the Mars Wrigley candy company — is working on biodegradable packaging that uses plant oils to manufacture “plastic” that dissolves in soil and water. Bioplastics and biopolymers can reduce greenhouse gas emissions reductions by up to 80% more compared to their petroleum-based counterparts.

Fuel is another target for biotechnology. Transportation accounts for the highest percentage of U.S. greenhouse gas emissions. While electric cars are gaining popularity, and the $174 billion allocated to support the transition to electrics in Biden’s American Jobs Plan is important, biofuels — which are carbon neutral — will be needed to help reduce emissions in transportation and need comparable support.

The biotech company Synthetic Genomics, for instance, is utilizing saltwater algae, which convert sunlight and carbon dioxide into biomass, to make sustainable auto fuel. By 2025, 10,000 barrels of the algal biofuel could be produced per day for commercial use.

Biofuels will also play an important role in air travel. While flying accounts for less than 3% of global CO2 emissions a year, on a per-mile calculation it’s the least green form of travel. With the number of air travel passengers expected to double by 2040, the Biden administration is upping the financial incentives — through tax credits — for companies that produce sustainable aircraft fuels.

Biotech firms are already stepping up. Companies like Neste, Gevo, and World Energy are using everything from algae to used or wasted cooking oil to create sustainable jet fuels. LanzaTech recycles carbon from industrial emissions and other sources and turns it into aviation fuel — and has recently partnered with other corporations to bring that fuel to market for commercial airline use.

With help from biotechnology, the U.S. can achieve the climate change goals outlined by the Biden administration and the Paris Agreement. Human progress and technology got us into this mess. That same ingenuity can help get us out.

#### Waiving IP protections sends a signal that encourages China to further erode U.S. IP---makes sustaining competitiveness impossible.

Staudt 21 – Current President of the Intellectual Property Owners Association, an international trade association representing members that own, or are interested in, intellectual property (IP) rights

Daniel J. Staudt, “Waiving IP Rights: The Wrong Path to the Right Goals,” IP Watchdog, June 2021, https://www.ipwatchdog.com/2021/06/15/waiving-ip-rights-the-wrong-path-to-the-right-goals/id=134546/

Waiving intellectual property (IP) protections for COVID-19 vaccines will hinder rather than further three meritorious objectives of the current U.S. Presidential Administration: ending the pandemic as soon as possible, leveling the IP playing field with China, and pursuing a worker-centric trade policy. Ensuring equitable, widespread, and successful distribution of vaccines across the globe to meet the challenges of COVID-19, ending the erosion of U.S. IP at the hands of China, and putting Americans back to work are goals that most of us in the U.S. share. An examination of the facts, however, demonstrates that waiving IP rights in the name of COVID-19 relief undermines each of these three U.S. government goals.

Waiver Would Hurt, Not Help

In terms of ending the pandemic as soon as possible, the Washington Post got it right in its May 4 editorial when it stated, “Sharing doses and know-how is better than stripping patents.” It is noteworthy that, during this global debate over whether IP protections should be waived, there have been no instances identified where IP has been used to limit access to vaccines or other COVID-related technologies. In contrast, there are many examples of innovator companies from a wide array of industries who have partnered and shared IP to create testing, vaccines, and therapies to address this pandemic. In fact, IP has enabled this innovation and facilitated this collaboration by providing the incentives that have enabled innovators to devote the resources, technical knowledge, and know-how necessary to counter the pandemic. As a result, our innovative industries have been able to create vaccines and other measures to fight the pandemic. Should an IP waiver be implemented, however, there would not be a stable framework in place to provide confidence to innovators that they can take the necessary risks associated with their inventions and creations as we continue to combat COVID-19. In fact, a waiver would have an immediate chilling effect on continued research and collaborations that are needed, for example, to overcome new variants of the virus, create vaccines for special populations, and develop new tools to help defeat the pandemic and for future vaccine development for other infectious deceases.

Waiver Would Be a Windfall for U.S. Competitors

A second stated goal of the Administration is to become more competitive with countries such as China. To that end, the Senate just passed legislation totaling well over $200 billion that’s designed to strengthen U.S. competitiveness against China. However, to achieve that goal, the United States needs to protect our IP against forced tech-transfer from foreign governments, not give it away. Providing a windfall to U.S. competitors at the same time we are purportedly trying to level the playing field with regards to IP not only makes a farce out of U.S. attempts to “get tough,” but it also sends a dangerous message – that the United States is willing to cave to global pressure and waive Word Trade Organization IP commitments, even if the efficacy of the waiver is not supported by the facts. Unfortunately, we have no reason to think that will be the last of the calls to waive such commitments.

#### Short-term competition key to prevent U.S.-China war.

Beckley & Brands 20 – Associate Professor of Political Science at Tufts University and Jeane Kirkpatrick Visiting Scholar at the American Enterprise Institute; Henry A. Kissinger Distinguished Professor of Global Affairs at the Johns Hopkins University School of Advanced International Studies and a Resident Scholar at the American Enterprise Institute

Michael Beckley, Hal Brands, “Competition With China Could Be Short and Sharp: The Risk of War Is Greatest in the Next Decade,” Foreign Affairs, December 2020, https://www.foreignaffairs.com/articles/united-states/2020-12-17/competition-china-could-be-short-and-sharp

The good news for the United States is that over the long term, competition with China may prove more manageable than many pessimists believe. Americans may one day look back on China the way they now view the Soviet Union—as a dangerous rival whose evident strengths concealed stagnation and vulnerability. The bad news is that over the next five to ten years, the pace of Sino-American rivalry will be torrid, and the prospect of war frighteningly real, as Beijing becomes tempted to lunge for geopolitical gain. The United States still needs a long-term strategy for protracted competition. But first it needs a near-term strategy for navigating the danger zone.

RED FLAGS

Much debate on Washington’s China policy focuses on the dangers China will pose as a peer competitor later this century. Yet the United States actually faces a more pressing and volatile threat: an already powerful but insecure China beset by slowing growth and intensifying hostility abroad.

China has the money and muscle to challenge the United States in key areas. Thanks to decades of rapid growth, China boasts the world’s largest economy (measured by purchasing power parity), trade surplus, financial reserves, navy by number of ships, and conventional missile force. Chinese investments span the globe, and Beijing is pushing for primacy in such strategic technologies as 5G telecommunications and artificial intelligence (AI). Add in four years of disarray in the U.S.-led world order under President Donald Trump, and it is hardly surprising that Beijing is testing the status quo from the South China Sea to the border with India.

Yet China’s window of opportunity may be closing fast. Since 2007, China’s annual economic growth rate has dropped by more than half, and productivity has declined by ten percent. Meanwhile, debt has ballooned eightfold and is on pace to total 335 percent of GDP by the end of 2020. China has little hope of reversing these trends, because it will lose 200 million working-age adults and gain 300 million senior citizens over the next 30 years. And as economic growth falls, the dangers of social and political unrest rise. Chinese leaders know this: President Xi Jinping has given multiple speeches warning about the possibility of a Soviet-style collapse, and Chinese elites are moving their money and children abroad.

Meanwhile, global anti-China sentiment has soared to levels not seen since the 1989 Tiananmen Square massacre. Nearly a dozen countries have suspended or canceled participation in Belt and Road Initiative (BRI) projects. Another 16 countries, including eight of the world’s ten largest economies, have banned or severely restricted use of Huawei products in their 5G networks. India has been turning hard against China since a clash on their shared border killed 20 soldiers in June. Japan has ramped up military spending, turned amphibious ships into aircraft carriers, and strung missile launchers along the Ryukyu Islands near Taiwan. The European Union has labeled China a “systemic rival”; and the United Kingdom, France, and Germany are sending naval patrols to counter Beijing’s expansion in the South China Sea and Indian Ocean. On multiple fronts, China is facing the blowback created by its own behavior.

HISTORY RHYMES

Many people assume that rising revisionists pose the greatest danger to international security. But historically, the most desperate dashes have come from powers that had been on the ascent but grew worried that their time was running short.

World War I is a classic example. Germany’s rising power formed the strategic backdrop to that conflict, but German fears of decline triggered the ultimate decision for war. Russia’s growing military power and mobility menaced Germany’s eastern flank; new French conscription laws were changing the balance in the West; and a tightening Franco-Russian-British entente was leaving Germany surrounded. German leaders ran such catastrophic risks in the July crisis for fear that geopolitical greatness would elude them if they did not act quickly.

The same logic explains imperial Japan’s fatal gamble in 1941, after the U.S. oil embargo and naval rearmament presented Tokyo with a closing window of opportunity to dominate the Asia-Pacific. In the 1970s, Soviet global expansion peaked as Moscow’s military buildup matured and the slowing of the Soviet economy created an impetus to lock in geopolitical gains.

Given that China is currently facing both a grim economic forecast and a tightening strategic encirclement, the next few years may prove particularly turbulent. The United States obviously needs a long-term strategy to compete with China. But it also needs to blunt a potential surge of Chinese aggression and expansion this decade.

The early Cold War offers a useful parallel. At that time, American leaders understood that winning the long-term struggle against the Soviet Union required not losing crucial battles in the short term. The Marshall Plan, unveiled in 1947, was meant to prevent economic collapse in Western Europe, because such a breakdown might allow Moscow to extend its political hegemony over the entire continent. The creation of NATO and rearmament during the Korean War forged a military shield that allowed the West to thrive. Strategic urgency was the prelude to strategic patience: the United States could exploit its lasting economic and political advantages only if it closed off more immediate vulnerabilities.

Today, the United States again needs a danger-zone strategy, which should be based on three principles. First, focus on denying China near-term successes that would radically alter the long-term balance of power. The most pressing dangers are a Chinese conquest of Taiwan and Chinese preeminence in 5G telecommunications networks. Second, rely on tools and partnerships available now or in the near future rather than assets that require years to develop. Third, focus on selectively degrading Chinese power rather than changing Chinese behavior. Seduction and coercion are out; targeted attrition is in. Such an approach entails greater risk. But the United States must act assertively now to prevent more destabilizing spirals of hostility later.

#### U.S.-China war is likely and goes nuclear.

Kulacki 16 – China Project Manager in the UCS Global Security Program

Gregory Kulacki, “The Risk of Nuclear War with China: A Troubling Lack of Urgency,” Union of Concerned Scientists, 2016, https://www.ucsusa.org/sites/default/files/attach/2016/05/Nuclear-War-with-China.pdf

It is not difficult to imagine situations that could trigger an inadvertent or accidental nuclear war. For example, PRC leaders could underestimate U.S. willingness to use nuclear weapons to stop a conventional war. U.S. leaders could underestimate PRC willingness to retaliate after a tailored U.S. nuclear attack. The PRC could launch a retaliatory nuclear attack if the United States were to launch conventional missile strikes that China mistakenly believed were nuclear. The United States could make the same mistake. Equipment in the command and control network of either nation could be destroyed or malfunction, especially given the interest of both countries in anti-satellite weapons. Decision makers may not have timely access to accurate information in the fog of a conflict.

A PRC decision to move to launch on warning would be especially dangerous. The U.S. and Soviet/Russian experience with warning systems shows that false alarms and unexpected situations occur due to human and technical errors, and they are especially likely early in the deployment and operation of such a system. Errors of this sort increased the risk of a nuclear exchange on multiple occasions for the United States and Russia both during and after the Cold War.

No Technical Exit

As long as both sides remain committed to pursuing technical solutions to their unique strategic problems, they are condemned to continue competing indefinitely. But stalemate is not a stable outcome; rather, it is a perpetual high-wire act. Twenty-four hours a day, 365 days a year, the governments of the United States and China are a few poor decisions away from starting a war that could escalate rapidly and end in a nuclear exchange.

Lack of mutual trust and a growing sense that their differences may be irreconcilable incline both governments to continue looking for military solutions—for new means of coercion that help them feel more secure. Establishing the trust needed to have confidence in diplomatic resolutions to the disagreements, animosities, and suspicions that have troubled leaders of the United States and the PRC for almost 70 years is extremely difficult when both governments take every new effort to up the technological ante as an act of bad faith.

The bilateral dialogues on strategic stability aim to manage the military competition, but they do not seek to end it. Although the two governments work very hard at avoiding conflict, they have yet to find a way out of what Graham Allison called their “Thucydides trap”—the risk of conflict between a rising power and an established power invested in the status quo (Allison 2015). Allison’s warning not to minimize the risks of war is sage advice, even if he does not say how the United States and China can escape the trap he describes.

PRC leaders believe it is possible to prosecute a major war without risking a U.S. nuclear attack. The leaders of the United States believe stopping the PRC from prosecuting such a war may depend, in certain contingencies, on a credible threat to use nuclear weapons—a threat U.S. leaders state they are prepared to execute. These mismatched perceptions increase both the possibility of war and the likelihood it will result in the use of nuclear weapons.

Well-informed U.S. officials tend to dismiss the possibility that the United States and the PRC could wander into a nuclear war. For example, Admiral Dennis Blair, a former Director of National Intelligence whose final military post was Commander in Chief of the U.S. Pacific Command, assured a large gathering of U.S. arms-control experts that “the chances of a nuclear exchange between the United States and China are somewhere between nil and zero.” J. Stapleton Roy, a former U.S. ambassador to the PRC, wholeheartedly agreed (Swaine, Blair, and Roy 2015). Similarly, PRC military strategists and arms control experts believe that the risk of nuclear war with the United States is not an urgent concern even if that risk may not be zero (Cunningham and Fravel 2015).

This lack of urgency is troubling. For example, the United States reportedly told the PRC it would risk military escalation to prevent or stop a proposed PRC island reclamation project in the Scarborough Shoal (Cooper and Douglas 2016). The PRC reportedly responded by committing to move ahead with the project later in 2016 (Chan 2016). This particular contest of wills is part of a steadily increasing number of unresolved diplomatic spats that have escalated to the level of overt military posturing reminiscent of U.S.-Soviet jousting during the Cold War.

The United States and the PRC are decades-old enemies, preparing for war and armed with nuclear weapons. Good faith efforts by the leaders of both nations have failed to stop accelerating preparations for war, including new investments in their nuclear forces. Miscommunication, misunderstanding, or poor judgment could spark a conflict that both governments may find difficult to stop.

### 1NC

#### CP: Member nations of the World Trade Organization should enter into a prior and binding consultation with the World Health Organization over reducing intellectual property protections. Member nations will support the proposal and adopt the results of consultation.

#### WHO says yes:

#### It opposes data exclusivity and TRIPS-plus measures

WHO 17 [(World Health Organization) “Data exclusivity and other TRIPS-plus measures,” UHC Technical Brief, 2017] JL

Finally, data exclusivity could prevent the registration of generic versions of medicines even when there is no patent on a medicine, e.g. when a pharmaceutical product does not meet the standards for patentability (e.g. because it is not new or an inventive step), the patent lapses, when a country has no patent law, or when patents are not being granted for pharmaceuticals. The latter situation can arise in least-developed countries that are World Trade Organization (WTO) Members, which do not have to grant or enforce patents for pharmaceuticals until 2033.b

It has at times been argued that Article 39.3 of the TRIPS Agreement makes it mandatory for countries to grant data exclusivity. However, careful reading of Article 39.3 (see Box 1) does not warrant this conclusion; the text of the Article does not make any reference whatsoever to exclusivity or exclusive rights.

Article 39.3 requires countries to protect undisclosed registration data about new chemical entities (i) against disclosure and (ii) against unfair commercial use. Thus, regulatory authorities may not publish registration data,c or share them with third parties (e.g. generic competitors). There is some debate as to what exactly is meant by “unfair commercial use”. Does the use of bioequivalence studies instead of full clinical trials represent “unfair commercial use”? There is no “unfair commercial use” by the generic company: the generic manufacturer never uses the originator’s data, and does not even have access to them. Meanwhile, regulatory authorities also do not normally use the originator’s data, though, as mentioned above, they may (indirectly) rely on them. Even even if the regulators were to use the data, it would not be commercial use, as the regulatory agency is not a commercial organization. The unfair comercial use does not apply to the work of a government regulatory body.

Thus, legal and public health experts believe that TRIPS requires data protection, but not data exclusivity – and national laws do not need to be more restrictive than TRIPS. It is important to note that least-developed countries are not required to provide the data protection mandated by TRIPS on pharmaceuticals till 2033.

It is also worthwhile noting that in developing countries, regulatory authorities often rely on data that are already published or otherwise in the public domain – and that therefore do not fall within the scope of Article 39.3 (which imposes protection only for undisclosed data).

As mentioned above, from the perspective of public health and access to medicines, it is preferable not to grant data exclusivity. Moreover, there is no requirement under international law that countries grant data exclusivity; countries have to provide for data protection only.

#### It supports increasing the availability of generics

Hoen 03 [(Ellen T., researcher at the University Medical Centre at the University of Groningen, The Netherlands who has been listed as one of the 50 most influential people in intellectual property by the journal Managing Intellectual Property, PhD from the University of Groningen) “TRIPS, Pharmaceutical Patents and Access to Essential Medicines: Seattle, Doha and Beyond,” Chicago Journal of International Law, 2003] JL

However, subsequent resolutions of the World Health Assembly have strengthened the WHO’s mandate in the trade arena. In 2001, the World Health Assembly adopted two resolutions in particular that had a bearing on the debate over TRIPS [30]. The resolutions addressed:

– the need to strengthen policies to increase the availability of generic drugs;

#### Consultation displays strong leadership and authority which are key to WHO legitimacy

Gostin et al 15 [(Lawrence O., Linda D. & Timothy J. O’Neill Professor of Global Health Law at Georgetown University, Faculty Director of the O’Neill Institute for National & Global Health Law, Director of the World Health Organization Collaborating Center on Public Health Law & Human Rights, JD from Duke University) “The Normative Authority of the World Health Organization,” Georgetown University Law Center, 5/2/2015] JL

Members want the WHO to exert leadership, harmonize disparate activities, and set priorities. Yet they resist intrusions into their sovereignty, and want to exert control. In other words, ‘everyone desires coordination, but no one wants to be coordinated.’ States often ardently defend their geostrategic interests. As the Indonesian virus-sharing episode illustrates, the WHO is pulled between power blocs, with North America and Europe (the primary funders) on one side and emerging economies such as Brazil, China, and India on the other. An inherent tension exists between richer ‘net contributor’ states and poorer ‘net recipient’ states, with the former seeking smaller WHO budgets and the latter larger budgets.

Overall, national politics drive self-interest, with states resisting externally imposed obligations for funding and action. Some political leaders express antipathy to, even distrust of, UN institutions, viewing them as bureaucratic and inefficient. In this political environment, it is unsurprising that members fail to act as shareholders. Ebola placed into stark relief the failure of the international community to increase capacities as required by the IHR. Guinea, Liberia and Sierra Leone had some of the world's weakest health systems, with little capacity to either monitor or respond to the Ebola epidemic.20 This caused enormous suffering in West Africa and placed countries throughout the region e and the world e at risk. Member states should recognize that the health of their citizens depends on strengthening others' capacity. The WHO has a central role in creating systems to facilitate and encourage such cooperation.

The WHO cannot succeed unless members act as shareholders, foregoing a measure of sovereignty for the global common good. It is in all states' interests to have a strong global health leader, safeguarding health security, building health systems, and reducing health inequalities. But that will not happen unless members fund the Organization generously, grant it authority and flexibility, and hold it accountable.

#### WHO is key to disease prevention – it is the only international institution that can disperse information, standardize global public health, and facilitate public-private cooperation

Murtugudde 20 [(Raghu, professor of atmospheric and oceanic science at the University of Maryland, PhD in mechanical engineering from Columbia University) “Why We Need the World Health Organization Now More Than Ever,” Science, 4/19/2020] JL

WHO continues to play an indispensable role during the current COVID-19 outbreak itself. In November 2018, the US National Academies of Sciences, Engineering and Medicine organised a workshop to explore lessons from past influenza outbreaks and so develop recommendations for pandemic preparedness for 2030. The salient findings serve well to underscore the critical role of WHO for humankind.

The world’s influenza burden has only increased in the last two decades, a period in which there have also been 30 new zoonotic diseases. A warming world with increasing humidity, lost habitats and industrial livestock/poultry farming has many opportunities for pathogens to move from animals and birds to humans. Increasing global connectivity simply catalyses this process, as much as it catalyses economic growth.

WHO coordinates health research, clinical trials, drug safety, vaccine development, surveillance, virus sharing, etc. The importance of WHO’s work on immunisation across the globe, especially with HIV, can hardly be overstated. It has a rich track record of collaborating with private-sector organisations to advance research and development of health solutions and improving their access in the global south.

It discharges its duties while maintaining a dynamic equilibrium between such diverse and powerful forces as national securities, economic interests, human rights and ethics. COVID-19 has highlighted how political calculations can hamper data-sharing and mitigation efforts within and across national borders, and WHO often simply becomes a convenient political scapegoat in such situations.

International Health Regulations, a 2005 agreement between 196 countries to work together for global health security, focuses on detection, assessment and reporting of public health events, and also includes non-pharmaceutical interventions such as travel and trade restrictions. WHO coordinates and helps build capacity to implement IHR.

#### WHO diplomacy solves great power conflict

Murphy 20 [(Chris, U.S. senator from Connecticut serving on the U.S. Senate Foreign Relations Committee) “The Answer is to Empower, Not Attack, the World Health Organization,” War on the Rocks, 4/21/2020] JL

The World Health Organization is critical to stopping disease outbreaks and strengthening public health systems in developing countries, where COVID-19 is starting to appear. Yemen announced its first infection earlier this month, and other countries in Africa, Asia and the Middle East are at severe risk. Millions of refugees rely on the World Health Organization for their health care, and millions of children rely on the WHO and UNICEF to access vaccines.

The World Health Organization is not perfect, but its team of doctors and public health experts have had major successes. Their most impressive claim to fame is the eradication of smallpox – no small feat. More recently, the World Health Organization has led an effort to rid the world of two of the three strains of polio, and they are close to completing the trifecta.

These investments are not just the right thing to do; they benefit the United States. Improving health outcomes abroad provides greater political and economic stability, increasing demand for U.S. exports. And, as we are all learning now, it is in America’s national security interest for countries to effectively detect and respond to potential pandemics before they reach our shores.

As the United States looks to develop a new global system of pandemic prevention, there is absolutely no way to do that job without the World Health Organization. Uniquely, it puts traditional adversaries – like Russia and the United States, India and Pakistan, or Iran and Saudi Arabia – all around the same big table to take on global health challenges. It has relationships with the public health leaders of every nation, decades of experience in tackling viruses and diseases, and the ability to bring countries together to tackle big projects. This ability to bridge divides and work across borders cannot be torn down and recreated – not in today’s environment of major power competition – and so there is simply no way to build an effective international anti-pandemic infrastructure without the World Health Organization at the center.

#### Ought means should

Merriam Webster, No Date – Merriam Webster’s Learner’s Dictionary, “ought”, <http://www.learnersdictionary.com/definition/ought>  
ought /ˈɑːt/ verb  
Learner's definition of OUGHT [modal verb] 1 ◊ Ought is almost always followed by to and the infinitive form of a verb. The phrase ought to has the same meaning as should and is used in the same ways, but it is less common and somewhat more formal. The negative forms ought not and oughtn't are often used without a following to. — used to indicate what is expected They ought to be here by now. You ought to be able to read this book. There ought to be a gas station on the way. 2 — used to say or suggest what should be done You ought to get some rest. That leak ought to be fixed. You ought to do your homework.

#### Should means must and is immediate

Summers 94 (Justice – Oklahoma Supreme Court, “Kelsey v. Dollarsaver Food Warehouse of Durant”, 1994 OK 123, 11-8, http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn13)

¶4 The legal question to be resolved by the court is whether the word "should"[13](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn13) in the May 18 order connotes futurity or may be deemed a ruling in praesenti.[14](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn14) The answer to this query is not to be divined from rules of grammar;[15](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn15) it must be governed by the age-old practice culture of legal professionals and its immemorial language usage. To determine if the omission (from the critical May 18 entry) of the turgid phrase, "and the same hereby is", (1) makes it an in futuro ruling - i.e., an expression of what the judge will or would do at a later stage - or (2) constitutes an in in praesenti resolution of a disputed law issue, the trial judge's intent must be garnered from the four corners of the entire record.[16](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn16) [CONTINUES – TO FOOTNOTE] [13](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker2fn13) "*Should*" not only is used as a "present indicative" synonymous with *ought* but also is the past tense of "shall" with various shades of meaning not always easy to analyze. See 57 C.J. Shall § 9, Judgments § 121 (1932). O. JESPERSEN, GROWTH AND STRUCTURE OF THE ENGLISH LANGUAGE (1984); St. Louis & S.F.R. Co. v. Brown, 45 Okl. 143, 144 P. 1075, 1080-81 (1914). For a more detailed explanation, see the Partridge quotation infra note 15. Certain contexts mandate a construction of the term "should" as more than merely indicating preference or desirability. Brown, supra at 1080-81 (jury instructions stating that jurors "should" reduce the amount of damages in proportion to the amount of contributory negligence of the plaintiff was held to imply an *obligation* *and to be more than advisory*); Carrigan v. California Horse Racing Board, 60 Wash. App. 79, [802 P.2d 813](http://www.oscn.net/applications/oscn/deliverdocument.asp?box1=802&box2=P.2D&box3=813) (1990) (one of the Rules of Appellate Procedure requiring that a party "should devote a section of the brief to the request for the fee or expenses" was interpreted to mean that a party is under an *obligation* to include the requested segment); State v. Rack, 318 S.W.2d 211, 215 (Mo. 1958) ("should" would mean the same as "shall" or "must" when used in an instruction to the jury which tells the triers they "should disregard false testimony"). [14](http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker2fn14) In praesenti means literally "at the present time." BLACK'S LAW DICTIONARY 792 (6th Ed. 1990). In legal parlance the phrase denotes that which in law is presently or immediately effective, as opposed to something that will or would become effective in the future *[in futurol*]. See Van Wyck v. Knevals, [106 U.S. 360](http://www.oscn.net/applications/oscn/deliverdocument.asp?box1=106&box2=U.S.&box3=360), 365, 1 S.Ct. 336, 337, 27 L.Ed. 201 (1882).

## Case

### C1

#### A waiver greenlights counterfeit vaccines specifically – independently turns Case – and this sets a bad precedent for the future as well.

Conrad 5-18 John Conrad 5-18-2021 "Waiving intellectual property rights is not in the best interests of patients" <https://archive.is/vsNXv#selection-5353.0-5364.0> (president and CEO of the Illinois Biotechnology Innovation Organization in Chicago.)//Elmer

The Biden's administration's support for India and South Africa's proposal before the World Trade Organization to temporarily waive anti-COVID vaccine patents to boost its supply will fuel the **development of counterfeit vaccines and weaken the already strained global supply chain**. The proposal will not increase the effective number of COVID-19 vaccines in India and other countries. The manufacturing standards to produce COVID-19 vaccines are **exceptionally complicated**; it is unlike any other manufacturing process. To ensure patient safety and efficacy, only manufacturers with the **proper facilities and training should produce the vaccine, and they are**. Allowing a temporary waiver that permits compulsory licensing to allow a manufacturer to export counterfeit vaccines will **cause confusion and endanger public health**. For example, between 60,000 and 80,000 children in Niger with fatal falciparum malaria were treated with a counterfeit vaccine containing incorrect active pharmaceutical ingredients, resulting in more than **100 fatal infections.** Beyond the patients impacted, counterfeit drugs erode public confidence in health care systems and the pharmaceutical industry. Vaccine hesitancy is a rampant threat that feeds off of the distribution of misinformation. Allowing the production of vaccines from improper manufacturing facilities further opens the door for antivaccine hacks to stoke the fear fueling **vaccine hesitance**.

Preempting their kumar card: their card talks about hep b vaccines – which is a different vaccine, and our card talks about malaria, it is still a risk – AND OUR CARD SAYS COV19 VAX EVEN MORE COMPLCIATED

### C2

#### DA turns the 2nd and 3rd contentions

### C3

#### The WTO is structurally incapable of doing anything.

Blange-Gubbay & Ossa 21 – Senior Research Fellow at the Kühne Center for Sustainable Globalization at the University of Zurich; Director of the Kühne Center for Sustainable Globalization at the University of Zurich, Kühne Foundation Professor of International Trade The WTO's major challenges

Michael Blange-Gubbay, Ralph Ossa, “A New Hope for the WTO? Past achievements, current challenges, and planned reforms,” University of Zurich, Kühne Center, IMPACT SERIES: 02–21, 2021, https://www.kuehnecenter.uzh.ch/impact\_series/2021\_03\_17-02-21-a\_new\_hope\_for\_the\_wto.html

While the WTO deserves credit for these achievements, they still fall far short of its initial goals. One challenge is that WTO members are bitterly divided over essentially all deep integration issues so that it has proven impossible to make any progress on that front. An example of this divide is the never-ending conflict between rich and poor countries about stronger intellectual property rights protection, which rich countries support and poor countries oppose. Another challenge is that the WTO has been unable to keep up with some important new trade policy issues such as e-commerce or data governance.

There are two closely related symptoms of this impasse: First, the WTO has been unable to make any significant progress through multilateral trade negotiations, a hallmark of the world trading system under the GATT. What stands out is the failure of the Doha Development Round, which started in 2001 and ended 7 years later without reaching any agreement, and with reciprocal accusations from the largest economies in the world (US, EU, India and China) for its failure. In 2013, the WTO reached the first, and only, multilateral agreement approved by all its members since its creation — the Bali Package — approving only a very small portion of the Doha Development Agenda.

Second, most trade negotiations now occur in the context of regional trade agreements (RTAs), which have proliferated since the creation of the WTO. While RTAs as such are often worthwhile initiatives, their proliferation is a clear testament to the waning importance of the WTO as the main forum for international trade policy cooperation. Since the establishment of the WTO, RTAs have risen in number, reaching 338 agreements notified as of December 2020. All 164 WTO Members are party to at least one RTA.

#### A number of crises ensure credibility is irrecoverable.

Blange-Gubbay & Ossa 21 – Senior Research Fellow at the Kühne Center for Sustainable Globalization at the University of Zurich; Director of the Kühne Center for Sustainable Globalization at the University of Zurich, Kühne Foundation Professor of International Trade The WTO's major challenges

Michael Blange-Gubbay, Ralph Ossa, “A New Hope for the WTO? Past achievements, current challenges, and planned reforms,” University of Zurich, Kühne Center, IMPACT SERIES: 02–21, 2021, https://www.kuehnecenter.uzh.ch/impact\_series/2021\_03\_17-02-21-a\_new\_hope\_for\_the\_wto.html

Ill-timed crises

On top of these major challenges, the WTO has faced multiple additional crises over the course of the last few years. What comes to mind immediately are the breakdown of trade policy cooperation during the China-US trade war and the COVID-19 pandemic, which severely damaged the credibility of the WTO as a guarantor of stable trade relations. We have extensively discussed the trade-implications of the Covid-19 pandemic in our previous two Kühne Impact Series and will therefore not further belabor this point here.2

Another crisis pertains to the WTO's Dispute Settlement Mechanism (DSM), and more precisely to its Appellate Body (AB). The DSM was often referred to as the "crown jewel" of the organization. Over the past two decades, it has been remarkably active: since its inception, 600 disputes have been initiated by WTO members. And the high rate of compliance with the decisions testified to the system's success. With time, while the dynamics of trade relationships evolved and deepened significantly, the rules and procedures of the system have not followed these developments, due to the inactivity on the legislative front. This effectively forced the DSM and the AB to make law by their rulings. As a consequence, the dispute settlement mechanism entered a deep crisis of legitimacy due to its judicial overreach. The system collapsed in December of 2019, when the United States refused to appoint new members to the AB.

### Solvency

#### 1]—Their own solvency card, communication from India and S. Africa to WTO 2020 states that requires access to “affordable medical products”.

#### Vaccine cost is reasonable, making reductions unnecessary – therefore the aff is an unnecessary step, everything else being too expensive isn’t something that they can control, since it’s outside the bounds of the resolution.

Mercurio ‘21 (Bryan Mercurio; Chinese University of Hong Kong - Faculty of Law, ; 2-12-2021; "Wto Waiver From Intellectual Property Protection For Covid-19 Vaccines And Treatments: A Critical Review (February 12, 2021)”; Virginia Journal Of International Law Online (Forthcoming 2021), Available At Ssrn: Https://Ssrn.Com/Abstract=3789820 Or Http://Dx.Doi.Org/10.2139/Ssrn.3789820"; https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3789820, accessed 7-21-2021; JPark)

First, **pharmaceutical companies are selling the vaccine at extremely reasonable rates** and several announced plans for extensive not-for-profit sales.30 Although agreements between the pharmaceutical companies and governments are not publicly disclosed, the Belgian Secretary of State Eva De Bleeker temporarily made publicly available in a tweet the prices the EU is being charged by each manufacturer. The De Bleeker **tweet indicated the European Commission negotiated price arrangements with six companies**, with the range of spending between €1.78 and €18 per coronavirus vaccine dosage. Specific price per dose listed for each of the six vaccines was as follows: Oxford/AstraZeneca: (€1.78), Johnson & Johnson (€8.50), Sanofi/GSK (€7.56), CureVac (€10), BioNTech/Pfizer (€12) and Moderna (€18).31 While much as been made of the fact that South Africa agreed to purchase 1.5 million doses of the Oxford/AstraZeneca from the Serum Institute of India (SII) at a cost of €4.321 per dose,32 **these criticisms are directed at the lack of transparency in pharmaceutical licenses and production contracts – an issue which would be wholly unaddressed by a waiver of IPRs**. Moreover, **while the disparity in pricing is concerning the overall per dosage rate South Africa is paying nevertheless represents value for money given the expected health and economic returns on investment.** Despite the disparity in pricing between nations, the larger point remains that the industry has not only rapidly produced vaccines for the novel coronavirus but is making them available at unquestionably reasonable prices.

#### Waivers fail to disseminate know-how and opening up IP to the whole world is bad for long-term innovation.

Bergmann 21 – Partner at BakerHostetler, previously worked as a trial and appellate attorney for 12 years at the U.S. Department of Justice

William C. Bergmann, “COVID IP Waiver Doesn't Resolve Vaccine Production Barriers,” Law360, May 2021, https://www.law360.com/articles/1383618

Notably absent from the WTO petition, and Tai's announcement, are any details or proposed pathways with respect to how patent rights and know-how currently held by private pharmaceutical companies would be globally shared and why these companies would have any incentive to do so. Indeed, there are many hurdles that would need to be overcome to implement such as plan, including the agreement of all WTO members.

Those opposing the waiver, and there are many, argue that IP has not been a barrier, but a facilitator of critical, cutting-edge innovation to address the pandemic.[3] For example, Sen. Chris Coon, D-Del., remarked at Center for Strategic and International Studies conference in April:

If we were to simply open up to the world all of the IP at the core of these groundbreaking developments, I think we would then be at risk of losing the private sector investment in development that's critical to this moment of personalized medicine, of breakthrough vaccines and breakthrough medical diagnostics, and I think frankly the world would suffer as a result.[4]

Pharmaceutical companies point out that the reason they have been able to create vaccines so quickly is because they already had proprietary platforms that have been developed over more than a decade, at the cost of hundreds of millions of dollars of private investment.[5] The biggest hurdle to getting vaccines administered widely around the world is not IP protections, but limited infrastructure and supply chain bottlenecks.[6]

Although India is sometimes perceived as a relatively poor country, it has a well-developed generic pharmaceutical industry. The prospect of giving such a country technology that has been developed at private expense over several years raises many issues.

Although the waiver is supposed to be only for the duration of the COVID-19 pandemic, once the genie is out of the bottle there may be no way to put the genie back in.

There may be no practical way to prevent companies receiving such technology from using it to compete in the future against those companies that developed the vaccines with their own funding, particularly with respect to the knowledge of the underlying platforms that will be gained and that will have a much wider application than COVID-19 vaccines. [7]