# 1

#### Plan: The US, EU, China, Russia, Canada and India will join the WHO patent pools for infectious disease research [CTAP and MPP], providing economic support and compliance with the pool. Pool resources will be devoted to addressing inequality of access to medicines and vaccines worldwide. Funding and enforcement guaranteed.

#### WHO patent pool = best solvency. Protects innovation. Need US and others to join.

Davey 2021 [Neil, Science Writer, 2/26] “Increasing global access to COVID-19 vaccines and treatments through patent pools,” **Jolt Digest** <https://jolt.law.harvard.edu/digest/increasing-global-access-to-covid-19-vaccines-and-treatments-through-patent-pools/EDM>

Given that the Global North is responsible for a [majority of the world’s biotechnology innovation](https://science.sciencemag.org/content/294/5550/2289.3) and thereby owns most of the intellectual property (“IP”) for these technologies, a fine balance must be achieved between increasing international access to care without deterring essential [R&D]Research & Development investment. The World Health Organization (“WHO”) has created a [voluntary patent pool](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov/covid-19-technology-access-pool/solidarity-call-to-action/) in an attempt to resolve this tension. Known as the [COVID-19 Technology Access Pool](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov/covid-19-technology-access-pool) (“C-TAP”), this effort [led by Costa Rica and the WHO](https://www.who.int/news/item/29-05-2020-international-community-rallies-to-support-open-research-and-science-to-fight-covid-19) aims to leverage collective research and incentivize international cooperation to address the pandemic. The goal of such a patent pool is to bundle multiple pieces of IP together so as to [reduce the transaction costs](https://www.thinkglobalhealth.org/article/patent-pools-and-pandemic-renewed-debate) of knowledge sharing on a patent-by-patent basis. Signatory nations to this proposal agree to sharing data, knowledge, and IP surrounding COVID-19 detection, prevention, and treatment. Thus far, [35+ countries have signed](https://www.bioworld.com/articles/435437-who-launches-covid-19-patent-pool-backed-by-35-countries), but many of the world’s leading biotechnology innovators (including the US, UK, France, Germany, China, Russia, Canada, and India) have [not joined the international effort](https://www.statnews.com/pharmalot/2020/05/29/who-covid19-coronavirus-patents/). Importantly, such a voluntary patent pool is preferable to the pharmaceutical industry relative to a compulsory licensing approach, in which countries could entirely circumvent the patents of innovator pharmaceutical companies and allow domestic generic companies to manufacture and distribute the products.

#### Pools solve red tape issues that hinder innovation. Restricting IP inefficient. Pools fast-track innovation.

Eldin 2011 [Chris, Themba Pharmaceuticals] “The importance of patent sharing in neglected disease drug discovery,” **Future Science** <https://www.future-science.com/doi/pdf/10.4155/fmc.11.101/EDM>

It is widely acknowledged that insufficient resources are allocated globally to [R&D] research and development covering new ways to reduce the disease burden in developing countries, and particularly neglected tropical diseases (NTDs). In order to address this problem, several organizations have sought innovative ways to increase the availability of funding for such research. For instance, the WHO established the Expert Working Group on Research and Development: Coordination and Financing to “examine current financing and coordination of research and development, as well as proposals for new and innovative sources of financing to stimulate research and development”, related to diseases predominantly affecting the developing countries [101. Sharing patents and their associated data and know-how is another example of such an initiative. According to patent law, a traditional patent pool is a consortium of at least two companies agreeing to cross-license or make available patents relating to a particular technology or innovation. The creation of a patent pool can save patentees and licensees time and money, and, in the case of blocking patents, it may also be the only reasonable method for making the invention available to the public [1]. In the NTD space, mechanisms for sharing patents should be established to make the patents and, at the discretion of a pool contributor, the know-how of companies and organizations more widely available for the development of therapeutics for NTDs. For such patent pools to achieve their maximum impact, the entire process from inflow to outflow of technology and collaborations needs to be carefully managed. In particular, the following principles should be implemented: n Core values for the patent pool should be established to manage: incoming patents and technology, incoming requests to join the pool and exploit any technology, license and royalty agreements of any innovation resulting from exploitation of information, or know-how in the pool and ownership of any intellectual property (IP) that results from pool collaborations; n A clearly defined process map should be produced to handle requests for participation in the pool; n A method should be implemented that measures the success of the pool (e.g., number of investigational new drug filings and hit series generated). In the case of NTD research, where there is a pressing requirement for new medicines but little to no market for commercial development, there is a need for novel discovery and development models to be identified, developed and pursued. Traditional, industry-driven approaches to drug discovery are less appropriate in the NTD discovery space because the investment required to protect and develop medicines is not likely to be recouped through sales of drugs following regulatory approval [2]. Patent pools represent one way that knowledge and know-how can be shared in order to fast-track medicine development.

Advantage: WHO Leadership

#### Only WHO effectively promotes innovation. Overlapping involvement by WTO = policy failure. Makes the problem worse. CP solves. Gets better coordination.

Taylor 2002 [Allyn, Health policy Advisor, WHO] “Global governance, international health law and WHO: looking towards the future,” **Bulletin of the World Health Organization** <https://scielosp.org/pdf/bwho/v80n12/8012a12.pdf/EDM>

The WTO’s [TRIPs} Convention on Trade-related Aspects of Intellectual Property establishes standards for protection of [IP] intellectual property applicable to biotechnology; several other WTO agreements also apply to biotechnology related trade disputes. The United Nations Education, Scientific and Cultural Organization has announced the ‘‘possible preparation’’ of an ‘‘international instrument on genetic data’’ and a ‘‘universal instrument on bioethics’’ as a follow-up to its Universal Declaration on the Human Genome and Human Rights (32); it is unclear whether these proposed instruments would be designed as binding international law. Most recently, in December 2001, the United Nations General Assembly established an Ad Hoc Working Group of the Sixth Committee to consider an international treaty to ban reproductive cloning of human beings (20)…International law in biotechnology is thus emerging in a fragmented and amorphous manner in which intergovernmental organizations with overlapping jurisdictions are addressing sector-specific aspects of the genetics revolution in a piecemeal and incomplete manner. The splintered legal process exacerbates uncertainties about the legal regime that governs biotechnology. This is partly because standards adopted under the auspices of different international organizations are being developed in increasingly contradictory ways, including conflicting legal standards related to intellectual property (33, 34). The experience of international lawmaking in biotechnology strongly suggests that the current decentralized organizational framework is ill-equipped to deal with international legal aspects of the massive public health implications of new genetic technologies and other realms of global public health. Taking the agenda forward: WHO and international health law An international health law mandate for WHO: coordination and collective management A larger role for WHO, involving coordination of the international health law enterprise, is essential for rational development and effective implementation of international health law policy.

#### CP solves China and globalization best. WHO is proper place for US-China collaboration. Failure to support WHO governance drives crisis.

Xinhua 2020 [5/8] “Responding to crisis requires cooperation between China, U.S.: expert,” <http://www.xinhuanet.com/english/2020-05/08/c_139040592.htm/EDM>

Gu cited how coronavirus pandemic outbreak took place in an era of globalization, where people, information and resources flow through a market-oriented global system. However, when a major infectious disease occurs and its enormous negative externality causes the market-oriented global trading system fail, there is an "urgent need" for a strong international governance body to step in, said Gu. Unfortunately, effective global leadership and global collective action has not emerged from this crisis, he added. For instance, The [WHO] World Health Organization, as the coordinating body for global public health, has not had the support of some of the major powers to deal with such a major global public health crisis, said Gu. Gu called the spread of this epidemic as a crisis of global governance, not a crisis of globalization" and that the aftermath of this lack of global governance has been "disastrous." In fact, globalization has played a crucial role in the fight against the epidemic, said Gu. The world has provided China with scarce medical supplies. Likewise, when the United States and Europe situation worsened, the international community, led by China, provided much support as well. This process of mutual support therefore illustrates the importance of global production and supply chain systems in supporting global disasters, and in allowing for international aid to reach disaster areas quickly, said Gu. Some might think that a shortage for medical emergency supplies like masks due to more demand is a problem caused by the global supply chain and that the future solution is to localize medical supplies, Gu said. In times of crisis, however, the reality is that the principle of efficiency or timely supply of critical goods cannot be guaranteed. "Because the probability of such rare public health emergencies occurring frequently is very small, we can't know in advance which country the crisis will occur," he said. While political interference may affect globalization in the short term, globalization will not end, as long as enterprises seek to maximise profits, and consumers pursue their interests. Hence, as globalization is inevitable, countries should make strengthening global governance their top priority, because globalization without global governance is "fragile and even dangerous," said Gu. The world has undergone fundamental changes, with the growth of developing countries which still lack a voice on global governance. As the power of the U.S. continues to wane, it cannot sustain its unipolar hegemony, and is further weakened by Trump administration's decision to pull out in many areas of global governance, said Gu. The most important need now is for the world to form a multi-polar system of governance as soon as possible, he said. This can be done through a reform of the existing governance system, as well as establishing new institutions. But either way, multilateralism and the participation of developing countries should be important elements, said Gu. For this to happen, cooperation between the two major powers of China and the United States is essential to solve many of the existential crisis facing the world.

# 2

#### Brink. US/PRC on the brink of nuclear confrontation.

Gerson 8/4/2021 {Joseph, Executive Director of the Campaign for Peace, Disarmament and Common Security and Vice-President of the International Peace Bureau] “IN A DANGEROUS TIME: TOWARD PREVENTING A DISASTROUS U.S.-CHINA WAR,” **Foreign Policy in Focus** <https://fpif.org/in-a-dangerous-time-toward-preventing-a-disastrous-u-s-china-war/EDM>

U.S.-Chinese relations are worse than at any time since the renewal or relations began in the early 1970s. As in the late 1940s, we are witnessing, and suffering, the restructuring of the global disorder into a new, extremely dangerous, and totally unnecessary confrontation analogous, but not identical, to the Cold War. As Zhu Zhiqun, my colleague at the Committee for a SANE U.S.-China Policy has written, “the Biden Administration has convinced itself that China is an existential threat to US national interests and…must be pushed back at all costs.” Trump, and now Biden, Blinken and others, blinded by their self-righteousness, have forged a new Washington and national consensus: China poses an existential threat to freedom and democracy around the world; therefore the U.S. must aggressively defend freedom and democracy – militarily, diplomatically, technologically, and otherwise. That the United States has enforced an Asia-Pacific empire since 1898, that human rights do not exist in Guantanamo, that racist Republicans – like Modi, Washington’s new partner in India – are disenfranchising minority voters, and that the United States is deeply allied with repressive governments around the world are inconvenient truths consigned to an Orwellian memory hole. At root are the inevitable tensions between rising and declining powers, the Thucydides Trap, that many times in history has climaxed in catastrophic wars. Compounding the Cold War analogy, there are disturbing parallels to the years before World War I: tensions between rising and declining powers and complex alliance structures that now include the QUAD, intense nationalism with attendant hatreds, territorial disputes, arms races with new technologies, international economic integration and competition, autocracies, and wild-card actors. Like the 1914 Sarajevo gunshots, an incident, accident, or miscalculation –a collision of warships in the South or East China Seas or near Taiwan – could escalate to a major, potentially nuclear, war.

#### China manipulates the WTO process. WTO = China steals tech and manipulates trade.

Wemer 2019 [David A., Assistant director, editorial, at the Atlantic Council] “What is wrong with the WTO?” **The Atlantic Council** <https://www.atlanticcouncil.org/blogs/new-atlanticist/what-is-wrong-with-the-wto/EDM>

Criticisms of the WTO by the United States and others, such as the European Union and Japan, fall into three major categories: the ability of WTO members to self-identify as “developing” countries in order to receive special treatment, the failure of many WTO members to properly notify the WTO and other WTO members of government subsidies in accordance with specific agreement rules, and alleged overreach by the Appellate Body. Much of this criticism is directed at the actions of China, which the United States and other WTO members say is skirting WTO rules in the behavior of state-owned enterprises, dumping products, and stealing intellectual property.

#### Surrendering US IP benefits to WTO members kills US competitive edge. SQ IPR best.

Atkinson 2019 [Robert, Founder and president of the Information Technology and Innovation Foundation] “China’s Biopharmaceutical Strategy: Challenge or Complement to U.S. Industry Competitiveness?” **Information Technology & Innovation Foundation** <https://itif.org/publications/2019/08/12/chinas-biopharmaceutical-strategy-challenge-or-complement-us-industry/EM>

America’s strong IP system—including allowing 12 years of data exclusivity for biologics and providing a period of marketing exclusivity for drugs independent of exclusive patent rights, as well as providing patent linkage and patent term extension through the Hatch-Waxman Act—has helped spur investment. Robust funding for the National Institutes of Health (NIH), especially the doubling of funding in the late 1990s and early 2000s, has helped lay the groundwork for robust biopharma innovation.22 The United States also benefits greatly from having a drug-pricing system that permits companies to earn sufficient revenues from one generation of biomedical innovation to reinvest in the next. That matters greatly because, as the Organization for Economic Cooperation and Development (OECD) has written, “There exists a high degree of correlation between pharmaceutical sales revenues and R&D expenditures.”23 Limited government price controls also make investing in the United States more attractive than in many other nations.24 The lesson of the U.S. gain in global competitive advantage in the biopharmaceutical industry should be clear. It was not based on absolute advantage (e.g., some nations being good in agriculture because they have a lot of arable land). Rather, it was and is based on competitive advantage (e.g., factors that are malleable by policy, such as a strong drug-approval system and reasonable drug pricing). As such, have competitive advantage in industries such as biopharmaceutical is something that has to be earned and worked at to retain. As some European nations and nations such as Japan found to their distress, competitive advantage is not a birthright; it can be lost. That should be the message for the United States: while the United States is doing well in the industry now, it could easily lose that advantage, particularly to China, which has targeted the industry for global leadership. This means that the United States needs to keep in place the right policies and make them even stronger while at the same time continuing to press China to roll back its innovation mercantilist practices in this industry.

#### Medical edge increases PRC military

Kuo 17 [Mercy A; Executive Vice President at Pamir Consulting; “The Great US-China Biotechnology and Artificial Intelligence Race,” The Diplomat; 8/23/17; <https://thediplomat.com/2017/08/the-great-us-china-biotechnology-and-artificial-intelligence-race/>EDM

Trans-Pacific View author Mercy Kuo regularly engages subject-matter experts, policy practitioners, and strategic thinkers across the globe for their diverse insights into the U.S. Asia policy. This conversation with Eleonore Pauwels – Director of Biology Collectives and Senior Program Associate, Science and Technology Innovation Program at the Wilson Center in Washington D.C. – is the 104th in “The Trans-Pacific View Insight Series.” Explain the motivation behind Chinese investment in U.S. genomics and artificial intelligence (AI). With large public and private investments inland and in the U.S., China plans to become the next AI-Genomics powerhouse, which indicates that these technologies will soon converge in China. China’s ambition is to lead the global market for precision medicine, which necessitates acquiring strategic technological and human capital in both genomics and AI. And the country excels at this game. A sharp blow in this U.S.-China competition happened in 2013 when BGI purchased Complete Genomics, in California, with the intent to build its own advanced genomic sequencing machines, therefore securing a technological knowhow mainly mastered by U.S. producers. There are significant economic incentives behind China’s heavy investment in the increasing convergence of AI and genomics. This golden combination will drive precision medicine to new heights by developing a more sophisticated understanding of how our genomes function, leading to precise, even personalized, cancer therapeutics and preventive diagnostics, such as liquid biopsies. By one estimate, the liquid biopsy market is expected to be worth $40 billion in 2017. Assess the implications of iCarbonX of Shenzhen’s decision to invest US$100 million in U.S.-company PatientsLikeMe relative to AI and genomic data collection. iCarbonX is a pioneer in AI software that learns to recognize useful relationships between large amounts of individuals’ biological, medical, behavioral and psychological data. Such a data-ecosystem will deliver insights into how an individual’s genome is mutating over time, and therefore critical information about this individual’s susceptibilities to rare, chronic and mental illnesses. In 2017, iCarbonX invested $100 million in PatientsLikeMe, getting a hold over data from the biggest online network of patients with rare and chronic diseases. If successful, this effort could turn into genetic gold, making iCarbonX one of the wealthiest healthcare companies in China and beyond. The risk factor is that iCarbonX is handling more than personal data, but potentially vulnerable data as the company uses a smartphone application, Meum, for customers to consult for health advice. Remember that the Chinese nascent genomics and AI industry relies on cloud computing for genomics data-storage and exchange, creating, in its wake, new vulnerabilities associated with any internet-based technology. This phenomenon has severe implications. How much consideration has been given to privacy and the evolving notion of personal data in this AI-powered health economy? And is our cyberinfrastructure ready to protect such trove of personal health data from hackers and industrial espionage? In this new race, will China and the U.S. have to constantly accelerate their rate of cyber and bio-innovation to be more resilient? Refining our models of genomics data protection will become a critical biosecurity issue. Why is Chinese access to U.S. genomic data a national security concern? Genomics and computing research isinherentlydual-use**,** therefore a strategic advantagein a nation’s security arsenal. Using AI systems to understand how the functioning of our genomes impacts our health is of strategic importancefor biodefense. This knowledge will lead to increasing developments at the forefront of medical countermeasures, including vaccines, antibiotics, and targeted treatments relying on virus-engineering and microbiome research. Applying deep learning to genomics data-sets could help geneticists learn how to use genome-editing (CRISPR) to efficiently engineer living systems, but also to treat and, even “optimize,” human health, with potentialapplications in military enhancements. A $15 million partnership between a U.S. company, Gingko Bioworks, and DARPA aims to genetically design new probiotics as a protection for soldiers against a variety of stomach bugs and illnesses. China could be using the same deep learning techniques on U.S. genomics data to better comprehend how to develop, patent and manufacture tailored cancer immunotherapies in high demand in the United States. Yet, what if Chinese efforts venture into understanding how to impact key genomics health determinants relevant to the U.S. population? Gaining access toincreasingly largeU.S. genomicdata-sets gives China aknowledge advantage into leading the next stepsin bio-military research**.** Could biomedical data be used to develop bioweapons? Explain. Personalized medicine advances mean that personalized bio-attacks are increasingly possible. The combination of AI with biomedical data and genome-editing technologies will help us predict genes most important to particular functions. Such insights will contribute to knowing how a particular disease occurs, how a newly-discovered virus has high transmissibility, but also why certain populations and individuals are more susceptible to it. Combining host susceptibility information with pathogenic targeted design, malicious actors could engineer pathogens that are tailored to overcome the immune system or the microbiome of specific populations.

#### Threshold: The closer to reaching US technological edge, the higher risk of war in SCS.

Leigh et al. 2020 [12/17, Karen**]** “Troubled Waters: Where the US and China could clash in the SCS,” **Bloomberg** <https://www.bloomberg.com/graphics/2020-south-china-sea-miscalculation/EDM>

Perhaps nowhere do the U.S. and Chinese militaries come closer to each other than in the South China Sea. And the brinkmanship in the waters could soon rise under President-elect Joe Biden. As the world’s biggest economies spar on everything from trade to the coronavirus, fears have grown that a miscalculation between warships could spark a wider military confrontation. Although top defense officials from the U.S. and China have maintained communication even as broader relations have deteriorated, more fervent nationalism in both countries raises the political stakes of any crisis. President Donald Trump’s administration has increased the number of “freedom of navigation operations”—known as FONOPs—in the South China Sea to challenge China’s sovereignty claims. The current round of maneuvers, which involve naval vessels sailing within territorial limits of land features claimed by China, reached a new high of 10 last year after a total of just five in the last two years of the Obama administration. Biden looks set to maintain or even expand the number of FONOPs. Jake Sullivan, his pick for national security adviser, last year lamented the U.S.’s inability to stop China from militarizing artificial land features in the South China Sea, and called for the U.S. to focus more on freedom of navigation. “We should be devoting more assets and resources to ensuring and reinforcing, and holding up alongside our partners, the freedom of navigation in the South China Sea,” Sullivan told ChinaTalk, a podcast hosted by Jordan Schneider, an adjunct fellow at the Washington-based Center for a New American Security. “That puts the shoe on the other foot. China then has to stop us, which they will not do.” The U.S. has played a key role in maintaining security in Asian waters since World War II. Yet Beijing’s military buildup, combined with moves to fortify its hold on disputed territory in the South China Sea, has raised fears that it could look to deny the U.S. military access to waters off China’s coastline. In turn, the U.S. has increasingly sought to demonstrate the right to travel through what it considers international waters and airspace. That’s led to a handful of tense encounters. Back in 2001, a mid-air collision between a U.S. Navy reconnaissance plane and a Chinese fighter jet prompted an international incident, with the American crew held for 10 days on Hainan island. During a close call in 2018 between China’s Luyang destroyer and the USS Decatur, the Chinese warship warned the American vessel it would “suffer consequences” if it didn’t change course, according to the South China Morning Post. “We certainly don’t want to go to war over some coral rocks, but then again we don’t want to let China change the rules with their presence,” said Joe Felter, former deputy assistant secretary of defense for South Asia, Southeast Asia and Oceania in the Trump administration. “They’re going to push it as far as they can.” China claims more than 80% of the South China Sea, one of the world’s busiest shipping routes, based on a 1947 map showing vague markings that has since become known as the “nine-dash line.” The U.S. estimates that more than 30% of the global maritime crude oil trade passes through the waters. Besides China, five other governments claim land in the South China Sea: Vietnam, the Philippines, Brunei, Malaysia and Taiwan. Efforts to resolve the disputes have made little progress: Talks with Southeast Asian nations on a code of conduct in the waters have dragged on for about two decades. Beijing has also rejected a dispute resolution mechanism under the United Nations Convention on the Law of the Sea, known as Unclos. In a case unilaterally brought by the Philippines, the Permanent Court of Arbitration in The Hague ruled in 2016 that there was no legal basis for China to claim historic rights to resources in seas falling within the nine-dash line, and man-made structures don’t generate zones of sovereignty. In a military fight, China could easily take the islands from its fellow claimants. The U.S. and Japan are the only countries that “stand a chance” against China while Southeast Asian nations can only hope to “inflict a bloody nose,” said Bill Hayton, associate fellow with the Asia-Pacific Program at Chatham House and author of “The South China Sea: The Struggle for Power in Asia.” U.S. sailors conduct flight operations on the deck of the aircraft carrier USS Carl Vinson. American Navy aircraft carrier strike groups regularly patrol regional waters, fueling tensions in the South China Sea. Photographer: Mass Communication Specialist 3rd Class Matt Brown/U.S. Navy via Getty Images “We’re getting to a kind of brinkmanship phase now,” he said. “The U.S. has an edge technologically, but the closer the Chinese come to thinking they can match the U.S. the closer we get to confrontation.”

#### Chinese aggression = SCS invasion and nuclear war.

Flournoy and Chefitz 2020 [Michèle A., Former undersecretary of defense for policy, and Gabrielle, senior associate at WestExec Advisors] “China's military capabilities are gaining on the U.S. The Pentagon needs to take bold steps,” **Think** <https://www.nbcnews.com/think/opinion/china-s-military-capabilities-are-gaining-u-s-pentagon-needs-ncna1234383/EDM>

The next U.S. administration will face an increasingly emboldened and aggressive China — one that has shown a growing willingness to use coercive measures to stake its territorial claims from the South China Sea to Taiwan to the Indian border region. Although neither Washington nor Beijing wants a war, there is a real risk that miscalculation could cause a crisis to spiral into a conflict between these two nuclear-armed powers. Although neither Washington nor Beijing wants a war, there is a real risk that miscalculation could cause a crisis to spiral into a conflict between these two nuclear-armed powers. To prevent conflict, the United States must maintain the military capability to deter China by demonstrating the ability to deny the success of such aggression or impose costs so high that Beijing steps back from the brink. The problem is this: If the Pentagon's own reported war games and analysis are to be believed, the current force may well be insufficient to deter or defeat Chinese aggression in the future. The Pentagon's analysis shows that the U.S. military is equipped to fight the last war. But many of the weapon systems that gave U.S. forces the edge in conflicts in the Middle East are incredibly vulnerable to attack by the advanced electronic warfare, cyber-capabilities and precision-guided missiles of China and Russia. The U.S. must take urgent action to reverse this worrying trend. Maintaining and ultimately extending its military-technological edge over great-power competitors like China must become the Pentagon's highest investment priority — or it could lose that edge within the decade. To stay on top, the next secretary of defense must advance a much bolder vision for sharpening the U.S. military-technology edge, as recommended in our recent Center for a New American Security report, "Sharpening the U.S. Military's Edge: Critical Steps for the Next Administration." Few U.S. national security challenges are of greater consequence and urgency than preventing conflict with China and promoting a peaceful Asia-Pacific region. It is fundamental to safeguarding global trade and shipping routes, democratic norms and ideals, the future of technological governance and the security and independence of key partners and allies.

# Case

### FW

#### We concede extinction first

### Solvency

#### Aff gets circumvented- powerful countries use bilateral agreements to force other countries to accept their IPR protections- its empirically proven

DC = developing country

NIT = Net Importers of Technology (this references developing countries)

NET = Net Exporters of Technology (countries with advanced economies)

Marcellin 16 Marcellin, Sherry (Professor, London School of Economics). The political economy of pharmaceutical patents: US sectional interests and the African Group at the WTO. Routledge, 2016./SJKS

In July 1988, prior to the Montreal Mid-Term Review, DCs had sensed that the approach being proposed by industrialised countries was desirable on the grounds that the alternative would be a proliferation of unilateral or bilateral actions (MTN.GNG/NG11/8: 31). These NITs maintained that acceptance of such an approach would be tantamount to creating a licence to force, in the name of trade, modifications in standards for the protection of IP in a way that had not been found acceptable or possible so far in WIPO (ibid). Brazil subsequently informed the Group that on October 20, 1988, unilateral restrictions had been applied by the US to Brazilian exports as a retaliatory measure in connection with an IP issue; that this type of action seriously inhibited Brazil’s participation in the work of the Group, since ‘no country could be expected to participate in negotiations while experiencing pressures on the substance of its position’ (MTN.GNG/NG11/10: 27). The Brazilian delegate maintained that such action by the US constituted a blatant infringement of GATT rules and was contrary to the Standstill commitment of the Punta del Este Declaration. ‘The United States action was an attempt to coerce Brazil to change its intellectual property legislation, and furthermore represented an attempt by the United States to improve its negotiating position in the Uruguay Round’ (ibid). A US delegate countered that the measures had been taken with regret and as a last resort after all alternative ways of defending legitimate US interests had been exhausted, and that the US further believed that the adoption of effective patent protection was in Brazil’s own interest (ibid: 28). The US had therefore applied its strategy of coercive unilateralism against one of the two most important players championing the cause of the South in the TRIPS negotiations, the other being India. Apprehensive about the resistance of this dominant Southern duo, the United States sought to utilise its market size as a bargaining tool to secure changes to national IP regimes. It therefore decided to impact the more powerful of the two at the time, thereby indirectly admonishing India and the entire coalition against strengthened IP rules, as well as their domestic export constituencies who would be affected by US decisions to restrict imports. Moreover, because Brazil and India appeared to be collaborating extensively in maintaining a united front, a resulting strain on Brazil’s economy would likely affect their co-operation. However, since market opening and closure have been treated as the currency of trade negotiations in the post-war period (Steinberg 2002: 347), the move to place restrictions on Brazilian exports by the largest consumer market in the GPE should not have been entirely unanticipated. Brazil was also the regional leader in South America and disciplining it would send an unequivocal warning to other South American countries (Drahos and Braithwaite 2002: 136), including Argentina, Chile and Peru who were also active participants in the negotiations. This would mark the start of a series of coercive strategies aimed at compliance with the US private-sector envisioned GATT IPP.

#### Durable fait doesn’t solve, this assumes plan is past, it is post plan circumvention, you don’t get to fait plan solves.

### GHI

#### The impact is heavely ow, no implication outside slightly high prices from lack on innovation and them not being great for LDC, that is a super small impact to the DA, extinction ow so ur not evaluating this contention. Don’t let skew

#### Tons of alt causes to impact, read the card, in unhighlighted it talks about heath care costs external to patents, low average income – we read yellow

Ahmediani and Nikfar 16 (Saeed Ahmadiani and Shekoufeh Nikfar both work in the Department of Pharmacoeconomics and Pharmaceutical Administration at Tehran University of Medical Sciences), “Challenges of access to medicine and the responsibility of pharmaceutical companies: a legal perspective”, 5-4-16, DARU Journal of Pharmaceutical Sciences, pg. 2-3, DOI 10.1186/s40199-016-0151-z, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4855755/> NT

Huge part of barriers in access to medicine returns to patent law and its consequences. Although patent law generally has been used for centuries [2], the manifestation of TRIPS agreement in 1994 turned it to a new form of challenge. This agreement force the World Trade Organization (WTO) members to take action for protecting intellectual property rights, which entails that any patented product should be produced, imported, sold or used under permission of the patent owner [3]. This includes medicine, thus the production of each medicine is initiated with a period of monopoly in the market with the highest possible price. In this period there will be no low price generic drugs in the market after signing the agreement by one state (for those drugs which are still under patent), and hence, patients should provide the expensive branded medicine either out of pocket or by using their insurance. **The problem will rise up when it comes to a developing country where population not only have lower economic status, but also lower health status and higher needs to medicine**. According to WHO, life expectancy in developed countries was 1.7 fold higher than developing countries in 2002, showing a 32-years gap in life expectancy between these societies [4]. Also, data shows that infectious diseases such as TB have a negative relationship with GDP per capita of the country [5] (also see Fig 1). These health measures make it obvious that in developing countries there is a higher need to medical technologies which many of them are under patent. At the same time, health insurance coverage is usually poor in these countries and patients often have to pay for the branded medicine out of their own pockets. Evidence shows that the lower the national income is, the higher the out of pocket share of health spending will be [6]. **With higher needs and lower economic ability, providing branded medicine will result in a large load of expenditure for states, catastrophic expenditures for patients [7] and increase of mortality and/or morbidity because of low access to medicine** (see Fig 2). Moreover, if any TRIPS member produce or provide an under patent product, the company can sue the member state and ask for a fine compensating the market loss. This was the case for South Africa in late 90s, when giant pharmaceutical companies such as GlaxoSmithKline filed a lawsuit to the Pretoria High Court against the South African government because of importation of generic anti-retroviral medicine- for treating HIV/AIDS endemic situation [8]. The Pharmaceutical Association was using this law to save their presence in the pharmaceutical market of South Africa. However, there were millions of people suffering from HIV/AIDS while could not afford the original brand medicine and the South African state was trying to find a way to guarantee their health. After three years of clashes, the court overruled the patent law in the case and recognized the right to health as a basic human right for the South African patients. Consequently big pharma companies withdrew the lawsuit and started negotiations for dropping the price of original brand to come into the South Africa market [9]. Although this was a happy-ending experience, no country can be sure that the court will give the right to the member state again and hence, in many cases the government prefer to import the branded medicine from the beginning, even if it is not affordable for a part of population. The TRIPS agreement is not the end of story. Less than a decade after the first TRIPS agreement, United States started to make bilateral trade agreements with other TRIPS members to expand and deepen the TRIPS agreement. **These agreements (generally known as TRIPS-plus) decrease the flexibilities which were anticipated for some exceptional situations- particularly for developing countries- and increase the duration of patents in some cases.** Until now, there are 20 countries that accepted such an agreement with US [10], which surprisingly 80 % of them are developing countries. If we consider the economic power of United States and its role in pharmaceutical industry, then it is not hard to guess about the effect of these agreements on the access to medicine in the subjected developing countries. Besides the patent law and TRIPS-plus agreements, there is always a bias towards maintenance medicine- the controlling medicine for chronic conditions. Pharmaceutical companies have a substantial desire in developing drugs which are focused on disease areas within the developed world, such as chronic diseases and cancer treatments, not only because of high prevalence, but also because these drugs are often used in long term, which means a long term costumer for the company, particularly if one can take the advantage of patent. As an instance, a new anti-hypertensive medicine not only has more costumers, also most of the costumers have to use the medicine until the end of their lives, let’s say 10–15 years in average. On the other side, giant pharmaceutical companies are less interested in modern anti-parasites, antibiotics and other medicines related to acute conditions, while these medicines are more needed in developing countries and this bias cause a lower access to medicine- and a lower health in result- in these low income areas. The mentioned bias also can be seen against “rare diseases” (i.e., diseases with prevalence less than 1/2000), even if they might be chronic. This inattentiveness to some specific diseases forms when the disease is rare or restricted to some particular areas and population, hence pharmaceutical companies find no incentive to invest on research and development of new medicine specified for a limited population, specifically when there is a large possibility that the state does not have the ability to pay for the medicine and the company should provide it underprice. To see it evidently, from over 1500 drugs which have been approved during 1975–2004, only about 1 % of them were related to the diseases which are known as neglected [11], while over 10 % of global burden of disease is caused by these diseases [12]. This is also reflected in 10/90 phenomena: only 10 % of R&D expenditures is related to problems of 90 % of world population [13]. These facts clearly show an insufficient attention from pharmaceutical companies to this field of health needs. According to WHO, already over one billion people are affected by neglected tropical diseases [14], which may considerably decrease both the life expectancy and quality of life. By considering the higher rate of these diseases in low income countries, it is to say that this situation can cause a huge discrimination between high and low income societies, not only in terms of health, but also economically as a consequence of low health level. All these modern structures, from patents and TRIPS-plus agreements to bias in pharma industry, cause a decrease or imbalance in access to medicine, and hence an inequity in health between and within the communities, which can be considered as a breach of human rights as will be explained further.

#### They evd moser 16says = innovation at best there is no increases in innovation

#### Strong IPR is key to innovation – empirics and FDI

Ezell and Cory 19 [Stephen Ezell, BS from School of Foreign Service at Georgetown, VP of global innovation policy at Information Technology and Innovation Foundation. Nigel Cory, MA in public policy from Georgetown, BA in international business from Griffith University, Associate Director of trade policy at Information Technology and Innovation Foundation, former researcher in the Southeast Asia Program at the Center for Strategic and International Studies.] “The Way Forward for Intellectual Property Internationally,” Information Technology and Innovation Foundation, April 25, 2019, <https://itif.org/publications/2019/04/25/way-forward-intellectual-property-internationally> TG

* FDI – foreign direct investment

IPRs Strengthen Innovation

Intellectual property rights power innovation. For instance, analyzing the level of intellectual property protections (via the World Economic Forum’s Global Competitiveness reports) and creative outputs (via the Global Innovation Index) shows that countries with stronger IP protection have more creative outputs (in terms of intangible assets and creative goods and services in a nation’s media, printing and publishing, and entertainment industries, including online), even at varying levels of development.46

IPR reforms also introduce strong incentives for domestic innovation. Sherwood, using case studies from 18 developing countries, concluded that poor provision of intellectual property rights deters local innovation and risk-taking.47 In contrast, IPR reform has been associated with increased innovative activity, as measured by domestic patent filings, albeit with some variation across countries and sectors.48 For example, Ryan, in a study of biomedical innovations and patent reform in Brazil, found that patents provided incentives for innovation investments and facilitated the functioning of technology markets.49 Park and Lippoldt also observed that the provision of adequate protection for IPRs can help to stimulate local innovation, in some cases building on the transfer of technologies that provide inputs and spillovers.50 In other words, local innovators are introduced to technologies first through the technology transfer that takes place in an environment wherein protection of IPRs is assured; then, they may build on those ideas to create an evolved product or develop alternate approaches (i.e., to innovate). Related research finds that trade in technology—through channels including imports, foreign direct investment, and technology licensing—improves the quality of developing-country innovation by increasing the pool of ideas and efficiency of innovation by encouraging the division of innovative labor and specialization.51 However, Maskus notes that without protection from potential abuse of their newly developed technologies, foreign enterprises may be less willing to reveal technical information associated with their innovations.52 The protection of patents and trade secrets provides necessary legal assurances for firms wishing to reveal proprietary characteristics of technologies to subsidiaries and licensees via contracts.

The relationship between IPR rights and innovation can also be seen in studies of how the introduction of stronger IPR laws, with regard to patents, copyrights, and trademarks, affect R&D activity in an economy. Studies by Varsakelis and by Kanwar and Evenson found that R&D to GDP ratios are positively related to the strength of patent rights, and are conditional on other factors.53 Cavazos Cepeda et al. found a positive influence of IPRs on the level of R&D in an economy, with each 1 percent increase in the level of protection of IPRs in an economy (as measured by improvements to a country’s score in the Patent Rights Index) equating to, on average, a 0.7 percent increase in the domestic level of R&D.54 Likewise, a 1 percent increase in copyright protection was associated with a 3.3 percent increase in domestic R&D. Similarly, when trademark protection increased by 1 percent, there was an associated R&D increase of 1.4 percent. As the authors concluded, “Increases in the protection of the IPRs carried economic benefits in the form of higher inflows of FDI, and increases in the levels of both domestically conducted R&D and service imports as measured by licensing fees.”55 As Jackson summarized, regarding the relationship between IPR reform and both innovation and R&D, and FDI, “In addition to spurring domestic innovation, strong intellectual property rights can increase incentives for foreign direct investment which in turn also leads to economic growth.”56

#### No monopolies. Legally impossible to extend patents. Domestic laws prevent.

Lietzan 2020 [Erika, Professor of Law, University of Missouri School of Law] “The Evergreening Myth.” **Cato Institute** <https://www.cato.org/regulation/fall-2020/evergreening-myth/EDM>

The first myth is that innovators extend their patents. This is legally impossible. In the United States, a patent expires 20 years after its application date. There are only two ways a patent’s expiration date can shift later in time: (1) When it issues a patent, the U.S. Patent and Trademark Office (PTO) adjusts the expiry date later to compensate for routine delays at the PTO. And (2), if the marketing application proposed a new active ingredient, then if the company asks the PTO for a patent term extension within 60 days of FDA approval, the PTO will use a statutory formula to extend one patent claiming the product to compensate partially for the lapse of patent life during premarket testing and regulatory review. There is no other mechanism by which a patent might be extended. In particular, a patent on one invention — no matter when it expires — does not extend the patent on another invention.

### Climate

#### They are missing a internal link, just because big pharma doesn’t have the same patents they still exist, and won’t stop emitting. They don’t have anything that say the aff would stop them from emitting.

#### Second is the nothing in thier cards says that stopping big pharma would solve for climate change, even if they emit a lot there is countless other

#### large company that emit more, those companies still emit in the world of the aff, which prevent and real solvency.

#### IDK if they just forgot but there is no card that say it decreases only that squo they are emitting, 0 risk of internal link.

#### Even if everyone stopped all emissions today it wouldn’t solve warming

**Cascio 19** [Jamais Cascio is a professional futurist who has been exploring the intersection of environmental, technological, and cultural change for 25 years. Selected by Foreign Policy magazine as one of their Top 100 Global Thinkers in 2009, Cascio specializes in plausible scenarios of the future. He is a Distinguished Fellow at the Institute for the Future, where he works on a wide array of projects. Cascio’s written work has appeared in both academic and popular journals and collections. “The apocalypse: It’s not the end of the world”, BULLETIN OF THE ATOMIC SCIENTISTS 2019, VOL. 75, NO. 6, 269–272, Taylor and Francis]

There’s a 25- to 50-year lag between the emission of atmospheric carbon and its persistent impact on temperature. This means the environmental disruption attributable to global warming we’re seeing now is the result of carbon emissions up through the 1980s. It also means we could cut off all carbon emissions today, globally, and still see another generation of warming. Beyond the environmental, economic, and human consequences, imagine the political impact of taking bold action that produces no observable benefits for 20 years, or even longer

#### Their own impact card says they are irreversible no evd that we will be able to step back from the brink.

#### Turn: WTO key instrument for reviving globalization. Draws in the South

Landau 2001 [Alice, Economist] **The GATT/WTO: Instrumentalizing Globalization** <https://link.springer.com/chapter/10.1057/9780230511361_5/EDM>

The WTO, the successor of the GATT, is undoubtedly one of the main instruments of globalization. It contributes to globalization in removing barriers to trade and in pushing liberalization ahead in more and more sectors of the economy, including the key sector of services. Lowered tariffs have reduced national frontiers as barriers to trade, and have facilitated transnational production and distribution. From the Geneva Round in 1947 to the Uruguay Round from 1986 to 1993, tariffs on industrial products diminished from 40 per cent to 3.8 per cent. The WTO provides stability of access to export markets by a uniform set of rules elaborated in the various agreements. These rules apply before the border (inspection procedures); at the border (customs valuation and import licenses); and after the border in adopting harmonized market requirements. Each member country implements the same rules, and the rule-based system provides business enterprises or exporters with a predictable environment in which they can plan and develop their production without fear that foreign markets may be lost or disrupted by government practices such as the raising of tariffs or the imposition of prohibitions and restrictions on imports. The WTO has transformed the global playing field for international players. Is the WTO successful in transforming it for developing countries? Is it contributing to integration or to fragmentation? Before answering these questions, we will explore the GATT/WTO trade regime, the results of the Uruguay Round of Negotiations, and the built-in provisions.

#### Globalization drives climate change.

Huwart, and Verdier 2013 (OECD) “What is the impact of globalisation on the environment?”, in **Economic Globalisation: Origins and consequences**, OECD Publishing, Paris. DOI: https://doi.org/10.1787/9789264111905-8-en

Globalisation, which is partly synonymous with rising international trade, has fostered the rapid production, trade and consumption of material goods in unprecedented quantities. This has weighted the ecological footprint of human activities around the world. While it’s still difficult to assess the impact of globalisation on the environment, it’s quite obvious in some areas. By increasing GHG emissions Climate change is one of the main environmental problems, perhaps all the more worrying because it is impossible to predict exactly how it’s going to develop and what the consequences will be. Its causes, however, are known. Climate change stems mostly from the greenhouse effect – meaning the excessive retention of solar energy in the atmosphere due to an accumulation of certain gases, particularly CO2. The main sources of CO2 emissions are industrial production, transportation

#### Warming inevitable and unavoidable – we’re locked in for 5 degrees

Thomas 17 (Evan; Student at University of Missouri-Columbia, and current digital producer and news correspondent at Newsy; “A Warming Planet Is Inevitable, New Research Finds The planet will heat up, according to new analyses. The question is by how much?”; <https://www.newsy.com/stories/global-warming-may-surpass-2-degrees-celsius-within-century/>; published 7/31/17; accessed 8/10/17) [TG]

Scientists have warned for years that an increase in global temperatures of 2 degrees Celsius could cause dangerous weather patterns, crunch the global food supply and force entire populations to migrate. Now, new research suggests a lot of that warming is unavoidable — no matter how much we cut emissions. Studies usually use models to forecast climate behavior, but this time, researchers at the University of Colorado in Boulder looked at "things that have already happened" to the planet. They weighed variables like the particulates in the air and what oceans do when they absorb carbon. They said even if we turned off everything that creates carbon dioxide tomorrow, global temperatures will still be higher by the end of the century. They found there's a 13 percent chance Earth is already committed to a climate that's 1.5 degrees Celsius warmer.