### 1NC – Off

#### CP Text: the United States should

#### -invest $25 billion into 25 production lines dedicated solely to COVID-19 vaccines to boost global vaccine production managed by the Biomedical Advanced Research and Development Authority.

#### -distribute 8 billion doses of COVID vaccines using an equitable distribution framework prioritizing developing countries in the Global South.

#### The CP solves the entirety of the case and does it faster.

Stankiewicz 21 Mike Stankiewicz 5-6-2021"Opinion: For just $25 billion, the U.S. could jump-start a project to quickly vaccinate the entire world against COVID" <https://www.marketwatch.com/story/for-just-25-billion-the-u-s-could-jump-start-a-project-to-quickly-vaccinate-the-entire-world-against-covid-11614898552> (a press officer in Public Citizen's communication's department, where he focuses on legislative policy and health-orientated advocacy)

Despite wealthy countries such as the U.S. ramping up COVID-19 vaccination efforts, it still may take years to vaccinate the world, especially poorer countries, and the economic and humanitarian impacts could be devastating. But an injection of just $25 billion into global vaccine production efforts by the U.S. government could save millions of lives and help prevent economic disaster. The most up-to-date numbers paint incredibly different futures between wealthy and low-income countries. At the current rate of vaccination, analysts predict that developing countries, including almost all of Southeast Asia, may not reach meaningful vaccine coverage until 2023. Comparatively, President Joe Biden has promised that the U.S. will have enough vaccine doses to inoculate every adult within the next three months. Increased fatalities And as wealthy countries such as the U.S. are starting to see lower death, transmission and hospitalization rates, low-income countries are experiencing increased hardship and fatalities. Countries such as Hungry are being forced to tighten restrictions as infection rates increase, and deaths in Africa have spiked by 40% in the past month, according to the World Health Organization (WHO). No country can be left behind in this global pandemic, and the U.S. is in a unique position to make sure every country gets the ample amount of vaccines they need. Public Citizen research has found that just a $25 billion investment in COVID-19 vaccine production by the U.S. government would produce enough vaccine for developing countries, potentially shaving years from the global pandemic. Public Citizen estimates that 8 billion doses of National Institutes of Health-Moderna MRNA, +1.98% vaccine can be produced for just over $3 per dose. To bolster production and supply the necessary 8 billion doses, it would take $1.9 billion to fund the necessary 25 production lines. Another $19 billion would pay for materials and labor, and $3 billion would compensate Moderna for making technology available to manufacturers in other countries. An additional $500 million would cover costs to staff and run a rapid-response federal program that provides technical assistance and facilitates technology transfer to manufacturers and works with the WHO’s technology hub**.** In total, vaccinating the world would cost less than 1.4% the total of Biden’s $1.9 trillion COVID relief plan. But such a program also needs to be properly managed to be successful. To help facilitate these efforts, the Biden administration should also designate the government’s Biomedical Advanced Research and Development Authority (BARDA) to lead the world-wide vaccine manufacturing effort. BARDA has the necessary experience to coordinate an initiative of this scale with the WHO, building on its partnership to build pandemic flu manufacturing capacity in developing countries after the bird-flu scare of 2006. Widespread vaccines would help U.S. economy These efforts would dramatically increase access to vaccines in developing countries and speed up global vaccination by years, saving countless lives. But allowing the current vaccine supply crisis to continue is not just inhumane, it is also not in our own economic interest to do so.

## 1NC – Shell

#### WTO is near consensus on fisheries subsidies – success will require continued focus, flexibility, and cooperation among members

WTO 7/15 [(World Trade Organization) “WTO members edge closer to fisheries subsidies agreement,” News and Events, 7/15/2021] JL

During an all-day meeting with 104 ministers and heads of delegation, WTO members pledged to conclude the negotiations soon and certainly before the WTO's Ministerial Conference in early December, and to empower their Geneva-based delegations to do so. Members also confirmed that the negotiating text currently before them can be used as the basis for the talks to strike the final deal.

“I feel new hope this evening. Because ministers and heads of delegation today demonstrated a strong commitment to moving forward and doing the hard work needed to get these negotiations to the finish line. I applaud you for this. In 20 years of negotiations, this is the closest we have ever come towards reaching an outcome — a high-quality outcome that would contribute to building a sustainable blue economy,” said Director-General Ngozi Okonjo-Iweala.

“One fundamental conclusion that I draw from your interventions today is that members are ready to use the text as the basis for future negotiations. A second takeaway from today was that there is universal agreement about the importance of the food and livelihood security of artisanal fishers in developing and least developed countries. The prospect for a deal in the autumn ahead of our Ministerial Conference has clearly improved.”

The UN Food and Agriculture Organization estimates that one-third of global fish stocks are overfished and most of the rest is fully exploited. This is up from 10% in 1970 and 27% in 2000. Depleted stocks threaten the food security of low-income coastal communities, and the livelihoods of poor and vulnerable fishers who must go further and further from shore only to bring back smaller and smaller hauls.

Each year, governments hand out around $35 billion in fisheries subsidies, two-thirds of which go to commercial fishers. These subsidies keep at sea vessels which would otherwise be economically unviable. World leaders in 2015 made a fisheries subsidies agreement by 2020 part of the Sustainable Development Goals and trade ministers reaffirmed this pledge in 2017.

The negotiations on fisheries subsidies disciplines have been ongoing for nearly 20 years. Although there has been recent progress thanks to the intensive work that led to the development of the negotiating text on which members are working, the lack of political impetus in the talks to close the remaining gaps inspired Director-General Okonjo-Iweala to call this meeting of ministers.

Among the thorniest issues to resolve has been how to extend special and differential treatment to developing and least developed country WTO members while preserving the overall objective of enhanced sustainability of the oceans. Ministers said that the livelihoods and food security of poor and vulnerable artisanal fishers in developing and least developed countries were of great importance, as was preserving the sustainability objective of the negotiations.

Amb. Santiago Wills of Colombia, who chairs the Rules Negotiating Group overseeing the fisheries subsidies negotiations, said he had received some valuable inputs from the discussions. He now has greater clarity on the path forward and the next steps that would be required to harvest an agreement. He will be consulting with the Director-General and WTO members about charting the path forward for the next stage of the talks.

“I am very heartened by the responses and messages that we have heard today. What we sought from ministers today was political guidance to help close these negotiations soon. And we did hear that guidance. We have been given the ingredients to reach a successful conclusion; a commitment to finish well ahead of our Ministerial Conference a text that can be the platform for this final stage of the negotiations and fully empowered heads of delegations in Geneva. This represents a real success,” said Amb. Wills.

The Director-General said that delegations needed to prepare for an intensive period of line by line negotiations.

“As we enter this new phase of text-based discussions, the responsibility to conclude these negotiations is truly in the hands of members. To get from here to an agreement, it will be your job to find the necessary trade-offs and flexibilities. A successful outcome by MC12 is ultimately your responsibility,” she said. “The world is watching. The fisheries subsidies negotiations are a test both of the WTO's credibility as a multilateral negotiating forum and of the trading system's ability to respond to problems of the global commons.  If we wait another 20 years, there may be no marine fisheries left to subsidise — or artisanal fishing communities to support.”

#### IP disputes fragment WTO unity and trade off with subsidies negotiation

Patnaik 3/12 [(Priti, journalist in Geneva, Switzerland, master’s in Development Studies from The Graduate Institute in Geneva and a master’s in Business and Economic Reporting from New York University) “Could Vaccine Nationalism Spur Disputes At The WTO?” Geneva Health Files, 3/12/2021] JL

To protect domestic manufacturers and constituencies, countries may resort to filing disputes, if only to send a signal to other members, experts believe. To be sure, this is not only about vaccines. Going forward, export restrictions on raw materials can have implications for therapeutics as well. So the threat of a dispute may be a tool to deal with competition for scarce medical products during the pandemic, experts say.

Although trade restrictive measures are short-sighted and not a preferred policy option, governments see them as powerful instruments to meet political goals, to send a message to domestic stakeholders, sources said.

“My hunch is that all countries are sort of sitting on both sides of the fence. On the one hand, governments would like to maintain the discretion and the ability to impose export restrictions if they need to or if they think they need to. Whether that is medical products or personal protective equipment. On the other hand, everybody dislikes it when other countries impose export restrictions. So I think there is enough of an incentive for countries to sit down and negotiate,” one legal expert noted.

Sources also pointed to political declarations last year where WTO members came together and said that they would not impose restrictive trade measures. “In order to be constructive, countries decided that they were going to signal to members that will not introduce exports restrictive measures even though it may be expedient to do so,” one trade expert said. The way out, some feel, is to find solution to placing limits on export restrictions.

It is not just trade restrictive measures that could result in trade disputes. The heated political discussions on the TRIPS waiver at WTO is also aggravating the potential for disputes, according to experts involved in litigations in international trade in Geneva. Therefore these ostensibly independent processes, can catalyse disputes.

“The waiver discussion is very heated and it is aggravating the discussion on the EU's export restrictions. If the waiver succeeds, then the opposing members cannot do anything about it. So they will be looking at other ways to beat up on behavior they do not like on the COVID-19 front,” one trade law expert said.  Do not rule out disputes against supporters of the TRIPS waiver proposal, in case the waiver is adopted, the source added.

In their statement at the WTO General Council meeting last week, the EU said, “In order to ensure that vaccines and their ingredients are not directed to export destinations in unjustified volumes, the European Union had no choice but to introduce a transparency mechanism on Covid-19 vaccine export transactions.” The EU has said that the measures are WTO-consistent.

It added “Since the entry into force of the scheme on the 1 February, we have received 150 requests for export authorisation. All of them have been accepted. I repeat, all of them.” This week, the European Commission extended transparency and authorisation mechanism for exports of COVID-19 vaccines.

The EU is also a part of the Ottawa Group proposal on Trade and Health that also spells out commitments towards export restrictions. (See also *E.U. Exports Millions of Covid Vaccine Doses Despite Supply Crunch at Home*)

“Members bring disputes all the time, even when they know that it's going to take a long time to get a result and often they bring a dispute as leverage for negotiations. Filing a dispute does not mean they are looking for a solution. It does not mean the dispute will be litigated all the way to the end,” a trade lawyer said.

It could also result in a negotiated arrangement, like it was in 2001 in the U.S.-Brazil case. “Why did the U.S. bring a case against Brazil? It gave them leverage in negotiations, and to satisfy domestic stakeholders,” the lawyer added.

The impasse at the Appellate Body may not be a deterrent for countries to dissuade countries from bringing a dispute, some believe.

“The Appellate Body not being functional is not a problem. Countries have recourse to Article 25 under the Dispute Settlement Understanding (DSU) that provides for ‘expeditious arbitration as a alternate means to dispute settlement’,” a source involved in the WTO litigation process said. (The EU, for example, is a signatory to the Multi-party interim appeal arbitration arrangement, MPIA.)

While disputes may take up precious energy and resources of members already stretched in fighting to address the pandemic, it may likely be a strategy to address trade protectionism. Not all agree.

“I think the law is not really an answer here, I hate to say that because I'm a lawyer. But I really don't think the law is an answer because the law is so generically drafted right that and it's politically so sensitive. Which WTO panel will tell a member that restricting vaccines is not legitimate? It will ultimately harm the legitimacy of the trading system,” the person added.

#### Overfishing collapses biodiversity

DUJS 12 [(Dartmouth Undergraduate Journal of Science, official open access science journal of Dartmouth College, publishing original scientific research, multidisciplinary review articles, and science news) “The Threats of Overfishing: Consequences at the Commercial Level,” 3/11/2012] JL

According to marine ecologists, overfishing is the greatest threat to ocean ecosystems today (1). Overfishing occurs because fish are captured at a faster rate than they can reproduce (2). Advanced fishing technology and an increased demand for fish have led to overfishing, causing several marine species to become extinct or endangered as a result (3, 4). In the long-term, overfishing can have a devastating impact on ocean communities as it destabilizes the food chain and destroys the natural habitats of many aquatic species (2).

In the past, fishing was more sustainable because fishermen could not access every location and because they had a limited capacity for fish aboard their vessels. Today, however, small trawlers and fishing boats have been replaced by giant factory ships that can capture and process extremely large amounts of prey at a given time (2). These ships use sonar instruments and global positioning systems (GPS) to rapidly locate large schools of fish (1). Fishing lines are deployed with thousands of large hooks that can reach areas up to 120 kilometers deep. The trawling vessels and machines can even reach depths of 170 kilometers and can store an extraordinarily large volume of fish. Each year, these huge trawling ships comb an area twice the size of the United States. They use massive nets 50 meters wide with the capacity to pull the weight of a medium-sized plane (2). They also have several plants for processing and packing fish, large freezing systems, fishmeal processing plants, and powerful engines that can carry this enormous fishing gear around the ocean. Because these ships have all the equipment necessary to freeze and tin fish, they only need to return to their base once they are full. Even when the ships are filled, however, the fish are often transferred to refrigerated vessels in the middle of the ocean and are processed for consumption later (4). As such, industrial fishing has expanded considerably and fishermen can now explore new shores and deeper waters to keep up with the increased demand for seafood. In fact, it has been reported by the United Nations Food and Agricultural Organization (FAO) that over 70 percent of the world’s fisheries are either ‘fully exploited’, ‘over exploited’ or ‘significantly depleted’ (5). The annual total global catch of fish is 124 million metric tons, which is equivalent in weight to 378 Empire State Buildings (2).

Fishing gear is often non-selective in the fish it targets. For example, any fish that are too big to get through the mesh of a net are captured. Therefore, overfishing does not only threaten the species of fish that is targeted for food, but also many non-target species. As a result, these other species, including marine mammals and seabirds, are accidentally caught in the fishing gear and killed (6). For example, for every ton of prawn caught, three tons of other fish are killed and thrown away. Those in the trade refer to this practice of inadvertent catching of other species as bycatch (4). The FAO has pointed out that about 25 percent of the world’s captured fish end up thrown overboard because they are caught unintentionally, are illegal market species, or are of inferior quality and size. Many of the fish caught this way include endangered and over exploited species, 95 percent of which are eventually thrown away (2). Bycatch is not just limited to just unwanted fish, but rather affects all types of marine life, including whales, dolphins, porpoises, fur seals, albatrosses, and turtles. For example, tuna fisheries are indirectly responsible for the deaths of an estimated one million sharks annually due to bycatch. Small cetaceans, such as dolphins and porpoises, are also targets of bycatch as they are often caught in fishing nets. In fact, hundreds of dolphin corpses are washed up on the beaches of Europe every year, bringing attention to the growing scale of this problem (6).

Many modern fishing methods are also irreversibly destructive. For example, bottom trawling, a technique that uses extremely wide nets armed with heavy metal rollers, can crush everything in the path of the gear, destroying fragile corals, smashing rock formations, and killing several tons of fish and animals as bycatch (7). As such, these practices can wreak havoc on delicate marine ecosystems.

Not surprisingly, it has been reported that industrial fishing takes between only 10 and 15 years to wipe out a tenth of whichever species it targets (2). In fact, several marine species have already been fished to commercial extinction, and this number is rapidly increasing (1). One of the reasons for this is that the regulation of fishing vessels and the fishing industry is universally inadequate. Roughly two-thirds of the ocean is free of laws and fishing vessels only follow the laws ratified by their country of origin. However, most fishing countries have not ratified any international convention to protect the sea or marine life (2). Moreover, fishing factory ships and companies are given access to fisheries before the long–term impact of their fishing practices is understood (1).

Today, the number of fish caught worldwide is actually shrinking as the fishing industry is in decline from many years of overfishing (2). The year 1988 was the first time in human history that global wild fish catches dropped and they have continued to fall ever since. In European waters, four out of every five known fish stocks are already beyond safe biological limits (7). Illegal and unreported fishing have also contributed a great deal to the depletion of the oceans and continues to be a serious problem.

A new study conducted by the International Union for Conservation of Nature (IUCN) found that 5 out of the 8 tuna species are at risk of extinction (8). All three species of bluefin tuna, for example, are threatened with extinction and are at a population that makes their recovery practically irreversible (2). The IUCN has also reported that freshwater fish are among the most endangered species, with more than a third facing extinction. Not surprisingly, among those at the greatest risk are species like the Mekong giant catfish, the freshwater stingray, and the European eel, which are used to make some of the most expensive caviars. The Mekong giant catfish is the closest to extinction, with as few as 250 left. Overfishing has reduced the numbers of Mekong freshwater stingray by over 50 percent in Southeast Asia and has reduced the giant Mekong salmon carp population by over 90 percent (9).

As previously mentioned, shark populations have also been greatly affected by overfishing. There are already more than 135 species of shark on the IUCN’s list of endangered animals and more are being added each year. For example, the number of scalloped hammerhead shark has decreased by 99% over the past 30 years. Other species recently added to the endangered list include the smooth hammerhead, shortfin mako, common thresher, big-eye thresher, silky, tiger, bull, and dusky (10). Besides being caught as bycatch, sharks are now also being targeted by commercial fishermen for their fins which can fetch a substantial price on the Asian food market. Sharks are particularly vulnerable to exploitation because they have long life spans, are exceptionally slow to mature (taking as long as 16 years in some cases), and are relatively unprolific breeders (11). Recent reports suggest that over fishing has caused a 90% decline in shark populations across the world’s oceans and up to 99% along the US east coast, which are some of the best managed waters in the world. Because sharks are at the top of the food chain, a decline in their numbers has devastating consequences on marine ecosystems (10).

Overfishing impacts not just the particular species that is exploited, but also damages other species of fish and disrupts local ecosystems. The stability of ecological communities depends largely on the interactions between predators and prey (12). Thereby, the balance of the food chain is disturbed when certain species are removed. As a result, many ocean species are disappearing and losing their habitats. The evolutionary process of marine species is also being altered, causing cycles of premature reproduction and relative decreases in the size of fish across generations. As predators diminish, the populations of smaller fish escalate because they were previously the food source of the bigger fish. In addition, the disappearance of these species affects many other species, like seabirds and sea mammals, which are vulnerable to the lack of food (2).

A recent study found that overfishing is also decreasing the genetic diversity of fish worldwide. Diversity is projected to be reduced further if overfishing continues at the same rate (13). This has serious effects on nutrient recycling in marine ecosystems because fish species vary widely in their rates of nitrogen and phosphorus excretion. As such, altering fish communities creates divergent nutrient recycling patterns and disrupts the functioning of the ecosystem. Recently conducted studies in lakes affected by overfishing show that loss of species contributes to a decline in nutrient recycling and destabilizes the ecosystem (14).

While it is often overlooked for other environmental issues, overfishing has historically caused more ecological extinction than any other human influence on coastal ecosystems, including water pollution (5). Unfortunately, due to a lack of data, the extent of this damage has only recently been recognized (15).

#### Continued biodiversity loss causes extinction

Carrington 18 [(Damian, the Guardian's Environment editor) "Humanity has wiped out 60% of a animal populations since 1970, report finds," The Guardian, 10/29/18] TDI

Humanity has wiped out 60% of mammals, birds, fish and reptiles since 1970, leading the world’s foremost experts to warn that the annihilation of wildlife is now an emergency that threatens civilisation.

The new estimate of the massacre of wildlife is made in a major report produced by WWF and involving 59 scientists from across the globe. It finds that the vast and growing consumption of food and resources by the global population is destroying the web of life, billions of years in the making, upon which human society ultimately depends for clean air, water and everything else.

“We are sleepwalking towards the edge of a cliff” said Mike Barrett, executive director of science and conservation at WWF. “If there was a 60% decline in the human population, that would be equivalent to emptying North America, South America, Africa, Europe, China and Oceania. That is the scale of what we have done.”

“This is far more than just being about losing the wonders of nature, desperately sad though that is,” he said. “T**his is** actually now jeopardising the future of people. Nature is not a ‘nice to have’ – it is our life-support system.”

“We are rapidly running out of time,” said Prof Johan Rockström, a global sustainability expert at the Potsdam Institute for Climate Impact Research in Germany. “Only by addressing both ecosystems and climate do we stand a chance of safeguarding a stable planet for humanity’s future on Earth.”

Many scientists believe the world has begun a sixth mass extinction, the first to be caused by a species – Homo sapiens. Other recent analyses have revealed that humankind has destroyed 83% of all mammals and half of plants since the dawn of civilisation and that, even if the destruction were to end now, it would take 5-7 million years for the natural world to recover.

The Living Planet Index, produced for WWF by the Zoological Society of London, uses data on 16,704 populations of mammals, birds, fish, reptiles and amphibians, representing more than 4,000 species, to track the decline of wildlife. Between 1970 and 2014, the latest data available, populations fell by an average of 60%. Four years ago, the decline was 52%. The “shocking truth”, said Barrett, is that the wildlife crash is continuing unabated.

Wildlife and the ecosystems are vital to human life, said Prof Bob Watson, one of the world’s most eminent environmental scientists and currently chair of an intergovernmental panel on biodiversity that said in March that the destruction of nature is as dangerous as climate change.

“Nature contributes to human wellbeing culturally and spiritually, as well as through the critical production of food, clean water, and energy, and through regulating the Earth’s climate, pollution, pollination and floods,” he said. “The Living Planet report clearly demonstrates that human activities are destroying nature at an unacceptable rate, threatening the wellbeing of current and future generations.”

The biggest cause of wildlife losses is the destruction of natural habitats, much of it to create farmland. Three-quarters of all land on Earth is now significantly affected by human activities. Killing for food is the next biggest cause – 300 mammal species are being eaten into extinction – while the oceans are massively overfished, with more than half now being industrially fished.

Chemical pollution is also significant: half the world’s killer whale populations are now doomed to die from PCB contamination. Global trade introduces invasive species and disease, with amphibians decimated by a fungal disease thought to be spread by the pet trade.

The worst affected region is South and Central America, which has seen an 89% drop in vertebrate populations, largely driven by the felling of vast areas of wildlife-rich forest. In the tropical savannah called cerrado, an area the size of Greater London is cleared every two months, said Barrett.

“It is a classic example of where the disappearance is the result of our own consumption, because the deforestation is being driven by ever expanding agriculture producing soy, which is being exported to countries including the UK to feed pigs and chickens,” he said. The UK itself has lost much of its wildlife, ranking 189th for biodiversity loss out of 218 nations in 2016.

The habitats suffering the greatest damage are rivers and lakes, where wildlife populations have fallen 83%, due to the enormous thirst of agriculture and the large number of dams. “Again there is this direct link between the food system and the depletion of wildlife,” said Barrett. Eating less meat is an essential part of reversing losses, he said.

The Living Planet Index has been criticised as being too broad a measure of wildlife losses and smoothing over crucial details. But all indicators, from extinction rates to intactness of ecosystems, show colossal losses. “They all tell you the same story,” said Barrett.

Conservation efforts can work, with tiger numbers having risen 20% in India in six years as habitat is protected. Giant pandas in China and otters in the UK have also been doing well.

But Marco Lambertini, director general of WWF International, said the fundamental issue was consumption: “We can no longer ignore the impact of current unsustainable production models and wasteful lifestyles.”

## 1NC

**The standard is maximizing expected wellbeing**

**First, pleasure and pain are intrinsically valuable. People consistently regard pleasure and pain as good reasons for action, despite the fact that pleasure doesn’t seem to be instrumentally valuable for anything.**

**Moen 16** [Ole Martin Moen, Research Fellow in Philosophy at University of Oslo “An Argument for Hedonism” Journal of Value Inquiry (Springer), 50 (2) 2016: 267–281] SJDI

Let us start by observing, empirically, that a widely shared judgment about intrinsic value and disvalue is that pleasure is intrinsically valuable and pain is intrinsically disvaluable. On virtually any proposed list of intrinsic values and disvalues (we will look at some of them below), pleasure is included among the intrinsic values and pain among the intrinsic disvalues**.** This inclusion makes intuitive sense, moreover, for there is something undeniably good about the way pleasure feels and something undeniably bad about the way pain feels, and neither the goodness of pleasure nor the badness of pain seems to be exhausted by the further effects that these experiences might have. “Pleasure” and “pain” are here understood inclusively, as encompassing anything hedonically positive and anything hedonically negative.2 The special value statuses of pleasure and pain are manifested in how we treat these experiences in our everyday reasoning about values**.** If you tell me that you are heading for the convenience store, I might ask: “What for?” This is a reasonable question, for when you go to the convenience store you usually do so, not merely for the sake of going to the convenience store, but for the sake of achieving something further that you deem to be valuable**.** You might answer, for example: “To buy soda.” This answer makes sense, for soda is a nice thing and you can get it at the convenience store. I might further inquire, however: “What is buying the soda good for?” This further question can also be a reasonable one, for it need not be obvious why you want the soda. You might answer: “Well, I want it for the pleasure of drinking it.” If I then proceed by asking “But what is the pleasure of drinking the soda good for?” the discussion is likely to reach an awkward end. The reason is that the pleasure is not good for anything further; it is simply that for which going to the convenience store and buying the soda is good.3 As Aristotle observes**:** “We never ask [a man] what his end is in being pleased, because we assume that pleasure is choice worthy in itself.”4 Presumably, a similar story can be told in the case of pains, for if someone says “This is painful!” we never respond by asking: “And why is that a problem?” We take for granted that if something is painful, we have a sufficient explanation of why it is bad. If we are onto something in our everyday reasoning about values, it seems that pleasure and pain are both places where we reach the end of the line in matters of value.

**Moral uncertainty means preventing extinction should be our highest priority.  
Bostrom 12** [Nick Bostrom. Faculty of Philosophy & Oxford Martin School University of Oxford. “Existential Risk Prevention as Global Priority.” Global Policy (2012)]  
These reflections on **moral uncertainty suggest** an alternative, complementary way of looking at existential risk; they also suggest a new way of thinking about the ideal of sustainability. Let me elaborate.¶ **Our present understanding of axiology might** well **be confused. We may not** nowknow — at least not in concrete detail — what outcomes would count as a big win for humanity; we might not even yet **be able to imagine the best ends** of our journey. **If we are** indeedprofoundly **uncertain** about our ultimate aims,then we should recognize that **there is a great** option **value in preserving** — and ideally improving — **our ability to recognize value and** to **steer the future accordingly. Ensuring** that **there will be a future** version of **humanity** with great powers and a propensity to use them wisely **is** plausibly **the best way** available to us **to increase the probability that the future will contain** a lot of **value.** To do this, we must prevent any existential catastrophe.

**Reducing the risk of extinction is always priority number one.   
Bostrom 12** [Faculty of Philosophy and Oxford Martin School, University of Oxford.], Existential Risk Prevention as Global Priority.  Forthcoming book (Global Policy). MP. http://www.existenti...org/concept.pdfEven if we use the most conservative of these estimates, which entirely ignores the   possibility of space colonization and software minds, **we find that the expected loss of an existential   catastrophe is greater than the value of 10^16 human lives**.  **This implies that the expected value of   reducing existential risk by a mere one millionth of one percentage point is at least a hundred times the   value of a million human lives.**  The more technologically comprehensive estimate of 10  54 humanbrain-emulation subjective life-years (or 10  52  lives of ordinary length) makes the same point even   more starkly.  Even if we give this allegedly lower bound on the cumulative output potential of a   technologically mature civilization a mere 1% chance of being correct, we find that the expected   value of reducing existential risk by a mere one billionth of one billionth of one percentage point is worth   a hundred billion times as much as a billion human lives. **One might consequently argue that even the tiniest reduction of existential risk has an   expected value greater than that of the definite provision of any ordinary good, such as the direct   benefit of saving 1 billion lives.**  And, further, that the absolute value of the indirect effect of saving 1  billion lives on the total cumulative amount of existential riskâ€”positive or negativeâ€”is almost   certainly larger than the positive value of the direct benefit of such an action.

## 1NC – DA

#### Biotech industry strong now

Cancherini et al. 4/30 [(Laura, Engagement Manager @ McKinsey & Company, Joseph Lydon, Associate Partner @ McKinsey & Company, Jorge Santos Da Silva, Senior Partner at McKinsey & Company, and Alexandra Zemp, Partner at McKinsey & Company), “What’s ahead for biotech: Another wave or low tide?“, McKinsey & Company, 4-30-2021, https://www.mckinsey.com/industries/pharmaceuticals-and-medical-products/our-insights/whats-ahead-for-biotech-another-wave-or-low-tide] TDI

Belying this downbeat mood, biotech has in fact had one of its best years so far. By January 2021, venture capitalists had invested some 60 percent more than they had in January 2020, with more than $3 billion invested worldwide in January 2021 alone.5 IPO activity grew strongly: there were 19 more closures than in the same period in 2020, with an average of $150 million per raise, 17 percent more than in 2020. Other deals have also had a bumper start to 2021, with the average deal size reaching more than $500 million, up by more than 66 percent on the 2020 average (Exhibit 3).6

What about SPACs?

The analysis above does not include special-purpose acquisition companies (SPACs), which have recently become significant in IPOs in several industries. Some biotech investors we interviewed believe that SPACs represent a route to an IPO. How SPACs will evolve remains to be seen, but biotechs may be part of their story.

Fundamentals continue strong

When we asked executives and investors why the biotech sector had stayed so resilient during the worst economic crisis in decades, they cited innovation as the main reason. The number of assets transitioning to clinical phases is still rising, and further waves of innovation are on the horizon, driven by the convergence of biological and technological advances.

In the present day, many biotechs, along with the wider pharmaceutical industry, are taking steps to address the COVID-19 pandemic. Together, biotechs and pharma companies have more than 250 vaccine candidates in their pipelines, along with a similar number of therapeutics. What’s more, the crisis has shone a spotlight on pharma as the public seeks to understand the roadblocks involved in delivering a vaccine at speed and the measures needed to maintain safety and efficacy standards. To that extent, the world has been living through a time of mass education in science research and development.

Biotech has also benefited from its innate financial resilience. Healthcare as a whole is less dependent on economic cycles than most other industries. Biotech is an innovator, actively identifying and addressing patients’ unmet needs. In addition, biotechs’ top-line revenues have been less affected by lockdowns than is the case in most other industries.

Another factor acting in the sector’s favor is that larger pharmaceutical companies still rely on biotechs as a source of innovation. With the top dozen pharma companies having more than $170 billion in excess reserves that could be available for spending on M&A, the prospects for further financing and deal making look promising.

For these and other reasons, many investors regard biotech as a safe haven. One interviewee felt it had benefited from a halo effect during the pandemic.

More innovation on the horizon

The investors and executives we interviewed agreed that biotech innovation continues to increase in quality and quantity despite the macroeconomic environment. Evidence can be seen in the accelerating pace of assets transitioning across the development lifecycle. When we tracked the number of assets transitioning to Phase I, Phase II, and Phase III clinical trials, we found that Phase I and Phase II assets have transitioned 50 percent faster since 2018 than between 2013 and 2018, whereas Phase III assets have maintained much the same pace. There could be many reasons for this, but it is worth noting that biotechs with Phase I and Phase II assets as their lead assets have accounted for more than half of biotech IPOs. Having an early IPO gives a biotech earlier access to capital and leaves it with more scope to concentrate on science.

#### Lack of IP protection makes medical innovation prohibitively risky and expensive

Grabowski et al 15 [(Henry, Professor of Economics, member of the faculty for the Health Sector Management Program, and Director of the Program in Pharmaceuticals and Health Economics at Duke University) “The Roles of Patents and Research And Development Incentives In Biopharmaceutical Innovation,” Health Affairs, 2/2015] JL

The essential rationale for patent protection for biopharmaceuticals is that long-term benefits in the form of continued future innovation by pioneer or brand-name drug manufacturers outweigh the relatively short-term restrictions on imitative cost competition associated with market exclusivity. Regardless, the entry of other branded agents remains an important source of therapeutic competition during the patent term.

Several economic characteristics make patents and intellectual property protection particularly important to innovation incentives for the biopharmaceutical industry. **5** The R&D process often takes more than a decade to complete, and according to a recent analysis by Joseph DiMasi and colleagues, per new drug approval (including failed attempts), it involves more than a billion dollars in out-of-pocket costs. **6** Only approximately one in eight drug candidates survive clinical testing. **6**

As a result of the high risks of failure and the high costs, research and development must be funded by the few successful, on-market products (the top quintile of marketed products provide the dominant share of R&D returns). **7**,**8** Once a new drug’s patent term and any regulatory exclusivity provisions have expired, competing manufacturers are allowed to sell generic equivalents that require the investment of only several million dollars and that have a high likelihood of commercial success. Absent intellectual property protections that allow marketing exclusivity, innovative firms would be unlikely to make the costly and risky investments needed to bring a new drug to market.

Patents confer the right to exclude competitors for a limited time within a given scope, as defined by patent claims. However, they do not guarantee demand, nor do they prevent competition from nonidentical drugs that treat the same diseases and fall outside the protection of the patents.

New products may enter the same therapeutic class with common mechanisms of action but different molecular structures (for example, different statins) or with differing mechanisms of action (such as calcium channel blockers and angiotensin receptor blockers). 9 Joseph DiMasi and Laura Faden have found that the time between a first-in-class new drug and subsequent new drugs in the same therapeutic class has been dramatically reduced, from a median of 10.2 years in the 1970s to 2.5 years in the early 2000s. 10 Drugs in the same class compete through quality and price for preferred placement on drug formularies and physicians’ choices for patient treatment.

Patents play an essential role in the economic “ecosystem” of discovery and investment that has developed since the 1980s. Hundreds of start-up firms, often backed by venture capital, have been launched, and a robust innovation market has emerged. **11** The value of these development-stage firms is largely determined by their proprietary technologies and the candidate drugs they have in development. As a result, the strength of intellectual property protection plays a key role in funding and partnership opportunities for such firms.

#### MRNA solves a litany of diseases, but continued innovation is key

Gupta 5/7 [(Swati, vice president and head of emerging infectious diseases and scientific strategy at IAVI, a nonprofit scientific research organization that develops vaccines and antibodies for HIV, tuberculosis, emerging infectious diseases (including COVID-19) and neglected diseases, PhD and MPH from Yale University) “The Application and Future Potential of mRNA Vaccines,” Yale School of Public Health, 5/7/2021] JL

The implications of mRNA technology are staggering. Several vaccine developers are studying this technology for deployment against rabies, influenza, Zika, HIV and cancer, as well as for veterinary purposes. Its potential utility is based upon its being a “platform technology” that can be developed and scaled rapidly. Given that only the genetic code for a protein of interest is needed, synthetically produced mRNA vaccines can be made rapidly, in days. Other vaccine approaches involve growing and/or producing proteins in cells, a process that can take months. Messenger RNA vaccines are generally regarded as safe, since they do not integrate into our cells’ DNA and naturally degrade in the body after injection. They also can be safely administered repeatedly, as we are seeing with the two-dose regimen for both the Pfizer-BioNTech and Moderna vaccines.

Despite the current success of mRNA vaccines for COVID-19, scientists continue to work on making the technology better. A number of laboratories are testing more thermostable formulations of mRNA vaccines, which currently must be kept at freezing or ultra-cold temperatures. Others are investigating second-generation vaccines that will only require a single shot, and “universal” coronavirus vaccines that could protect against future emerging coronaviruses. Messenger RNA vaccines that target a broad range of different diseases, all in one shot, are also in development; this approach has the potential to greatly simplify current vaccination schedules.

Taken together, these advantages and potential future developments position mRNA vaccines as an increasingly important technology in our arsenal of tools against infectious disease outbreaks, and are likely to be critical to fighting future epidemics and pandemics. Global partnerships like the Coalition for Epidemic Preparedness and Innovation (CEPI), tasked with facilitating the development of vaccines to stop future epidemics, have called for vaccines to be able to be tested in the clinic within months after a new pathogen is identified. With the latest discoveries in mRNA technology, we are well on our way to this goal; the ability of this platform technology to be transformative is no longer a hope, but more likely to be a reality in the very near future.

#### Disease causes extinction – defense is wrong

Piers Millett 17, Consultant for the World Health Organization, PhD in International Relations and Affairs, University of Bradford, Andrew Snyder-Beattie, “Existential Risk and Cost-Effective Biosecurity”, Health Security, Vol 15(4), http://online.liebertpub.com/doi/pdfplus/10.1089/hs.2017.0028

Historically, disease events have been responsible for the greatest death tolls on humanity. The 1918 flu was responsible for more than 50 million deaths,1 while smallpox killed perhaps 10 times that many in the 20th century alone.2 The Black Death was responsible for killing over 25% of the European population,3 while other pandemics, such as the plague of Justinian, are thought to have killed 25 million in the 6th century—constituting over 10% of the world’s population at the time.4 It is an open question whether a future pandemic could result in outright human extinction or the irreversible collapse of civilization.

A skeptic would have many good reasons to think that existential risk from disease is unlikely. Such a disease would need to spread worldwide to remote populations, overcome rare genetic resistances, and evade detection, cures, and countermeasures. Even evolution itself may work in humanity’s favor: Virulence and transmission is often a trade-off, and so evolutionary pressures could push against maximally lethal wild-type pathogens.5,6

While these arguments point to a very small risk of human extinction, they do not rule the possibility out entirely. Although rare, there are recorded instances of species going extinct due to disease—primarily in amphibians, but also in 1 mammalian species of rat on Christmas Island.7,8 There are also historical examples of large human populations being almost entirely wiped out by disease, especially when multiple diseases were simultaneously introduced into a population without immunity. The most striking examples of total population collapse include native American tribes exposed to European diseases, such as the Massachusett (86% loss of population), Quiripi-Unquachog (95% loss of population), and theWestern Abenaki (which suffered a staggering 98% loss of population).

In the modern context, no single disease currently exists that combines the worst-case levels of transmissibility, lethality, resistance to countermeasures, and global reach. But many diseases are proof of principle that each worst-case attribute can be realized independently. For example, some diseases exhibit nearly a 100% case fatality ratio in the absence of treatment, such as rabies or septicemic plague. Other diseases have a track record of spreading to virtually every human community worldwide, such as the 1918 flu,10 and seroprevalence studies indicate that other pathogens, such as chickenpox and HSV-1, can successfully reach over 95% of a population.11,12 Under optimal virulence theory, natural evolution would be an unlikely source for pathogens with the highest possible levels of transmissibility, virulence, and global reach. But advances in biotechnology might allow the creation of diseases that combine such traits. Recent controversy has already emerged over a number of scientific experiments that resulted in viruses with enhanced transmissibility, lethality, and/or the ability to overcome therapeutics.13-17 Other experiments demonstrated that mousepox could be modified to have a 100% case fatality rate and render a vaccine ineffective.18 In addition to transmissibility and lethality, studies have shown that other disease traits, such as incubation time, environmental survival, and available vectors, could be modified as well.19-2