# 1NC

#### I negate, resolved: The member nations of the World Trade Organization ought to reduce intellectual property protections for medicines.

## Framework

#### Concede framing

#### Impact calc -- Extinction is categorically prior:

#### A] Magnitude -- trillions of future lives are lost that are just as valuable as current ones – anything else says some lives are worth less than others which is a slippery slope to genocide.

#### B] Reversibility -- extinction forecloses future improvement; prefer -- if we’re unsure about which interpretation of the world is true, we should preserve it to figure things out.

#### C] Kills oppressed ppl too

## 1 – Bioterrorism DA

#### **Reducing IP protections gives terrorists key intel, which causes bioterrorism.**

Pavel and Venkatram 21 Barry Pavel, senior vice president and director of the Scowcroft Center for Strategy and Security, former senior director for defense policy and strategy on the National Security Council, Vikram Venkatram, Young Global Professional in the Scowcroft Center for Strategy and Security, "Facing the future of bioterrorism," 7 September 2021, Atlantic Council, accessed 9 October 2021, <https://www.atlanticcouncil.org/commentary/article/facing-the-future-of-bioterrorism/> ~ST~

Biotechnology has developed at an astounding rate over the first twenty years of the twenty-first century. Emerging biotechnological tools have become cheaper and more accessible than ever before, and less expertise is necessary to use those tools effectively. Amateur biologists can now accomplish feats that would have been impossible until recently for even the foremost experts in top-of-the-line laboratories. The iGEM competition is a great example of this phenomenon in practice: a synthetic biology competition in which amateur scientists compete with one another to build biological systems and operate them within living cells. Similarly, CRISPR, a scientific technique that enables the manipulation of DNA and genetic engineering, can be used in the high-school classroom as an illustrative practical example of biology. There exists a new and growing community of “biohackers” who use novel biotechnology tools to modify their own bodies in a variety of ways. As biotechnologist Drew Endy at Stanford University put it, many years ago hackers would hack computer code, but now they are hacking the code for life.1 Thus, biotechnology capabilities are becoming democratized.

In general, this evolution of biotechnology will bring with it an amazing array of changes to our societies, our economies, and our security. The growing biotech revolution will have as great an impact on our way of life as the communications and information revolution. Chronic diseases will be mitigated, human life spans will be extended, and the global economy will be increasingly driven by biological inventions and processes. A new understanding of epigenetics could usher in an era of highly personalized medicine, and gene drives could wipe mosquito-borne diseases like malaria from the planet. One day, engineered living materials, built through synthetic biology, might grow to suit specific architectural needs and heal when faced with wear and tear. Neuroenhancement technology could optimize human performance: increasing learning speed, combatting neurological diseases, or even assisting soldiers by boosting their awareness and decision-making on the battleground. A new generation of scientists will build a suite of as-yet-undiscovered technologies, transforming the world in radical ways.

However, greater access to cheap but powerful biotechnology tools—and a reduced need for expertise in operating those tools—also is making it easier for malicious actors to utilize that technology for ill. Terrorist groups could use synthetic biology to craft bioweapons, using data to manufacture dangerous pathogens or modifying easily accessible pathogens to make them more virulent. At present, there are still some barriers to entry that prevent such actors from operating with free reign, as widespread access to certain pathogens, tools, and data is still limited. But these barriers will only continue to recede over the next decade. In evaluating the future of terrorism and counterterrorism, one must consider: How should the United States and its allies prepare to face the growing threat of bioterrorism?

Bioterrorism is not a new phenomenon, though past cases have been limited in scope. In the 1990s, a Japanese cult known as Aum Shinrikyo attempted to engineer an aerosolized strain of anthrax or, in other words, a strain of anthrax capable of infecting people through inhalation. The cult’s members were ultimately unsuccessful in their attempts to do so and resorted to releasing sarin gas (a chemical weapon, rather than a biological one) in Tokyo’s subway system on March 20, 1995, which killed thirteen people and sickened thousands of others. Their goal was to release an infectious pathogen in the hopes of causing an epidemic and stimulating a world war that would have allowed them to seize power. They were stymied by a lack of expertise—though cult members included former biologists and some with medical credentials.

A decade before, in Oregon, a cult known as the Rajneeshees spread salmonella in the hopes of incapacitating opposing candidates in local government elections. Cult members ultimately caused food poisoning in more than seven hundred and fifty people, marking the largest bioterrorism incident in US history. In 1998, al-Qaeda publicly declared its intent to pursue weapons of mass destruction, including bioweapons. The organization later conducted training courses on the use of such weapons and recruited biologists to help develop a bioweapons program. In the wake of the attacks on the United States on September 11, 2001, anthrax-laced letters were sent by mail, killing five people.

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As these cases illustrate, terrorists have already demonstrated a willingness to use biological weapons, without regard for the indiscriminate danger those weapons pose to the entire globe. As COVID-19 has shown, diseases can cross borders, particularly in the globalized world we live in today. A bioweapon released in Tokyo could spread across the world in short order, even if the initial attack is limited in scope (i.e., targeted at a specific group or starting with a relatively small volume of pathogen). These potential large-scale effects of attempted bioterrorism have been mitigated in the past by terrorists’ lack of expertise, and the inherent challenge of using biotechnology to make and release dangerous pathogens. Now, as people gain greater access to this technology and it becomes easier to use, the challenge is easing. Further, COVID-19 has shown that pandemics can have an extraordinary political impact, preying upon and worsening existing fractures in society and among nations. To terrorists, who conduct violence to achieve political aims, this reinforces the fact that a bioweapon could serve their purposes. Thus, incidents of bioterrorism soon will become more prevalent.

Given the broad scope and scale of this growing threat, the United States should take a series of actions to mitigate the risks, without unduly stunting the growth of the biotechnology field. To date, bioterrorist attacks have been low-risk, high-impact events. While they have been extremely rare, their frequency will only increase as will their ramifications. However, overregulating the spread of biotechnological tools could stunt innovation and the profound potential of this increasingly important sector. Furthermore, existing methods of preventing bioterrorism may no longer be effective. The government could previously monitor the purchase of expensive and dangerous biotechnology tools and the laboratories that owned them in large quantities. This is no longer possible to the same degree when such tools are increasingly cheap, widespread, and usable in a garage. The FBI is currently attempting to address this risk by building relationships with the iGEM community and with life scientists so that they can report suspicious behavior. These efforts should continue, but are wildly insufficient, since some bioterrorists may have minimal contact with the larger community of biologists and biology hobbyists.

The release of a bioweapon by a terrorist, if left unchecked, could spread throughout the globe, just as a naturally occurring pandemic would. Thus, one major step that the United States should take is to establish improved responses to disease outbreaks, particularly learning from COVID-19. This should include building a larger stockpile of PPE and establishing a set of clear step-by-step actions to be taken in the event of an attack. Building resilience in this fashion will not prevent bioterrorism, but it will mitigate its effects, and may slightly disincentivize utilizing bioweapons to cause terror. Beyond this, the United States should secure its laboratories and the data within, as terrorists could leverage that knowledge to build bioweapons. For example, new technology allows pathogens to be synthesized from the data describing their genetic sequences. In a recent controversial study, scientists published a methodology that would allow horsepox virus, a virus very similar to one that causes smallpox, to be synthesized. This research was conducted with a noble goal: understanding how the horsepox virus could be used as a potential treatment for cancer. However, it had significant dual-use implications. Research like this should not be banned outright, but the United States should establish norms to evaluate whether it is worth the risk before such research is conducted, and then ensure that it is conducted and the results published in the most secure ways. Replicability is an important part of science, but the general public should not be able to replicate the most dangerous experiments. Where building resilience would reduce the impact of a bioterror incident, restricting access to dual-use methodologies will reduce the likelihood of one occurring in the first place.

#### That causes extinction.

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I’ve lived through disease outbreaks, and in the previous chapter I showed just how unprepared we are to face a widespread pandemic of flu or another new pathogen like SARS. But a deliberate outbreak caused by an engineered pathogen would be far worse. We would face the same agonizing decisions that must be made during a natural pandemic: whether to ban travel from affected regions, how to keep overburdened hospitals working as the rolls of the sick grew, how to accelerate the development and distribution of vaccines and drugs. To that dire list add the terror that would spread once it became clear that the death and disease in our midst was not the random work of nature, but a deliberate act of malice. We’re scared of disease outbreaks and we’re scared of terrorism—put them together and you have a formula for chaos. As deadly and as disruptive as a conventional bioterror incident would be, an attack that employed existing pathogens could only spread so far, limited by the same laws of evolution that circumscribe natural disease outbreaks. But a virus engineered in a lab to break those laws could spread faster and kill quicker than anything that would emerge out of nature. It can be designed to evade medical countermeasures, frustrating doctors’ attempts to diagnose cases and treat patients. If health officials manage to stamp out the outbreak, it could be reintroduced into the public again and again. It could, with the right mix of genetic traits, even wipe us off the planet, making engineered viruses a genuine existential threat. And such an attack may not even be that difficult to carry out. Thanks to advances in biotechnology that have rapidly reduced the skill level and funding needed to perform gene editing and engineering, what might have once required the work of an army of virologists employed by a nation-state could soon be done by a handful of talented and trained individuals. Or maybe just one. When Melinda Gates was asked at the South by Southwest conference in 2018 to identify what she saw as the biggest threat facing the world over the next decade, she didn’t hesitate: “A bioterrorism event. Definitely.”2 She’s far from alone. In 2016, President Obama’s director of national intelligence James Clapper identified CRISPR as a “weapon of mass destruction,” a category usually reserved for known nightmares like nuclear bombs and chemical weapons. A 2018 report from the National Academies of Sciences concluded that biotechnology had rewritten what was possible in creating new weapons, while also increasing the range of people capable of carrying out such attacks.3 That’s a fatal combination, one that plausibly threatens the future of humanity like nothing else. “The existential threat that would be most available for someone, if they felt like doing something, would be a bioweapon,” said Eric Klien, founder of the Lifeboat Foundation, a nonprofit dedicated to helping humanity survive existential risks. “It would not be hard for a small group of people, maybe even just two or three people, to kill a hundred million people using a bioweapon. There are probably a million people currently on the planet who would have the technical knowledge to pull this off. It’s actually surprising that it hasn’t happened yet.”