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The Terra Nullius of Intellectual Property

Eva Hilberg o

he development and distribution of COVID-19 vaccines has once again prompted a debate over intellectual property (IP) rights, linking limited access to vaccines to the exercise of monopoly rights. In the face of a widespread failure to extend effective access arrangements to the Global South, many have been critical of blatant instances of vaccine nationalism and have demanded IP waivers on vaccines to address the situation. The mounting public pressure is reminiscent of the global campaign that led to the negotiations for the 2001 Doha Declaration on TRIPS and Public Health, which addressed issues around the access to medicines in a health-specific extension of the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).² This essay argues that in all these contestations, intellectual property has been more than a legal instrument—it has been a conceptual framework that structures debates over the price and the distribution of medicines in a way that fundamentally excludes anything except for the concerns of the producers or owners of IP. This privileging of interests continues to be a glaring oversight at the center of a legal system that has historically been directed at appropriation and conquest, thus working for the owners and not the "sources" or indeed the potential beneficiaries of innovation.

The underlying colonial legacy of IP has a negative, lasting effect on chances to adjust the relationship between IP and public health. The essay shows how the current debates around this issue reflect the lopsided global distribution of power between IP owners and those seeking access to medicines, as well as the relative powerlessness that these potential "customers" have in negotiations.

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It argues that the (unspoken) center of all struggles over access to new pharmaceuticals rests in the IP system's original assumption of the world as terra nullius—that is, as available to be claimed. This stance quite literally imposed a European perspective on the rest of the world, arranging its territories and resources according to a new property system in which the only legitimate interests are those of owner or bestower/enforcer of patents. This historic exclusion of other interests continues to have special salience in the field of public health today, where the access to and prices of medicines often determine the difference between a high quality of life and severe impairment, to say the very least.

TERRA NULLIUS: A BLANK CANVAS AT THE HEART OF THE PATENT SYSTEM

The IP system is ordinarily presented as a bureaucratic apparatus without much of a political dimension—it is usually understood as merely a means of administering innovation and promoting a return on investment into the laborious and expensive research and development of new pharmaceuticals. However, the IP system and, more specifically, patents³ are also frequently criticized for their role as "mechanisms of appropriation"⁴ with a history dating back to feudalism and the eventual establishment of the colonial system.

Historically, letters patent (*litterae patentes*) were issued by a monarch or ruler, conferring privileges or monopolies on select individuals or companies, including letters granting control over overseas territories to individual entities as a means of discovery and acquisition. These privileges effectively determined ownership of these territories, such as, for instance, Governor Bourke's proclamation of 1835 designating the entire continent of Australia, including its natural resources and traditional knowledges, as "unknown" and without owner. As Vandana Shiva points out, this vision of the world as a blank canvas, or terra nullius, sets aside any other models of ownership, such as community ownership or other traditional modes of relating to territory and nature.⁵ The rule of law, and more specifically property law, thus acted as "a classic means of extending empire, part of the process of colonization." Time and again, the establishment of property was a means of encouraging something reminiscent of a gold-rush atmosphere, effectively projecting power over frontier regions "by giving away an empire." This system, for instance, distributed and administered property in the newly settled American colonies, and continues to exert power even today, as "land patents" can still form a basis for U.S. property relations.⁸

While the registration of land patents and the patenting of inventions administratively parted ways in the seventeenth century, the assumption of terra nullius continues to operate in both forms of grant. For instance, in modern patenting requirements, this notion can be found in the need to demonstrate "novelty." Novelty, in these terms, often directly reflects the perspective of the "discoverer," as things that appear new to some may be well known in other contexts. For example, this requirement for patentability has been interpreted broadly in gene patents, rendering the mere discovery and isolation of a "new" plant gene sequence an inventive step of significant creativity. Controversially, this practice led to a number of patents for plant and medicinal compounds being issued to researchers from the Global North based on traditional indigenous knowledge. These resources and knowledges were of course novel only to the researchers who later registered their intellectual property in another country—a practice of discovery often known as "bioprospecting."

Bioprospecting projects are often also characterized as "biopiracy," which "refers to the use of intellectual property systems to legitimize the exclusive ownership and control over biological resources and biological products and processes that have been used over centuries in non-industrialized cultures."9 Common examples include the patenting of traditional medicinal knowledge and plants; for instance, the (attempted) patenting of plant species such as basmati rice or the patenting of the kwao krua herb from Thailand, and larger bioprospecting missions that gather human genetic or plant materials from remote areas across the globe. 10 In the 1990s, Stanford's Human Genome Diversity Project became particularly notorious as it sought to gather human genetic materials from "remote" tribes in its quest to discover different genetic markers. These practices have been likened to "the Age of Exploration, [when] researchers and travelers . . . transported discovered plant species back to their own countries as new foods and raw materials for plant breeding." Roht-Arriaza argues that this mechanism is "perhaps the most prevalent and insidious form of appropriation of indigenous knowledge and resources," which "systematically exclude[s] the knowledge and resources of local communities, farmers, and indigenous people."12 While this practice works to incorporate these knowledges into a new system of ownership, it also devalues other systems of knowing, nearly up to the point of eradication, in some cases rendering illegal traditional systems of knowledge circulation such as, for example, seed saving and seed sharing.

The current debate over COVID-19 vaccines once again highlights the significant impact of this legacy, which still relies on a narrative of an uncharted world ripe for discovery. Here, exclusion works in more ways than on the conceptual level of novelty and the assignment of rights and profits. For instance, it "works against indigenous groups primarily due to various procedural qualifications, such as the requirement of written documentation of knowledge or invention under US patent laws."13 This means not only that indigenous "intellectual contribution"14 is routinely set aside as undocumented but also, as this essay seeks to point out, that indigenous communities and other sources of knowledge are denied a place at the table when it comes to decisions on the further use and distribution of the resulting products.¹⁵ In a similar vein, a system based on sovereign monopolies does not include representation for those who are ultimately the recipients of the invention—in the pharmaceutical sector, these are usually healthcare workers and patients. Voluntary acts of charity, such as waivers, end up being the only possible exception to this systemic legacy of exclusion, which does not have any regard for positions outside of the IP system. In the global bioeconomy, this also means no seat at the table in discussions about price, availability, and distribution strategies, as, for instance, in the cases of insulin pricing, the distribution of COVID-19 vaccines, and the sharing of influenza virus samples.

Exclusion as the Hidden Legacy of Colonial Conquest: Insulin, COVID, and Influenza Samples

The marginalization of other interests at the heart of the IP system can lead to exploitation, without either the source or the recipient of the eventual product having any say in the matter. A recent example of this can be seen in the exclusion of patients' interests from the process of price setting for life-saving medications such as insulin. The history of insulin patenting began in 1923 with an act of profound philanthropy, when its original inventors donated their patent for a nominal sum of \$1 to the University of Toronto to ensure the accessibility of this revolutionary treatment. Since then, costs have spiraled upward, and a creeping process of "incremental innovation has repeatedly precluded the formation of a generic insulin industry in North America when earlier patents expired." The expiration of several significant patents after 2015 created openings for change, but between 2012 and 2016, for instance, the cost of insulin still nearly doubled. The United States, some patients with insurance coverage have shouldered the resultant high costs, and those without it face a prohibitive situation, likening their

position to one of "hostages." This example shows that the colonial legacy of terra nullius excludes indigenous peoples, traditional knowledges, and many other kinds of outside (read: non-industry) influence on the pricing and distribution of medicines.

Today's most prominent example of the legacy of this fundamental exclusion takes place in the current global debate about temporary IP waivers to improve access to vaccines against SARS-CoV-2 (COVID-19). The development of COVID-19 vaccines was the result of an unprecedentedly rapid global effort, which went from initial isolation of the virus in December 2019 to four vaccine candidates entering clinical trials by March 2020—and an expanding vaccine development landscape of over 115 candidates by April 8, 2020. However, access to these vaccines was inevitably restricted, as production facilities tried to meet overwhelming global demand, and national governments began buying up doses in sweeping instances of "vaccine nationalism." 20

The idea of an IP waiver to expand production was first introduced in October 2020 by a coalition of countries in the Global South led by India and South Africa; it was immediately opposed by industrialized countries such as the United States, the U.K., Japan, and members of the EU. This opposition, along with pressing concerns about uneven access to vaccines, resulted in WHO's director general accusing these governments of "vaccine apartheid"21 and a journalist decrying the pro-IP "vaccine colonialism"22 of influential organizations such as the Gates Foundation. The global nature of the coronavirus pandemic and the obvious need for a global solution generated pressure that began to slowly erode the established division of interests between the owners and the consumers of IP. Both the U.S. government²³ and the Gates Foundation²⁴ reversed their positions in the spring of 2021, which led to a renewed petition brought by a coalition of countries at the World Trade Organization.²⁵ However, no waivers have yet been issued because opinion among EU countries remains split. The European Commission instead advanced alternative plans to overcome the access issue by otherwise expanding production.²⁶ Yet, as Médecins Sans Frontières points out, similar access plans made under WHO's global COVAX facility pale in the face of the sheer amount of vaccine doses ordered by European countries, effectively leaving COVAX "without purchase options."²⁷ The potential consumers of IP-protected products are thus barred from exerting any influence on the availability of vaccines, at least as long as national governments continue to abstain from issuing compulsory licenses.²⁸

The "sources" of virus samples for vaccines are also routinely excluded from decisions regarding the future accessibility of treatments. Stepping back from COVID-19, we see that this exclusion has not gone entirely unchallenged. For example, resistance by those representing the source of vital information emerged in the 2006 standoff between the Indonesian government and WHO over the sharing of H5N1 ("bird flu") virus samples.²⁹ By withholding virus samples, the Indonesian government protested against what it perceived to be "neocolonialism in global health."³⁰ As Indonesia's former health minister, Siti Fadilah Supari, pointed out at the time:

Samples shared become the property of the WHO collaborating centres in rich countries, where they are used to generate research papers, patents and to commercialize vaccines. But the developing countries that supply the samples do not share in these benefits. In the event of a pandemic, we also risk having no access to vaccines, or having to buy them at prices we cannot afford, despite the fact that the vaccines were developed using our samples.³¹

This move resulted in a renegotiation of the WHO framework regarding the sharing of influenza virus samples,³² giving rise to its Pandemic Influenza Preparedness (PIP) Framework with access and benefit-sharing mechanisms.³³ While this framework applies specifically to influenza viruses, its recognition of "source-country" interests highlights the importance of access to samples for pandemic response, and the amount of power this interest can exert. The blank canvas of the world is thus not as uninhabited as assumed by the IP system, and its inhabitants can bring about successful challenges, at least in specific circumstances.³⁴ Similar challenges did not emerge in the more pervasive COVID-19 pandemic, where the virus travelled far too quickly and too widely for any potential campaigns to form. The evolving pandemic, however, makes clear the pressing need for new modes of access to vaccines and treatments.

Conclusion

Patents have historically acted as a means to strategically appropriate resources by declaring novelty or, more specifically, an unclaimed availability that stretched across the entire world as viewed from the perspective of colonial power. On closer inspection, the IP system's historic function as a means of appropriation continues to privilege what are considered legitimate interests from the perspective of the owners of IP, and also ensures that the IP apparatus operates independently

from other concerns—such as public health. No matter how many statements are made by politicians and business leaders in support of expanded access to technologies and medicines, the IP system simply does not acknowledge the demands of the broader community of users—with the exception of the rarely invoked compulsory license for a public health emergency. In fact, as a former vehicle of sovereign conquest, the IP system does not consider anything except for the interest of sovereign power—ensuring the transfer of monopoly from a public sovereign to a private owner. All that has been declared terra nullius remains firmly excluded, including the source and potential beneficiaries of the inventions in question.

This system needs to change, as many have argued before. Attempts have included, among others, "tethering" source to product;35 introducing prize funds to encourage research and development; and implementing access and benefit-sharing mechanisms, patent pools, clearinghouses, and targeted international coalitions for vaccine distribution, such as Gavi, the Vaccine Alliance. Most of these efforts, however, have proven unwieldy and laborious, requiring a lot of negotiation, and proven difficult to activate in times of a global pandemic.³⁶ While there is thus a global desire to address the shortcomings of the IP system, existing methods are piecemeal—and the position of industrialized countries remains very hard to shift. On the basis of the current crisis, we can see that, at the very least, what is needed is a more readily available and clearly defined option of a global IP waiver that can be relied upon in health emergencies. Wider structural reform should, however, include more effective representation of all interests when it comes to decisions on the pricing of medicines, and more transparent pharmaceutical pricing and distribution strategies. The IP waiver debate here represents a potential opening that could provide a normative basis for overcoming IP's colonial era terra nullius assumption, instead of infinitely perpetuating its myth of unilateral discovery.

Notes

- Anshu Siripurapu, "The Debate over a Patent Waiver for COVID-19 Vaccines: What to Know," Council on Foreign Relations, May 26, 2021, www.cfr.org/in-brief/debate-over-patent-waiver-covid-19-vaccines-what-know; and World Trade Organization (communication from the African Group, the Plurinational State of Bolivia, Egypt, Eswatini, Fiji, India, Indonesia, Kenya, the LDC Group, Maldives, Mozambique, Mongolia, Namibia, Pakistan, South Africa, Vanuatu, the Bolivarian Republic of Venezuela, and Zimbabwe), Waiver from Certain Provisions of the TRIPS Agreement for the Prevention, Containment and Treatment of COVID-19: Revised Decision Text, IP/C/W/669/Rev.1, May 25, 2021.
- Debora Halbert, "Moralized Discourses: South Africa's Intellectual Property Fight for Access to AIDS Drugs," Seattle Journal for Social Justice 1, no. 2 (November 2002), Article 2, pp. 257–96.
- ³ The difference in emphasis between intellectual property in general and patents in particular also contains strategic and political decisions—the notion of the "intellectual property system" refers to four

different vehicles for assigning IP; namely, copyright, patents, trademarks, and trade secrets. Each of these categories can bring about a variety of anticommons effects (see, for example, James Boyle, *The Public Domain: Enclosing the Commons of the Mind* [New Haven, Conn.: Yale University Press, 2008]), restricting access to knowledge, but copyright critiques usually focus on information technologies, while patents are often at the heart of controversies in the field of health.

Naomi Roht-Arriaza, "Of Seeds and Shamans: The Appropriation of the Scientific and Technical Knowledge of Indigenous and Local Communities," *Michigan Journal of International Law* 17, no. 4

(1996), pp. 919-65.

⁵ Vandana Shiva, *Earth Democracy: Justice, Sustainability, and Peace* (London: Zed Books, 2005), p. 22. Shiva makes this connection very prominently throughout her work, and also points out the use of this concept in the colonial appropriation of Australia.

⁶ Laurelyn Whitt, Science, Colonialism, and Indigenous Peoples: The Cultural Politics of Law and

Knowledge (New York: Cambridge University Press, 2009), p. 157.

- Douglas W. Allen, "Establishing Economic Property Rights by Giving Away an Empire," *Journal of Law and Economics* 62, no. 2 (May 2019), pp. 251–80, at p. 252, www.journals.uchicago.edu/doi/10. 1086/703464.
- An example of this is the settlement of Pennsylvania, going back to a patent given by Charles II to William Penn in 1681 as a means of paying off an outstanding debt—the first of a number of such grants made to Penn over time. Penn then issued patents to smaller tracts of land within this larger area, which can be traced through the records of the land office (see, for instance, the original patent entry in the Records of the Land Office, "Index to Land Records by Name of Patentee," 1684, repr. on Pennsylvania Historical & Museum Commission website, www.phmc.state.pa.us/bah/dam/rg/di/r17PatentIndexes/A-AAPatentIndex235.pdf. The U.S. government took over the issuance of land patents after the American Revolution, and a patent is still conceptually "necessary to divest the United States of legal title and to vest the title in another entity," thus acting as "the highest evidence of a private deed." Paul L. Wright and Thomas E. Muth, "Land Patents: Are They an Escape from Foreclosure?," Drake Law Review 36, no. 3 (1986–1987), pp. 561–84, at pp. 562 and 563, lawreview-drake.files.wordpress.com/2016/09/wright1.pdf.
- ⁹ Vandana Shiva, *Protect or Plunder? Understanding Intellectual Property Rights* (London: Zed Books, 2001), p. 49; James O. Odek, "Bio-Piracy: Creating Proprietary Rights in Plant Genetic Resources," *Journal for Intellectual Property Law* 2, no. 1 (Fall 1994), pp. 141–82; Lakshmi Sarma, "Biopiracy: Twentieth Century Imperialism in the Form of International Agreements," *Temple International and Comparative Law Journal* 13, no. 1 (1999), pp. 107–36; Keith Aoki, "Neocolonialism, Anticommons Property, and Biopiracy in the (Not-So-Brave) New World Order of International Intellectual Property Protection," *Indiana Journal of Global Legal Studies* 6 (1998), pp. 11–58; Andrew Mushita and Carol B. Thompson, *Biopiracy of Biodiversity: Global Exchange as Enclosure* (Trenton, N.J.: Africa World Press, 2007); Ikechi Mgbeoji, *Global Biopiracy: Patents, Plants, and Indigenous Knowledge* (Vancouver: UBC Press, 2006); and Daniel F. Robinson, *Confronting Biopiracy: Challenges, Cases and International Debates* (London: Earthscan, 2010).

¹⁰ Robinson, Confronting Biopiracy; and Mgbeoji, Global Biopiracy.

11 Odek, "Bio-Piracy," pp. 141, 145.

¹² Roht-Arriaza, "Of Seeds and Shamans," p. 929; and Sarma, "Biopiracy," p. 115.

¹³ Sarma, "Biopiracy," p. 116.

- ¹⁴ Vandana Shiva, *Biopiracy: The Plunder of Nature and Knowledge* (Boston: South End Press, 1998), p. 55.
- 15 The fundamental divide between the traditional sources of knowledge and the resulting genetic resource samples has been addressed by the 2010 Convention on Biological Diversity and its Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, which introduced access and benefit-sharing mechanisms that keep track of later use of products of research. The Nagoya Protocol has however not been ratified by some industrialized countries such as the United States, and in practice its implementation has been fraught with difficulty (Sebastian Oberthür and G. Kristin Rosendal, Global Governance of Genetic Resources: Access and Benefit Sharing after the Nagoya Protocol [Abingdon, U.K.: Routledge, 2014]). For more details on sovereignty campaigns as a challenge to the IP system, see Eva Hilberg, "Molecular Sovereignties: Patients, Genomes, and the Enduring Biocoloniality of Intellectual Property," BioSocieties (July 2021), link. springer.com/article/10.1057/s41292-021-00237-5.

Jeremy A. Greene and Kevin R. Riggs, "Why Is There No Generic Insulin? Historical Origins of a Modern Problem," New England Journal of Medicine 372, no. 12 (March 2015), pp. 1171-75, at p. 1173, www.nejm.org/doi/10.1056/NEJMms1411398. While insulin's history is not a straightforward case of "evergreening"—that is, the practice of changing the formulation of pharmaceuticals in incremental ways in order to guarantee ongoing patent protection—the continual development of insulin

- has led to a network of patents that prevented competition from emerging. In the meantime, the price of insulin has increased from an adjusted \$1 for the first patent taken out in 1923 to prices around \$300 per vial "from the three major brands that control the market." Ritu Prasad, "The Human Cost of Insulin in America," BBC News, March 14, 2019, www.bbc.com/news/world-us-canada-47491964.
- ¹⁷ Robin Respaut and Chad Terhune, "U.S. Insulin Costs per Patient Nearly Doubled from 2012 to 2016: Study," Reuters, January 22, 2019, www.reuters.com/article/us-usa-healthcare-diabetes-cost-idUSKCN 1PG136.
- ¹⁸ Prasad, "The Human Cost of Insulin in America."
- ¹⁹ Tung Thanh Le, Zacharias Andreadakis, Arun Kumar, Raúl Gómez Román, Stig Tollefsen, Melanie Saville, and Stephen Mayhew, "The COVID-19 Vaccine Development Landscape," *Nature Reviews Drug Discovery* 19, no. 5 (May 2020), pp. 305–6, www.nature.com/articles/d41573-020-00073-5.
- Lynn Eaton, "Covid-19: WHO Warns against 'Vaccine Nationalism' or Face Further Virus Mutations," BMJ 372 (February 1, 2021), n292, www.bmj.com/content/372/bmj.n292.
- ²¹ Tedros Adhanom Ghebreyesus, quoted in "World Has Entered Stage of 'Vaccine Apartheid'—WHO Head," Healthcare & Pharmaceuticals, Reuters, May 17, 2021, www.reuters.com/business/healthcare-pharmaceuticals/world-has-entered-stage-vaccine-apartheid-who-head-2021-05-17/.
- Mohit Mookim, "The World Loses under Bill Gates' Vaccine Colonialism," Wired, May 19, 2021, www. wired.com/story/opinion-the-world-loses-under-bill-gates-vaccine-colonialism/.
- ²³ Amy Maxmen, "In Shock Move, US Backs Waiving Patents on COVID Vaccines," *Nature*, May 6, 2021, www.nature.com/articles/d41586-021-01224-3.
- ²⁴ Catherine Cheney, "Gates Foundation Reverses Course on COVID-19 Vaccine Patents," Devex, May 7, 2021, www.devex.com/news/sponsored/gates-foundation-reverses-course-on-covid-19-vaccine-patents-99810.
- ²⁵ Siripurapu, "The Debate over a Patent Waiver for COVID-19 Vaccines."
- ²⁶ Philip Blenkinsop, "Resisting Patent Waiver, EU Submits Vaccine Plan to WTO," Reuters, June 4, 2021, www.reuters.com/world/europe/eu-executive-submits-vaccine-access-proposal-wto-2021-06-04/.
- 27 "European Union: More Empty Promises about Global COVID-19 Vaccine Equity," Médecins Sans Frontières, September 15, 2021, www.msf.org/european-union-more-empty-promises-about-global-covid-19-vaccine-equity.
- It is well worth remembering that the IP system already contains something akin to a waiver option—namely, the option of a state issuing compulsory licenses that override patents in response to a public health emergency. This is part of the existing "flexibilities" of the TRIPS system with regard to health. But the proposed waiver at the World Trade Organization goes much further than an individual compulsory license on a vaccine. It covers a minimum duration of three years and a wide range of medicinal products and personal protective equipment. See World Trade Organization, Waiver from Certain Provisions of the TRIPS Agreement for the Prevention, Containment and Treatment of COVID-19.
- ²⁹ Stefan Elbe, "Haggling over Viruses: The Downside Risks of Securitizing Infectious Disease," *Health Policy and Planning* 25, no. 6 (October 2010), pp. 476–85, academic.oup.com/heapol/article/25/6/476/583821.
- ³⁰ Amy Hinterberger and Natalie Porter, "Genomic and Viral Sovereignty: Tethering the Materials of Global Biomedicine," *Public Culture* 27, no. 2 (76) (2015), pp. 361–86, at p. 365, read.dukeupress.edu/public-culture/article-abstract/27/2%20(76)/361/73877/Genomic-and-Viral-Sovereignty-Tethering-the? redirectedFrom=fulltext.
- ³¹ Siti Fadilah Supari, "Q&A: Siti Fadilah Supari," interview by Declan Butler, *Nature*, no. 450 (December 19, 2007), p. 1137, www.nature.com/articles/4501137a.
- 32 Influenza has long been seen as the most likely candidate for a pandemic. The coronavirus is not addressed by WHO's PIP framework.
- ³³ "Pandemic Influenza Preparedness Framework," World Health Organization, 24.5.2011, apps.who. int/gb/pip/pdf_files/pandemic-influenza-preparedness-en.pdf.
- ³⁴ Legal challenges are often limited by the parameters of the IP system, which effectively fragments challenges into smaller-scale campaigns needing to be brought in each national legislation (Hilberg, "Molecular Sovereignties"). Such piecemeal challenges and long-winded debates at the World Trade Organization over demands made by representatives from the Global South can be regarded as a political process that manages dissent (Eva Hilberg, "Promoting Health or Securing the Market? The Right to Health and Intellectual Property between Radical Contestation and Accommodation," *Third World Quarterly* 36, no. 6 [2015], pp. 1237–52).
- 35 Hinterberger and Porter, "Genomic and Viral Sovereignty."
- ³⁶ Elbe, "Haggling over Viruses"; and Thomas Pogge, Matthew Rimmer, and Kim Rubenstein, *Incentives for Global Public Health: Patent Law and Access to Essential Medicines* (Cambridge, U.K.: Cambridge University Press, 2010).

Abstract: The current debate over the global distribution of COVID-19 vaccines once again highlights the many shortcomings of the modern intellectual property (IP) system, especially when it comes to equitable access to medicines. This essay argues that the (unspoken) conceptual center of struggles over access to new pharmaceuticals rests in the IP system's colonial legacy, which perceives the world as uncharted territory that is ripe for discovery and ownership. This vision of the world as a blank canvas, or terra nullius, sets aside any other models of ownership and devalues other traditional modes of relating to territory and nature. Several examples show the long-lasting exclusionary effects of this hidden legacy of colonial conquest in the field of public health, ranging from the spiraling price of insulin to the distribution of COVID-19 vaccines to the negotiation of sharing mechanisms for virus samples. In all of these cases, the continuing marginalization of other interests by the IP system can lead to exploitation, without either the "sources" of materials, such as those from whom the samples were taken, or the recipients of the eventual product having any say in matters of price and access. This legacy of fundamental exclusion needs to be recognized and addressed in order to arrive at more equitable solutions to public health emergencies such as the current pandemic.

Keywords: intellectual property, global health, colonialism, vaccines, land patents, biopiracy, virus sharing, access to medicines