

# INTELLECTUAL PROPERTY IN TIMES OF COVID-19

Cristiana BUDILEANU\*

## Abstract

*Since the beginning of year 2020, we are facing a pandemic of a coronavirus disease discovered in 2019 in China and rapidly spread worldwide. This pandemic affected many sectors of economic activities, such as the medical system, tourism, culture, education, work life.*

*The life we knew before the pandemic may never return to us or it would be possible to have a better life after the pandemic is over because since the beginning of times, the human being tried to overcome his condition by creating all sort of things to have an easier and more comfortable life. All such creations were made due to his intellectual activity which later, with the development of the societies, it began to be recognized and protected by laws. Nowadays, the intellectual property is present in all economic sectors and we protect it through patents, designs, copyright, trademarks.*

*Therefore, the intellectual property is nowadays more important than ever in order to try to end the pandemic because only the creative mind of human beings may find a way to eradicate this disease.*

*The purpose of this article is to analyse the consequences of the pandemic into the intellectual property. We would try, among others, to see if the human being remained as creative as before the pandemic or if he taken the opportunity to become even more creative, to invest more in research and development and if the laws protecting the intellectual property would stay in front of the needed progress to overcome this pandemic.*

**Keywords:** vaccine, counterfeit, pharmaceuticals, fashion, free use.

## 1. Introduction

Intellectual Property (“IP”), as any other law discipline, is alive one or even more alive than others, even if like in other disciplines, the IP regulations are sometimes behind our times. Examples of such situations are the regulations of Artificial Intelligence (“AI”), of 3D printing in relation to which the specialists arise many questions.

In the present, we are in the middle of a pandemic, a Coronavirus disease pandemic (“Covid-19”) which affected and changed our lives since its beginning in 2020, but which it is, as we will see below, manageable due to the creators, researchers, in other words due to the IP which “even in a period of such challenge and adversity (...) IP can provide opportunities for innovation, and the regulatory framework can evolve and be responsive to facilitate the adoption of new technology models.”<sup>1</sup>

When arrived in Europe, Covid-19 put the biggest states (such as Italy, France, Spain) in distress from medical point of view, because of the large number of sick people who needed very attentive medical care and also because of the lack of sufficient medical supplies, medical staff, rooms in hospitals, etc.

However, ignoring these shortcomings, if we look back in time a year ago, we may see that unlike the situation in prehistoric and even more recent epidemics

or pandemics, the Covid-19 pandemic caught the humankind and the technology more advanced than ever, which despite the restrictions of freedom, lot of industries have managed to continue their activity through remote work (e.g. IT, legal sector) or through reinvention of the business approach (e.g. by being present more in online system. There were some restaurants who started making deliveries, supermarkets started to offer to clients the possibility of home delivery).

It is also true that other industries were negatively impacted (e.g. culture, tourism, hotels, publicity). If we look at the publicity sector in Romania, we remember that during the emergency state, the number of radio and TV commercials has decreased, not being presented anymore commercials with discounts at products sold by supermarkets or by fashion stores. Also, the street advertising (e.g. the posters placed on billboards) decreased, having in view that the freedom of movement was restricted, the shopping centres, restaurants, theatres and other places where the people could gather were closed.

However, in time, with the help of technology and people who put at free their research and who created devices to protect people from the virus, solutions were found for those industries to retake their activity. For example, the fashion industry moved more in online, TV commercials to online shops beginning to appear

\* PhD Candidate, Faculty of Law, "Nicolae Titulescu" University of Bucharest (e-mail: cristiana@budileanu.ro).

<sup>1</sup> Intellectual Property Office of Singapore, *Digitalisation and Intellectual Property in the time of COVID-19*, September 2020, <https://www.reuters.com/article/sponsored/digitalisation-and-intellectual-property-in-the-time-of-COVID-19> (accessed on 19.03.2021).

more, the culture also moved in online, being possible to find lots of theatre plays or performances.

All of this was possible due to the creative mind of human beings which helped prior and during the pandemic with the development of our life standards.

### 1.1. Other pandemics that affected the humanity

It is not the first time when the humanity is facing a disease with rapid spread and with lots of victims who transforms into an epidemic or a pandemic. Along the history, „plagues and epidemics have ravaged humanity throughout its existence, often changing the course of history” and „at times, signalling the end of entire civilizations”<sup>2</sup>. However, people associate plagues, epidemics or pandemics with times long gone, considering that in the time they live in, it is not possible to happen something like that, just like the people from Albert Camus’s novel “The Plague” because they are modern people with phones, trams, airplanes, internet, and “they are surely not going to die like the wretches of 17th century London or 18th century Canton”<sup>3</sup>. If we analyse the current times during Covid-19 pandemic and the times from Albert Camus’s novel “The Plague”, we realise that even if between the two events it is a great period of time, the Covid-19 pandemic also caught people unprepared, some of them do not believe that this virus exists or they believe that the virus is a normal cold and they continue with business, with making arrangements for travel, not observing the rules imposed by states, considering themselves free. This tells us that people forget history or that they did not learn anything from it.

The worst epidemics and pandemics in history are considered to be:

a) The prehistoric epidemic in China (approx. 3000 B.C.) which took place in a prehistoric village now called „Hamin Mangha” and which „happened quickly enough that there was no time for proper burials”<sup>4</sup>;

b) The plague of Athens (430 B.C.) which took place during the Peloponnesian War during which it is estimated that between 75,000 and 100,000 people (i.e. 25% of the population) died<sup>5</sup>;

c) Antonine Plague (A.D. 165 - 180) which is believed to have appeared in Babylon, spread in Parthia and then in entire world, even in China, where it is attested in 173, 179 and 182 A.D.<sup>6</sup>;

d) Plague of Cyprian (A.D. 250 - 270) which originated in Ethiopia, spread in Rome where it killed approx. 5,000 people per day, in Greece and Syria<sup>7</sup>;

e) Plague of Justinian (A.D. 541 - 542) named after the Byzantine emperor Justinian I, arrived in Constantinople almost a year after the disease first made its appearance in the outer provinces of the Byzantine empire. It killed between a quarter and a half of the Mediterranean population and played a key role in the fall of the eastern Roman Empire<sup>8</sup>;

f) The Black Death (1346 – 1353) which devastated Europe, killing approx. 25-30 million people. The disease originated in central Asia and entered Europe carried by rats on Genoese trading ships sailing from the Black Sea<sup>9</sup>;

g) Cocoliztly epidemic (1545 – 1548) first appeared in Mexico and killed an estimated 45% of the entire Aztec population. Historical records suggest it was some type of haemorrhagic fever, but recent DNA evidence suggests the culprit might have been salmonella brought by European colonizers<sup>10</sup>;

h) Great Plague of London (1665 – 1666) ravaged London, around 68,596 people dying during the epidemic, though the actual number of deaths is suspected to have exceeded 100,000 out of a total population estimated at 460,000. From London, the plague spread to many parts of England<sup>11</sup>;

i) Great Plague of Marseille (1720 – 1723) was the last wave of plague that hit western Europe and affected the French region of Provence. Arrived from the Levant, the plague killed between 76,000 and

<sup>2</sup> Owen Jarus, *20 of the worst epidemics and pandemics in history*, Live Science, All About History, 2020, <https://www.livescience.com/worst-epidemics-and-pandemics-in-history.html> (accessed on 19.03.2021).

<sup>3</sup> The School of Life, *Camus and the Plague*, <https://www.theschooloflife.com/thebookoflife/camus-and-the-plague/> (accessed on 19.03.2021).

<sup>4</sup> Owen Jarus, *op. cit.*.

<sup>5</sup> Robert J. Littman, *The plague of Athens: epidemiology and paleopathology*, Mt Sinai J Med. 2009, <https://pubmed.ncbi.nlm.nih.gov/19787658/> (accessed on 19.03.2021).

<sup>6</sup> For more details, Florian Matei-Popescu, *Ciuma Antonină – o pandemie devastatoare la apogeul Imperiului Roman*, 2020, <https://www.upit.ro/ro/upit-pentru-comunitate/ciuma-antonina-o-pandemie-devastatoare-la-apogeul-imperiului-roman> (accessed on 19.03.2021).

<sup>7</sup> John Horgan, *Plague of Cyprian, 250-270 CE*, 2016, <https://www.ancient.eu/article/992/plague-of-cyprian-250-270-ce/> (accessed on 19.03.2021).

<sup>8</sup> John Horgan, *Justinian’s Plague (541 – 542 CE)*, 2014, <https://www.ancient.eu/article/782/justinians-plague-541-542-ce/> (accessed on 19.03.2021).

<sup>9</sup> Mark Cartwright, *Black Death*, 2020, [https://www.ancient.eu/Black\\_Death/](https://www.ancient.eu/Black_Death/) (accessed on 19.03.2021).

<sup>10</sup> Angus Chen, *One of the history’s worst epidemics may have been caused by a common microbe*, 2018 <https://www.sciencemag.org/news/2018/01/one-history-s-worst-epidemics-may-have-been-caused-common-microbe> (accessed on 19.03.2021).

<sup>11</sup> John S. Morrill, *Great Plague of London*, <https://www.britannica.com/event/Great-Plague-of-London> (accessed on 19.03.2021).

126,000 people in south-eastern France, taking as many as 45,000 lives in Marseille alone<sup>12</sup>;

j) Russian Plague (1770 – 1772) was the last wave of plague that hit Europe, started when Russian troops that fought in Russo-Turkish war developed a feverish illness and swollen lymph nodes. The plague spread all the way to Moscow, and killing between 52,000 and 100,000 people in Moscow alone<sup>13</sup>;

k) Philadelphia yellow fever epidemic (1793) was worst outbreak of Yellow Fever ever recorded in North America, approximately 11,000 people contracted it out of which 5,000 people, (i.e. 10 % of the city's population), died<sup>14</sup>;

l) Flu pandemic (1889 – 1890) also known as the “Russian flu”, appeared in November 1889 in St. Petersburg, Russia. Within four months, it had spread throughout the northern hemisphere, killing about 1 million people worldwide<sup>15</sup>;

m) American polio epidemic (1916) started in June 1916 in a densely populated area of Brooklyn, New York, and soon spread to other communities across Northeast America. It lasted through October 1916 and claimed 6,000 lives and left 27,000 people paralyzed, 80% of the fatalities being children under 5<sup>16</sup>;

n) Spanish flu (1918 – 1919) was first observed in Kansas, United States, and it was the most severe influenza outbreak of the 20th century. It affected 1/3 of the world population and killed between 25 and 50 million people worldwide. Just like Covid-19, it was transmitted from person to person through airborne respiratory secretions<sup>17</sup>;

o) Asian flu (1957 – 1958) was caused by a virus known as influenza A subtype H2N2. It was first identified in February 1957 in East Asia and subsequently spread to countries worldwide. The estimated number of deaths was 1.1 million worldwide<sup>18</sup>;

p) AIDS pandemic and epidemic (1981 – present) is caused by the human immunodeficiency virus (HIV)

which targets the immune system and weakens people's defense against many infections and some types of cancer. First identified in 1981, AIDS continues to be a major global public health issue, having claimed almost 33 million lives so far and infected over 70 million worldwide<sup>19</sup>;

q) H1N1 Swine flu pandemic (2009 – 2010) was first detected in spring of 2009 in the United States of America and spread quickly across the world. The disease was caused by a novel influenza A virus which contained a unique combination of influenza genes not previously identified in animals or people. It is estimated that 151,700 - 575,400 people worldwide died from A H1N1 virus infection during the first year the virus circulated<sup>20</sup>;

r) West African Ebola epidemic (2014 – 2016) was the “largest, most severe and most complex Ebola epidemic” in history, according to the World Health Organization. More than 28,000 people were infected, and over 11,000 people died before the international public health emergency ended in June 2016. Most of the cases occurred in three countries: Guinea, Sierra Leone, and Liberia<sup>21</sup>.

## 2. The impact of Covid-19 on Intellectual Property

If we analyse the goods that we use, eat, drink, dress in our daily life, we notice that all of them are the product of the IP. The IP started its life when people started to exist and to find ways to improve their life. The drawings in the caves, the tools for hunting, for agriculture, the wheel, the earliest examples of written literature are also part of the human creation and therefore of the IP.

Not only in normal times, but also in times of crisis, such as a pandemic, IP is more important than

<sup>12</sup> Cindy Ermus, *The Plague of Provence: Early Advances in the Centralization of Crisis Management*, Arcadia, 2015, no. 9, <http://www.environmentandsociety.org/arcadia/plague-provence-early-advances-centralization-crisis-management> (accessed on 19.03.2021).

<sup>13</sup> Past Medical History, *The Russian Plague of 1770 – 1772*, 2017, <https://www.pastmedicalhistory.co.uk/the-russian-plague-of-1770-1772/> (accessed on 19.03.2021).

<sup>14</sup> History Resources, *Reports on the yellow fever epidemic, 1793*, <https://www.gilderlehrman.org/history-resources/spotlight-primary-source/reports-yellow-fever-epidemic-1793> (accessed on 19.03.2021).

<sup>15</sup> *Epidemiology of the Russian flu, 1889-1890*, <https://contagions.wordpress.com/2011/01/03/epidemiology-of-the-russian-flu-1889-1890/> (accessed on 19.03.2021).

<sup>16</sup> David M. Oshinsky, *Breaking the back of polio*, Yale Medicine, 2005, <https://medicine.yale.edu/news/yale-medicine-magazine/breaking-the-back-of-polio/> (accessed on 19.03.2021).

<sup>17</sup> Editors of the Encyclopedia Britannica, *Influenza pandemic of 1918-1919*, <https://www.britannica.com/event/influenza-pandemic-of-1918-1919> (accessed on 19.03.2021).

<sup>18</sup> Centers for Disease Control and Prevention, *Influenza (flu) 1957 – 1958 pandemic (H2N2 virus)*, <https://www.cdc.gov/flu/pandemic-resources/1957-1958-pandemic.html> (accessed on 19.03.2021).

<sup>19</sup> World Health Organization, *Hiv/Aids*, 2020, <https://www.who.int/news-room/fact-sheets/detail/hiv-aids> (accessed on 19.03.2021).

<sup>20</sup> Centers for Disease Control and Prevention, *Influenza (flu). 2009 H1N1 Pandemic*, <https://www.cdc.gov/flu/pandemic-resources/2009-h1n1-pandemic.html> (accessed on 19.03.2021).

<sup>21</sup> World Vision, *2014 Ebola virus outbreak: Facts, symptoms, and how to help*, <https://www.worldvision.org/health-news-stories/2014-ebola-virus-outbreak-facts> (accessed on 19.03.2021).

ever, and its benefits are even greater<sup>22</sup> because it helps to progress and innovate to eradicate the pandemic. In addition, “the IP system recognizes at both the national and the international levels that emergencies and catastrophes may call for measures that may disrupt the normal functioning of the incentive framework upon which the IP system is based during the period of the emergency or catastrophe.”<sup>23</sup> Such measures include compulsory licenses, licenses of right of patented technology embodied in vital medical supplies and medicines, the use of exceptions in relation to cultural and educational works to ensure the availability of vital data, information and knowledge for the purposes of combatting and containing the virus.

At the beginning of the crisis, starting with Italy and continuing with other states where the disease spread, the biggest problem encountered by states was the „scarcity of resources to fight and contain the virus”, by resources meaning in principle the medical staff and including but not limited to „personal protective equipment, testing kits, ventilators, pharmaceuticals and healthcare products as well as other laboratory and medical equipment”<sup>24</sup>. In time, solutions were found, most of them coming from private sector which made available to the medical sector the missing equipment either on a voluntary basis, either obliged by governments.

There were many voices saying that the IP stands against the progress to eradicate the Covid-19 pandemic mischaracterising the IP rights as a “monopoly”, claiming that “IP rights will thwart research and development and make vaccines and treatments unaffordable” and calling “for the suspension of IP rights to keep prices low and to address supply shortages, particularly in low and middle-income countries”<sup>25</sup>. But is this the case? Is IP standing against the needed innovation to fight the Covid-19? In our opinion “no” because there are multiple ways to use the IP such as:

a) free licenses granted online by the IP right holders to the general public, for example under Creative Commons;

b) free licenses granted by the IP right holders to specific persons under written agreements;

c) waiver by the IP right holders to act against the persons who infringe their rights;

d) compulsory licenses granted by competent authorities in the state where the IP right exist;

e) technology pools (i.e. agreements between at least two IP right owners to group their rights relating to a specific technology and to license the rights to use these rights to each other and to third parties, subject to certain conditions, such as the payment of royalties<sup>26</sup>;

f) under emergency legislation adopted by the affected states which in most countries have the right to requisition goods and/or services necessary to fight against the crisis.

Also, in times of crisis, the IP is better valued and the businesses whose activity is based on IP have greater revenues.

It may be thought that from the IP systems, only the patent system is a key element of the system for innovation and dissemination of medical technologies since most of the drugs, medical devices, vaccines, and other health technologies are protected by patents. However, the copyright, trademarks, designs, and trade secrets are also key elements of the IP system which may help or already helped during the Covid-19 pandemic not only the medical system, but other industries also<sup>27</sup>. In addition, it is worth mentioning that drugs, medical devices, vaccines, and other health technologies may be protected by multiple IP systems at the same time. For example, a vaccine may be protected under the patent laws, but also under the trademark law. A medical device may be protected under the design law, but also under the trademark law and copyright law.

## 2.1. Copyright during Covid-19

As we know, for the copyright there is no need for any registration, the author having the right over his/her work since the moment of its creation, even if it is unfinished, under the condition that the work is original.

The Berne Convention for the protection of literary and artistic works as amended in September 1979 („**Berne Convention**”) presents the object of „literary and artistic works” which is represented by „every production in the literary, scientific and artistic

<sup>22</sup> Thomas J. Donohue, *Why Intellectual Property Protection matters in the time of Coronavirus*, Global Innovation Policy Center, <https://www.theglobalipcenter.com/why-intellectual-property-protection-matters-in-the-time-of-coronavirus/> (accessed on 19.03.2021).

<sup>23</sup> WIPO, *Some Considerations on Intellectual Property, Innovation, Access and COVID-19*, 2020, p. 3, [https://www.wipo.int/export/sites/www/about-wipo/en/dg\\_gurry/pdf/ip\\_innovation\\_and\\_access\\_24042020.pdf](https://www.wipo.int/export/sites/www/about-wipo/en/dg_gurry/pdf/ip_innovation_and_access_24042020.pdf) (accessed on 19.03.2021).

<sup>24</sup> Ma. Sophia Editha Cruz – Abrenica, Renson Louise Yu, *IP in the Time of Covid-19: Limiting IP rights for Covid-19 Solutions*, 2020, <https://www.lexology.com/library/detail.aspx?g=f681793e-f830-40a7-988c-13d7b689d792> (accessed on 19.03.2021).

<sup>25</sup> For more details, Philip Stevens, Mark Schultz, *Why Intellectual Property rights matter for Covid-19*, Geneva Network, 2021, <https://geneva-network.com/research/why-intellectual-property-rights-matter-for-covid-19/> (accessed on 19.03.2021).

<sup>26</sup> World Trade Organization, *The TRIPS Agreement and Covid-19. Information note*, 2020, p. 5, [https://www.wto.org/english/tratop\\_e/covid19\\_e/trips\\_report\\_e.pdf](https://www.wto.org/english/tratop_e/covid19_e/trips_report_e.pdf) (accessed on 19.03.2021).

<sup>27</sup> This aspect was also recognised by WTO. For more details, see World Trade Organization, *The TRIPS Agreement and Covid-19. Information note*, 2020, p. 2, [https://www.wto.org/english/tratop\\_e/covid19\\_e/trips\\_report\\_e.pdf](https://www.wto.org/english/tratop_e/covid19_e/trips_report_e.pdf) (accessed on 19.03.2021).

domain, whatever may be the mode or form of its expression, such as books, pamphlets and other writings; lectures, addresses, sermons and other works of the same nature; dramatic or dramatico-musical works; choreographic works and entertainments in dumb show; musical compositions with or without words; cinematographic works to which are assimilated works expressed by a process analogous to cinematography; works of drawing, painting, architecture, sculpture, engraving and lithography; photographic works to which are assimilated works expressed by a process analogous to photography; works of applied art; illustrations, maps, plans, sketches and three-dimensional works relative to geography, topography, architecture or science”.

The World Trade Organization („WTO”) Agreement on Trade-Related Aspects of Intellectual Property Rights (the „TRIPS Agreement”) represents the most comprehensive multilateral agreement on IP and it makes the connection with the Berne Convention stipulating that computer programs, whether in source or object code, shall be protected as literary works under the Berne Convention.

The computer programs have a key role in making our life easier. It is said that prior to the Covid-19 pandemic, „the speed of technological change had already expected to be significant” taking into consideration the rollout of 5G, development of AI and big data<sup>28</sup>, but after the pandemic started, we have „vaulted five years forward in consumer and business digital adoption in a matter of around eight weeks”.<sup>29</sup> And if we think at all that changed around us we realise that this is true because many entities from many industries shifted in online using digital platforms for their activity (e.g. the courts, the grocery stores, the schools, the doctors who started delivering telemedicine, the theatres, the show organisers, etc.) or other industries, such as financial ones, increased their use of digital services (e.g. banks).

Also, in the cultural sector, “many right holders have taken steps to make their works easily available to schools, universities, libraries, research institutions and the general public. These steps include innovative licensing arrangements, free access to research related to SARS-CoV-2, the virus strain that causes Covid-19, free access to newspaper and media articles about Covid-19, free access to many educational texts, online learning platforms and e-books and the free

transmission of concerts, operas, and other cultural works.”<sup>30</sup>

Therefore, many right holders of copyright tried to help either with free licenses, either with better prices for their works. For example, at the beginning of the crisis, having in view the shortage of masks and other protective equipment Romanian and French Association of Standardization have made available for free:

a) in Romania, kit of free standards during the emergency state (i.e. March-Mai 2020);

b) in France, guides to produce masques for the population that there are still available for free and continuously updated and improved<sup>31</sup>.

Other entities which made available their works protected by copyright are from different sectors, such as academic, corporative, intergovernmental organizations, non-governmental organizations, governmental organizations, and among them we mention:

a) Technology companies such as Microsoft, Amazon, IBM, Intel, Hewlett Packard, Facebook have committed to grant time-limited licenses for some of or all their IP for the purposes of ending and mitigating the Covid-19 pandemic<sup>32</sup>;

b) College de France, which offers more than 1000 online documents (courses, conferences, colloquium);

c) Harvard University, which offers some content freely available such as e-books, streaming video and music, images, theatre and Covid-19 resources;

d) Copyright Clearance Center, which has a list of publishers who have authorised the use of their materials in distance learning models and other uses;

e) Egypt Today, which lists governmental initiatives where cultural sectors began broadcasting and uploading their content on the internet;

f) Pearson, which is providing access to expert faculty, best practices and other online learning resources for people who are studying, teaching or working remotely;

g) European Committee for Standardization and the European Committee for Electrotechnical Standardization, which in collaboration with their members made freely available certain copyrighted European standards for certain medical devices and personal protective equipment.

<sup>28</sup> Intellectual Property Office of Singapore, *op.cit.*.

<sup>29</sup> Aamer Baig, Bryce Hall, Paul Jenkins, Eric Lamarre, and Brian McCarthy, *The Covid-19 recovery will be digital: A plan for the first 90 days*, 2020, <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/the-covid-19-recovery-will-be-digital-a-plan-for-the-first-90-days> (accessed on 19.03.2021).

<sup>30</sup> WIPO, *Some Considerations on Intellectual Property, Innovation, Access and COVID-19*, 2020, p. 3,

[https://www.wipo.int/export/sites/www/about-wipo/en/dg\\_gurry/pdf/ip\\_innovation\\_and\\_access\\_24042020.pdf](https://www.wipo.int/export/sites/www/about-wipo/en/dg_gurry/pdf/ip_innovation_and_access_24042020.pdf) (accessed on 19.03.2021).

<sup>31</sup> <https://www.afnor.org/actualites/masque-barriere-france-international/> (accessed on 19.03.2021).

<sup>32</sup> Open Covid Pledge, *Make the pledge to share your intellectual property in the fight against Covid-19*, <https://opencovidpledge.org/> (accessed on 19.03.2021).

Regarding the procedures for isolation, testing and treatment of every case of Covid-19<sup>33</sup>, there were also developed and used contact tracing applications<sup>34</sup> and body temperature devices, which have played a major role in the prevention of the spread of the virus among the citizen of China, Singapore, and South Korea<sup>35,36</sup>. Such applications and devices also started to be developed and used in other states, even in European Union, Canada, United States of America.

As previously mentioned, many businesses from many industries started to develop their activity remotely, through digital means in order to survive, the pandemic being therefore a wake-up call to businesses that have been slow to embrace digitalisation and to commercialise their intangible assets. In these times, the declaration of Margaret Vestager, EU Competition Commissioner, that “there are only two types of business: those that are digital and those that soon will be”, is more applicable than ever that.<sup>37</sup>

Nowadays, “digitalisation and IP come hand in hand” taking into consideration that the technologies developed and used for remote activities are protected by copyright. Also, it is said that “governments should encourage businesses to embark on digitalisation, and should not only offer funding, but also make it easier for businesses to protect the IP rights created in the process of digitalisation.”<sup>38</sup>

Even if the digitalisation has its positive aspects such as amplifying brand value, it also has negative aspects, such as making IP “more vulnerable to theft through greater ease of counterfeit and copying”. Therefore, “understanding the value of IP assets and ensuring they are adequately protected will be essential for businesses going digital.”<sup>39</sup>

## 2.2. Patents during Covid-19

According to art. 27 of the TRIPS Agreement, patents are available for any inventions, in all fields of technology under three conditions: (a) to be new, (b) to involve an inventive step and (c) to be capable of industrial application.

The first recorded patent in the world for an industrial invention was granted in 1421 in Florence to the architect and engineer Filippo Brunelleschi<sup>40</sup>. The patent gave him a three-year monopoly on the manufacture of a barge with hoisting gear used to transport marble. It appears that such privileged grants to inventors spread from Italy to other European countries during the next two centuries<sup>41</sup>.

Patents are granted to incentivize innovation and “that incentive requires trust that those rights will be respected.”<sup>42</sup>

Patents provide the IP right holder with a legal right to prevent other to making, using, selling, and importing that invention for a period of time and they are granted for inventions in any field of industry, but having in view the crisis we are facing, the patents in the medical field for devices, drugs, vaccines, and other health technologies are of most interest nowadays.

As we know, patent rights require public disclosure, and in the medical sector, they enable drug developers to identify partners with the right intellectual assets such as knowhow, platforms, compounds, and technical expertise. Without patents most of this valuable proprietary knowledge would be kept hidden as trade secrets, making it impossible for researchers to know what is out there.<sup>43</sup>

To support the inventors, many states have implemented accelerated patents examination

<sup>33</sup> Dr Tedros Adhanom Ghebreyesus, Director - General of World Health Organisation - speech opening remarks at the Media Briefing on COVID-19, 13 March 2020 said “You can’t fight a virus if you don’t know where it is. Find, isolate, test and treat every case, to break the chains of transmission. Every case we find and treat limits the expansion of the disease.”

<sup>34</sup> World Health Organisation defined the contact tracing as “the process of identifying, assessing, and managing people who have been exposed to a disease to prevent onward transmission. When systematically applied, contact tracing will break the chains of transmission of an infectious disease and is thus an essential public health tool for controlling infectious disease outbreaks. For contact tracing to be effective, countries need adequate capacity, including human resources, to test suspect cases in a timely manner.” For more details, please see *Ethical considerations to guide the use of digital proximity tracking technologies for COVID-19 contact tracing*, Interim Guidance, 28 May 2020, [https://www.who.int/publications/i/item/WHO-2019-nCoV-Ethics>Contact\\_tracing\\_apps-2020.1](https://www.who.int/publications/i/item/WHO-2019-nCoV-Ethics>Contact_tracing_apps-2020.1) (accessed on 19.03.2021).

<sup>35</sup> Euronews, *Coronavirus Conundrum: COVID-19 Tracking Apps That Do Not Breach Privacy*, (television broadcast, dated 9 April 2020), [https://www.youtube.com/watch?v=\\_goD-J96br0](https://www.youtube.com/watch?v=_goD-J96br0) (accessed on 19.03.2021).

<sup>36</sup> Jennifer Valentino-DeVries, *Translating a Surveillance Tool into a Virus Tracker for Democracies*, New York Times, 19 March 2020, <https://www.nytimes.com/2020/03/19/us/coronavirus-location-tracking.html> (accessed on 19.03.2021).

<sup>37</sup> Intellectual Property Office of Singapore, *op.cit.*

<sup>38</sup> Intellectual Property Office of Singapore, *op.cit.*

<sup>39</sup> Intellectual Property Office of Singapore, *op.cit.*

<sup>40</sup> Isabelle Hyman, *Filippo Brunelleschi*, Encyclopedia Britannica, January 1, 2021. <https://www.britannica.com/biography/Filippo-Brunelleschi> (accessed on 19.03.2021).

<sup>41</sup> William Weston Fisher, *Patent*, Encyclopedia Britannica, May 27, 2019. <https://www.britannica.com/topic/patent> (accessed on 19.03.2021).

<sup>42</sup> Christopher Stothers, Alexandra Morgan, *IP and the supply of Covid-19-related drugs*, Journal of Intellectual Property Law & Practice, Volume 15, Issue 8, August 2020, p. 590, <https://doi.org/10.1093/jiplp/jpaa114> (accessed on 19.03.2021).

<sup>43</sup> Philip Stevens, Mark Schultz, *op.cit.*

procedures, known also as „fast-track” procedures, among such states being<sup>44</sup>:

a) Brazil – for patent applications related to innovations that can be used to fight Covid-19 from 7 April 2020 to 30 June 2021;

b) United States - for applicants which qualify for small and micro-entity status with respect to applications that cover a product or process that is subject to US Food and Drug Administration approval for use in the prevention and/or treatment of COVID-19;

c) Russia - applications for inventions and utility models in the field of technologies for combating viruses and associated diseases (such as pneumonia) without charging an additional fee.

### 2.2.1. History of the vaccine

Most of the pharmaceutical companies, when making development, research and releasing new drugs, medical equipment or vaccines on the market want to protect their IP rights taking into consideration the high costs involved by those activities.

From a legal point of view, the vaccines are protected by IP through the patents system.

At this moment, there exists in the market multiple vaccines approved by the competent authorities against the Covid-19. However, like always, people are divided in two groups: one group entrusting the vaccines and agreeing to be vaccinated in order to acquire the immunisation to Covid-19, the other one not entrusting them and refusing the vaccination, even if according to World Health Organization, the vaccines in general (i.e. which protect against at least 20 diseases, such as diphtheria, tetanus, pertussis, influenza and measles) save the lives of up to 3 million people every year<sup>45</sup>.

According to the Cambridge Dictionary, the term “vaccine” is defined as “a substance containing a virus

or bacterium in a form that is not harmful, given to a person or animal to prevent them from getting the disease that the virus or bacterium causes”<sup>46</sup>. Most of the vaccines are given by an injection, but some are given orally (by mouth) or sprayed into the nose<sup>47</sup>.

The word “vaccine” comes from the name for a pox virus—the cowpox virus, *vaccinia*<sup>48</sup>.

Edward Jenner is considered the founder of vaccinology in the West in 1796, after he inoculated a 13-year-old-boy with vaccinia virus (cowpox), and demonstrated immunity to smallpox, after he noticed that milkmaids infected with cowpox, which manifested itself as a series of pustules on the hand and forearms, were immune to the smallpox epidemics that regularly attacked the residents of his parish<sup>49,50</sup>. In 1798, the first smallpox vaccine was developed. Over the 18th and 19th centuries, systematic implementation of mass smallpox immunisation culminated in its global eradication in 1979<sup>51</sup>.

However, it is said that “the story of vaccines did not begin with the first vaccine of Edward Jenner, but that it begun with the long history of infectious disease in humans, and in particular, with early uses of smallpox material to provide immunity to that disease”, the evidence showing that the Chinese employed smallpox inoculation as early as 1000 AD, being practices also in Africa and Turkey.<sup>52</sup>

After the first vaccine of Edward Jenner in 1798, the following vaccines have been developed<sup>53</sup>:

a) 1885 – the vaccine of Louis Pasteur against rabies, who appropriated the word “vaccine”, permanently stretching its meaning beyond its Latin word associations with cows and cowpox virus<sup>54</sup>;

b) 1923 – the method of Alexander Glenn to inactivate tetanus toxin with formaldehyde;

c) 1926 - the method of Alexander Glenn was used to develop the vaccine against diphtheria;

d) 1938 – the vaccine against tetanus;

<sup>44</sup> World Trade Organization, *The TRIPS Agreement and Covid-19. Information note*, 2020, p. 6. [https://www.wto.org/english/tratop\\_e/covid19\\_e/trips\\_report\\_e.pdf](https://www.wto.org/english/tratop_e/covid19_e/trips_report_e.pdf) (accessed on 19.03.2021).

<sup>45</sup> World Health Organization, *Vaccines and immunisation: What is vaccination?*, December 2020, <https://www.who.int/news-room/q-a-detail/vaccines-and-immunization-what-is-vaccination> (accessed on 19.03.2021).

<sup>46</sup> Cambridge Dictionary, <https://dictionary.cambridge.org/dictionary/english/vaccine> (accessed on 19.03.2021).

<sup>47</sup> World Health Organization, *Vaccines and immunisation: What is vaccination?*, December 2020, <https://www.who.int/news-room/q-a-detail/vaccines-and-immunization-what-is-vaccination> (accessed on 19.03.2021).

<sup>48</sup> Howard Markel, *The origin of the word „vaccine”*, Science Friday, 2015, <https://www.sciencefriday.com/articles/the-origin-of-the-word-vaccine/> (accessed on 19.03.2021).

<sup>49</sup> Howard Markel, *op. cit.*

<sup>50</sup> For more details on the observations of Edward Jenner prior to creating the vaccine, please see Edward Jenner, *An Inquiry into the Causes and Effects of the Variolae Vaccinae. A Disease Discovered in Some of the Western Counties of England, Particularly Gloucestershire, and Known by the Name of the Cow Pox*, The Project Gutenberg eBook, 2009, <http://www.gutenberg.org/files/29414/29414-h/29414-h.htm> (accessed on 19.03.2021).

<sup>51</sup> The Immunisation Advisory Centre, *A brief history of vaccination*, <https://www.immune.org.nz/vaccines/vaccine-development/brief-history-vaccination> (accessed on 19.03.2021).

<sup>52</sup> The College of Physicians of Philadelphia, *The History of Vaccines*, [https://www.historyofvaccines.org/timeline#EVT\\_101044](https://www.historyofvaccines.org/timeline#EVT_101044) (accessed on 19.03.2021).

<sup>53</sup> For more information, please see Children’s Hospital of Philadelphia, *Vaccine History: Developments by year*, 2019,

<https://www.chop.edu/centers-programs/vaccine-education-center/vaccine-history/developments-by-year#> (accessed on 19.03.2021).

<sup>54</sup> Howard Markel, *op. cit.*

- e) 1948 – the vaccine against Pertussis;
- f) 1955 – the vaccine of Jonas Salk against polio;
- g) 1963 – the vaccine against measles;
- h) 1967 - the vaccine against mumps;
- i) 1969 - the vaccine against rubella;
- j) 1985 – the vaccine against *Haemophilus influenzae* type b;
- k) 1996 – the vaccine against varicella (chickenpox);
- l) 1998 – the vaccine against rotavirus;
- m) 2000 – the vaccine against hepatitis A;
- n) 2001 - the pneumococcal vaccine;
- o) 2002 – the vaccine against influenza;
- p) 2014 - meningococcal serogroup B vaccine;
- q) 2020 - the vaccine against Covid-19.

### 2.2.2. The role of the IP in innovation

Having in view the spread of the Covid-19, the vaccine is the only way for us to obtain the immunity against the virus and in the end to regain our freedom of movement and to start travelling again.

The WTO mentions in an information note from 15 October 2020 that „A full response to the Covid-19 crisis requires wide access to an extensive array of medical products and other technologies, ranging from protective equipment to contact tracing software, medicines and diagnostics, as well as vaccines and treatments that are yet to be developed. The way in which the IP system is designed – and how effectively it is put to work – can be a significant factor in facilitating access to existing technologies and in supporting the creation, manufacturing and dissemination of new technologies.”<sup>55</sup>

The vaccine means innovation and for creating a vaccine many hours of research are invested, many researchers are involved, many technologies are used, many attempts and testing are made. Therefore, it results that creating a vaccine involves a lot of costs for the pharmaceutical companies, this being the main reason for which they want to protect it through the patents system. In addition, the protection under IP is the reward for the hard work of the people involved in research.

However, prior to having approved the vaccines against Covid-19, multiple international organizations, or non-governmental organisation wondered if the IP

represented a barrier to access to the vaccines, especially in cases where “the innovation produces effective results, and (...) the countries are not able to obtain the innovation on appropriate and affordable terms”<sup>56</sup>.

A response to the above situation is that one of the many roles of IP, especially in crisis, is “to provide an incentive framework in which innovation can be encouraged and provided with a safe passage through the many, often perilous, stages from invention to commercial product or service”<sup>57</sup>, in other words the reward for the people making the hard work and on which the entire world counts on. We understand therefore the CEO of AstraZeneca who stated that: “I think IP is a fundamental part of our industry and if you don't protect IP, then essentially there is no incentive for anybody to innovate.”<sup>58</sup> IP rights support the investments in research and development by giving the opportunity of a return.

### 2.2.3. Compulsory and voluntary licenses

Governments cannot simply cancel the patent rights, but in some situations, like crisis situations, there are legal possibilities to make available the patents to overcome that crisis.

Article 7 of the TRIPS Agreement describes the objectives of the IP system in terms of a balance of rights and obligations. The objectives refer to the protection and enforcement of IP rights in a manner which contributes to „the promotion of technological innovation”, „the transfer and dissemination of technology” to the mutual advantage of both „producers and users of technological knowledge”, and also „social and economic welfare”. Article 8 states that members may adopt measures necessary to protect public health and nutrition and to promote the public interest in sectors of vital importance to their socio-economic and technological development that are consistent with the provisions of the TRIPS Agreement<sup>59</sup>.

With application to a crisis such as the Covid-19, art. 30, 31 and 31bis of the TRIPS Agreement provide the member states with three situations in which patents rights may be restricted.

The first one regulated by art. 30 provides members states with the possibility to establish limited

<sup>55</sup> World Trade Organization, *The TRIPS Agreement and Covid-19. Information note*, 2020, p. 1, [https://www.wto.org/english/tratop\\_e/covid19\\_e/trips\\_report\\_e.pdf](https://www.wto.org/english/tratop_e/covid19_e/trips_report_e.pdf) (accessed on 19.03.2021).

<sup>56</sup> WIPO, *Some Considerations on Intellectual Property, Innovation, Access and COVID-19*, 2020, p. 1, [https://www.wipo.int/export/sites/www/about-wipo/en/dg\\_gurry/pdf/ip\\_innovation\\_and\\_access\\_24042020.pdf](https://www.wipo.int/export/sites/www/about-wipo/en/dg_gurry/pdf/ip_innovation_and_access_24042020.pdf) (accessed on 19.03.2021).

<sup>57</sup> WIPO, *Some Considerations on Intellectual Property, Innovation, Access and COVID-19*, 2020, p. 2, [https://www.wipo.int/export/sites/www/about-wipo/en/dg\\_gurry/pdf/ip\\_innovation\\_and\\_access\\_24042020.pdf](https://www.wipo.int/export/sites/www/about-wipo/en/dg_gurry/pdf/ip_innovation_and_access_24042020.pdf) (accessed on 19.03.2021).

<sup>58</sup> Sarah Newey, *WHO patent pool for potential Covid-19 products is „nonsense”, pharma leaders claim*, The Telegraph, 29.05.2020, <https://www.telegraph.co.uk/global-health/science-and-disease/patent-pool-potential-covid-19-products-nonsense-pharma-leaders/> (accessed on 19.03.2021).

<sup>59</sup> World Trade Organization, *The TRIPS Agreement and Covid-19. Information note*, 2020, p. 8, [https://www.wto.org/english/tratop\\_e/covid19\\_e/trips\\_report\\_e.pdf](https://www.wto.org/english/tratop_e/covid19_e/trips_report_e.pdf) (accessed on 19.03.2021).



exceptions to the exclusive rights conferred by a patent, under two conditions (a) that such exceptions do not unreasonably conflict with the normal exploitation of the patent and (b) do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties. Such situation may refer to<sup>60</sup>:

a) The exception for research and experimental – in such a case, the use of the patented product for scientific experimentation, during the term of the patent and without consent, is not an infringement. This exception enables researchers to examine the patented inventions and to conduct research on improvements without having to fear that they are infringing the patent;

b) The exception for regulatory view – which allows potential competitors to use a patented invention during the patent term without the consent of the patent owner for the purpose of obtaining marketing approval for a prospective generic product.

The second situation is regulated by art. 31 of the TRIPS Agreement and provide the member states with the possibility to allow the use of a patent without the authorisation of the right holder, including use by the government or third parties authorised by the government if the following conditions are cumulatively accomplished:

a) authorization of such use shall be considered on its individual merits;

b) in case of a **national emergency** or **other circumstances of extreme urgency** or in cases of public non-commercial use;

c) the scope and duration of such use shall be **limited to the purpose for which it was authorized**, and in the case of semi-conductor technology shall only be for public non-commercial use or to remedy a practice determined after judicial or administrative process to be anti-competitive;

d) such use shall be non-exclusive;

e) such use shall be non-assignable, except with that part of the enterprise or goodwill which enjoys such use;

f) any such use shall be authorized predominantly for the supply of the domestic market of the state authorizing such use;

g) authorization for such use shall be liable, subject to adequate protection of the legitimate interests of the persons so authorized, to be terminated if and

when the circumstances which led to it cease to exist and are unlikely to recur. The competent authority shall have the authority to review, upon motivated request, the continued existence of these circumstances;

h) the right holder shall be paid adequate remuneration in the circumstances of each case, taking into account the economic value of the authorization;

i) the legal validity of any decision relating to the authorization of such use shall be subject to judicial review or other independent review by a distinct higher authority in that state;

j) any decision relating to the remuneration provided in respect of such use shall be subject to judicial review or other independent review by a distinct higher authority in that state;

k) where such use is authorized to permit the exploitation of a patent („the second patent”) which cannot be exploited without infringing another patent („the first patent”).

Such possibility is known as “compulsory license” which “allow rival companies to manufacture and sell generic versions of a patented drug, thus breaking the inventor’s monopoly and keeping prices as low as possible.”<sup>61</sup>

For example, the Romanian law on patents<sup>62</sup> offers in cases of national urgency, circumstances of extreme urgency (such as the pandemic of Covid-19) or in circumstances of public utility for non-commercial purposes the possibility that the Bucharest Court to grant a compulsory license at the request of any interest person if the following conditions are accomplished:

a) the license to be granted at the expiry of a four-year term from the filing date of the patent request or of a three-year term from the granting of the patent, being applicable the term which expires the latest – this means that compulsory licenses will only be relevant for older registered inventions which prove to be useful against Covid-19<sup>63</sup>;

b) the granted license is non-exclusive;

c) the remuneration of the right holder is established based on the commercial value and granted licenses.

d) However, even if such possibility exists, Romania did not offer yet such compulsory license.

If we analyse the list created by the World Intellectual Property Organization<sup>64</sup>, we will see that such possibility exists in many states, however only three states having granted them:

<sup>60</sup> For more details, see World Trade Organization, *The TRIPS Agreement and Covid-19. Information note*, 2020, p. 1, [https://www.wto.org/english/tratop\\_e/covid19\\_e/trips\\_report\\_e.pdf](https://www.wto.org/english/tratop_e/covid19_e/trips_report_e.pdf) (accessed on 19.03.2021).

<sup>61</sup> Abi Millar, *Intellectual Property in the time of Covid-19*, [https://pharma.nridigital.com/pharma\\_jul20/intellectual\\_property\\_covid-19#](https://pharma.nridigital.com/pharma_jul20/intellectual_property_covid-19#) (accessed on 19.03.2021).

<sup>62</sup> Law no. 64/1994 on patents republished on the Official Gazette Part I no. 613 / 2014.

<sup>63</sup> Christopher Stothers, Alexandra Morgan, *op. cit.*, p. 590.

<sup>64</sup> WIPO, *Covid-10 IP Policy Tracker*, <https://www.wipo.int/covid19-policy-tracker/#/covid19-policy-tracker/access> (accessed on 19.03.2021).

a) Colombia, which through a Decree issued in March 2020 declared of public interest the drugs, medical devices, vaccines, and other health technologies that are used for diagnosis, prevention and treatment of Covid-19;

b) Israel, for the importation of generic versions of Abbvie's patents associated with lopinavir/ritonavir, branded as Kaletra;

c) Russia, for inventions related to the production of Remdesivir.

Among the entities which offered for free their patents we mention<sup>65</sup>:

a) the company Abbvie which voluntarily requested in Chile the cancellation of six of its patents related to the drugs Norvir (ritonavir) and Kaletra (ritonavir/lopinavir)<sup>66</sup>;

b) Moderna, which announced that it will not enforce during the pandemic the patents for the vaccine against Covid-19 based on a messenger RNA<sup>67</sup>;

c) Amazon Corporation, which announced that it will collaborate with the World Health Organization to supply advanced cloud technologies and technical expertise to track the Covid-19 virus, understand the outbreak, and better contain its spread;

d) Hewlett Packard Enterprise, which granted free access to all its patented technologies for the purpose of diagnosing, preventing, containing and treating Covid-19, including to supercomputing software and applications and compute and storage systems to advance diagnosis or treatment of Covid-19;

e) Novartis Corporation, which has made available a set of compounds from its libraries that it considers suitable for in vitro antiviral testing.

There are also companies which explored various forms of collaboration to speed up vaccine development, such as Pfizer who entered into a partnership with biotech company BioNTech, Sanofi who has teamed up with GSK to share technologies<sup>68</sup>.

The third situation is regulated by art. 31bis of the TRIPS Agreement and provide that the condition

regarding the use in the national market of the patent shall not apply for the purposes of production of a pharmaceutical product(s) and its export to another state which is least-developed or to another state that has made a notification of its intention to use this possibility, for example only in the case of a national emergency or other circumstances of extreme urgency or in cases of public non-commercial use. Therefore, it is ensured „a legal pathway for a country to permit the manufacturing of patented medicines under compulsory licence exclusively for export to countries with insufficient or no local manufacturing capacities in the pharmaceutical sector.”<sup>69</sup>

Regarding the compulsory licenses, as usual, there are two groups: one supporting them, meaning the publication for free of the patent related to drugs, medical devices, vaccines, and other health technologies that are used for diagnosis, prevention, and treatment of Covid-19 and the other being against such idea. Among those supporting the free, compulsory licenses, we found the WTO, Costa Rica<sup>70</sup>, India.

The group being against the waiving of the IP rights for drugs, medical devices, vaccines, and other health technologies that are used for diagnosis, prevention, and treatment of Covid-19 is arguing that:

a) “IP has not been an impediment to the common goal of ending this pandemic and rather has enabled the development of several medicines and vaccines that are now being tested for additional use in the fight against the COVID-19,” and “we have never needed innovation so much as now”<sup>71</sup>;

b) “this is probably the worst possible time to weaken IP, when biopharmaceutical companies are investing significantly and are taking many risks without any guarantee that their medicines or vaccines will make it past the finishing line”<sup>72</sup>;

c) “far from being a barrier, IP is part of the solution”, allowing “the innovator to control which partners manufacture the product, ensuring high quality

<sup>65</sup> WIPO, *Covid-19 Policy Tracker*, <https://www.wipo.int/covid19-policy-tracker/#/covid19-policy-tracker/voluntary-actions-text> (accessed on 19.03.2021).

<sup>66</sup> National Office of Intellectual Property Chile, *Patents of experimental use drugs for Coronavirus are released in Chile*, 2020, <https://www.inapi.cl/sala-de-prensa/detalle-noticia/liberan-en-chile-patentes-de-medicamentos-de-uso-experimental-para-coronavirus> (accessed on 19.03.2021).

<sup>67</sup> „We feel a special obligation under the current circumstances to use our resources to bring this pandemic to an end as quickly as possible. Accordingly, while the pandemic continues, Moderna will not enforce our COVID-19 related patents against those making vaccines intended to combat the pandemic. Further, to eliminate any perceived IP barriers to vaccine development during the pandemic period, upon request we are also willing to license our intellectual property for COVID-19 vaccines to others for the post pandemic period.” For more details, please see *Statement by Moderna on Intellectual Property Matters during the Covid-19 pandemic*, 2020, <https://investors.modernatx.com/news-releases/news-release-details/statement-moderna-intellectual-property-matters-during-covid-19> (accessed on 19.03.2021).

<sup>68</sup> Abi Millar, *op. cit.*

<sup>69</sup> World Trade Organization, *The TRIPS Agreement and Covid-19. Information note*, 2020, p. 10, [https://www.wto.org/english/tratop\\_e/covid19\\_e/trips\\_report\\_e.pdf](https://www.wto.org/english/tratop_e/covid19_e/trips_report_e.pdf) (accessed on 19.03.2021).

<sup>70</sup> Sarah Newey, *op. cit.*

<sup>71</sup> James Bacchus, *An unnecessary proposal. A WTO waiver of Intellectual Property Rights for Covid-19 Vaccines*, Free Trade Bulletin, 2020, no. 78, p. 3, <https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines> (accessed on 19.03.2021).

<sup>72</sup> Abi Millar, *op. cit.*

supplies, and to maximise low-cost access for low and middle-income countries.”, the TRIPS waiver, being the “wrong approach” because COVID-19 therapeutics and vaccines are complex biological products in which the main barriers are production facilities, infrastructure, and know-how. “IP is the least of the barriers”<sup>73</sup>;

d) “every researcher, scientist, business owner relies on a patent to put a great idea on paper. Patents also have many benefits: They prevent good ideas from being stolen; they help formalize developing economies by encouraging cooperation between government and the private sector; they encourage increased investments in biomedical and biopharmaceutical research; and they reward the hard work of inventors and creators everywhere ensuring (...) that better medicines are on the way”<sup>74</sup>;

e) “the private research and development business model, underpinned by IP rights, has been foundational to most of the existing treatments that are now being tested for coronavirus. It has also enabled companies to make bold investments in research and development for new products;

f) “generally speaking, nearly 70% of research and development is funded by the commercial sector, while around 30% is funded by the State. Around 70% of research and development is also performed by the commercial sector and 30% by the State. An effective strategy or approach to encouraging innovation must ensure that the right incentives are in place to encourage the major funders and performers of research and development to deliver results. IP is a central part of those incentives.”<sup>75</sup>

In addition, others mention that „With the belief that medicines should be “public goods,” there is literally no support in some quarters for the application of the WTO TRIPS Agreement to IP rights in medicines. Any protection of the IP rights in such goods is viewed as a violation of human rights and of the

overall public interest. This view, though, does not reflect the practical reality of a world in which many medicines would simply not exist if it were not for the existence of IP rights and the protections they are afforded.”<sup>76</sup>

*After vaccines against Covid-19 were created and were in process of authorization, as of 21<sup>st</sup> December 2020 existing 219 vaccines<sup>77</sup>, the group supporting the IP rights concluded that “this major achievement is a testament to how well the IP system has worked during the pandemic” and that “the existence of multiple vaccines means there is no Covid-19 vaccine “monopoly”, and minimal risk of premium pricing.”<sup>78</sup>*

### 2.3. Designs during Covid-19

The designs are also important IP rights, including during Covid-19, when lots of products used by medical staff are protected under the design system.

Just like in case of works protected by copyright and products protected by patents, the creators of designs also made available for free their creation for fighting against Covid-19. For instance<sup>79</sup>:

a) an anaesthesiologist from Taiwan, designed an “aerosol box” to protect medical personnel when performing endotracheal intubations and made his design available for use by others under a Creative Commons license, being free of charge to the public on condition that it is not used for commercial purposes and be properly attributed to the inventor<sup>80</sup>;

b) producers from fashion industry from Taiwan made a design for a protective suit to be used by medical personnel and made it accessible for replication by uploading it online, being after that used in Australia, Egypt, Mexico, Morocco, Botswana, Thailand, etc.<sup>81</sup>;

c) Medtronic Corporation, which made freely available the design specifications and software for their ventilator under the trademark Puritan Bennett 560 (PB560)<sup>82</sup>;

<sup>73</sup> Philip Stevens, Mark Schultz, *op. cit.*

<sup>74</sup> WIPO, *Some Considerations on Intellectual Property, Innovation, Access and COVID-19*, 2020, p. 4, [https://www.wipo.int/export/sites/www/about-wipo/en/dg\\_gurry/pdf/ip\\_innovation\\_and\\_access\\_24042020.pdf](https://www.wipo.int/export/sites/www/about-wipo/en/dg_gurry/pdf/ip_innovation_and_access_24042020.pdf) (accessed on 19.03.2021).

<sup>75</sup> WIPO, *Some Considerations on Intellectual Property, Innovation, Access and COVID-19*, 2020, p. 4, [https://www.wipo.int/export/sites/www/about-wipo/en/dg\\_gurry/pdf/ip\\_innovation\\_and\\_access\\_24042020.pdf](https://www.wipo.int/export/sites/www/about-wipo/en/dg_gurry/pdf/ip_innovation_and_access_24042020.pdf) (accessed on 19.03.2021).

<sup>76</sup> James Bacchus, *op. cit.*

<sup>77</sup> Philip Stevens, Mark Schultz, *op. cit.*

<sup>78</sup> Philip Stevens, Mark Schultz, *op. cit.*

<sup>79</sup> WIPO, *Covid-19 Policy Tracker*, <https://www.wipo.int/covid19-policy-tracker/#/covid19-policy-tracker/voluntary-actions-text> (accessed on 19.03.2021).

<sup>80</sup> ABC Mundial, *Taiwanese doctor creates cheap protective device amid coronavirus crisis*, March 2020, <https://abcmundial.com/en/2020/03/22/asia/technology/taiwanese-doctor-creates-cheap-protective-device-amid-coronavirus-crisis> apud. Ma. Sophia Editha Cruz – Abrenica, Renson Louise Yu, *IP in the Time of Covid-19: Limiting IP rights for Covid-19 Solutions*, 2020, <https://www.lexology.com/library/detail.aspx?g=f681793e-f830-40a7-988c-13d7b689d792> (accessed on 19.03.2021).

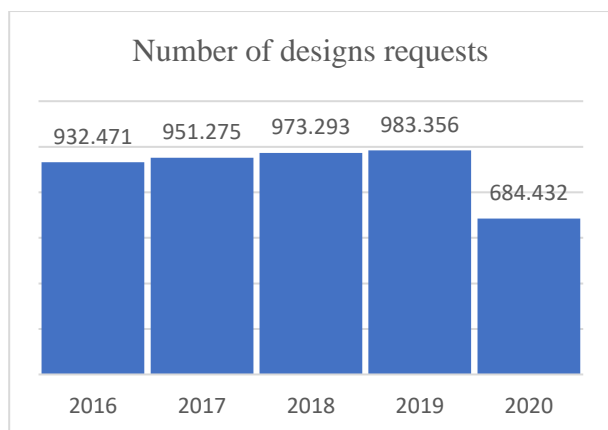
<sup>81</sup> Joaquin Singson, *In focus: How Mich Dulce's PPE Designs Are Saving Lives Across The World*, April 2020, <https://lifestyle.abs-cbn.com/articles/8621/mich-dulce-ppe-design> apud. Sophia Editha Cruz – Abrenica, Renson Louise Yu, *IP in the Time of Covid-19: Limiting IP rights for Covid-19 Solutions*, 2020, <https://www.lexology.com/library/detail.aspx?g=f681793e-f830-40a7-988c-13d7b689d792> (accessed on 19.03.2021).

<sup>82</sup> World Trade Organization, *The TRIPS Agreement and Covid-19. Information note*, 2020, p. 4, [https://www.wto.org/english/tratop\\_e/covid19\\_e/trips\\_report\\_e.pdf](https://www.wto.org/english/tratop_e/covid19_e/trips_report_e.pdf) (accessed on 19.03.2021).

d) General Motors, which made available its designs specifications for masks to the Original Equipment Suppliers Association and the Michigan Manufacturers Association;

e) Smiths Technology, which has made available one of its ventilators for other manufacturers to produce as part of a coordinated attempt to tackle a shortage of live-saving equipment as Covid-19 spreads.

To make an analysis of the impact of Covid-19 on design rights, we will present the situation of design applications during the period 2016 – 2020, which is the following<sup>83</sup>:



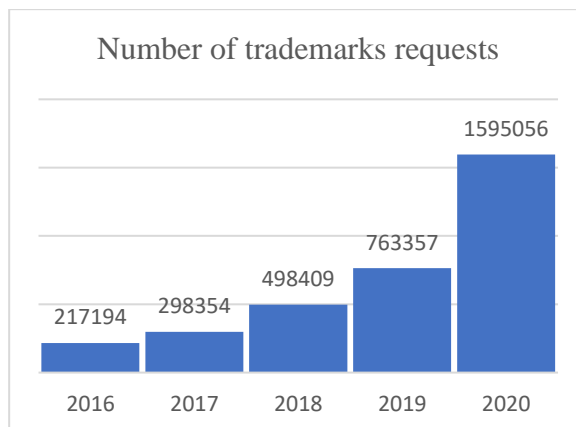
Analysing the above situation, we may notice that in the years prior to Covid-19 pandemic, the number of designs applications was constant, while in 2020, the year when the pandemic started, the number of designs applications decreased with 30,39% compared to 2019.

#### 2.4. Trademarks during Covid-19

According to art. 15 of the TRIPS Agreement, a trademark is represented by any sign, or any combination of signs, capable of distinguishing the goods or services of one undertaking from those of other undertakings.

The first recorded trademark in the world is the Czech beer trademark PILSNER from 1859 which is still in force and since then until 23.03.2021, there were 28.418.372 registered trademarks all over the world<sup>84</sup>.

Regarding the applications of trademarks during the period 2016 - 2020, the situation is the following<sup>85</sup>:



Analysing the above situation, we may notice that in the years prior to Covid-19 pandemic, the number of trademarks increased year-on-year with less than 50%, but the biggest increase was in 2020, the year when the pandemic started, when the number of trademarks applications increased by more than 100% compared to 2019.

According to the European Union Intellectual Property Office database, 90.567 applications out of the total number of applications in 2020 were for pharmaceutical products.

According to WTO<sup>86</sup>, to monitor Covid-19-related trademark applications, some members have introduced guidance for IP offices, other members are offering assistance to trademark registration applicants. For example:

a) Australia –implemented the Trade Mark Covid-19 Helpline which supports and assists small to medium Australian businesses that are having to quickly adapt to changing circumstances due to Covid-19;

b) China - introduced guidance to increase the monitoring or investigation of certain trademark applications related to Covid-19;

c) Chinese Taipei - produced a list of the names of pandemic prevention products and services and is offering a fee reduction with respect to trademark applications which designate goods or services identical to those on the list. In addition, the IP office launched a trademark consultation hotline in order to assist applicants with trademark searches;

d) United States - launched the Prioritized Examination Program for certain trademark and service mark applications, which allows COVID-19-related

<sup>83</sup> The data is filled by using the Design View database kept by the European Union Intellectual Property Office to which 71 IP Offices are members.

<sup>84</sup> The data is filled by using the TM View database kept by the European Union Intellectual Property Office to which 71 IP Offices are members.

<sup>85</sup> The data is filled by using the TM View database kept by the European Union Intellectual Property Office to which 71 IP Offices are members.

<sup>86</sup> World Trade Organization, *The TRIPS Agreement and Covid-19. Information note*, 2020, p. 7, [https://www.wto.org/english/tratop\\_e/covid19\\_e/trips\\_report\\_e.pdf](https://www.wto.org/english/tratop_e/covid19_e/trips_report_e.pdf) (accessed on 19.03.2021).

trademark applications to be prioritized and immediately assigned for examination.

There are voices which suggest that big clothing manufacturers (or fashion companies) must take a step to comply with their duty obligation in a way of not relying anymore on force majeure and not to exit from agreements with companies located to low-cost developing countries having in view that the big clothing manufacturers “rely on trademark licensing to outsource the manufacturing of their garments to low-cost developing countries”<sup>87</sup>.

### 2.5. Measures taken by the IP Offices

To support the applicants in the process of trademark, design, patents registration, but also the holders of registered trademarks, designs, patents during the Covid-19 crisis in 2020, the governments have issued regulations extending the time limits, the deadlines for payment of fees and also have started to work remotely and received online applications<sup>88</sup>. For example, WIPO adapted its work process to ensure

continued delivery of its IP services, the official meetings being moved to hybrid and virtual modes and offering a wide range of webinars with information about its services and IP in general<sup>89</sup>.

### 3. Conclusions

This study had the purpose to present how the Covid-19 affected the IP and if people (e.g. individual creators, businesses) remained interested in protecting and defending their rights related to their creations.

Our conclusion is that even if the humanity is facing a pandemic, lockdowns having and still being instated in many countries, we may see that the IP remained alive, still making part of our lives and the rights related to it being also in force, in principle due to the efforts of many people involved in research and development, in creative industries, in technology industries and who try every day to defend and to keep applicable the rights related to IP.

### References

- James Bacchus, *An unnecessary proposal. A WTO waiver of Intellectual Property Rights for Covid-19 Vaccines*, Free Trade Bulletin, 2020, no. 78, <https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines>;
- Amer Baig, Bryce Hall, Paul Jenkins, Eric Lamarre, and Brian McCarthy, *The Covid-19 recovery will be digital: A plan for the first 90 days*, 2020, <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/the-covid-19-recovery-will-be-digital-a-plan-for-the-first-90-days>;
- Irene Calboli, *Trade mark licensing and Covid-19: why fashion companies have a duty to comply with their legal obligation*, Journal of Intellectual Property Law & Practice, Volume 15, Issue 7, July 2020, Pages 489–490, <https://doi.org/10.1093/jiplp/jpaa088>;
- Mark Cartwright, *Black Death*, 2020, [https://www.ancient.eu/Black\\_Death/](https://www.ancient.eu/Black_Death/);
- Angus Chen, *One of the history's worst epidemics may have been caused by a common microbe*, 2018 <https://www.sciencemag.org/news/2018/01/one-history-s-worst-epidemics-may-have-been-caused-common-microbe>;
- Ma. Sophia Editha Cruz – Abrenica, Renson Louise Yu, *IP in the Time of Covid-19: Limiting IP rights for Covid-19 Solutions*, 2020, <https://www.lexology.com/library/detail.aspx?g=f681793e-f830-40a7-988c-13d7b689d792>;
- Thomas J. Donohue, *Why Intellectual Property Protection matters in the time of Coronavirus*, Global Innovation Policy Center, <https://www.theglobalipcenter.com/why-intellectual-property-protection-matters-in-the-time-of-coronavirus/>;
- Cindy Ermus, *The Plague of Provence: Early Advances in the Centralization of Crisis Management*, Arcadia, 2015, <http://www.environmentandsociety.org/arcadia/plague-provence-early-advances-centralization-crisis-management>;
- Isabelle Hyman, *Filippo Brunelleschi*, Encyclopedia Britannica, January 1, 2021. <https://www.britannica.com/biography/Filippo-Brunelleschi>;
- John Horgan, *Justinian's Plague (541 – 542 CE)*, 2014, <https://www.ancient.eu/article/782/justinians-plague-541-542-ce/>;
- John Horgan, *Plague of Cyprian, 250-270 CE*, 2016, <https://www.ancient.eu/article/992/plague-of-cyprian-250-270-ce/>;

<sup>87</sup> Irene Calboli, *Trade mark licensing and Covid-19: why fashion companies have a duty to comply with their legal obligation*, Journal of Intellectual Property Law & Practice, Volume 15, Issue 7, July 2020, Pages 489–490, <https://doi.org/10.1093/jiplp/jpaa088> (accessed on 19.03.2021).

<sup>88</sup> For information about each state, please see WIPO, *Covid-19 Policy Tracker*, <https://www.wipo.int/covid19-policy-tracker/#/covid19-policy-tracker/voluntary-actions-text> (accessed on 19.03.2021).

<sup>89</sup> WIPO, *WIPO's COVID-19 Response*, <https://www.wipo.int/covid-19/en/> (accessed on 19.03.2021).

- Owen Jarus, *20 of the worst epidemics and pandemics in history*, Live Science, All About History, 2020, <https://www.livescience.com/worst-epidemics-and-pandemics-in-history.html>;
- Robert J. Littman, *The plague of Athens: epidemiology and paleopathology*, Mt Sinai J Med. 2009, <https://pubmed.ncbi.nlm.nih.gov/19787658/>;
- Florian Matei-Popescu, *Ciuma Antonină – o pandemie devastatoare la apogeul Imperiului Roman*, 2020, <https://www.upit.ro/ro/upit-pentru-comunitate/ciuma-antonina-o-pandemie-devastatoare-la-apogeul-imperiului-roman>;
- Howard Markel, *The origin of the word „vaccine”*, Science Friday, 2015, <https://www.sciencefriday.com/articles/the-origin-of-the-word-vaccine/>;
- John S. Morrill, *Great Plague of London*, <https://www.britannica.com/event/Great-Plague-of-London>;
- Abi Millar, *Intellectual Property in the time of Covid-19*, [https://pharma.nridigital.com/pharma\\_jul20/intellectual\\_property\\_covid-19#](https://pharma.nridigital.com/pharma_jul20/intellectual_property_covid-19#);
- Sarah Newey, *WHO patent pool for potential Covid-19 products is „nonsens”, pharma leaders claim*, The Telegraph, 29.05.2020, <https://www.telegraph.co.uk/global-health/science-and-disease/patent-pool-potential-covid-19-products-nonsense-pharma-leaders/>;
- David M. Oshinsky, *Breaking the back of polio*, Yale Medicine, 2005, <https://medicine.yale.edu/news/yale-medicine-magazine/breaking-the-back-of-polio/>;
- Joaquin Singson, *In focus: How Mich Dulce's PPE Designs Are Saving Lives Across The World*, April 2020, <https://lifestyle.abs-cbn.com/articles/8621/mich-dulce-ppe-design>;
- Philip Stevens, Mark Schultz, *Why Intellectual Property rights matter for Covid-19*, Geneva Network, 2021, <https://geneva-network.com/research/why-intellectual-property-rights-matter-for-covid-19/>;
- Christopher Stothers, Alexandra Morgan, *IP and the supply of Covid-19-related drugs*, Journal of Intellectual Property Law & Practice, Volume 15, Issue 8, August 2020, <https://doi.org/10.1093/jiplp/jpaa114>;
- Jennifer Valentino-DeVries, *Translating a Surveillance Tool into a Virus Tracker for Democracies*, New York Times, 19 March 2020, <https://www.nytimes.com/2020/03/19/us/coronavirus-location-tracking.html>;
- William Weston Fisher, *Patent*, *Encyclopedia Britannica*, May 27, 2019, <https://www.britannica.com/topic/patent>;
- ABC Mundial, *Taiwanese doctor creates cheap protective device amid coronavirus crisis*, March 2020, <https://abcmundial.com/en/2020/03/22/asia/technology/taiwanese-doctor-creates-cheap-protective-device-amid-coronavirus-crisis>;
- Cambridge Dictionary, <https://dictionary.cambridge.org/dictionary/english/vaccine>;
- Centers for Disease Control and Prevention, *Influenza (flu) 1957 – 1958 pandemic (H2N2 virus)*, <https://www.cdc.gov/flu/pandemic-resources/1957-1958-pandemic.html>;
- Centers for Disease Control and Prevention, *Influenza (flu). 2009 H1N1 Pandemic*, <https://www.cdc.gov/flu/pandemic-resources/2009-h1n1-pandemic.html>;
- Children's Hospital of Philadelphia, *Vaccine History: Developments by year*, 2019, <https://www.chop.edu/centers-programs/vaccine-education-center/vaccine-history/developments-by-year#>;
- Editors of the Encyclopedia Britannica, *Influenza pandemic of 1918-1919*, <https://www.britannica.com/event/influenza-pandemic-of-1918-1919>;
- Epidemiology of the Russian flu, 1889-1890, <https://contagions.wordpress.com/2011/01/03/epidemiology-of-the-russian-flu-1889-1890/>;
- Euronews, *Coronavirus Conundrum: COVID-19 Tracking Apps That Do Not Breach Privacy*, (television broadcast, dated 9 April 2020), [https://www.youtube.com/watch?v=\\_goD-J96br0](https://www.youtube.com/watch?v=_goD-J96br0);
- History Resources, *Reports on the yellow fever epidemic, 1793*, <https://www.gilderlehrman.org/history-resources/spotlight-primary-source/reports-yellow-fever-epidemic-1793> (accessed on 19.03.2021);
- Intellectual Property Office of Singapore, *Digitalisation and Intellectual Property in the time of COVID-19*, September 2020, <https://www.reuters.com/article/sponsored/digitalisation-and-intellectual-property-in-the-time-of-COVID-19>;
- National Office of Intellectual Property Chile, *Patents of experimental use drugs for Coronavirus are released in Chile*, 2020, <https://www.inapi.cl/sala-de-prensa/detalle-noticia/liberan-en-chile-patentes-de-medicamentos-de-uso-experimental-para-coronavirus>;
- Open Covid Pledge, *Make the pledge to share your intellectual property in the fight against Covid-19*, <https://opencovidpledge.org/>;
- Past Medical History, *The Russian Plague of 1770 – 1772*, 2017, <https://www.pastmedicalhistory.co.uk/the-russian-plague-of-1770-1772/>;
- The College of Physicians of Philadelphia, *The History of Vaccines*, [https://www.historyofvaccines.org/timeline#EVT\\_101044](https://www.historyofvaccines.org/timeline#EVT_101044);
- The Immunisation Advisory Centre, *A brief history of vaccination*, <https://www.immune.org.nz/vaccines/vaccine-development/brief-history-vaccination>;

- 
- The School of Life, *Camus and the Plague*, <https://www.theschooloflife.com/thebookoflife/camus-and-the-plague/>;
  - WIPO, *Some Considerations on Intellectual Property, Innovation, Access and COVID-19*, 2020, [https://www.wipo.int/export/sites/www/about-wipo/en/dg\\_gurry/pdf/ip\\_innovation\\_and\\_access\\_24042020.pdf](https://www.wipo.int/export/sites/www/about-wipo/en/dg_gurry/pdf/ip_innovation_and_access_24042020.pdf);
  - World Health Organization, *Hiv/Aids*, 2020, <https://www.who.int/news-room/fact-sheets/detail/hiv-aids>;
  - World Health Organization, *Vaccines and immunisation: What is vaccination?*, December 2020, <https://www.who.int/news-room/q-a-detail/vaccines-and-immunization-what-is-vaccination>;
  - World Trade Organization, *The TRIPS Agreement and Covid-19. Information note*, 2020, [https://www.wto.org/english/tratop\\_e/covid19\\_e/trips\\_report\\_e.pdf](https://www.wto.org/english/tratop_e/covid19_e/trips_report_e.pdf);
  - World Vision, *2014 Ebola virus outbreak: Facts, symptoms, and how to help*, <https://www.worldvision.org/health-news-stories/2014-ebola-virus-outbreak-facts>.