

Data Exclusivity in the European Union: *Briefing Document*



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Data Exclusivity in the EU: *Briefing Document*

Medicines regulation and test data

A pharmaceutical company that wants to sell a new medicine needs a marketing approval for that product from a medicines regulatory authority. Regulatory agencies require drug companies to submit test data that shows efficacy, safety and quality of the medicine they want to put on the market. Assuring efficacy, safety and quality of medicines, be it innovative products or generic medicines, is an important public service meant to protect consumers and patients.

The European Medicines Agency (EMA) is responsible for the assessment of the applications made through the centralised procedure for marketing authorisation of new medicines in the European Union (EU).¹ The EU pharmaceutical regulation also has a decentralised and national procedure for

A data exclusivity regime creates strong monopolies that are automatically granted, quietly enforced by the medicines regulatory system and without exceptions or limitations.

obtaining marketing approval in EU member states. However, the centralised procedure through the EMA is compulsory for medicines for the treatment of HIV, cancer, diabetes, neurodegenerative diseases, auto-immune and other immune diseases, viral diseases, biotechnology products, advanced therapy medicines (e.g. gene therapy), and orphan medicinal products. The EMA has thus become the predominant route for obtaining marketing approval of new medicines in the EU.

A generic company applying for marketing authorisation for a generic product has to demonstrate that its product is bioequivalent to the originator product but is not required to generate its own clinical efficacy and safety data. For that, the generic company can make reference to the clinical test data that was submitted by the original applicant and which is on file with the regulatory agency. Also, applicants for biosimilar medicines (generic biologic medicines) can refer to data in the originator file. They are required to demonstrate through comprehensive **comparability studies**

¹ For information about regulatory requirements in the EU, see here: European Medicines Agency, 'Marketing Authorisation' <<https://www.ema.europa.eu/en/human-regulatory/marketing-authorisation>> and European Medicines Agency and the European Commission, 'Biosimilars in the EU: Information Guide for Healthcare Professionals' (2017) <https://www.ema.europa.eu/en/documents/leaflet/biosimilars-eu-information-guide-healthcare-professionals_en.pdf>.

(clinical and non-clinical) with the 'reference' biological medicine that the biosimilar medicine is highly similar to the reference biologic medicine and that there are **no clinically meaningful differences** in terms of safety, quality and efficacy. A biosimilar product can rely on the safety and efficacy experience gained with the reference medicine. This avoids unnecessary repetition of clinical trials already carried out with the reference medicine, which is costly and would be considered unethical.

Protection of test data

Most countries protect 'test data' against unfair commercial use. There are different ways in which undisclosed test data can be protected, including: protecting it against dishonest commercial practices, but allowing its use to register a generic product,² permitting generic reliance on the test data but with compensation to the entity that originally generated the data³ (one can call this a 'data compensation' regime); or denying generic reliance on the data by making its use exclusive to the originator (a 'data exclusivity' regime).

Increasingly, the protection of test data has taken the form of 'data exclusivity' whereby a generic company for a certain period of time cannot rely on or refer to another company's clinical test data when registering a generic product. Data exclusivity provisions can result in delayed generic entry into the market.

The idea behind data exclusivity is that the production of such data – by running, for example, clinical trials – requires significant investments. Protecting it against use by generic companies is thus seen as a means to encourage medical research and development (R&D). Data exclusivity was first introduced in the US in 1984 with the "*Drug Price Competition and Patent Term Restoration Act of 1984*," also known as the Hatch-Waxman Amendments. The act provided several types of additional exclusivities to innovators as trade-offs for provisions to make market entry of generics easier and quicker.⁴

The global agreement on the protection of intellectual property, the World Trade Organization (WTO)'s Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), contains an obligation of WTO members to protect certain kinds of test data against unfair commercial use, but only where that data is related to new chemical entities, previously undisclosed, required as a condition of marketing approval, and required considerable effort to generate.

² Carlos Correa, 'Protection of Data Submitted for the Registration of Pharmaceuticals: Implementing the Standards of the Trips Agreement' (2002) South Centre <<http://apps.who.int/medicinedocs/en/d/Jh3009ae/>>.

³ For example, in the US, Knowledge Ecology International has proposed a cost sharing model. See for details: Judit Rius Sanjuan, James Love, and Robert Weissman, 'Protection of Pharmaceutical Test Data: A Policy Proposal' (2006) KEI Research Paper 2006:1.

⁴ Erika Lietzan, 'The Myths of Data Exclusivity' (2016) 20 Lewis & Clark L Rev 91.

TRIPS, section 7, article 39.3 reads as follows:

Members, when requiring, as a condition of approving the marketing of pharmaceutical or of agricultural chemical products which utilize new chemical entities, the submission of undisclosed test or other data, the origination of which involves a considerable effort, shall protect such data against unfair commercial use. In addition, Members shall protect such data against disclosure, except where necessary to protect the public, or unless steps are taken to ensure that the data are protected against unfair commercial use.

The TRIPS provision for the protection of undisclosed test data therefore does not require protection under a data exclusivity regime, neither does it preclude the use of the data for the approval of a competing product, which, as some have argued, does not fall within the definition of 'unfair commercial use'.^{5,6,7} In this context it is relevant to note that TRIPS negotiators explicitly rejected language that would have required granting exclusive rights to test data and that would have prohibited the use of the data by the government to fulfil its public health functions.⁸ This position was repeated by developing country members of the WTO in 2001 at the Doha Ministerial where they stated article 39.3 "does not require granting 'exclusive rights' to the owner of the data" and that it "does permit a national competent authority to rely on data in its possession to assess a second and further applications, relating to the same drug, since this would not imply any 'unfair commercial use'."⁹

Indeed, the vast majority of WTO members do not provide data exclusivity. A survey of the MedsPaL¹⁰ database shows that only around 16 middle-income countries provide data exclusivity, and that these data exclusivity regimes find their origin in trade agreements with the EU or the US that were reached outside of the WTO.

In the EU, however, the obligation to grant data exclusivity to the originator company goes well beyond the TRIPS requirement¹¹ for the protection of undisclosed test data against unfair commercial use. For a certain period of time a generic company cannot rely on or refer to pre-

⁵ Jerome H Reichman 'The International Legal Status of Undisclosed Clinical Trials Data: From Private to Public Goods?' (2009) 13 Marquette Intellectual Property L Rev 17.

⁶ Karin Timmermans, 'Monopolizing Clinical Trial Data: Implications and Trends' (2007) 4 PLoS Med e2.

⁷ Commission on Intellectual Property Rights, *Innovation and Public Health, Public Health, Innovation and Intellectual Property Rights* (World Health Organization 2006).

⁸ Correa (n 2).

⁹ 'TRIPS Council Discussion on Access to Medicines: Developing Country Group's Paper' (World Trade Organization, 20 June 2001) IP/C/W/296, paras 39–40 <https://www.wto.org/english/tratop_e/trips_e/paper_develop_w296_e.htm>.

¹⁰ 'MedsPaL: The Medicines Patents and Licences Database' <<https://www.medsPal.org>>.

¹¹ During the Uruguay Round negotiations, the option of making data exclusivity an explicit obligation under the TRIPS Agreement was discussed, but negotiators instead adopted the general wording of the current Article 39.3. See: WTO, WIPO, and the WHO, *Promoting Access to Medical Technologies and Innovation* (2012) 64 <https://www.wipo.int/policy/en/global_health/trilateral_cooperation.html>.

clinical and clinical test data of the original manufacturer that demonstrate safety and efficacy of the compound for which it wants to obtain a marketing authorisation.

Data exclusivity rules do not prohibit the generic company from generating its own clinical efficacy data to circumvent data exclusivity, but this is costly and, in most cases, would raise serious ethical issues. Such tests may involve carrying out clinical studies with an already proven effective compound. The reality is that generic companies do not carry out such trials.

Therefore, a data exclusivity regime creates strong monopolies that are automatically granted, quietly enforced by the medicines regulatory system and without exceptions or limitations.

Data exclusivity in the EU: A tale of regulatory capture

EU's adoption of its generous data exclusivity regime is a tale of regulatory capture.¹² Data exclusivity was first introduced in the EU in 1987 after intense lobbying by the pharmaceutical industry that cited the need to protect European

R&D. Directive 87/21/EEC initially provided for six years of data exclusivity for most medicines from the first marketing approval and ten years for biotech products. Member states could extend data exclusivity to 10 years if they considered this was "in the interest of public health."

This led to diversity in data exclusivity regimes in different European countries. Importantly, the system allowed member states not to apply the six-year period beyond the date of expiry of a patent protecting the original product.

When data exclusivity was introduced in the EU, pharmaceutical patenting was also diverse in the different member states. For example, Greece, Spain and Portugal did not provide pharmaceutical product patents. In 1992, the EU introduced the Supplementary Protection Certificate (SPC), providing up to 5 years of additional patent protection for medicines. But the SPC only had effect in countries that had medicines patents and not yet in countries that had no medicines patent protection or had only recently introduced it. In this context, data exclusivity was seen as a partial remedy for what the industry saw as weak patent protection.¹³

The global harmonisation of patent rules through the General Agreement on Tariffs and Trade (GATT) negotiations that led to the 1994 establishment of the WTO and the adoption of the WTO TRIPS Agreement, as well as further European integration, strengthened medicines patenting in

The EU has the most generous data exclusivity regime globally. The adoption of this generous regime is a tale of regulatory capture.

¹² Sandra Adamini and others, 'Policy Making on Data Exclusivity in the European Union: From Industrial Interests to Legal Realities' (2009) 34 *Journal of Health Politics, Policy and Law* 979.

¹³ Cynthia Ho, 'Beyond Patents: Protecting Drugs Through Regulatory Laws' in *Access to Medicine in the Global Economy: International Agreements on Patents and Related Rights* (OUP 2011).

European countries. One would expect that the introduction of strong patent regimes throughout the EU would slow down the drive for additional market exclusivities for medicines. It did not.

In 2004 the EU data exclusivity rules were further harmonised upwards and extended from the minimum of six years to eight years of data exclusivity, plus two years market exclusivity during which generic companies can prepare and apply for their marketing approval but not market the product. An additional one year of market exclusivity can be obtained by the originator company for a new indication with significant added clinical benefit. The new EU exclusivity regime became known as the 8+2+1 rule. It is the most generous exclusivity regime globally and extends to small molecules and biologic products.¹⁴ By contrast, the US grants five years of exclusivity for small molecule new chemical entities, three years for a new indication of a previously approved medicine and four years for biologics (complemented by a parallel 12-year market exclusivity). Japan grants six years of data exclusivity.

Table 1: A comparison of data exclusivity regimes

	WTO TRIPS	United States	European Union
Data protected	Undisclosed data that involved considerable effort to generate and of which the submission is required for marketing approval	Not specified	Not specified
Scope of protection	Against unfair commercial use and against disclosure	Grant of exclusive rights. No use/disclosure/reliance permitted	Grant of exclusive rights. No use/disclosure/reliance permitted
Type of drug	Limited to new chemical entities (NCEs)	NCEs and new indications/new uses	New medicinal product and new indications/new uses
Protection period	Not specified	5 years for NCEs + 3 years market exclusivity for new indications In parallel, 12 years for biologics	8 years data exclusivity + 2 years market exclusivity + 1 year market exclusivity for new indications

Adapted from Consumer Project on Technology, 12 April 2006.¹⁵

¹⁴ Directive 2004/27/EC on the Community code relating to medicinal products for human use [2004] OJ L136/34.

¹⁵ Judit Rius Sanjuan, 'U.S and E.U Protection of Pharmaceutical Test Data' (*CP Tech Discussion Paper – No. 1*, 12 April 2006) < <http://www.cptech.org/publications/CPTechDPNo1TestData.pdf>>.

Practical consequences of data exclusivity in the EU

During the period of data exclusivity in the EU, no generic competitor product can be considered for registration.

The originator company maintains a market monopoly until the generic company can bring a generic product to market in the EU, which it can only do when it obtains a marketing authorisation from the EMA. The application for an authorisation cannot be considered by the EMA until eight years of data exclusivity has passed. And the generic company cannot bring the product to market until at least two additional years of market exclusivity have passed, providing the originator company with 10 years of market exclusivity. This market exclusivity is regardless of the patent status of the product and is regulated in the European pharmaceutical legislation. Companies can thus obtain a strong market monopoly position with a product that is not patented using the data exclusivity provisions of the pharmaceutical regulation.

Does data exclusivity stimulate innovation?

The stated objective of data exclusivity is to encourage innovation by protecting clinical test data from use by others than the originator company. The evidence that such additional exclusivity is indeed required is not at all clear. After all, data exclusivity generally co-exists with other forms of exclusivity such as patents or SPCs. The Dutch Technopolis Group report¹⁶ concluded that “this study cannot provide any evidence on whether, or to what extent, the impacts of these exclusivities and protections align with the intended objectives.” Earlier, in 2009, the US Federal Trade Commission (FTC) concluded that a lengthy exclusivity period (12 to 14 years) is unnecessary to promote innovation by biologic drug manufacturers. The FTC considered existing incentives (patents and market-based pricing) to be sufficient to support biologic innovation.¹⁷

Data exclusivity: rock solid monopoly

In the case of patents, governments can rely on flexibilities in patent law to make use of the patent without the consent of the patent holder. Such an intervention by the government can be based on the need to act in the public interest.

Even in case of an urgent need or an emergency situation, the EU law fails to provide a safety valve to release the stronghold of data exclusivity

¹⁶ Thyra de Jongh and others, 'Effects of Supplementary Protection Mechanisms for Pharmaceutical Products' Final Report (Technopolis Group, May 2018) <<http://www.technopolis-group.com/wp-content/uploads/2018/06/2718-Technopolis-report-on-supplementary-protection-mechanisms.pdf>>.

¹⁷ U.S. Federal Trade Commission, 'Emerging Health Care Issues: Follow-on Biologic Drug Competition' (FTC, June 2009) <<https://www.ftc.gov/sites/default/files/documents/reports/emerging-health-care-issues-follow-biologic-drug-competition-federal-trade-commission-report/p083901biologicsreport.pdf>>

For example, when a patent forms a barrier to accessing a lower priced generic medicine and the originator product is priced too high, well above the country's willingness to pay. These flexibilities have been acknowledged in the 2001 WTO Doha Declaration on TRIPS and Public Health as important tools to promote and protect access to medicines for all.

A number of European governments including Belgium, Ireland, France, the Netherlands, Norway, Scotland, Spain, Sweden, Switzerland and the UK have been asked and/or are considering to issue compulsory licences for important medicines including treatments for hepatitis C and cancer that are not available at affordable prices for their health care systems. In principle, these countries have the required provisions for compulsory licensing or government use of patents in their patent legislation. But when it concerns medicines for which marketing approval has been obtained through the centralised procedure at the EMA, it may not be possible to give effect to the compulsory licence.

The reason for this is that EU data exclusivity bars any generic or biosimilar from being registered for a period of 10 years after the originator is registered, and data exclusivity holds even when a patent has expired or when a compulsory licence has been issued. When products fall within the category for which EMA registration is compulsory, the national procedure for registration is not an option.

In the EU, safeguards to lift the effect of data and/or market exclusivity when this forms a barrier to accessing a needed medicine do not exist. Even in case of an urgent need or an emergency situation the EU law fails to provide a safety valve to release the stronghold of data exclusivity. This became apparent in 2006 when the European Generic Medicines Association was seeking clarification on whether data exclusivity would apply in case of an emergency compulsory licence for the flu medicine Tamiflu (oseltamivir) within the European Union.

In response, the European Commission acknowledged that the "Community pharmaceutical acquis does not currently contain any provision allowing a waiver of the rules on data exclusivity and marketing protection periods."¹⁸ The European Commission, however, has yet to take initiative to propose an explicit waiver in the EU pharmaceutical legislation to allow effective use of compulsory licensing for production and supply within the EU.

¹⁸ European Commission, 'Letter from the European Commission to Mr Greg Perry, EGA-European Generic Medicines Association on the subject of Tamiflu application and data exclusivity in an emergency compulsory license situation' (Brussels, 2006).

Box 1: Case study, access to sofosbuvir in Romania

Access to hepatitis C medicines in Romania

In 2016, the government of Romania contemplated issuing a compulsory licence for the hepatitis C medicine sofosbuvir, which in Europe was only available from the originator company at a price of around € 50,000 for a 12-week treatment.¹⁹ By contrast, generic sofosbuvir-ledipasvir has been available in Egypt, where there are no patents on the compound, for US\$ 400 for a full treatment.²⁰

However, the registration of a generic version of sofosbuvir in the EU is not possible before the expiry of the data exclusivity in 2022. Further, the EU market exclusivity for sofosbuvir expires at the earliest in 2024. As a result, Romania, like any other EU member state, cannot give effect to a compulsory licence. The case of Romania reveals the obstacles to the effective use of compulsory licensing created by EU data and market exclusivity.

Lack of legal coherence

Twelve years later, the EU pharmaceutical legislation still does not provide for exceptions to data and market exclusivity. Even in cases of national emergency or other situations of urgency, there are no explicit waivers in EU law to address the need to authorise the marketing of a generic product before the aforementioned exclusivity periods expire.

Even though issuing a compulsory licence to overcome patents blocking the use of a generic medicine is a matter of national law, regulatory requirements for EU-wide marketing authorisation, including data exclusivity, are a matter of European Union pharmaceutical legislation. These concurrent legal systems lack coherence, both with regards to the effective use of compulsory licensing by EU member states and with respect to public interest exceptions to data exclusivity more broadly.

The need to provide data exclusivity waivers to ensure effective availability of generic medicines is often acknowledged in voluntary licences. For example, all Medicines Patent Pool (MPP) licences include a data exclusivity waiver to facilitate regulatory approval of generic medicines manufactured by MPP's licensees.²¹

¹⁹ Paun C. Skyhigh, 'Drug Prices Made Romania Mull Patent Break' (*Politico*, 16 March 2016) <<http://www.politico.eu/pro/high-drug-prices-romania-changes-patents-hepatitis/>>.

²⁰ Isabelle Andrieux-Meyer and others, 'Disparity in Market Prices for Hepatitis C Virus Direct-Acting Drugs' (2015) 3 *The Lancet Correspondence* E676.

²¹ See for example: 'Licence Agreement Between ViiV Healthcare Company and the Medicines Patent Pool Foundation' (*Medicines Patent Pool*, 2014) <<https://medicinespatentpool.org/uploads/2017/07/ViiV-MPP-Head-Licence-DTG-Paediatics-Amendment-21032019-Web-page.pdf>>.

Waivers to data exclusivity and market exclusivity rules do exist when medicines manufactured using a compulsory licence and destined for markets outside the EU, via the *EU Regulation on compulsory licensing of patents for the manufacture of pharmaceutical products for export to countries with public health problems outside the EU*.^{22,23} Article 18 of the *EU Regulation* addresses the situation in which the applicant for a compulsory licence for manufacture and export of a medicine outside the EU may use the scientific opinion procedure of the European Medicines Agency (EMA), or any similar national procedures, to assess quality, safety, and efficacy of medicines intended exclusively for markets outside the EU. It provides waivers to exclusivity rules necessary to obtain such opinions from the EMA or national authorities.²⁴

Some WTO member countries, such as Chile, Colombia, and Malaysia provide for explicit data exclusivity waivers in medicines regulations or in relation to the use of compulsory licences in patent laws, for the purpose of facilitating generic medicines registration and sales where necessary to protect public health. While US law does not provide for an explicit exception to data exclusivity, the 2007 New Trade Policy of the US authorised an express public health exception to data and market exclusivity in the event of a compulsory licence or other public health need.²⁵

Professor Valérie Junod from the University of Geneva has argued in support of the application for a compulsory licence for the breast cancer drug pertuzumab (Perjeta) in Switzerland that the issuance of a compulsory licence for public interest reasons creates the obligation for the patent holder to provide a waiver to data exclusivity. Such a waiver would enable the use of test data for the registration of the generic product. She maintains that if a company holding a dominant position in the market denies access to the data held by the Swiss regulatory authority, it is likely to be viewed as abusive under Swiss competition law since a court has already decided that the public interest requires an additional product on the market.²⁶ However, enforcing this position will likely

²² Regulation 816/2006 on Compulsory Licensing of Patents Relating to the Manufacture of Pharmaceutical Products for Export to Countries with Public Health Problems [2006] OJ L157/1.

²³ This regulation implements the WTO 'August 30 2003 decision', which provided a waiver to the TRIPS Article 31(f) requirement that production under a compulsory licence be predominantly for the domestic market. This restriction seriously hampered the use of compulsory licensing by countries that were dependent on the importation of medicines. The 30 August 2003 waiver became a permanent amendment of the TRIPS Agreement in 2017 (see: WTO, 'WTO Members Welcome Entry Into Force of Amendment to Ease Access to Medicines' (30 January 2017) <https://www.wto.org/english/news_e/news17_e/heal_30jan17_e.htm>.

²⁴ Article 18(2) (n 22) reads: 'If a request for any of the above procedures concerns a product which is a generic of a reference medicinal product which is or has been authorised under Article 6 of Directive 2001/83/EC, the protection periods set out in Article 14(11) of Regulation (EC) No 726/2004 and in Articles 10(1) and 10(5) of Directive 2001/83/EC shall not apply'.

²⁵ U.S. House Ways and Means Committee, 'A New Trade Policy for America' (*Bilaterals*, 2007) <http://www.bilaterals.org/IMG/pdf/07_05_10_New_Trade_Policy_Outline.pdf>.

²⁶ Valérie Junod, Legal Analysis: The Interface Between Patent Protection and Data Exclusivity – The Issue of Compulsory Licensing in the Public Interest under Swiss Law' (*Public Eye*, 29 January 2019) <https://www.publiceye.ch/fileadmin/doc/Medikamente/ValerieJunod_Legal-Analysis-CL_20190129.pdf>

lead to protracted legal procedures and delays in the availability of the medicine for which the compulsory licence was requested.

One could argue that, because waivers to data exclusivity and market exclusivity exist for compulsory licensing for the manufacture of pharmaceutical products *for export*, it would logically follow that such waivers can also be applied in other compulsory licensing situations. It would nevertheless be desirable to take away any legal uncertainty. Therefore, it would be preferable to introduce explicit data and market exclusivity waivers in the EU pharmaceutical regulation to enable national governments to use non-voluntary licensing effectively to intervene in high drug pricing when necessary.²⁷

This is particularly important now that European countries have indicated that they lack the negotiating power to obtain good results in price negotiations with pharmaceutical companies concerning patented products.²⁸ Table 2 shows the wide discrepancies between list price and target prices (based on cost of production) of selected important products demonstrating the potential gains health ministers can make when they can lift the monopoly effect of patents.

Strategic role of data/market exclusivity

Because of the 20-year patent term plus up to 5 years additional protection via SPC (see previous paper in this briefing series, on SPCs), the data exclusivity period for the product has usually expired before other exclusivities expire, which leads to the question whether the data exclusivity system might be obsolete. Industry is keen to maintain it but their main driver seems to be strategic: create as many layers of exclusive rights as possible to discourage competitors to enter the market. As a result, it may leave weak patents unchallenged because why would a generic company undertake a patent opposition when it knows in case of success it will still not be able to register the product until after the data exclusivity and market exclusivity periods have expired. Further, market exclusivity for example granted through the orphan medicinal product regulation creates similar problems (see also the following paper in this briefing document series, on orphan medicinal product regulation).

²⁷ Ellen FM 't Hoen, Pascale Boulet, and Brook K Baker, 'Data Exclusivity Exceptions and Compulsory Licensing to Promote Generic Medicines in the European Union: A Proposal for Greater Coherence in European Pharmaceutical Legislation (2017) 10 JOPPP.

²⁸ Emma Rumney, 'Drug Manufacturers Have Too Much Power in Price Negotiations, Says OECD' (*Public Finance International*, 16 January 2017) <<http://www.publicfinanceinternational.org/news/2017/01/drug-manufacturers-have-too-much-power-price-negotiations-says-oecd>>.

The EU promotes data exclusivity with its trading partners, for example through demanding the introduction or strengthening of data exclusivity in trade agreements with other nations. See Box 2 on Ukraine-EU Trade Agreements, below. The EU is also demanding the introduction of data exclusivity in trade negotiations with the Latin American trading bloc Mercosur (Argentina, Brazil, Paraguay and Uruguay). Currently none of the countries provide data exclusivity.

Table 2: List prices versus target prices (based on production cost) of select medicines

Cancer medicines		
Medicine	Lowest-highest list prices in EU	Target price
Bortezomib ²⁹ <i>Multiple myeloma</i>	\$982 (Spain) - \$1,123 (UK) per month**	\$255 per month**
Dasatinib ²⁹ <i>Chronic myeloid leukaemia</i>	\$2,146 (UK) - \$3,624 (Latvia) per month**	\$12 per month**
Everolimus ²⁹ <i>Breast cancer</i>	\$3,155 (UK) - \$3,958 (Latvia) per month**	\$1,086 per month**
Gefitinib ²⁹ <i>Lung cancer</i>	\$1,786 (France) - \$2,568 (Latvia) per month**	\$13 per month**
Imatinib ³⁰ <i>Chronic myeloid leukaemia</i>	\$2,261 (Latvia) - \$32,906 (Spain) per year	\$172 per year
Erlotinib ³⁰ <i>Lung, pancreatic and other cancers</i>	\$26,416 (France) - \$36,678 (Latvia) per year	\$240 per year
Lapatinib ³⁰ <i>Breast cancer</i>	\$33,549 (Spain) - \$49,887 (Latvia) per year	\$4,020 per year
Sorafenib ³⁰ <i>Kidney and liver cancer</i>	\$45,162 (France) - \$67,877 (Latvia) per year	\$1,450 per year

²⁹Andrew Hill et al, 'Estimated generic prices of cancer medicines deemed cost-ineffective in England: a cost estimation analysis' (*BMJ Open*, 2017) <<https://bmjopen.bmj.com/content/7/1/e011965>>

³⁰ Andrew Hill et al, 'Target prices for mass production of tyrosine kinase inhibitors for global cancer treatment' (*BMJ Open*, 2015) <<https://bmjopen.bmj.com/content/6/1/e009586>>

Human Immunodeficiency Virus (HIV) and Hepatitis C Virus (HCV) medicines				
Medicine (Indication)	List price/pill in the UK	Target price/pill	Current price/treatment in the UK	Target price/treatment
Daclatasvir ³¹ (HCV)	\$379.44	\$0.08	\$31,872.96 *	\$6.72*
Darunavir ³¹ (HIV)	\$12.90	\$1.45	\$387 a month*	\$43.50 a month*
Efavirenz + emtricitabine + tenofovir ³¹ (HIV)	\$23.09	\$0.15	\$692.70 a month*	\$4.50 a month*
Ledipasvir + sofosbuvir ³¹ (HCV)	\$603.26	\$1.02	\$50,673.84*	\$85.68*
Sofosbuvir ³¹ (HCV)	\$541.40	\$0.57	\$45,477.60*	\$47.88*
Tenofovir disoproxil fumarate (TDF) ³¹ (HIV)	\$8.85	\$0.07	\$265.50 a month*	\$2.10 a month*

*HCV dosage assumes 1 pill/day for a 12-week regimen; HIV dosage assumes 1 pill/day over 1 month (30 days)

**Converted from British pounds to USD using May 2019 conversion rates

Concerns about such demands were also made with regards to trade negotiation with India, which prompted the European Commission (EC) Trade Commissioner to commit to 'not pursue the issue of supplementary protection any longer', and to 'not require India to introduce any kind of data exclusivity provisions.'³² The Commissioner also stated that the negotiation with India should be conducted in the spirit of the Doha Declaration on the TRIPS Agreement and Public Health, and that protecting access to medicines should be taken fully into account in future trade negotiations.³³

Today the EU's objective with regards to intellectual property in trade talks remains to obtain similar levels of intellectual property protection in countries outside the EU as are maintained inside the EU.³⁴ For example, the EU–Vietnam trade and investment agreement binds Vietnam to introduce data exclusivity of at least 5 years.³⁵

³¹ Andrew Hill, Melissa Barber, and Dzintars Gotham, 'Estimated costs of production and potential prices for the WHO Essential Medicines List' (*BMJ Global Health*, 2018) <<https://gh.bmj.com/content/3/1/e000571>>. Figures come from supplementary appendix.

³² European Commission, 'Q&A on Access to Medicines for EU-India Free Trade Agreement Negotiations' (April 2013).

³³ 'EC Trade Commissioner's response to MSF Letter on India-EU FTA' (*MSF Access Campaign*, 24 May 2010) <<https://msfaccess.org/ec-trade-commissioners-response-msf-letter-india-eu-fta>>.

³⁴ European Commission 'Intellectual Property' (9 July 2018) <<http://ec.europa.eu/trade/policy/accessing-markets/intellectual-property/>>.

³⁵ 'Chapter 12: Intellectual Property' (September 2018).

<http://trade.ec.europa.eu/doclib/docs/2018/september/tradoc_157370.pdf>.

Box 2: The impact of data exclusivity provisions in trade agreements, Ukraine case study**Ukraine-EU Trade Agreement's effect on access to hepatitis C medicine**

The Doha Declaration did not guide the trade talks between the EU and Ukraine. As a result of the EU-Ukraine Deep and Comprehensive Free Trade Agreement (DCFTA), Ukraine introduced five-year data exclusivity period for medicines. This introduction had an immediate effect on the treatment of hepatitis C in the country. Sofosbuvir, an essential medicine for the treatment of hepatitis C, was not patented in Ukraine. The Egyptian company Pharco was the first to apply for marketing authorisation for a generic version of sofosbuvir on 28 November 2014 (via its distributor Europharma International LLC). Later, the originator company, Gilead, applied for marketing authorisation on 9 June 2015 but was the first to obtain marketing authorisation on 9 October 2015. On 18 November 2015, Pharco also received marketing authorisation. In June 2016, Gilead filed a court case against Pharco's distributor in Ukraine and against the regulatory agency on the grounds that it was entitled to data exclusivity until 2020. Gilead also threatened with an investor state dispute. In response to this threat, the Ukraine government revoked Pharco's generic registration and established Gilead's monopoly position in the market.

Data exclusivity and the cost of R&D

One argument for the protection of test data is the need to protect the monetary investment that the company has to make to generate the data. It is true that developing a new medicine, particularly a new chemical entity, is costly and that a significant part of this cost is made up of the expenses for clinical studies. But the principle ignores the contribution by others. Most significant pharmaceutical innovations lean on earlier publicly funded research and it also ignores investment made by patients that take part in the trials.^{36,37} data exclusivity is granted regardless of the level of investment in generating the test data required to obtain a marketing authorisation for a medicine. Greater transparency with regards to the development cost would help to determine reasonable remuneration for the research efforts made. Cost of R&D can differ tremendously per product, and type of development, yet the incentive systems are based on a one size fits all (see Table 3, below).

³⁶ UCL Institute for Innovation and Public Purpose, 'The People's Prescription: Re-Imagining Health Innovation to Deliver Public Value' (2018) IPP Policy Report 2018-10 <<https://www.ucl.ac.uk/bartlett/public-purpose/publications/2018/oct/peoples-prescription>>.

³⁷ Ekaterina Galkina Cleary and others, 'Contribution of NIH Funding to New Drug Approvals 2010-2016' (2018) 115 PNAS 2329.

Table 3 Costs of R&D by type of product, for selected medicines

Medicine (Manufacturer)	Indication	Total R&D costs, in US\$ millions*
Eculizumab (Alexion Pharmaceuticals) ³⁸	Oncology (orphan status)	\$817.6
Pralatrexate (Allos Therapeutics) ³⁸	Oncology (orphan status)	\$178.2
Ruxolitinib (Incyte Corporation) ³⁸	Oncology (orphan status)	\$1097.8
Enzalutamide (Medivation) ³⁸	Oncology (no orphan status)	\$473.3
Cabozantinib (Exelixis) ³⁸	Oncology (orphan status)	\$1,950.8
Ibrutinib (Pharmacyclics) ³⁸	Oncology	\$328.1
Fexinidazole (DNDi) ³⁹	Sleeping sickness	\$62.1
SCYX-7158 (DNDi) ³⁹	Sleeping sickness	\$66.9
Sodiumstibogluconate & paramomycin combination (DNDi) ³⁹	Visceral leishmaniasis	\$13.0
Nifurtimox-eflornithine combination therapy (NECT) (DNDi) ³⁹	Sleeping sickness	\$7.6

*These prices do not include the cost of failed formulations, which often goes into aggregated figures. The Drugs for Neglected Diseases Initiative (DNDi) estimates that if cost of failed candidates is included, it could bring a new chemical entity to market for between US\$ 110-170 million.

³⁸ Vinay Prasad and Sham Mailankody, 'Research and Development Spending to Bring a Single Cancer Drug to Market and Revenues After Approval' (*JAMA Internal Medicine*, 2017)

<<https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2653012>>.

³⁹ Amy Maxmen, 'Big Pharma's Cost-Cutting Challenger' (*Nature: News Feature*, 2016)

<https://www.nature.com/polopoly_fs/1.20469!/menu/main/topColumns/topLeftColumn/pdf/536388a.pdf>.

Conclusions and recommendations

In light of the growing drug price crisis including for non-patented medicines, a revision of the EU rules on data exclusivity is warranted. Such revision should account for the fact that the generous EU data and market exclusivity regime has its roots in an historical situation of diverse medicines patenting and data protection practices by member states. A situation that no longer exists. The EU has no obligations under international law to maintain its data exclusivity regime: the WTO TRIPS Agreement allows for a generic reliance model whereby the generic company can rely on the test data of the originator in exchange for compensation. One should also acknowledge that other high-income nations provide far less data exclusivity than the EU. Further, data exclusivity threatens to stifle the effectiveness of public policy tools such as government use of patents which contravenes the “Doha norm” that the TRIPS Agreement does not and should not prevent governments from taking measures to protect public health.

Medicines Law & Policy therefore makes the following recommendations:

- 1. Replace the data exclusivity regime with a data compensation regime.** Replace the EU data exclusivity regime with a data protection regime that acknowledges the investment that goes into the generation of the data but does not allow the investor to exclude others from using the data: a *data compensation regime*. TRIPS leaves much flexibility for WTO members to design data protection regimes and such a *data compensation regime* would be compliant with the requirements for the protection of undisclosed data in the TRIPS Agreement.⁴⁰

Under a *data compensation regime*, the registration of a generic medicine or biosimilar medicine is considered fair commercial use and thus not hampered by the data protection. The originator company that made the investment that was needed to generate the data will receive adequate remuneration for the use of the data but cannot prevent its necessary use for the medicines agency to perform its public health duties, for example using it to register generic versions.⁴¹

⁴⁰ Protection consistent with TRIPS means: to protect undisclosed test data the submission of which is required to register a new chemical entity, and the generation of which involved considerable efforts against unfair commercial use. Disclosure may only take place if necessary to protect public health or unless steps are taken to ensure that the data are protected against unfair commercial use. (TRIPS 39.3).

⁴¹ Such a provision would further advance the objective to reach greater transparency on R&D expenditure.

- 2. Introduce waivers to data and market exclusivity to facilitate effective use by governments of patents in the public interest,** compulsory licensing or other measures needed for the advancement of public health and access to medicines for all within the European Union. This would bring coherence to EU law and assist member states that are seeking ways to ensure the availability of new medicines without undue burden on their health budgets. Legal coherence can be achieved by inserting the following provision into the EU legal framework governing medicinal products for human use:

'The protection periods set out in article 14 (11) of Regulation 726/2004 shall not apply in cases where it is necessary to allow access to and the use of pharmaceutical test data to register a generic of a reference medicinal product, which is or has been authorised under article 6 of Directive 2001/83/EC, for reasons of public interest including public health, in case of compulsory licensing of patents, including for public non-commercial use, and in situations of national emergency or extreme urgency.'

A payment of an adequate remuneration for the use of or reliance on test data to the holder of the marketing authorisation of the reference medicinal product may be required; for example, in the absence of patents and thus absence of remuneration normally payable in case of a compulsory licence or government use licence.

- 3. Remove the requirement to implement data exclusivity from trade negotiations with other nations** and instead focus on agreements with other nations that address medical R&D needs and mechanisms for burden and benefit sharing of medical R&D.⁴²

⁴² For a discussion of how such new R&D models could be shaped, see: 'Delinkage' <www.delinkage.org>.

Further Reading

This document is part of a series of briefing papers; the rest of the series is available at <https://medicineslawandpolicy.org/useful-resources/briefs/#EUReview>.

- Carlos Correa, 'Protection of Data Submitted for the Registration of Pharmaceuticals: Implementing the Standards of the Trips Agreement' (2002) South Centre <<http://apps.who.int/medicinedocs/en/d/Jh3009ae/>>.
- Ellen 't Hoen EFM, Pascale Boulet, and Brook K Baker, 'Data Exclusivity Exceptions and Compulsory Licensing to Promote Generic Medicines in the European Union: A Proposal for Greater Coherence in European Pharmaceutical Legislation' (2017) 10 JOPPP
- Jerome H Reichman 'The International Legal Status of Undisclosed Clinical Trials Data: From Private to Public Goods?' (2009) 13 Marquette Intellectual Property L Rev 17
- Medicines Law & Policy, 'The TRIPS Flexibilities Database', <<http://tripsflexibilities.medicineslawandpolicy.org>>
- Sandra Adamini and others, 'Policy Making on Data Exclusivity in the European Union: From Industrial Interests to Legal Realities' (2009) 34 Journal of Health Politics, Policy and Law 979
- Thyra de Jongh and others, 'Effects of Supplementary Protection Mechanisms for Pharmaceutical Products' Final Report (Technopolis Group, May 2018) <<http://www.technopolis-group.com/wp-content/uploads/2018/06/2718-Technopolis-report-on-supplementary-protection-mechanisms.pdf>>.