Licensing products for unmet medical needs

The licensing activities of the Medicines Patent Pool

Kelvin Nguyen, Associate Counsel, Legal

medicines
patent
pool

medicines patent pool

OUTLINE

1. **What is the Medicines Patent Pool?**
   - Establishment of MPP
   - MPP licensing model

2. **Licensing from a public health perspective**
   - Key public health considerations
   - MPP's approach to licensing

3. **Case study on Cabotegravir Long-Acting: Key licensing terms**
   - MPP-ViiV licence agreement
   - Licence agreement approval process

medicines
patent
pool

WHAT IS THE MEDICINES PATENT POOL?

Establishment of MPP

The HIV situation in 2010

- **First generation HIV medicines** became available from generic companies at affordable prices and were slowly being scaled up in low- and middle-income countries (LMICs) – but a significant gap remained

- **New medicines with improved efficacy/tolerability** or needed **for 2nd or 3rd line** treatment were patented in many LMICs and were largely available from originators at **higher prices**

- Need for **new fixed dose combinations combining best treatments in a single pill**

- **Paediatric formulations** of new medicines generally not available, or had a range of other problems

Could licence agreements with innovator pharmaceutical companies contribute to making the new treatments at affordable prices in LMICs?

What is the Medicines Patent Pool?

Establishment of MPP

MPP is a public health organisation established in 2010 to accelerate **access to new HIV medicines** in LMICs

…and to facilitate the **development of new formulations needed in developing countries (FDCs, pediatrics)**

Operates through **licensing** to facilitate early entry of **generic manufacturers** in LMICs

Expanded to work on **hepatitis C, tuberculosis** (2016) other **patented essential medicines** (2018)….and **COVID-19** (2020)

The MPP is funded by:

Unitaid
Innovation in Global Health

MINISTÈRE DE L'EUROPE ET DES AFFAIRES ÉTRANGÈRES
Liberté
Égalité
Fraternité

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

Ministry of Foreign Affairs of Japan
外務省

medicines patent pool

What is the Medicines Patent Pool?
How it works

IDENTIFY MEDICINES NEEDED IN LMICS WHERE LICENSING CAN IMPROVE ACCESS

PATENT HOLDERS INNOVATORS

16

abbvie · Boehringer Ingelheim · Bristol-Myers Squibb · GILEAD · Janssen · MSD · NIH · ViiV Healthcare · Roche · PHARCO CORPORATION · JOHNS HOPKINS UNIVERSITY · Pfizer · UNIVERSITY OF LIVERPOOL · UNIVERSITY of WASHINGTON · CSIC · MedinCell

ROYALTIES

(WHERE APPROPRIATE)

MPP NEGOTIATES WITH PATENT HOLDERS AND SIGNS LICENCES FOR INNOVATIVE AND OTHER HEALTH TECHNOLOGIES

medicines patent pool

MPP LICENSES MEDICINES TO GENERIC COMPANIES. LICENSING TERMS ENCOURAGE THE DEVELOPMENT AND SUPPLY OF LOW-COST GENERIC VERSIONS IN LOW- AND MIDDLE-INCOME COUNTRIES

SUBLICENSE TO QUALIFIED GENERIC COMPANIES COMMITTED TO SUPPYING TO LMICs

GENERIC / PRODUCT MANUFACTUERS

ACCESS

PEOPLE LIVING IN LOW- AND MIDDLE-INCOME COUNTRIES

SUPPORT DEVELOPMENT AND WORK WITH PARTNERS TO FACILITATE ACCESS IN LMICs

GUIDING PRINCIPLES

- ✓ PUBLIC HEALTH DRIVEN
- ✓ FLEXIBLE
- ✓ QUALITY-ASSURED
- ✓ VOLUNTARY
- ✓ FOCUS ON ACCELERATING ACCESS
- ✓ FACILITATING INNOVATION
- ✓ COMPLEMENTARY
- ✓ NON-EXCLUSIVE
- ✓ TRANSPARENT

medicines patent pool

What is the Medicines Patent Pool?

MPP Partnerships with Innovators

abbvie	Boehringer Ingelheim	Bristol-Myers Squibb	GILEAD	janssen	MSD	NIH	ViiV Healthcare	Roche
lopinavir ritonavir (adults) lopinavir ritonavir (paediatric)	nevirapine (non-assert)	atazanavir	bictegravir cobicistat elvitegravir emtricitabine tenofovir alafenamide tenofovir disoproxil fumarate	darunavir (paediatric; non-assert)	raltegravir (paediatric)	darunavir Related COVID-19 diagnostics	cabotegravir abacavir (paediatric) dolutegravir (paediatric/adults) dolutegravir (adults, for AZ, BY, KZ, MY)	valganciclovir (pricing agreement)

abbvie	Bristol-Myers Squibb	PHARCO	JOHNS HOPKINS UNIVERSITY	Pfizer	MSD	Pfizer	UNIVERSITY OF LIVERPOOL	UNIVERSITY of WASHINGTON	CSIC	MedinCell
glecaprevir/ pibrentasvir	daclatasvir	ravidasvir	sutezolid	molnupiravir	nirmatrelvir	solid drug nanoparticles technology (disease agnostic) ETFD LAI (TB, malaria, HCV)	TLD LAI (HIV)	serological antibody diagnostic test (COVID-19)	mdc-STM (marlaria)	

HIV · Hepatitis C · Tuberculosis · COVID-19 · Technologies (e.g., long-acting, diagnostics)

medicines patent pool

What is the Medicines Patent Pool?

MPP Impact

The economic and public health impact of intellectual property licensing of medicines for low-income and middle-income countries: a modelling study

THE LANCET Public Health

Sébastien Morin, Hannah Barron Moak, Oliver Bubb-Humfryes, Christian von Drehle, Jeffrey V Lazarus, Esteban Burrone

16 patent holders with MPP signed agreements

58 generic manufacturers and product developers have sublicences from MPP

26.91 Bn doses of treatment supplied (Jan 2012 - Dec 2021)

US$1.2 Bn dollars saved through MPP'S licences (Jan 2012 - Dec 2021)

By 2030

US$3.5 Bn projected dollars saved

148 countries have benefited from access to MPP-licensed products

71.76 Mn patient-years of treatment through MPPs generic partners (Jan 2012 - Dec 2021)

18,000 deaths averted (Jan 2012 - Dec 2021)

By 2030

160,000 deaths averted

Based on impact methodology from: The Lancet Public Health, 2021 - https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(21)00202-4/fulltext

medicines patent pool

LICENSING FROM A PUBLIC HEALTH PERSPECTIVE

Affordability

PUBLIC HEALTH NEED

Affordability: Need for affordable access to life-saving medicines

RELEVANT FEATURES IN MPP LICENCES

Licences enable MPP to sub-license **non-exclusively** to multiple manufacturers to facilitate **competition** and **price reduction many years before patent expiry**

Example:

- MPP licence on hepatitis C medicine daclatasvir with BMS enabled market entry of generic manufacturers, many years before patent expiry in 2027
- Four are on the market with quality assured product at a price of **USD$12** per pack (Global Fund 2022 Price)
- Prior to generic entry, the price for daclatasvir ranged from USD$167 to $11,800 per pack

HepC_IssueBrief_HEP_C_6.pdf (msfaccess.org); ppm_strategicmedicineshivreferencepricing_table_en.pdf (theglobalfund.org)

Licensing from a Public Health Perspective

Access for people in LMICs

PUBLIC HEALTH NEED

Facilitate access to millions of people in LMICs: need to enable as many people as possible to have access to life-saving new treatments

RELEVANT FEATURES IN MPP LICENCES

Licences have a **broad geographical scope**, to enable as many people as possible to benefit. Large geo scope also enables **high volumes**, resulting in economies of scale and lower prices

Example: Licence on **dolutegravir** has already enabled **122 low and middle-income countries** to transition to a more effective and better tolerated treatment regimen for people living with HIV

Licensing from a Public Health Perspective

Combination treatments

PUBLIC HEALTH NEED

Need for combinations to enhance adherence: Need for new fixed-dose combination treatment that combine various medicines in one pill to improve adherence

RELEVANT FEATURES IN MPP LICENCES

Some MPP licences offer the possibility to further innovate by developing new fixed dose combinations that meet public health needs

Example: MPP licences with Gilead on tenofovir alafenamide (TAF) and emtricitabine (FTC) and with ViiV Healthcare on dolutegravir (DGT) have facilitated the development of a new fixed-dose combination antiretroviral medicine

Licensing from a Public Health Perspective

Paediatric formulations

PUBLIC HEALTH NEED

New formulations for children: Need for paediatric formulations that are better adapted for young children (e.g. for HIV)

RELEVANT FEATURES IN MPP LICENCES

MPP licences enable licensees to develop new paediatric formulations that address needed gaps

Example: MPP licences with AbbVie and ViiV contributed to the availability of new anti-retroviral formulations targeting the youngest children

Licensing from a Public Health Perspective

Quality assurance

PUBLIC HEALTH NEED

Quality assurance: Need to ensure that medicines used for treatment scale-up in LMICs are of assured quality

RELEVANT FEATURES IN MPP LICENCES

All MPP licences require generic product to comply with **WHO Prequalification Programme (WHO PQ)** or a **stringent regulatory authority (SRA)** standards, and receive approval prior to commercialisation

Example: MPP licence with Pfizer and MSD for Covid-19 anti-viral drugs requires licensees to obtain WHO-PQ or SRA approval; or, where such approval is not yet available, provisional or emergency use authorisations

Licensing from a Public Health Perspective

Accelerating access

PUBLIC HEALTH NEED

Accelerate timelines for access: Need to speed up access to new ground-breaking treatments

RELEVANT FEATURES IN MPP LICENCES

MPP licences are negotiated early in the life cycle of the products (many years before patent expiry), some include tech transfer and proactive licence management to **shorten time to market**

Example: Timeline from approval of HIV medicines to availability of at least two generic versions:

Until 2010 (prior to MPP)	**~ 7-8 years**
Post 2010 (with MPP)	**~ 3-4 years**
For COVID-19 antivirals	**Less than one year**

Licensing from a Public Health Perspective

Fair compensation

PUBLIC HEALTH NEED

Fair compensation: Important to ensure that agreements are seen as “win-win” so that companies are willing to explore licensing products

RELEVANT FEATURES IN MPP LICENCES

Licences can include royalties that can be tiered according to the level of income of each country. Also some licences focus on public markets only.

Example: MPP entered into a licence with ViiV Healthcare in 2020 to enable supply of generics in 4 Upper Middle-Income Countries (i.e. Azerbaijan, Belarus, Kazakhstan and Malaysia) that includes substantial royalties to the innovator to compensate for loss of sales

medicines patent pool

CASE STUDY ON MPP-VIIV LICENCE AGREEMENT FOR CABOTEGRAVIR LONG-ACTING: KEY LICENSING TERMS

Cabotegravir Long-acting for HIV Pre-Exposure Prophylaxis

Public health significance

July 2022

MPP signs licence with ViiV on Cabotegravir Long-acting for HIV Pre-Exposure Prophylaxis (PreP)

CAB-LA is the first and only FDA-approved long-acting injectable PrEP option for use in at-risk adults and adolescents to reduce the risk of sexually acquired HIV

CAB-LA has been demonstrated in clinical trials to be 89% more effective than daily oral FTC/TDF (oral PrEP) and to be generally well tolerated with a promising safety profile

CAB-LA allows for less frequent administrations, which addresses adherence challenges (as well as stigma) often associated with consistently taking daily oral pills

- CAB-LA is initially administered one month part for two consecutive months, and then once every two months; reduces dosing from 365 doses as with oral PrEP to six doses per year after the initiation period
- Significant as research shows that teenage girls and young women particularly often struggle with adherence to a daily dose regimen

Access to CAB-LA could significantly contribute towards the goal of ending HIV transmission by 2030

medicines patent pool

Cabotegravir Long-acting for HIV Pre-Exposure Prophylaxis

Key terms of the licence

Technology & data

Patents (including pending patents) relating to cabotegravir; Data package available to licensees upon request to facilitate registration

Scope of grant

MPP can grant a sublicence to generic manufacturers anywhere in the world to manufacture and supply the licensed product for use in the field and territory

Granting sublicenses

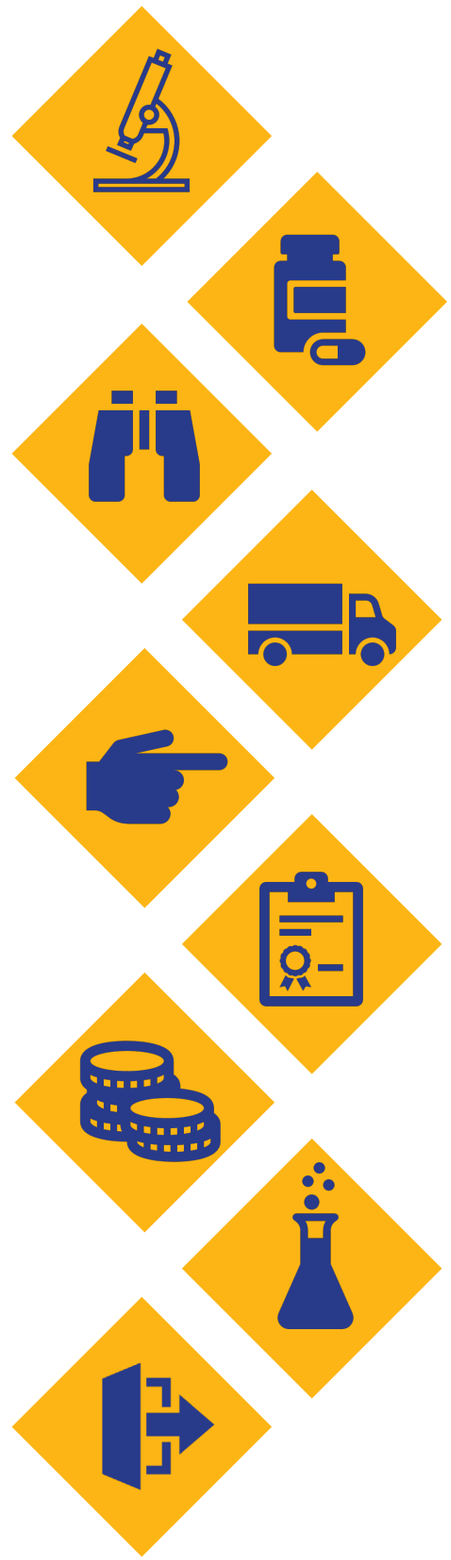
MPP to select qualified sublicensees based on a set of guidelines; approval from ViiV required and limited to a maximum of three

Royalties

Payable in 10 countries in the territory for sales to the public market (5%); other countries are royalty-free

Non-infringement

No restriction on generic manufacturer from undertaking any activity anywhere in the world where such activity does not infringe ViiV's patent rights (incl. where compulsory licence issued)



Licensed Product

Cabotegravir in a tablet form (containing 30mg of cabotegravir) and/or long-acting injectable form

Non-diversion

Obligations on the generic manufacturer to mitigate the risk of products being supplied outside the territory

Quality

Manufacture in a manner consistent with WHO PQ or SRA standards; Prior WHO PQ or SRA approval required for sale of Licensed Product

Improvement

Grant back of non-exclusive licence to ViiV and MPP for all improvements over the Licensed Product or the cabotegravir compound

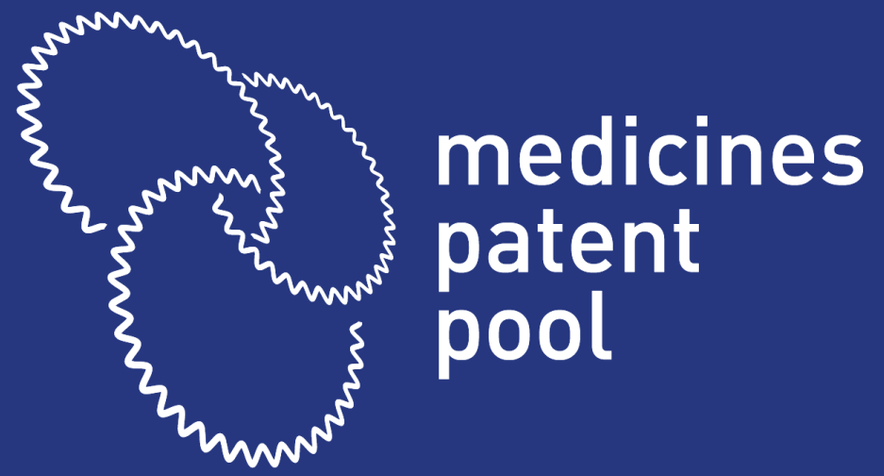
Approval of licence

Expertise of Expert Advisory Group members

- Regulatory
- Intellectual property licensing and law
- Public health in developing countries/medicines policy
- Communities/non-governmental organisations
- Science/research & development
- Clinical expertise
- Business development within the pharmaceutical sector/markets/procurement

Key questions to the Expert Advisory Group

- Do the results sufficiently meet the requirements as set out in the Statutes?
- Do the negotiation results offer sufficient added value over the status quo?


medicines
patent
pool