Current Issues in Intellectual Property Rights: Patents for Medicines

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Right to Health & Access to Medicines

Accesibility of essential Medicines is a **Non-derogable core obligation** under Article 12 (Right to Health) of the ICESC Ras elaborated by General Comment 14

Accessibility to the right to health has four dimensions according to General Comment No.14:

1. *Non-discrimination* i.e. medicines must be accessible **without discrimination** on any of the prohibited grounds;
2. *Physical accessibility:* medicines must be accessible in all **parts of the country;**
3. *Economic accessibility:* medicines must be **affordable to all**, including those living in poverty; and
4. *Information accessibility:* **reliable information about medicines** must be accessible to patients and health professionals for them to take well-informed decisions.

Patents and the Right to Health

- Patents prevent persons not authorized by them from **making, using, offering for sale, selling** or **importing** the patented inventions.
- **Patents on Medicines play a vital role in pricing** of the drug due to **monopoly** given to the patent holder.
- Patents can either be for **products** or **processes**
  - **Product** patent → absolute monopoly → No competition → Monopolistic prices
  - **Process** patent → relative monopoly → competition→ lower prices

Patents and the Right to Health

The creation of **patent monopolies** leads to monopolistic pricing i.e. high prices. For example:

1. *Imatinib mesylate* (*Gleevec*) EMR: Anti-cancer medicine for some time–
   - Novartis' price = **USD 2400** per patient per month
   - Generic version price = **USD 160 to 200** per patient per month

2. *Tenofovir + Emtricitabine + Efavirenz*, an HIV combodrug:
   - Gilead's price = **USD 1800** per patient per month
   - Generic version = **USD 15** per patient per month

India :1911 Act

- ***Patents and Designs Act, 1911*:**
  - **Protection for both Product and process patent**
  - **Absolute monopoly for the patent holder**
  - Term of patent: 16 years

  - **Consequence**
    - India had the highest prices for medicines in the world

India 1970 :No product patent: Only process patents

- *Patents Act, 1970* (For pharmaceuticals and agrochemicals):
  - **No product patent protection, only process patent**
  - Process patent for best process known to inventor
  - **Maximum term of patent: 7 years**
- Consequence:
  - **No monopoly on pharmaceutical products**
  - Indian pharmaceutical companies used alternate, non-infringing processes to manufacture drugs
  - **More than 1 manufacturer of drug → competition → lower prices**
  - Prices of medicines in India are the lowest in the world.
  - 1995**: Indian companies supply 95%** of the safe and quality generic **drugs to developing countries.**

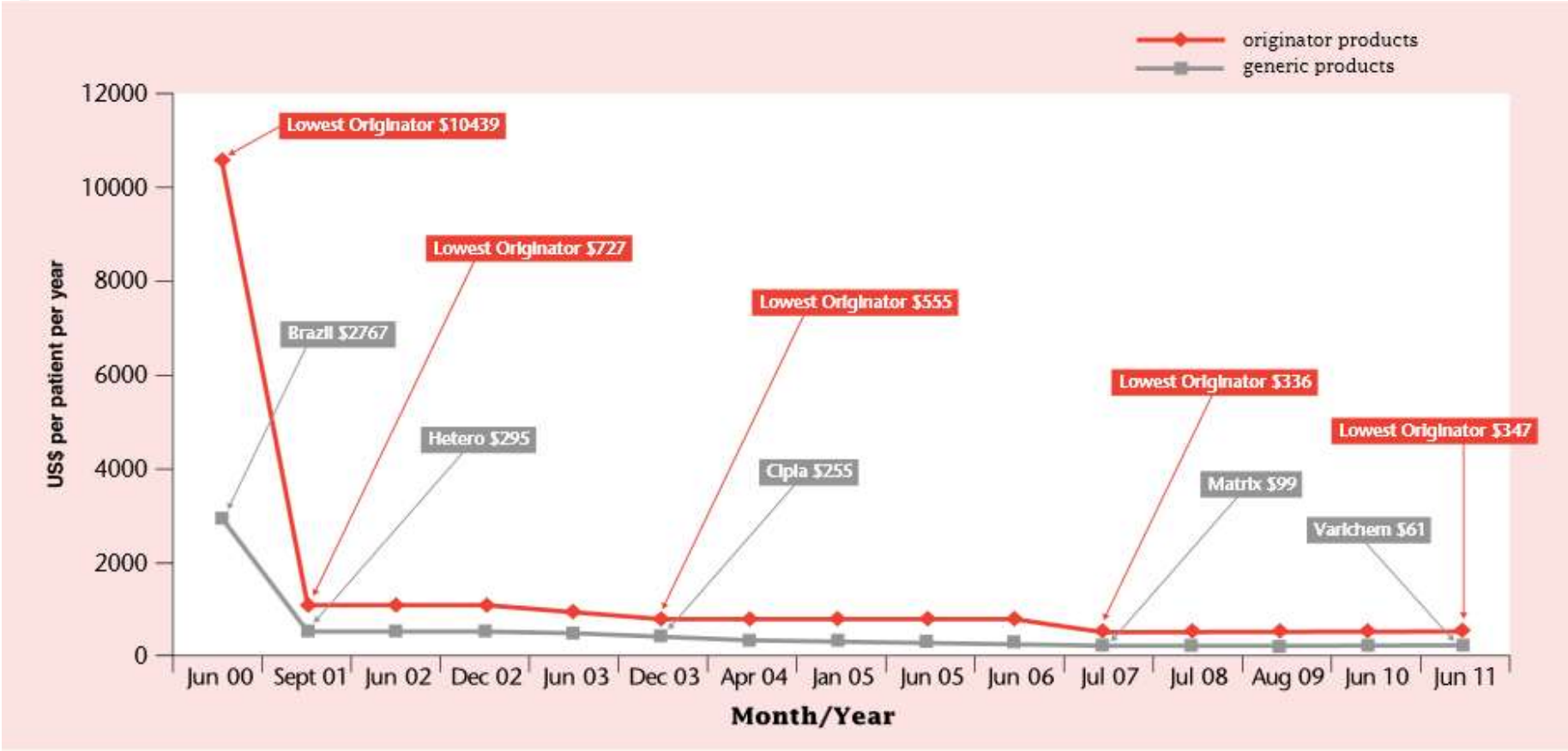
INDIAN PHARMA: EXPORT GROWTH

(USD million and %)

Year	Total exports	Total imports	Trade balance (col2/ 3)	Trade balance as % of exports
1973–74	47.9	43.8	4.1	8.5
1975–76	48.7	53.0	-4.3	-8.9
1979–80	87.9	148.2	-60.4	-68.7
1985–86	158.9	218.6	-59.7	-37.6
1988–89	**322.9**	**308.6**	**14.3**	**4.4**
1989–90	514.6	391.7	122.9	23.9
1995–96	698.7	558.1	140.5	20.1
1999–00	1668.5	346.6	1321.9	79.2
2003–04	3177.3	686.7	2490.6	78.4

Source: Sudip Chaudhari, *The WTO and India's Pharmaceutical Industry*

Studies show that **generic competition is the only sustainable solution to reduce the cost of drugs**. In the height of the HIV epidemic, the price of ARVs reduced by over 99% due to generic drugs primarily manufactured by Indian pharmas.



The fall in the price of the first-line combination of stavudine (d4T), lamivudine (3TC), and nevirapine (NVP), since 2000. *Source: Médecins Sans Frontières,* Untangling the Web of Antiretroviral Price Reductions: 11th Edition, 2011.

The TRIPS Agreement

- **American pharmaceutical and Music** companies, the major "IP-exporting industries" wanted an international IP regime similar to American law.
- They **lobbied with the US Government to approach WIPO to revise the Paris Convention of 1883 in the 1970s** but were **unsuccessful due to WIPO's one country, one vote policy**.
- The last round of GATT Negotiations– the **Uruguay Round** (1986-1994) included IP issues **i.e. the Trade Related Aspects of Intellectual Property (TRIPS) Agreement**

Coverage of TRIPS

- TRIPS is the most comprehensive multilateral treaty pertaining to IP issues covering **every aspect of IP** and trade such as copyrights, trademarks, patents, industrial design, geographical indications and trade secrets
- It establishes **a global standard for IP enforcement and regulation**
- **Grants 20 years for patent protection for products** and processes for food and drugs
- Allegations of non-compliance are **adjudicated** through the **Dispute Settlement Body** of the WTO and the Appellate Panel
- **Penalties** are imposed for non compliance **through sanctions**
- **India agreed to sign on to TRIPS because of Flexibilities**

TRIPS Flexibilities

- **Transition period-** India was given 10 years to comply
- **Criteria for patentability**
  (1) Novelty
  (2) Inventive step
  (3) Industrial application

  countries allowed to clearly define these basic criteria
- **Compulsory Licensing** in exceptional cases;
- Adopted rule of **international exhaustion** to enable **parallel importation;**
- **Exemptions on patent rights for research etc**. ;
- **Oppositions and revocation**;
- TRIPS Flexibilities must be used effectively to ensure that Right to Health goals are met

Making use of the TRIPS flexibilities: India

- India agreed to comply with TRIPS by 2005 and in March 2005, the **Patents (Amendment) Act, 2005** was passed.
- Introduced 20-year **product patents for pharmaceutical** products.
- Included key protections:
  - **Section 3(d**) excluded patentability of new forms of known substances unless there is significant enhancement of efficacy (to prevent ever-greening)
  - **Pre-grant opposition**;
  - **Post-grant oppositions**
  - **Review petitions**
  - **Revocations**
  - **Counter Claims**
  - **Compulsory licensing**
  - **Bolar provision (Generating data to submit to Drug Authorities) for domestic and international market**

Patent evergreening

- Not all patent applications are valid. Many patent applications are for a new use of an old drug, or simply for derivatives of old drugs or combinations of old drugs.
- '**Evergreening**' is the practice of obtaining new patents on a patented medicine by making minor changes, extending the period of protection
- These patents are obtained on **new uses, forms, combinations and formulations** of known substances.
- Extends the patentee's monopoly and restricts generics from entering the market.
- Pharma companies in the US take advantage of liberal patentability standards to keep extending the monopoly and maintaining high prices.

Extending patent terms: Evergreening

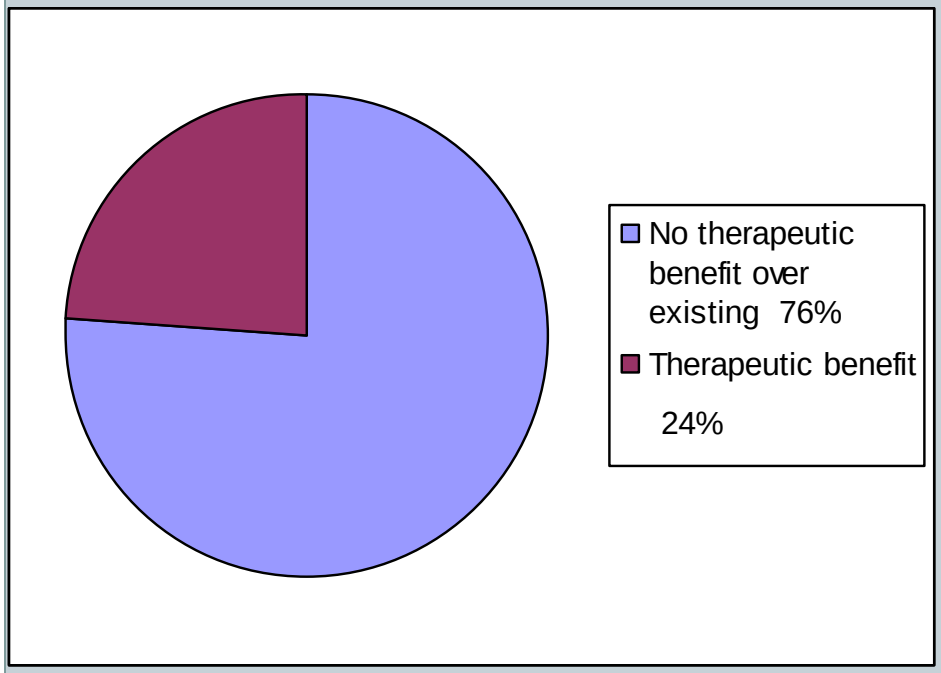
New form

1982	1991	1994	1995
Ganciclovir patented	Esters of ganciclovir patented	Patent application filed in US for ester prodrug of ganciclovir (valganciclovir) and its salts	Pre-1995 molecule : patent application filed in India for valganciclovir and its salts

New formulations

1996	1999	2000	2003
Ritonavir patented	Lopinavir patented	Lopinavir +ritonavir soft-gel capsule patented	Lopinavir + ritonavir tablet patent application filed

Ever greening: reduces innovation



Source: "Changing Patterns of Pharmaceutical Innovation", National Institute for Health Care, Management Research and Educational Foundation, May 2002]

New Drug approvals by USFDA from 1989-2000- Only 15% of 1,035 new drugs approved were highly innovative priority NMEs. Of the remaining, **only 24% showed actual therapeutic benefits** over the existing drugs

1995-2005: An estimated 12,000 pharmaceutical applications filed in India, **very few of which have substantial therapeutic benefits** over the existing drugs

Section 3 (d) & Evergreening

- Under section 3(d) of the Indian Patent Act, drugs cannot be patented if they result from

  *"the mere discovery of a **new form of a known substance which does not result in the enhancement of the known efficacy** of that substance OR the mere **discovery of any new property or new use** of a known substance OR of the mere **use of a known process, machine or apparatus** unless such know process results in a product or employs at least one new reactant."*

- This has allowed the continued production of cheap generic versions of drugs by Indian companies.
- The Patent Offices' rejection of the patent for Novartis' cancer drug, Gleevec, led to the challenge to the constitutionality of Section 3(d) in the landmark *Novartis case*.

Novartis AG v. Union of India

- The High Court of Madras held that **Section 3(d) was not vague or arbitrary and therefore did not violate the Constitution**
  - Concept of "efficacy" has a clear meaning in the pharmaceutical field.
  - Efficacy is to be understood as therapeutic efficacy.
  - Concept of "enhancement of efficacy" has a clear meaning in the pharmaceutical field. Therefore, a patent applicant can place on record the therapeutic effect/efficacy of a known substance and the enhancement in that known efficacy;

High Court: "We have borne in mind the object which the Amending Act wanted to achieve, namely … to provide easy access to the citizens of this country to life saving drugs and to discharge their Constitutional obligation of providing good health care to its citizens."

Novartis AG v. Union of India

- In the SLP filed by Novartis the Supreme Court which finally held that :
  - Gleevec was **NOT** new or obvious and was hit by 3(d)
  - In the context of medicines "Efficacy " means "therapeutic efficacy"
  - Not all advantages (flow properties, less hygroscopic properties and bioavailability) can be held to be as relating to efficacy
  - Bioavailability by itself may or may not result in its efficacy being affected. In each case patent holder has to show that there is an increase in efficacy

Patent Oppositions

- Structured to restrain wrongful obtaining of patents and claiming of the frivolous or petty inventions.

- **PRE-GRANT OPPOSITION**: any person or any third party or Government may challenge the application of grant of patent and inform the controller of Patents, in writing against the grant of a patent after the application for a patent has been published but before the grant of a patent a patent.

- Pre-grant opposition acts as a defensive shield to confirm the validity of the patent applications before a patents is granted

- **POST-GRANT OPPOSITION**: may be filed at any time after the grant of patent but before the expiry of a period of **one year** from the date of publication of grant of the patent.
- **Grounds** under both pre and post grant opposition are similar but certain procedural differences exist.
- Under Indian law, only "**persons interested**" can file a post-grant opposition.

Patent Oppositions

- **Revocations**: These can be filed at any time after the grant of the patent and only by **"persons interested."**
- Grounds under revocation are similar to oppositions but certain procedural differences exist.
- **Counterclaims** in Infringement suits
- By **person interested**
- Grounds for a counter claim are similar to oppositions but certain procedural differences exist.
- This always done at the High Court level

Compulsory licensing

- A compulsory license (CL) *" is when a government allows someone else to produce the patented product or process without the consent of the patent owner".*
- It is a **key flexibility** provided **for under the TRIPS Agreement.**
- **Article 31 o**f the **TRIPS Agreement** deals with compulsory licenses but does not provide a list of grounds of which they can be issued. But it lists certain conditions that must be fulfilled:
  - Attempt to negotiate a voluntary license (VL)- only if it fails can a CL be issued.
  - Payment of royalty
- **Doha Declaration on TRIPS and Public Health (2001)**
  - Clarified that WTO Members have the "right to grant compulsory licenses and the freedom to determine the grounds upon which such licenses are granted"

Compulsory licensing

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Compulsory Licenses under the Indian Patents Act , 1970

Types of Compulsory Licenses

Section 84 (Price+Working)	Section 92 (Public Interest)	Section 92A (Export)	Section 100 (Government Non-Commercial Use)
✓Reasonable reqmts of the public unmet ✓Not reasonably affordable ✓Invention is not being *worked*	✓National emergency, ✓extreme urgency, ✓public non-commercial use	✓For mfg and export to countries having low/no mfg capacity ✓CL/legislation allowing import of medicines ✓To address public health concerns	✓Use of the invention for the purposes of government

New TidingsBITs & FTAs

Free trade agreements (FTAs) are signed between countries to liberalise the trade of goods and services such as removing/lowering customs, tariffs, import quotas etc.

Bilateral Investment Treaties (BITs) govern private investment by nationals and companies between States

In the last two decades, an increasing number of **Trade and Investment Agreements (TIAs)** have been entered into, or are being negotiated, which link intellectual property rights to trade interests.

Why BITs, FTAs and TIAs

- **TRIPS flexibilities** were successfully introduced because of resistance from developing countries including India and Brazil, **foiling the IP harmonisation agenda**
- Multilateral TRIPS arena was not as favourable to the Big PhRMA lobby as initially hoped for. Instead, they **sought to further their IP agenda through Trade and Investment Agreements (TIAs)**, both bilateral and multilateral.
- **Asymmetrical trade and investment relations** allowed the US to barter market access to weaker trading partners in return for concessions on IP protection and enforcement

Impact of in TIAs on Access to Medicines

- Post-TRIPS, developed countries, like the US, entered into FTAs which:
  a) attempted to **dilute TRIPS flexibilities** e.g. extending the patentability criteria
  b) imposed **additional IP protection and enforcement** provisions beyond TRIPS (TRIPS-Plus standards

Such measures delay and restricts the entry of generic competitors, resulting in higher medicine prices **directly impinging on the right to health**

TIAs: Restricting TRIPS Flexibilities

- Broadening scope of **patentability criteria** by allowing patents on **"new uses" or "second uses"** i.e. patent evergreening
- Enhancing the protection on **patents on plants and animals,** even though Members are allowed to exclude them under TRIPS
- Prohibition or Limiting of **Pre-Grant Oppositions**
- Limiting the conditions for **granting a Compulsory License**

TRIPS+ : Patent Term Extension

- Under the **TRIPS Agreement, patents are given twenty years of protection**. Based on the understaning that it takes **8-12 years to get drug approval and therefore a monopoly of 12 to 8 years** (See WTO judgment on *EU/ US versus Canada* dispute)
- Pharma lobbies have used **FTAs to obtain the right to extend the patent term to compensate for alleged delay**s in the examination of the patent application and the process of marketing approval
- The EU and the US have argued that the delays reduce the ***effective term*** **of the patent and the possibility of recovering the high costs of R&D.**

TRIPS+ : Data Exclusivity

- Drug regulatory regimes require **originator** companies to do all the trials**: animal toxicity studies and phase 1, 2, 3 human trials**. These results in **data generated** which is presented to the drug regulatory authorities who decide whether the **drug is safe and efficacious and then grant approval**
- Second or **generic company** is **not required** to carry out **phase 1, 2 or 3 human clinical trials**
- **Ethical concerns**: Clinical trials should not be conducted again on humans when a medicine is already proved to be safe and efficacious.
- The **TRIPS Agreement** under Article 30 only requires **data protection** that **is no unfair commercial use** of that data by a rival
- **Drug regulatory authorities can use the data** of the originator to grant or deny the generic company the approval

TRIPS+ : Data Exclusivity

'**Data exclusivity**' prevents States' drug regulatory authorities from relying on test data submitted by originator companies to assess and approve generic versions until a specific period has expired after the submission of clinical trial by the first entrant.

- **It delays entry of generic competition** by making the companies wait for 5 and upto 10 years from the date of approval of the original drug, to get approved.
- **Increases the costs of medicines** by ensuring monopolies on pharmaceuticals for a longer period of time.

TRIPS+: Data Exclusivity

- **Exclusivity regardless of patent status** of the drug, including non-patentable or off-patent drugs or patents for new use.
- Allows **extension of monopoly beyond patent term** in some cases.
- **Undermines compulsory licensing** since it will force the licensee to wait for the expiry of the DE period until it can manufacture the drug.

TRIPS+ : Patent Linkage

- Article 30 of the **TRIPS Agreement** permits a pharmaceutical company or **research lab to undertake experimentation, generate and submit this data for approval during the subsistence of a patent**
- The principle is that the moment **drug goes off patent generic production must come in immediately**
- The WTO Dispute Settlement body first settled this position in the ***Canada–Pharmaceutical Patents case (DS114)***.
- WTO Dispute Settlement body decided that a law which promotes experimementation to generate data to submit it to regulatory authorities is permissible during the subsistence of the patent (in the patent period)

TRIPS+ : Patent Linkage

- **Patent linkage prevents marketing approval of generic drugs if there is a patent covering the drug product** sought for approval during the subsistent of the patent.
- **Marketing approval of generic drugs will be given only after the expiration of patents** of the drug product. In some cases, the regulatory authority must inform the patent-holder of the identity of the generic seeking marketing approval
- Patents are private rights**, but a patent linkage forces the country's drug regulatory authority(DRA) to prevent infringement** of the private rights of patent holders

TRIPS+ Patent Linkage

- **DRAs do not have the expertise to review patents and determine their validity**. The US FDA has taken the same position.
- **Delays the entry of generic medicines** into the market, once the patent is invalidated, or when the patent term expire
- **Undermines compulsory licensing**, since it would be difficult for generics to prove the safety and efficacy of their drug without its registration in the DRA. If a CL is granted, it would still result in a delay before the generic enters the market.
- In **India** the 107A of the Patents Act was amended in line with the Canadian law,upheld by the WTO Panel to allow for generating of date for regulatory approval in India or abroad
- In ***Bayer v Natco*: both for PATENT Linkage and for regulatory approval within the country and for export: 107A of the Patents Act**

TRIPS+ : Enforcement

- Many FTAs push for **stricter enforcement measures** of patent and trademark rights, **well beyond TRIPS**.

- Since **IPRs are private rights**, it is upto the **rights-holder to enforce** his rights. FTAs seek to shift the burden of enforcement of private rights to state

- **BORDER MEASURES**
  - TRIPS only requires border measures re infringement at point **of import to check copyright piracy and counterfeit trademarks** [Article 51].
  - FTAs seek **to extend the scope of patent protection**, the infringement of which cannot be determined by visual inspection.
  - Not only applicable to **import**, but also to **export, re-export** and **goods in transit**
  - Imposes obligation **on intermediaries to disclose information**
  - Action by State **is mandatory**

TRIPS+ : Enforcement

- In 2008 for example, WHO pre-qualified ARVs for the Clinton Foundation treatment project purchased by UNITAID were seized during transit from Amsterdam. The drugs, being sent from India were intended for Nigeria.
- 17 other such seizures; in some cases, drugs were released after a few months, and either forwarded to the destination or returned to India.

INJUNCTIONS

- EU FTAs seek stronger enforcement mechanisms that:
  - Facilitate litigation to deter competitors by **obtaining injunctions** more easily to thwart competition
  - Imposing **mandatory injunctions** to thwart counterclaims which challenge the validity of the patent;
  - Injunctions against intermediaries;
  - Far reaching **information gathering** provisions that undermine freedom of trade and private and confidential data
  - Compulsory damages and under expanded heads of damage
  - Orders to seize and **destroy goods**

Investor-State Dispute Settlement (ISDS)

- Bilateral Investment Treaties have long included investor-state arbitrations, allowing private investors to sue governments for taking measures which "harm" their potential investments. This is known as **Investor State Dispute Settlement (ISDS)**
- Creates a separate forum **allowing only the investors but not the State to go for arbitration**
- **Circumvents the local court systems** through private international arbitration tribunals.
- Arbitrators **are private lawyers who are experts in trade** and commercial law, however have no experience in human rights. They **adjudicate cases against States which may have serious implications on public health**.
- Arbitral **awards are final and binding** on the parties, therefore **no appeal is permitted**.
- Most ISDS disputes 2013 were brought **against developing countries** by investors from developed countries.

Problems with the ISDS

- **Impinges on the Sovereignty of States to decide on domestic policy.** There's a marked increase in the number of arbitrations during the time of financial crises. Even if a state needs to realign its economic and social policies in the changed climate, it would threaten investments and prevent States from meeting their obligations under the Investment agreement.

- **Huge costs** in arbitral proceedings in addition to **exponentially high compensation awards.** The losing party must also pay for the legal fees of the successful party. Results in a **chilling effect on States** to take measures in public interest

- **Conflict of interest-** small and well connected group of arbitrators, lawyers in the international arbitration world, many with close links to the investors and business interests.

- Arbitration **proceedings opaque and conducted *in camera***. Most instances do not even allow public notice.

ISDS impact on Health

- The ISDS mechanism has **been used several times to challenge economic, social and health policies.**
- ***Phillip Morris* arbitration under the Hong Kong-Australia BIT**
- In the interest of the public, the **Australian** government had mandated graphical **package warnings** on products containing tobacco.
- **Phillip Morris Asia**, after purchasing the shares of Phillip Morris Australia to **invoke the ISDS**, challenged the tobacco plain packaging legislation, contending that it was a discriminatory measure against the free use of the investor's trademark.
- Australia strongly defended its position, although the case was ultimately dismissed by the Tribunal on the ground that it **did not have the jurisdiction to hear Phillip Morris' claim. Upheld on a technical ground**

Eli Lilly arbitration under the NAFTA

- Eli Lilly, a pharmaceutical, **initiated arbitration proceedings against the Government of Canada, for invalidating the patents on two of its products, Zyprexa, an antipsychotic and Strattera, an ADD medication** on the grounds that they did not meet the standard for utility.
- Lilly has claimed $500 million CaD in damages

- The actual effects of the drugs did not meet the "promise" of its efficacy in the company's disclosure.

- Lilly argued that **Canada failed its international obligations under NAFTA when its judiciary developed the doctrine of "promise" rule** to determine utility.

- It stated that **it "legitimately expected that Canada's patent utility requirement would not be changed** in an arbitrary and unreasonable manner"; that is by a court decision

UN High Level Panel on A2M

- On 19 Nov 2015, the UN Secretary-General, Ban Ki Moon called for the creation of the High-Level Panel on Access to Medicines (HLP) to

"review and assess proposals and recommend solutions for remedying the policy incoherence between the justifiable rights of inventors, international human rights law, trade rules and public health in the context of health technologies"

- HLP comprised of 15 eminent individuals from diverse backgrounds such as trade, law, public health, pharma and human rights. Supported by an Expert Advisory Group under the chairmanship of Justice Michael Kirby.
- The **Report itself was the result of dialogue and deliberations held all over the world** by the HLP and EAG, in addition to almost 200 individual contributions from NGOs, community networks, companies and individuals.
- The **Final Report** was released on September 14th 2016

Voluntary Licences : New Challenge

- Compulsory licenses is the normal route for non accessibility of medicines under the Patent Act
- New Strategy for MNC is to offer Voluntary licensese to Indian generic companies

  In return
- No challenges to Patent applications
- Restrict the licenses to particular countries
- Needy countries don't have licenses
- Puts the MNC in the driver seat as opposed to the State

UN HLP Recommendations

Amongst others, the UN HLP Report made important recommendations with respect to the role of IPRs and access to medicine:

- **Affirmed the Doha Declaration**, called on WTO members to make full use of TRIPS flexibilities
- **Utilise Art 27 of TRIPS**- Members should apply rigorous definitions of invention and patentability in the best interests of public health i.e. prevent evergreening
- **Affirms** the issuance of **compulsory licenses** and laws to facilitate it
- **Countries resorting to threats** and strategies to undermine the rights of members to use TRIPS flexibilities **must be reported to the WTO** and liable to punitive measures.
- **Trade and Investment treaty** negotiations must include a **Public Health Impact Assessment** conducted transparently and publicly available

The Report still **falls short** however. For example, it fails to address the **skewed ISDS mechanism** and the existing trade agreements which are already being exploited to interfere with human rights.