A KEY SOURCE OF AFFORDABLE MEDICINES IS AT RISK OF DRYING UP

– The case of Novartis's challenge against the Indian government and what it could mean for millions of people across the globe –

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Swiss pharmaceutical company Novartis was one of the 39 companies that took the South African government to court five years ago, in an effort to overturn the country's medicines act that was designed to bring drug prices down. Now Novartis is up to it again and is targeting India. An ongoing legal challenge brought by Novartis against the Indian government has the potential to severely affect access to affordable essential medicines for millions of people across the developing world. Novartis is challenging a public health safeguard enshrined within India's Patents Act. If the company is successful, the era of India being a producer of affordable generic medicines for much of the world could be coming to an end with regard to newer and future medicines. This would have a devastating impact on people the world over who rely on affordable medicines manufactured in India.

PATENTS IN INDIA THREATEN A KEY SOURCE OF AFFORDABLE MEDICINES

India produces affordable medicines that are vital to many people living in developing countries. As an example, over half the medicines currently used for AIDS treatment in developing countries come from India, and such medicines are used to treat over 80% of the 80,000 AIDS patients in Médecins Sans Frontières (MSF) projects today.

That is because until recently, India did not grant patents on medicines, which allowed Indian generic manufacturers to compete with patent holders and amongst each other to produce lower-priced generic versions of drugs patented in other countries. This sort of generic competition among multiple producers is what made the cost of AIDS medicines fall dramatically and helped facilitate global AIDS treatment scale-up thus far.

However, India is drying up as a source of affordable versions of newer and future medicines. This is due to changes made to India's patent law in 2005, when the country was required to begin reviewing pharmaceutical patents according to its international obligations under the World Trade Organization (WTO) Agreement on Trade Related aspects of Intellectual Property Rights (TRIPS).

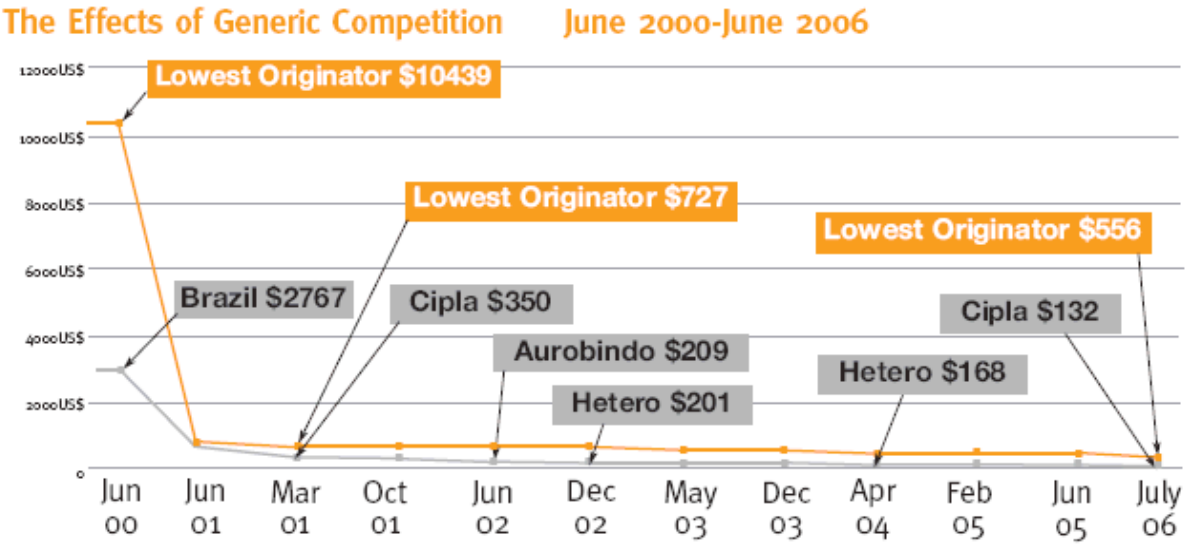
Widespread medicines patenting in India could mean that cheaper versions of newer medicines will no longer be able to be produced by Indian manufacturers. Precisely such newer drugs are crucial e.g. for the treatment of HIV/AIDS.

Fortunately, when the Indian government designed its patent law, an effort was made to find a balance between the intellectual property rights of pharmaceutical companies and the need to make drugs as affordable as possible. However, with this legal challenge brought by Novartis, access to newer affordable medicines produced in India could further worsen.

GENERIC COMPETITION NEEDED TO DRIVE PRICES DOWN: THE EXAMPLE OF AIDS MEDICINES

Thanks to competition among generic manufacturers since 2000, which was strongly encouraged by civil society pressure in countries such as India, Thailand and Brazil, the price of first-line antiretroviral drug regimens has fallen by 99% from an average of US $10,000 to the current price of US $132 per patient per year (see graph 1).[1]

Graph 1: *Sample of ARV triple-combination: stavudine (d4T) + lamivudine (3TC) + nevirapine (NVP). Lowest world prices per patient per year.*



Generic competition has shown to be the most effective means of lowering drug prices.

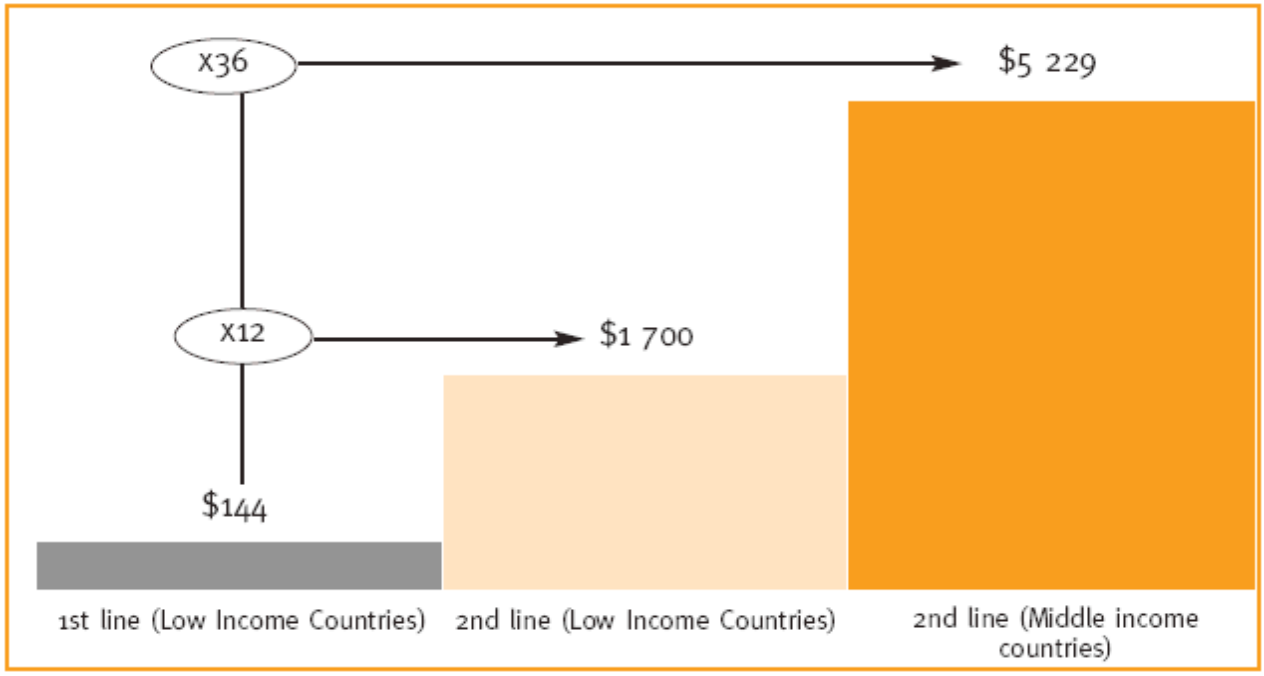
However, a new problem is looming. Assuring the availability of newer and improved drugs is crucial, as after a certain amount of time people become resistant to the drug combinations they take and inevitably need to be switched to newer "second-line" drug regimens. Data from one of MSF's longest-running treatment programmes, in Khayelitsha, South Africa, shows that 17.4% of people who have been on treatment for five years have had to switch to such second-line therapy. Additionally, improved first-line medicines also require newer drugs.

Today, however, newer AIDS medicines are largely still only available from originator companies. Contrary to medicines used in first-line regimens, these newer drugs are under patent in other key countries with generic production capacity, Brazil and Thailand, which keeps prices high and availability low. These medicines are also awaiting patent review in India, which explains why competition on these newer medicines is still limited among Indian manufacturers. If patents are granted on these medicines in India, production of generic versions will not be possible. Even the production of medicines for which patent applications are pending is a high-risk investment for

[1] Untangling the Web of Price Reductions: A pricing guide for ARVs in the developing world, 9th edition, 2006

generic manufacturers, as companies do not know if they will be able to continue production and sell the drugs in the future. This lack of competition on newer AIDS drugs today has had the result of prices for these medicines remaining much higher than those for older drugs, despite price reductions offered by originator companies (see graph 2)[2].

Graph 2: *Average weighted prices paid in 2005, reported to WHO GPRM for second-line ARVs in low- and middle-income countries, compared with first-line regimens*



PUBLIC HEALTH SAFEGUARDS INCLUDED IN INDIA'S PATENTS ACT

WTO rules made it mandatory in 2005 for India to have a patent regime for medicines, and as a result, the Indian parliament approved the country's new Patents Act, thereby allowing pharmaceutical products to be patented in India. This new law puts severe constraints on generic competition. However, the new law at least contains several crucially important features to prevent patents from being granted too easily, such as provisions that specifically prohibit patenting of known compounds, and the possibility for anyone to object to a patent before it is granted.

An effort to prevent "evergreening:" Section 3(d)

At the time of amending the Patents Act, the Indian parliament was aware of the concerns about patenting of medicines that are not new. As a result, Indian lawmakers introduced a provision in the Patents Act that stipulates that patents should only be granted on medicines that are truly new and innovative. This means that companies should not be able to obtain

[2] Untangling the Web of Price Reductions: A pricing guide for ARVs in the developing world, 9th edition, 2006

patents in India for medicines that are not actual inventions, such as drug combinations or slightly improved formulations of existing medicines.

This part of the law [section 3(d)] was specifically targeted at preventing a common practice used by drug companies of trying to get additional patents on insignificant improvements of drugs already patented. The provision was an effort to reward innovation, which is the rationale of the patent system to begin with. It also aimed to ensure that patents do not unnecessarily restrict access to medicines. It is this part of the law that Novartis is challenging, claiming it is in violation of WTO rules.

Further, manufacturers of patented medicines make minor variations to existing medicines in order to extend companies' monopolies for as long as possible. Also called "evergreening," this practice impacts the ability of patients to access affordable medicines by delaying or restricting the introduction of competition among other pharmaceutical manufacturers that could lead to lower prices.

An example of evergreening is the case of the ulcer medicine omeprazole, which Astra Zeneca sells under the brand name Losec. Sale of generic omeprazole in Canada was successfully blocked by the evergreening of patents by Astra Zeneca. As the basic patent on omeprazole was about to expire, Astra Zeneca switched the product from a capsule to a tablet and acquired new 20-year patents on the tablet form.

Pre-grant oppositions: the right to oppose a patent before it may be granted

India's Patents Act also allows room for any interested party to oppose a patent application that is awaiting a patenting decision. This "pre-grant opposition" process was used for the first time on an AIDS medicine in March 2006, when the Indian Network for People Living with HIV/AIDS (INP+) filed the an opposition to the patent claim for a fixed-dose combination of zidovudine and lamivudine filed by GlaxoSmithKline (GSK). INP+ based its opposition on Section 3(d) of the patent law, as the patent claim in question was not for a new invention but simply for the combination of two existing drugs. Similar oppositions on AIDS medicine patent applications have followed as most of the patent claims are for known pharmaceutical substances such as polymorphs, salts, and combinations. Soon after its patent was opposed in India, GSK announced the withdrawal of all its patents and patent applications for the fixed-dose combination of zidovudine and lamivudine.

In January 2006, the Indian patent office for the first time rejected a patent, on Novartis' patent application for the cancer drug imatinib mesylate, which the company sells under the brand name *Gleevec*. The patent was rejected on grounds that the application claims a "new form of a known substance." The rejection was a major success for the Cancer Patient Aid Association of India, which had submitted a pre-grant opposition to the patent office.

NOVARTIS'S CHALLENGE AGAINST THE INDIAN GOVERNMENT COULD HAVE GLOBAL CONSEQUENCES

If Novartis succeeds in its challenge against Section 3(d) of India's Patents Act, patents could end up being granted in India just as broadly as they are in wealthier countries. This would mean that

virtually no generic versions of newer drugs could be produced by Indian manufacturers during patent terms lasting at least 20 years. And that would mean that much of the developing world would no longer be able to rely on Indian manufacturers for their supply of cheap essential medicines, in particular newer medicines.

Patent applications have been filed in India by originator companies for all newer AIDS medicines needed for second-line treatment regimens. These applications now await patent examination in Indian patent offices. Under the terms of Section 3(d) of India's Patents Act, many of these medicines may not be granted a patent in India because the molecule is already known and therefore does not represent a real innovation. If patents on these newer drugs are not granted, Indian generic manufacturers will be allowed to produce generic versions, compete amongst each other and with originator companies and sell these urgently-needed medicines at prices much more affordable for people in developing countries.

But if Novartis succeeds in getting the Indian Patents Act changed, India may apply the same standards of intellectual property protection as wealthier countries, granting far more patents than required by the WTO or envisioned by India's lawmakers. This could lead to generic competition on newer drugs ending entirely and prices for these in both India and developing countries increasing. This in turn would further deteriorate access to essential medicines in the developing world.

> ***Likely patent for newer AIDS medicine lopinavir/ritonavir if Novartis succeeds***
> Lopinavir and ritonavir are two key AIDS medicines that need to be taken in combination by people who have developed resistance to their first set of medication. Although both medicines were first discovered in the early 1990s, pharmaceutical company Abbott Laboratories has applied for patents in India on new forms of these known medicines, in order to be granted a monopoly in India. Both patent applications are still under review at the Indian patent office, and have been opposed by civil society organisations.

DIFFERENT COUNTRIES NEED DIFFERENT PATENT REGIMES

Although the TRIPS Agreement obliges all WTO countries to grant patents on medicines, nothing obliges developing countries to replicate patent systems of wealthy countries. The agreement allows each country to set its criteria of patentability and does not prevent countries from including safeguards against the grant of patents for known substances, i.e. trivial patents. The Doha Declaration on TRIPS and Public Health, which was signed by all WTO countries, states that "the [TRIPS] Agreement can and should be interpreted and implemented in a manner supportive of WTO Members' right to protect public health and, in particular, to promote access to medicines for all."[3] Developing countries therefore have the right to design their patent laws in a way that takes their public health needs into account. This is precisely what India did when it amended its Patents Act in 2005. India fulfilled its obligation to grant patent protection according to WTO rules. The consequences for access to newer medicines for developing countries are severe; they should not be worsened further by making patenting too easy. Novartis should not be standing in the way and challenging India's rights.

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[3] Doha Declaration on TRIPS and Public Health, signed at WTO Ministerial meeting in Doha, Qatar on 14 November 2001

NOVARTIS APPEALS PATENT REJECTION ON CANCER DRUG IMATINIB MESYLATE (GLEEVEC)

Novartis filed patent applications for the cancer drug imatinib in most countries in 1993. The company was not able to do so in India, as the country was not granting product patents at that time. In 1998, Novartis applied for a more specific patent on the beta-crystalline polymorph of a mesylate salt of imatinib i.e. imatinib mesylate, in order to try to obtain a patent monopoly in India

In January 2006, the patent on imatinib mesylate, which Novartis produces under the brand name *Gleevec*, was rejected in India on the grounds that it only represented a new form of a known substance and therefore was not an innovation and not patentable under Indian law. In May 2006, the company filed an appeal to the patent rejection, as well as a challenge against Section 3(d) of India's Patents Act.

Imatinib mesylate (Gleevec) is a crucial cancer drug essential in prolonging the life of patients suffering from chronic myeloid leukemia. In countries where Novartis has obtained a patent on Gleevec, the drug is sold at US $2,600 per patient per month. In India, generic versions are available for less than US $200 per patient per month. Novartis is now trying to have the patent decision overturned, so it can sell Gleevec at the same price in India as in other countries. The company is also challenging the Indian patent law, in an effort to make patents as easily granted in India as they are in most other countries.