Polar Opposite Prices for Antipsychotic Aripiprazole

Mental Illness in South Africa
Aripiprazole is an anti-psychotic, used for the treatment of schizophrenia, bipolar disorder or major depression disorder.1 Approximately 1% – 2% of the world’s population is afflicted by these illnesses; onset is usually diagnosed in people between the ages of 15 and 30. Around one-third of the South African population will suffer from a mental disorder at some point in their lifetime, which includes major depression, bipolar disorder and schizophrenia, as well as anxiety and substance abuse2. Although not curable, both schizophrenia and bipolar disorder are treatable3.

How is aripiprazole used?
Typical adult dosage ranges from 10 to 30 mg daily. Adults with depression will generally start at lower daily dosages of the drug.4

How available is aripiprazole in South Africa, and how much does it cost?
Otsuka is the original manufacturer of aripiprazole, but in many countries—including South Africa—jointly markets the drug with Bristol-Myers Squibb, under the trade name Abilify. Aripiprazole is not readily available in the South African public sector. The cost of a 10mg tablet in the private sector is R36.32; a 30mg tablet costs R80.27,5 meaning average annual treatment costs per patient range between R13,246 (10mg/daily) and R29,298 (30mg/daily). The price per mg in South Africa is almost 20% more than in Japan (¥340.70 or R35 per 12mg tablet)6, where Otsuka holds a sales monopoly. Aripiprazole in South Africa is 35 times more expensive than the average price of a generic in India7, where at least four generics are available from manufacturers Zydus, Lupin, Ranbaxy and Sun Pharma8, and the originator product is not marketed due to the high level of generic competition.9

Aripiprazole is one of the top ten selling drugs in the world, earning nearly $6.5 billion in sales revenue in 2013.10 In South Africa it earned over R30million in annual revenue for BMS in the South African private sector in 2012-13. If South Africa had access to Indian generic prices, over R29 million in savings annually could be realized on one drug alone. The graph below illustrates the projected prices paid by a patient for a 20mg daily dosage of aripiprazole over five years in South Africa, Japan and India.

How do patents block access to generic aripiprazole?
The initial U.S. patent application was filed by Otsuka in October 1989. A five-year extension granted in the U.S. means the initial patent does not expire there until October 2014, with a paediatric indication further extending the patent until 201511. This original patent cannot be found through the South African online patent search database, but Otsuka has filed multiple patents on carbostyril derivatives, which are similar compounds to early-stage aripiprazole.

In some countries, if the initial patent is not filed, patents can be rejected on any later patents on the same medicine. However, in South Africa, where no examination of patent applications exists to determine patent validity, a substantial number of patents have been filed and granted on aripiprazole, both to BMS and Otsuka, as well as to the companies Alkermes and Synthon.12 Otsuka and BMS have seven patents on various manufacturing processes, methods of use, and

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2 http://africacheck.org/reports/do-a-third-of-south-africans-really-suffer-from-mental-illnesses/
7 At least four generics are available from manufacturers Zydus, Lupin, Ranbaxy and Sun Pharma, at an average cost per unit of R0.96 for a 10mg tablet in India. The originator product, Abilify, is not marketed in India due to the high level of generic competition.
8 http://www.supportsabda.co.za/mental-illnesses/
9 http://www.duanereade.com/health/DrugFactSheet/3502_1_0_2_0_0/Abilify.aspx
10 2012 Otsuka Annual Report Otsuka, page 12
12 CPC online public patent search (http://patentsearch.cipc.co.za/patents/patentsearch.aspx). Keyword: aripiprazole

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formulations of aripiprazole, filed in 2003\textsuperscript{13}, 2006\textsuperscript{14}, 2010\textsuperscript{15}, 2013\textsuperscript{16} with two pending applications submitted in November 2013\textsuperscript{17} and December 2013\textsuperscript{18}. While generics will soon become available in the United States, and are widely available in India, where no patents exist on the drug, patients in South Africa may have decades to wait for lower prices, unless generic companies register in South Africa and call into question the validity of secondary patents.

\textbf{How could access to generic aripiprazole be improved in South Africa?}

The \textbf{Department of Health} could consider utilising a legal flexibility called parallel importation if they wanted access to more affordable aripiprazole for the public sector. Parallel importation allows registered aripiprazole from Otsuka/BMS to be imported from another country where the product is sold at a lower price than in South Africa.

\textbf{Otsuka/BMS} should lower the price of aripiprazole in South Africa, and allow secondary patents to lapse.

\textbf{Generic manufacturers} could file registration dossiers in South Africa for permission to bring more affordable quality-approved aripiprazole to market. This could facilitate the ability of the Department of Health to afford and procure aripiprazole for the public sector if patent barriers are overcome.

\textbf{The Patents Office} should not reinstate any patents that lapse, and reject any new patents filed on aripiprazole.

\textbf{The Department of Trade and Industry} must finalise a national intellectual property policy and amend the country’s patent laws, in order to limit multiple patents being granted on the same medicine, and establish easier procedures for overcoming patent barriers when medicines are overpriced. These reforms will promote access to more affordable medicines.

\textbf{What can I do to change things?}

Your government and multinational companies should know that you are tired of paying too much for patented medicines in South Africa. Ask the Department of Trade and Industry to finalise a National Intellectual Property Policy that promotes the right to health, so that the patent laws can start to change!

Tweet @the_dti @HealthZA and at your Parliamentary representative and demand they @FixPatentLaw

\textsuperscript{13} Patent Number: ZA 2003/07797 and ZA 2003/00113
\textsuperscript{14} Patent Number: ZA 2006/02347 and ZA 2006/01385
\textsuperscript{15} Patent Number ZA 2010/00307
\textsuperscript{16} Patent Numbers: ZA 2013/05199, ZA 2013/03514
\textsuperscript{17} Application number: ZA 2013/08868
\textsuperscript{18} Application number: ZA 2013/09246

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