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Patent Advantage

A recently created online database of Indian systems of medicine has managed to foil many western bio-pirates looking to patent our ancient knowledge

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The US multinational giant Johnson & Johnson Consumer Companies was excited. Its research had shown that the fragrance of rose and jasmine when mixed with tulsi and vetiver could improve sleep behavior. Not wasting any time, it went ahead and filed a patent application under the title 'Method for Improving Sleep Behaviors' at the Canada Intellectual Property Office (CIPO). The patent claimed that the finding was "unique".

Discovering the application, India shot off a third-party submission, informing the CIPO that the combination in question had been in use in India for centuries and thus the "knowledge" was "not new". India backed its claim by asking CIPO to look into a massive, newly created online database called the Traditional Knowledge Digital Library (TKDL). CIPO was asked to refer to books on the Indian Systems of Medicine (ISM) like Kitaab-al-Haawi-fil-Tibb (dating back to the ninth century AD), Bhavaprakasa from the sixteenth century, Ikseer Azam from the nineteenth century and Khazaain-al-Advia from the twentieth century.
On February 28, 2011, CIPO declared Johnson's application "dead".

"Within a period of 22 weeks, a US MNC's four-year-long attempt to pirate India's knowledge was crushed," says a scientist of the Council of Scientific & Industrial Research (CSIR). "In contrast, when TKDL was not around, it took 10 years (1995-2005) to get a neem patent invalidated at the European Patent Office." The Johnson patent application is not the only one India has managed to squash — since February 2009, when the TKDL first signed the agreement with the European Patent Office, 95 such applications have been squashed and 500 others are in process.

So what exactly is the TKDL? The CSIR, in a path-breaking exercise, dug out, transcribed, documented and digitised over 2.26 lakh rare medical formulations which were part of the country's ancient Indian texts in order to protect them from bio-pirates. This knowledge base includes 1.22 lakh Unani formulations, 90,000 ayurvedic and 15,000 Siddha formulations which were originally written in Sanskrit, Arabic, Urdu, Persian and Tamil. CSIR then painstakingly translated them into five international languages — English, Japanese, French, German and Spanish for intellectual property rights organisations across the world to refer to whenever an application for a patent came up "from western bio-pirates".

Around 10 years ago, about 2,000 erroneous patents concerning ISMs were being granted annually at the international level. On an average, it took five to seven years to oppose a granted patent, which could set the opposer back by a sum of anywhere between 0.2 million dollars to 0.6 million dollars.

"Wrong patents concerning ISMs were being granted every year because India's traditional medicine knowledge exists in languages such as Sanskrit, Hindi, Arabic, Urdu and Tamil, which are neither accessible nor understood by patent examiners at the international patent offices," says a CSIR official. "The TKDL overcame these language and format barriers by scientifically converting the contents in 34 million A4 size pages of the ancient texts into five international languages. It took eight years to create the prior knowledge". The International Patent Classification (IPC) system has under it 69,000 symbols, each indicating the subject to which the invention relates. Similarly, India has put in place 400 unique symbols which are specific to medicinal plants and ancient Indian systems like ayurveda, siddha, unani and yoga. "We have created and installed a software that scans all patent systems for such applications," says the official. "Whenever anybody in the world files an application concerning Indian

KITCHEN CONFIDENTIAL: India has successfully foiled applications to patent the use of ashwagandha, ginger, turmeric (clockwise from left) and various spices that have been used for therapeutic purposes in Indian homes for centuries

TKDL. Now, all that patent offices have to do is click and check whether the knowledge for which the patent has been filed is original or not."

So how does India track all the patents being filed across the world in various patent offices? Ingeniously, the country has put in place a unique "global bio-piracy watch system" through which scientists sitting in India get to know within seconds whenever a patent application is filed in any of the seven largest patent offices in the world. The application is then checked "for systems of medicine or plant formulations, we immediately get a tip-off, after which we check the details."

Besides the European Patent Office with which it signed an agreement in Feb 2009, India has signed TKDL access agreements with the United States Patent & Trademark Office (Nov 2009), Canadian Intellectual Property Office (Sep 2010), German Patent Office (Oct 2009), United Kingdom Patent Office (Feb 2010), Intellectual Property Australia (Jan 2011) and the Japan Patent Office (April 2011). ■

NATURAL RESOURCES

India has foiled several attempts on the part of other countries to patent its indigenous knowledge

- Clara's ApS, a Danish firm, filed a patent application that **jeera** (cumin), **onion, ginger** and **turmeric** were effective as **slimming agents**. This combination has been used in India for centuries

- Cognis IP, Germany, filed a patent claiming that **aloe vera** was very useful for the treatment of **obesity**. The patent was filed on March, 9, 2007. TKDL submitted evidence of the plant's prior use for the purpose on July 20, 2009. The applicant decided to withdraw its claims/patent application on November 27, 2009

- Cyprus filed a patent on the usefulness of **coriander** in treating **poisoning** and **toxicities** on February 1, 2006. TKDL submitted its evidence on May 5, 2010. The applicant decided to withdraw its claims/patent application on October 10, 2011

- Perque LLC, United States, filed a patent on the use of **babool** for the treatment of **constipation, piles, hypertension** and **digestive problems** on November 7, 2006. TKDL submitted its evidence on June 30, 2010. The applicant decided to withdraw its claims/patent application on July, 6, 2010

- Melbrosin International Produktions, Great Britain, filed a patent on the use of **jaiphal** (nutmeg) and **onion** for the treatment of **diabetes** on November 15, 2006. TKDL submitted its evidence on June 8, 2010. The applicant decided to withdraw its claims/patent application on August 19, 2011

- A major Chinese bio-piracy bid to patent the use of medicinal plants **pudina** (mint) and **kalamegha** (andrographis) for the treatment of H5N1 avian influenza or **bird flu** was foiled

- TKDL protected the use of **pistachio, melon, Indian lotus, Bengal gram, neem, gheekawaar, turmeric, jeera** (cumin), **ginger** and **onion** at the European Patent Office by getting cancelled the patent claims of Spain, Italy, China, Kenya, Denmark, Germany and America

- India foiled a major bio-piracy bid on the use of **ashwagandha**, India's wonder plant, in the treatment of a range of illnesses from **depression** and **diabetes** to **insomnia, convulsions** and **gastritis**. Called the Indian ginseng, ashwagandha is used extensively in ayurveda, siddha and unani, India's traditional systems of medicine