

International Conference on “Utilization of the Traditional Knowledge Digital Library (TKDL) as a Model for the Protection of Traditional Knowledge”

New Delhi, India, March 22 to 24, 2011

*Developing a Plan of Action
and Resourcing Strategy &
Sharing the Experience*

V K Gupta, Senior Advisor and Director, TKDL,
Council of Scientific and Industrial Research, Rafi Marg, New Delhi;
E-mail: vkg@csir.res.in

Background on 1995 – 1998 Turmeric & Neem

- **Turmeric patent on wound healing properties granted at USPTO in 1995**
 - *Opposed by CSIR, patent revoked in 1997*
- **Neem patent for antifungal properties granted at EPO in 1995 to US Department of Agriculture & WR Grace**
 - *Opposed by Indian NGO (Research Foundation for Science, Technology & Ecology), Greens, EU & International federation of Organic Agriculture movement, EC*
 - *Revoked in 2000 and re-appealed by applicant*
 - *Finally revoked in 2005*

Major Milestones of TKDL Project

TKDL in 1999

- Recognition of need of creation of Traditional Knowledge database by SCIT, WIPO

Under the chairmanship of Dr R A Mashelkar, the then Director General of CSIR (June, 99)

- Direction to Dept. of Indian systems of Medicine & Homeopathy
Task force constituted under Prof. D N Tiwari, the then member Planning Commission on S & T

- Approach paper on setting up of TKDL
Prepared by Mr V K Gupta, the then Sr. Technical Director of National Informatics Centre (Oct, 99)

- Submission of approach paper to SCIT, WIPO
By Dr R A Mashelkar, the then Director General of CSIR (Dec,99)

TKDL in 2000

- Setting up of the interdisciplinary (inter-ministerial Task Force on TKDL, consisting of experts from Department Of ISM&H (now AYUSH), Central Council of Research in Ayurveda & Siddha (CCRAS), Banaras Hindu University (BHU), National Informatics Centre (NIC), Controller General of Patents Design & Trade Marks (CGPDTM), etc. under the Chairmanship of the then Senior Technical Director, Mr. V. K. Gupta

by The Department of AYUSH (Jan, 2000)

- Submission of TKDL Task Force Report to Department of Indian Systems of Medicine & Homoeopathy
- by TKDL Task Force (May, 2000)

- Presenting TKDL Concept & Vision at International forum
- by Dr. R.A Mashelkar, Director General, CSIR (May, 2000)

Activities, Resources & Out Comes

- **Formulation of Problem**
- **Dimensions of Problem**
- **Identification of Source of Information (Ayurveda Books)**
- **Assessment of Work Load**
- **Finalization of Approach**
- **Framework on TKRC**
- **Hardware Configurations & Software Products**
- **TKDL Team Composition and fixing Eligibility Criteria and number of Team Members**
- **Time & Cost for Phase – 1 Ayurveda (36000 Medicinal Formulations)**
 - **18 months, RS 1.2 crores (250000 US\$)**
 - **Does not include cost of Space, Utilities**

TKDL Task Force Composition

- ATK experts (Ayurveda – 3)
- IT Experts (2)
- Patent Examiners (2)
- Scientists (2)
- Policy Planners (2)
- Inter-Ministerial Compositions
 - Ministry of Information & Communication Technologies
NIC
 - Department of Industrial Policy & Promotion
 - Department of AYUSH
 - CSIR
 - Banaras Hindu University
 - Central Council for Research in Ayurveda & Research
- Time Frame for Tack force Report : 4 Months
- Direct Cost : NIL

TKDL in 2001

- **Cabinet Committee of Economic Affairs (CCEA's) approval on TKDL Project by The Department of AYUSH (Jan, 2001)**
- **Presentation on Traditional Knowledge Resource Classification (TKRC) at International Patent Classification (IPC) Union for getting established WIPO-TK Task Force consisting of USPTO, EPO, JPO, China and India
By Mr. V. K. Gupta, the then Director NISCAIR (Feb, 2001)**
- **Memorandum of Understanding (MoU) between Department of Indian Systems of Medicine & Homoeopathy (now AYUSH) and National Institute of Science Communication (now NISCAIR)
by The Department of AYUSH and National Institute of Science Communication and Information Resources –NISCAIR (June, 01)**
- **TKDL software specifications and design
By Mr. V. K. Gupta, Director NISCAIR (July 2001)**
- **Establishing TKDL team of Project Assistants (IT), Ayurveda, Patent Examiners, etc.
By NISCAIR, CCRAS, Dept. of AYUSH and CGPDTM (Oct, 2001 to March, 2002)**

Activities, Resources & Out Comes 2001

- **Approval of Cabinet Committee on Economic Affairs (7 Months)**
 - **Similar to Free Prior Informed Consent in case of knowledge of Communities.**
- **Recruitment of 30 member Inter-disciplinary Team**
 - **3 months for recruitments**
 - **Expenses per months Rs 4.5 Lakh (9000 US \$)**
- **Setting up of IT Infrastructure**
 - **3 months**
 - **Rs 20.0 Lakh (40,000 US \$)**
- **Output per day after 6 month since June 2001: 20000 A4 size pages**
- **Creation of Multilanguage Meta data Translation : Rs 10.00 Lakh (20,000 US \$)**

Summary of Capital & Recurring Cost in Year 2001

- **Capital**

- IT Infrastructure	: 40,000 US \$
- Multi language Meta data File	: 20,000 US \$
Total	: 60,000 US \$

- **Recurring**

- Monthly Cost	: 10,000 US \$
- Annual Cost	: 120,000 US \$

- **Output in 2001**

: 180,000

Five Languages A4 size
Pages.

TKDL in 2002

- **WIPO-TK Task Force recommended for adding a subclass under A 61**
Meeting on behalf of India was attended by Director, NISCAIR as one of the members of International Task Force and the presentation was made on the issue of linkage between TKRC and IPC (Feb, 2002)

- **Constitution of access policy issue committee (APIC)**
(Aug, 2002)

- **Internationally recognized specifications and standards for setting up of TK data bases and registries based on TKDL specifications**

(a) Drafting of specifications at WIPO Regional Symposium at Kochi, based on TKDL
by The Regional TK experts from China, Philippines, India (Nov, 2002)

(b) Presentation of WIPO document No. WIPO /GRTKF / IC/ 4/ 14 at the 4th session of Intergovernmental Committee (IGC) of WIPO on Intellectual Property and Genetic Resources, Traditional Knowledge and expression of folklore
by Mr. V. K. Gupta, Director NISCAIR (Dec,02)

TKDL in 2003

- **Committee of Experts recommended (i) inclusion of 200 subgroups on TK against earlier single group on medicinal plants, (ii) linking of TKRC to IPC and (iii) Continuation of work on biodiversity, TK and TCE (Feb, 2003)**

- **Completing data abstraction work on 36,000 *Ayurvedic* formulations for creating TKDL in five languages, i.e. English, German, Spanish, French and Japanese TKDL team of Project Assistants (IT), Ayurveda, Patent Examiners, and Scientists functioning since October 2001 at NISCAIR (March, 2003)**

- **Adoption of recommendations contained in document No. WIPO/ GRTKF/ IC/ 4/ 14 by International IP community at the 5th Session of IGC Intergovernmental Committee (IGC) of WIPO (July, 2003)**

- **Release of CD containing a sample of 500 formulations**
By the then Hon'ble Union Minister of Human Resource Development, Science & Technology, and Ocean Development and presided by the then Hon'ble Union Minister of Health & Family Welfare and Parliamentary Affairs. (Oct, 2003)

TKDL in 2004

• Initiation of the TKDL Unani project by The Dept. of AYUSH and NISCAIR (June, 2004)

• Initiation of TKDL Ayurveda Phase II by The Dept. of AYUSH and NISCAIR (Aug, 2004)

• Meeting with Hon'ble Minister of Health and Family Welfare on providing access of TKDL database to EPO by The Dept. of AYUSH and NISCAIR (Aug, 2004)

• Concordance between IPC and TKRC and approval on linking of TKRC with IPC
35th IPC Union Meeting (Oct, 2004)

• Request for access to TKDL by USPTO & EPO
(Nov 2004 July 2005)

• Workshop on Creation of TKDL for SAARC Countries by The SAARC Documentation Centre, NISCAIR and MHRD (Dec, 2004)

TKDL in 2005-06

- **Initiation of project on TKDL Siddha by The Dept. of AYUSH and NISCAIR (Aug, 2005)**

Creating of TKRC containing approx. 25,000 subgroups by NISCAIR (Dec,2005)

- **Vetting of Access Agreement**
 - (i) **Legal and Treaties Division, Ministry of External Affairs**
 - (ii) **Department of Legal Affairs, Ministry of Law and Justice**
 - (iii) **Shri Praveen Anand, Leading Patent Attorney**
 - (iv) **Shri Soli J. Sorabjee, Former Attorney General****(June 05, Aug 05, Dec 05, Jan 2006, Feb 08, March 08)**

- **Inclusion of approx. 200 subgroups in International Patent Classification, 8th Edition by World Intellectual Property Organization (Jan, 2006)**

- **Approval on Access to TKDL database to IPO by Cabinet Committee on Economic Affairs (June 2006)**

- **Access Agreement sent to EPO and USPTO by CSIR (July 06, Dec 2006)**

TKDL in 2007-08

- APIC meeting to discuss the responses given by EPO and USPTO by APIC (June, 2007)

- Initiation of activities on creation of TKDL Yoga by CSIR, Department of AYUSH and MDNIY (Jan, 2008)

- APIC meeting to discuss the clarifications sought by EPO, gives clearance for signing of Access Agreement by APIC (July, 2008)

- Decision taken at the APIC meeting after considering the views of EPO. Response was sent to EPO (Sept 2008)

- Views of USPTO were considered and report was sent to USPTO (Oct 2008)

TKDL in 2009

- Agreement was signed between EPO and India

(January 2009)

- Access to EPO of TKDL Database

(February 2009)

Reaction of National & International Media



- Press release on TKDL Access to EPO by India – 9th Feb 2009 



- Press release on TKDL access to EPO by EPO - 11th Feb 2009 

Protecting traditional knowledge: India opens online database to EPO examiners

11 February 2009



The government of India has granted the European Patent Office (EPO) access to its Traditional Knowledge Digital Library (TKDL). Loaded with ancient medical knowledge, the online database contains translations of manuscripts and textbooks in five languages, including English.

Examiners at the EPO will use the TKDL to evaluate patent applications and to better treat attempts to patent traditional knowledge as "new" inventions. Even 500-year-old texts on ayurvedic cures and herbal remedies are now available to EPO patent examiners.

"The cooperation between India and the EPO brings advantages to both parties. It helps protect India's traditional knowledge from misappropriation and gives the EPO additional relevant information for granting properly defined patents", said Paul Schwander, Director of Information Acquisition at the EPO.

TKDL 2010-11 Milestones

Access Agreement

India has signed TKDL Access Agreements with Canadian Intellectual Property Office, German Patent Office, United Kingdom Patent Office, Intellectual Property Australia

Impact of TKDL on Misappropriation and Action Taken

**At EPO: Patent office set-asides intention to grant patent in 2 cases
33 Applicants withdrew their pending applications**

CSIR - WIPO International Conference on '*Utilization of the Traditional Knowledge Digital Library (TKDL) as a Model for the Protection of Traditional Knowledge*'

March 22 to 24, 2011

WIPO's Proposal on Internationalization of TKDL

TKDL Team

Discipline		Strength
Ayurveda	Monitoring & Analysis	03
	Senior	14
	Junior	11
	Total	28
Unani	Monitoring & Analysis	02
	Senior	15
	Junior	20
	Total	35
Siddha	Monitoring & Analysis	01
	Senior	05
	Junior	08
	Total	14
Yoga	Senior	0
	Junior	4
	Total	4
IT Expert	Monitoring & Analysis	05
	Senior	10
	Junior	05
	Total	20
Outsourced Staff	Support Staff	48
	Total	149

Typical TKDL Team & Possible Out Come

- **Capital**

IT Infrastructure : 50,000 US \$

Meta data Translation : 10,000 US \$

Total : 40-60 thousand US \$

- **Recurring**

TK Experts : 20

IT Experts : 10

IP & Other : 05

- **Out Come Annual** : 0.3 – 0.4 million A4 Size pages

Plan of Action for National TKDL

- **Pre-requisite**
 - Political will and commitment to set up National TKDL
 - Technical Competency
- **Issues of Low Concern**
 - Cost of setting up National TKDL, since it is quite low
- **Plan of Action**
 - Set up Inter-disciplinary National Task Force on TKDL



Activity List for National TKDL

Other Activities

- **List sources of TK: oral (people) and codified (books and other written materials)**
- **Establish access to the TK: This may include acquiring FPIC and ensuring ownership for TK holders**
- **Develop a Classification System: Similar to TKRC**
- **Concordance between Nationally enhanced TKRC with IPC**
- **Convert and align Local and International Classification Systems to IP Classification Systems: for example, TK Resource Classification of India**
- **Assemble team of local TK experts, including TK holders, IT experts, IP experts**
- **Create Meta data libraries in multiple languages**



Thank You

Press Release on TKDL Access to EPO by India

9th Feb 2009



Traditional medicines documented:
In what is the world's first Traditional Knowledge Digital Library, India has documented over 2 lakh formulations of traditional medicine. P 10

To curb copies, India logs traditional formulations

Kounteya Sinha | TNN

New Delhi: In what is the world's first Traditional Knowledge Digital Library (TKDL), India has completed documenting over two lakh medical formulations of Ayurveda, Siddha and Unani to save them from piracy.

After eight years of toil, over 200 scientists and researchers from the Council of Scientific and Industrial Research (CSIR) and Union health ministry's department of Ayush have scientifically converted information of traditional Indian medicine from Hindi, Sanskrit, Arabic, Persian, Urdu and Tamil to five international languages — English, Japanese, French, German and Spanish.

The TKDL, 30 million pages of information, has been created to prevent those living abroad from claiming patent for existing formulations. India, till now, has lost over 15,000 patents of medicinal plants to the West.

According to Dr V P Gupta from CSIR who created TKDL, India would lose 2,000 new patents every year without such a digital library.

In the past, patents have been granted by the European Patent Office (EPO) on the use of over 285 Indian medicinal plants such as papaya, Indian long pepper, kali tulsi, pudina, ginger, aloe, isabgol, aonla, jira, soybean, tomato, almond, walnut and methi.

This is why India has now also signed a landmark agreement with the EPO. Under the three-year agreement, which came into effect on February 3, TKDL's database would be available to the patent examiners at EPO "for establishing prior art", in case of patent applications based on Indian systems of medicine (ISM).

However, TKDL's information will be restricted only for patent search and examination purposes. EPO will not be able to disclose the information to a third party.

PROTECTING SECRETS



● India has lost over **15,000** patents of medicinal plants to the West

● On an average, it takes **5 to 7** years to oppose a granted patent and costs between **Rs 1 to 3** crores

● Over **200,000** medical formulations have now been documented into India's Traditional Knowledge Digital Library (TKDL)

● Creating TKDL took over **8** years and cost **Rs 7** crore

● The library will prevent those living abroad from claiming patent for existing formulations

● Without the library, India would have lost **2000** patents every year concerning

Indian Systems of Medicine (ISM)

● At any given time, **50** patent applications based on ISMs are awaiting grant of patent

● The decision to create TKDL was taken after wrong patents were granted on wound-healing properties of **turmeric** (1995)

at the United States and on anti-fungal properties of **Neem** granted at European Patent Office (EPO)

● The patents were revoked in 1997 and 2005 respectively

● In the past, patents have been granted at EPO on the use of over **285** Indian medicinal plants. These include **Papaya, Indian long pepper, Kali Tulsi, Pudina, ginger, aloe, Isabgol, Amla, Jira, Soybean, Tomato, Almond, Walnut and Methi**

While India will help EPO with search assistance, EPO will inform India about what information was used as citation from the TKDL once in every three months.

Hindustan Times

For more, log on to hindustantimes.com

BATTLE'S WON, WAR IS ON

Don't take what's mine

- US Patent & Trademark Office granted patent for wound-healing properties of turmeric in 1995 and the European Patent Office (EPO) to anti-fungal properties of neem in 1994; both revoked after India fought for it
- 2,000 patents related to Indian systems of medicine granted every year
- 40-50 patent applications based on traditional knowledge from India awaiting grant at any given time
- EPO has granted patents on use of 285 plants used in Indian medicines, such as papaya, Indian long pepper, hoary basil (kali tulsi), ginger, aloe, psyllium, Indian gooseberry, cumin, tomato, almond, walnut and soybean
- It takes 5-7 years to oppose a granted patent, with cost for each case ranging between Rs 1 crore and Rs 3 crore

What's being done

- EPO granted access to Traditional Knowledge Digital Library (TKDL) database from February 2 to ensure it validates claims related to Indian systems of medicine
- Using TKDL, India can protect 2 lakh (2,00,000) medical formulations.
- TKDL comes in several languages — English, Japanese, French, German and Spanish
- Thailand, Cambodia, Afghanistan, Indonesia, South Africa, Mongolia and Indonesia are among the countries that have asked India for assistance in setting up a similar database



India banks on patent power

Sanchita Sharma
New Delhi, February 9

IT SEEMS the long-drawn battles over neem and turmeric patent claims in other countries have dawned upon India the urgency to stop bio-piracy. India has finally set up the world's first Traditional Knowledge Digital Library (TKDL) database and signed an agreement with the European Patent Office (EPO) to establish a mechanism to stop the piracy.

The Rs 7-crore TKDL project — completed in partnership with the Council of Scientific and Industrial Research (CSIR) — took nine years to enlist 2,00,000 formulations from Ayurveda, Unani and Siddha schools of medicine.

"India has signed an Access Agreement with the EPO to establish a mechanism to pro-

India has set up the world's first Traditional Knowledge Digital Library database and signed an agreement with the European Patent Office to establish a mechanism to stop bio-piracy.

tect India's traditional medicinal knowledge from bio-piracy. The Patent Examiners at the European Patent Office (EPO) have been given access to the TKDL from February 2 so that no patents are granted if there is existing documentation in the database," said S. Jalaja, secretary, AYUSH, a department of Indian systems of medicine in the ministry of health and family welfare.

In the past, the EPO, with 34 member states, granted patents on the use of 285 plants used in traditional Indian medicines — such as papaya, Indian long pepper, hoary basil (kali tulsi), ginger, aloe, psyllium, Indian gooseberry,

cumin, tomato, almond, walnut, and soybean.

About 2,000 patents on Indian systems of medicine are granted each year, mainly because traditional medicinal knowledge exists in many languages — Sanskrit, Hindi, Arabic, Urdu and Tamil, to name a few — that are not understood by patent examiners. The TKDL makes the information available in five international languages like English, Japanese, French, German and Spanish, said project leader Dr V. K. Gupta, head, information technology division, CSIR.

"We've learned from the past, where the government spent crores of rupees in fight-

ing wrong patents granted for the wound-healing properties of turmeric and the anti-fungal properties of neem. Fighting each patents costs Rs 2 to Rs 3 crore. But setting up the database will help ensure traditional knowledge is not wrongfully taken away from India," said CSIR director general Samir K. Brahmachari.

India has taken up the issue in the World Health Assembly, an inter-governmental committee at the World Intellectual Property Organisation and TRIPS council at the World Trade Organisation, but no consensus has been reached.

"Getting global recognition for this tool is a beginning. We've also reached agreements on most issues with the US Patent and Trademark Office. We expect results soon," said Dr Gupta.

sanchita.sharma@hindustantimes.com

दैनिक जागरण

दिनांक 01 अक्टूबर 2011 (शुक्रवार) 10 अक्टूबर 2011

भारत के 'परंपरागत ज्ञान' पर न डाल पाएंगे 'डाका'

जरनैल सिंह, नई दिल्ली : पांच हजार वर्षों के परंपरागत ज्ञान आयुर्वेद, सिद्ध, यूनानी और योग के चिकित्सकीय फार्मूलेसंस पर बहुराष्ट्रीय कंपनियों के लिए डाका डालना अब आसान न रहेगा। परंपरागत चिकित्सकीय ज्ञान के दो लाख फार्मूलों की डिजिटल कर परंपरागत ज्ञान की डिजिटल लाइब्रेरी बना ली गई है। 34 देशों के लिए पेटेंट करने वाले यूरोपियन पेटेंट आफिस (ईपीओ) से एक समझौता किया गया है। अब कोई भी पेटेंट जारी करने से पहले वह इस लाइब्रेरी में दर्ज फार्मूलों पर भी नजर डाल कर देखेंगे कि कहीं पेटेंट करने वाला पहले से मौजूद परंपरागत ज्ञान पर डाका तो नहीं डाल रहा।

डर यह भी था कि कहीं लाखों चिकित्सकीय फार्मूलों का डिजिटलीकरण कर दिया गया तो विकसित देशों के पेटेंट दफ्तरों से ही इनका बेजा इस्तेमाल न शुरू हो जाए। लिहाजा समझौते में शर्त रख दी गई कि यह ज्ञान उनके सर्वर पर नहीं, भारतीय सर्वर पर रहेगा। किसी तीसरे पक्ष की पहुंच इस ज्ञान तक नहीं होगी। बातचीत अमेरिका से भी चल रही है और उम्मीद है कि जल्द ही उसके साथ भी ऐसा समझौता हो जाएगा। आपको नीम, हल्दी और बासमती के पेटेंट की जंग तो याद होगी ही। कैसे एक-एक पेटेंट वापस कराने के लिए एक दशक तक जंग लड़नी पड़ी और करोड़ों रुपये बर्बाद हुए। सरकार अब तक सिर्फ इन तीन उत्पादों की ही जंग लड़ पाई है। पिछले दशक में बहुराष्ट्रीय कंपनियों ने भारत के परंपरागत ज्ञान की चोरी कर 10 हजार पेटेंट करा लिए हैं।

हर साल ऐसे 2 हजार पेटेंट हो रहे हैं। जो पेटेंट हो चुके उन्हें वापस लेने की न तो विकसित देशों की इच्छा है और न इसकी जंग लड़ने को सैकड़ों करोड़ रुपया खर्च करने की सरकार में हिम्मत। एक-एक पेटेंट पर जंग के लिए एक से तीन करोड़ रुपये चाहिए। इसीलिए स्वास्थ्य मंत्रालय के आयुष विभाग और सीएसआईआर ने मिलकर केवल सात करोड़ रुपये में इनका डिजिटलीकरण कर दिया है और अब प्रमुख पेटेंट दफ्तरों के साथ समझौते किए जा रहे हैं। स्वास्थ्य सचिव नरेश दयाल के मुताबिक भारत के इस प्रयास के बाद अब थाइलैंड, इंडोनेशिया व मंगोलिया समेत तमाम अफ्रीकी देशों ने अपना परंपरागत ज्ञान बचाने के लिए सहयोग मांगा है। सीएसआईआर में इस परियोजना के लीडर वीके गुप्ता ने बताया कि आयुर्वेद, योग, सिद्ध, यूनानी व आईटी के माहिरों समेत 150 लोगों की टीम बनाई गई जिसने इस काम को अंजाम दिया है। फिलहाल आयुर्वेद के 81 हजार, यूनानी के एक लाख 4 हजार और सिद्ध के 12 हजार फार्मूलेसंस को संरक्षित किया गया है। लाखों फार्मूलेसंस बचे हुए हैं। राज्य स्तर पर भी इसे शुरू किया जाएगा। अभी केरल को 41 लाख रुपये जारी भी कर दिए गए हैं।

♦ दो लाख चिकित्सकीय फार्मूलेसंस का डिजिटलीकरण

India inks agreement with EU patent office

Aarti Dhar

NEW DELHI: India has signed an agreement with the European Patent Office (EPO) to establish a mechanism to protect India's traditional medicinal knowledge from bio-piracy.

As per this access agreement, India's Traditional Knowledge Digital Library (TKDL) - the first of its kind database on traditional medicines - would now be available to the Patent Examiners at the EPO for establishing prior art, in case of patent applications based on the Indian systems of medicines. The EPO has 34 member states.

This agreement would provide against infringement of the country's rich traditional medicinal heritage having huge economic potential and would prevent situations witnessed during the last decade, including grant of wrong patents on wound healing properties of turmeric (1995) at the United States Patent and Trade Mark Office (USPTO) and on antifungal properties of neem granted at the EPO.

Official estimates suggest that at least 2,000 wrong patents concerning Indian sys-

tems of medicine were being granted every year internationally mainly due to India's traditional medicine knowledge existing in Sanskrit, Hindi, Arabic, Urdu and Tamil and neither accessible nor understood by patent examiners at international patent offices.

The TKDL has been able to scientifically convert and structure the information available in Indian languages in open domain text books into five international languages such as English, Japanese, French, German and Spanish. V.K. Gupta, head of the information technology division of the Centre of Scientific and Industrial Research, told reporters here on Monday. The library has information contents in 30 million A4 size pages, posted with the help of IT tools and a novel classification system - Traditional Knowledge Resource Classification.

At present, India through TKDL is capable of protecting about 2 lakh medical formulations similar to neem and turmeric. On an average, it takes five to seven years for opposing a granted patent at the international level, which

may even cost Rs. one to three crore. The cost of protecting two lakh medicinal formulations, in the absence of TKDL, would be unaffordable, Dr. Gupta explained.

The agreement would enhance the negotiating strength of India and developing countries at the international forums. The international IP community had recognised TKDL as an effective tool for defensive protection of traditional knowledge. The agreement would pave the way for others with more major international patent offices to prevent the misuse of this vast information. Several Asian and African countries have approached India for help in developing similar digitalised libraries for their traditional knowledge.

In the past, 285 medicinal plants have been granted patents and about 200 to 500 such patents are granted every year because of lack of access to the documented knowledge in the public domain. At any given point in time, 40 to 50 patent applications based on Indian traditional knowledge are awaiting grant of patent.



A strong dose to check wrong patents

ADITI TANDON
TRIBUNE NEWS SERVICE

NEW DELHI, FEBRUARY 9

Traditional medicinal knowledge of Ayurveda, which has been formulated over the past 3,000 years, is now being patented by foreign companies. This is a cause of concern for the Indian government, which has been trying to protect its traditional medicines. The government has been working with the World Intellectual Property Organization (WIPO) to create a global database of traditional medicines. This database will help in identifying and protecting traditional medicines from being patented by foreign companies. The government has also been working with the Indian Patent Office to create a system of traditional medicine patents. This system will allow traditional medicines to be patented in India, but not in other countries. This will help in protecting the rights of Indian traditional medicine practitioners and ensuring that their knowledge is not lost to the world.

patenting, causing economic losses to India, is the grant of patent on the wound healing properties of turmeric in 1995 by the US Patent and Trade Mark Office and on anti-fungal properties of neem granted at the EPO.

But all this is set to change, with the experts of AYUSH and Centre for Scientific and Industrial Research (CSIR) creating the Traditional Knowledge Digital Library (TKDL) database, which has been made available to the patent examiners at the EPO and its 34 member nations. In the past, most wrong patents were granted because India's traditional medicinal knowledge existed only in Sanskrit,

Hindi, Arabic, Urdu and Tamil - languages which international patent examiners did not understand.

But TKDL has broken these language barriers by converting the information in local languages into open domain textbooks in five international languages — English, Japanese, French, German and Spanish. All this information has been made available in 30 million A4 size pages to EPO. So far, 81,000 formulations in Ayurveda; 104,000 in Unani and 12,000 in Sidha yoga have been digitalised under TKDL.

"Now patent examiners at EPO will be in a position to establish prior

art in case they receive patent applications based on Indian systems of medicine. For example, if someone wants to patent the sexual disinhibiting properties of white mulberry, patent examiners would know that such qualities already exist in Indian traditional formulations. They can then refuse the grant of new patent."

VK Gupta, IT head, CSIR. With TKDL, India can now protect its two lakh medical formulations (like neem and turmeric) at no cost. Till now, all India could do was to oppose a wrong patent in case it was granted. On an average, it takes five to seven years to oppose a patent at the international level. The process costs Rs 3 crore per case.

हिन्दुस्तान

हर साल फिसल रहे हैं आयुर्वेद के दो हजार फॉर्मूले

मदन जैड़ा नई दिल्ली

आयुर्वेद और हमारे परंपरागत चिकित्सा ज्ञान के लगभग दो हजार अनमोल फॉर्मूलों को हर साल बहुराष्ट्रीय फार्मा कंपनियां चुरा लेती हैं। इनसे यह दवाएं और अन्य उत्पाद बनाकर चांदी बटोर रही हैं। पर हमारी सरकारी तैयारी इतनी लचर है कि इनके संरक्षण के लिए अब तक ठोस उपाय किए ही नहीं।

आयुर्वेद विभाग की सचिव एस. जालजा ने माना कि विदेशों में अब तक भारतीय ज्ञान के हजारों पेटेंट हथियाने जा चुके हैं। अब यूरोपियन पेटेंट ऑफिस के साथ समझौता किया गया लेकिन जो पेटेंट हो चुके हैं, उन्हें यदि रद्द करना है तो सरकार को अरबों-खरबों रुपये चाहिए क्योंकि एक पेटेंट को रद्द करने में तीन करोड़ रुपये खर्च होते हैं।

यहां बखत चलें कि हाल के वर्षों में यूरोपीय पेटेंट कार्यालय हमारे परंपरागत पौधों, पपीता, काली तुलसी, पुदीना, अदरक, इसबगोल, आमल, जीरा, सोयाबीन, टमाटर, मेथी समेत आयुर्वेद में वर्णित 285

- अब यूरोपीय पेटेंट ऑफिस से समझौते के बाद 34 देशों में रोक लगेगी
- भारत की सापरवाही के कारण मल्टीनेशनल कंपनियां करा रही हैं पेटेंट

औषधीय पौधों के इस्तेमाल को लेकर पेटेंट जारी कर चुका है। इन्हें अभी तक भारत सरकार ने चैलेंज भी नहीं किया है। लेकिन श्रीमती जालजा के अनुसार विदेशों में अब तक हमारे ज्ञान पर हुए तमाम पेटेंटों को रद्द करने के लिए सरकार ठोस मैकेनिज्म तलाश करेगी।

करीब दस साल पूर्व हल्दी और नीम के विदेशों में पेटेंट पर मचे हल्ले के बाद सरकार ने परंपरागत चिकित्सा ज्ञान के संरक्षण के लिए ट्रेडिशनल नालेज डिजिटल लाइब्रेरी (टीकेडीएल) बनाई। एनडीए सरकार में इसमें आयुर्वेद, युवाजी और सिद्ध पद्धतियों से जुड़े करीब 35 हजार फॉर्मूलों को रजिस्टर्ड किया गया। टीकेडीएल कई भाषाओं में है। अब यूरोपियन पेटेंट ऑफिस के साथ

समझौता किया गया कि टीकेडीएल में दर्ज फॉर्मूलों, औषधीय पौधों आदि के किसी भी हिस्से पर यह कार्यालय किसी अन्य को पेटेंट जारी नहीं करेगा। इससे यूरोप के 34 देशों में भारत के परंपरागत ज्ञान को संरक्षण प्राप्त होगा।

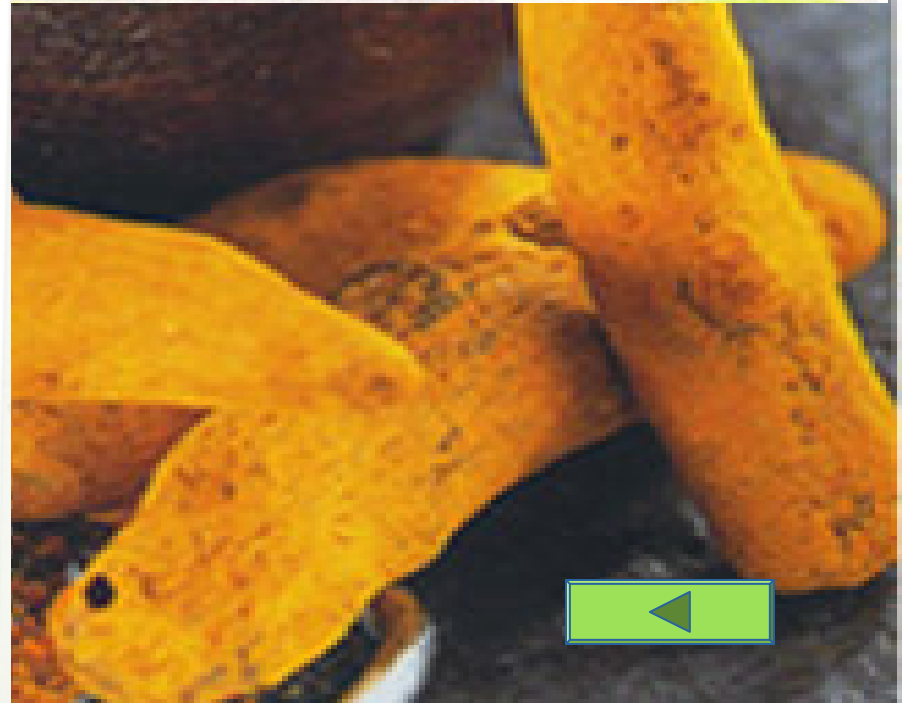
टीकेडीएल टास्क फोर्स की स्टडी के अनुसार अमेरिका में जड़ी-बूटियों पर दिए जाने वाले 80 फीसदी पेटेंट भारतीय औषधि के होते हैं जिनका आयुर्वेद और अन्य ग्रंथों में जिक्र होता है। जबकि यूरोपीय पेटेंट ऑफिस हर साल ऐसे पांच सौ पेटेंट जारी करता है।

सीएसआईआर के महानिदेशक समीर के. ब्रह्मचारी के अनुसार इसी तरह का समझौता भविष्य में यूएस पेटेंट ऑफिस के साथ भी किया जाएगा। ब्रह्मचारी और जालजा के अनुसार जो पेटेंट हो चुके हैं, उन्हें रद्द करने के लिए कोई मैकेनिज्म तलाश किया जा रहा है क्योंकि एक-एक पेटेंट रद्द करना हमारे लिए मुश्किल है। एक पेटेंट को रद्द करवाने में सरकार के तीन करोड़ खर्च होते हैं।



पहल तो हुई लेकिन...

आयुर्वेद और देशी चिकित्सा पद्धतियों के अलावा भी परंपरागत उपचार के ऐसे कई नुस्खे हैं जिनका किसी वेद या ग्रंथ में जिक्र नहीं है। ऐसे फॉर्मूलों की उपयोगिता की जांच के लिए आईसीएमआर और नेशनल इन्वेस्टिगेशन फाउंडेशन ने भी एक अलग से कार्यक्रम शुरू किया। लेकिन काम सुस्त है। एक अध्ययन के अनुसार आधुनिक एंथोपैथिक दवाओं के 20-30 फीसदी फॉर्मूले आयुर्वेद हथियाने गए हैं।





Protecting traditional knowledge: India opens online database to EPO examiners

11 February 2009



The government of India has granted the European Patent Office (EPO) access to its Traditional Knowledge Digital Library (TKDL). Loaded with ancient medical knowledge, the online database contains translations of manuscripts and textbooks in five languages, including English.

Examiners at the EPO will use the TKDL to evaluate patent applications and to better treat attempts to patent traditional knowledge as “new” inventions. Even 500-year-old texts on ayurvedic cures and herbal remedies are now available to EPO patent examiners.

A unique encyclopaedia

For the first time in history, the TKDL makes traditional Indian medical texts available in English, French, German, Japanese and Spanish. It is also the first time that these texts – many of them old manuscripts written in Hindi, Sanskrit, Arabic, Persian, Urdu and other languages – can be accessed in a digital, searchable format.

Development of the TKDL started in 1999 as a joint project between five Indian government organisations, including the Council of Scientific and Industrial Research (CSIR) and the National Institute of Science Communication and Information Resources (NISCAIR). In total the project will cost \$2 million.

EPO examiners have been able to access the TKDL since 2 February 2009. Various other countries have also granted the EPO access to traditional knowledge databases. In 2008, the Chinese Patent Office (SIPO) opened its 32 000-entry database on traditional Chinese medicine to the EPO.

Press Release on TKDL Access to EPO by EPO

11th Feb 2009

Preventing biopiracy

The main aim of the TKDL is to prevent unjustified patenting – and thereby commercial exploitation – of traditional knowledge that is already being used in the public domain in India.

Such public knowledge constitutes “prior art”, according to EPO regulations. As such, it cannot be patented unless the applicants can demonstrate significant inventive or new improvements.

Unjustified patent claims based on traditional knowledge, or “biopiracy”, have recently made headlines. In 2008, the Indian government won a ten-year legal battle appeal against a patent application that had been granted for an anti-fungal product derived from the native Neem tree.

With the TKDL, patent examiners can now compare patent applications to existing traditional knowledge documented in this new source. Examiners can limit the scope of a patent or reject it altogether before it is granted. This can prevent lengthy, and costly opposition procedures.

Activities, Resources & Out Comes

- **Formulation of Problem**
- **Dimensions of Problem**
- **Identification of Source of Information (Ayurveda Books)**
- **Assessment of Work Load**
- **Finalization of Approach**
- **Framework on TKRC**
- **Hardware Configurations & Software Products**
- **TKDL Team Composition and fixing Eligibility Criteria and number of Team Members**
- **Time & Cost for Phase – 1 Ayurveda (36000 Medicinal Formulations)**
 - **18 months, RS 1.2 crores (250000 US\$)**
 - **Does not include cost of Space, Utilities**



Reaction of National & International Media

naturenews
India protects traditional medicines from piracy
 Access to online database eases search for existing treatments.
 P. S. Iyengar
 European patent examiners can now access India's massive database on traditional medicines in order to ensure that patents are not granted for treatments already used in Indian systems of medicine. And when they find the recipe, which is recorded in ancient manuscripts, they can be sure.

guardian.co.uk
India moves to protect traditional medicines from foreign patents
 India fights to protect ancient treatments from western pharmaceutical companies
 Randeep Ranoch
 gurunews@guardian.com, London, 20 February 2013, 10:45 AM GMT
 Yoga could become public property, its patent is becoming a threat.
 Photograph: Anand / Corbis/Bettmann/ATF/Getty Images
 In the first step by a developing country to stop multinational companies patenting traditional remedies from local plants and animals, the Indian government has effectively banned patents on local treatments or "yoga property" that are known to be used in India as a "banned" process.

The Tribune
A strong dose to check wrong patents
 February 20, 2013

THE HINDU
India inks agreement with EU patent office
 February 20, 2013

THE TIMES OF INDIA
To curb copies, India logs traditional formulations
 February 20, 2013

THE TIMES OF INDIA
Yoga piracy: India shows who's the guru
 February 20, 2013

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हर साल फिसल रहे हैं आयुर्वेद के दो हजार फॉर्मूले
 20 फरवरी 2013

Hindustan Times
India banks on patent power
 February 20, 2013

दैनिक जागरण
भारत के 'परंपरागत ज्ञान' पर न डाल पाएंगे 'झका'
 20 फरवरी 2013

Business
Break
Traditional medicine
Now India is pushing
 For years, the drug industry has been about traditional medicine. Now, the Indian government is pushing that could open the door to exploitation of its traditional knowledge. In the past few years, a huge electronic database of traditional knowledge has been built. In the past few months, the Indian government has been making sure that patenting Indian remedies soon go one step further. National research from the Indian government's public domain has sharply increased knowledge in the country's culture. Advocate which has been in the Science & Information Commission in Delhi since its major drug discovery has the cost of development estimated at a total of 10% of the total cost of development. Or, it will not be a bad news. Now, strong results will be needed in the sector.

The background of the entire page is a photograph of several lit diya lamps (oil lamps) in a dimly lit setting, creating a warm, golden glow. The lamps are of various sizes and are arranged in a cluster, with some in the foreground and others in the background, slightly out of focus.

naturenews

India protects traditional medicines from piracy

Access to national database eases search for existing treatments.

K. S. Jayaraman

European patent examiners can now access India's massive database on traditional remedies in order to ensure that patents are not granted for treatments already used in Indian systems of medicine. But critics say that the move, which is intended to thwart piracy of traditional knowledge, may backfire.

Nature News - 18/02/2009

India moves to protect traditional medicines from foreign patents

India fights to protect ancient treatments from western pharmaceutical companies

- **Randeep Ramesh**
- guardian.co.uk, Sunday 22 February 2009 16.04 GMT



Yoga: could become 'public property' to prevent it becoming a brand.
Photograph: Sonny Tumbelaka/AFP/Getty Images

In the first step by a developing country to stop multinational companies patenting traditional remedies from local plants and animals, the Indian government has effectively licensed 200,000 local treatments as "public property" free for anyone to use but no one to sell as a "brand".

The move comes after scientists in Delhi noticed an alarming trend – the "bio-prospecting" of natural remedies by companies abroad. After trawling through the records of the global trademark offices, officials found 5,000 patents had been issued – at a cost of at least \$150m (£104m) – for "medical plants and traditional systems".

"More than 2,000 of these belong to the Indian systems of medicine ... We began to ask why multinational companies were spending millions of dollars to patent treatments that so many lobbies in Europe deny work at all," said Dr Vinod Kumar Gupta, who heads the Traditional Knowledge Digital Library, which lists in encyclopaedic detail the 200,000 treatments.

The database, which took 200 researchers eight years to compile by meticulously translating ancient Indian texts, will now be used by the European Patent Office to check against "bio-prospectors".

Gupta points out that in Brussels alone there had been 285 patents for medicinal plants whose uses had long been known in the three principal Indian systems: ayurveda, India's traditional medical treatment; unani, a system believed to have come to India via ancient Greece; and siddha, one of India's oldest health therapies, from the south.

Researchers found that in Europe one company had patented an Indian creeping plant known as Brahmi – *Bacopa monnieri* – for a memory enhancer. Another patent was awarded for aloe vera for its use as a mouth ulcer treatment.

"We have shown the authorities that ayurveda, unani and siddha medicinal uses were known in India. We would like the patents therefore lifted," said Gupta.

In the past India has had to go to court to get patents revoked. Officials say that to lift patents from medicines created from turmeric and neem, an Indian tree, it spent more than \$5m. In the case of the neem patent, the legal battle took almost 10 years.

"We won because we proved these were part of traditional Indian knowledge. There was no innovation and therefore no patent should be granted," said Gupta.

Yoga, too, is considered a traditional medicine and one that is already a billion-dollar industry in the US. Gupta said the Indian government had already asked the US to register yoga as a "well-known" mark and raised concerns over the 130 yoga-related patents issued.

"We want no one to appropriate the yoga brand for themselves. There are 1,500 asanas [yogic poses] and exercises given in our ancient texts. We are transcribing these so they too cannot be appropriated by anyone.

"We have had instances where people have patented a yoga technique by describing a certain temperature. This is simply wrong."

India is also unusual in that it has seven national medical systems – of which modern medicine is but one. Almost four-fifths of India's billion people use traditional medicine and there are 430,000 ayurvedic medical practitioners registered by the government in the country. The department overseeing the

THE TIMES OF INDIA

SUNDAY TIMES



IN THE TIME OF PINK SLIPS, SARKARI JOBS ARE BACK IN FASHION
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ALL THAT MATTERS | P 22

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Yoga piracy: India shows who's the guru

Kounteya Sinha | TNN

New Delhi: India is going all out to save yoga — a 2,000-year-old tradition of mental and physical discipline — from self-styled gurus in the West.

The gurus, who often claim copyright to ancient 'asanas', have led 200 scientists and researchers from the Council of Scientific and Industrial Research (CSIR) and Union health ministry's department of Ayush to join hands to record every known yoga posture that originated in India. They are scanning 35 ancient Sanskrit texts, including the Mahabharata, Bhagwad Gita and Patanjali's Yoga Sutras.

Till now, 600 'asanas' (physical postures) have been documented. The team plans to put on record at least 1,500 yoga postures by year-end.

Once completed, the data will be part of the world's first Traditional Knowledge Digital Library (TKDL) created by India. They will then be recognised as In-



dia's property. The TKDL's 30 million pages was created to prevent those living abroad from filing patents for existing knowledge. It already contains two lakh Ayurveda Siddha and Unani formulations.

Experts say yoga has become a \$225 billion market in the West with at least 130 yoga-related patents granted in the US.

► 'Over 130 yoga patents', P 14

Sunday 22
February
2009