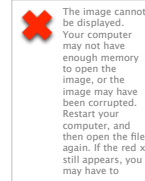




ARAB REPUBLIC OF EGYPT
MINISTRY OF FOREIGN AFFAIRS



ACADEMY OF SCIENTIFIC
RESEARCH AND TECHNOLOGY



WORLD INTELLECTUAL
PROPERTY ORGANISATION

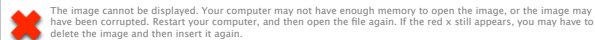
Second WIPO Inter-Regional Meeting on South-South Cooperation on Patents, Trademarks, Geographical Indications, Industrial Designs and Enforcement

South-South Exchanges on Infrastructure and Institutional Capacity for an Effective Use of the Patent System in Developing Countries and LDCs

IP for Development – Indian Approach

Zakir Thomas

Project Director, Open Source Drug Discovery (OSDD) Unit
Council of Scientific & Industrial Research, New Delhi, India



Nesta...

OUR FRUGAL FUTURE:
LESSONS FROM
INDIA'S INNOVATION
SYSTEM

Kirsten Bond and Ian Thornton

July 2012

NESTA an independent UK charity conducted this study in 2012

Efficiency of Invention and Knowledge

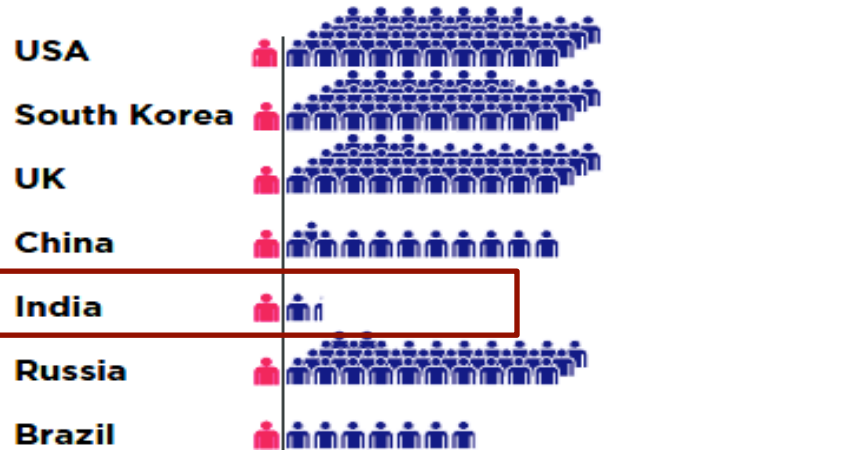
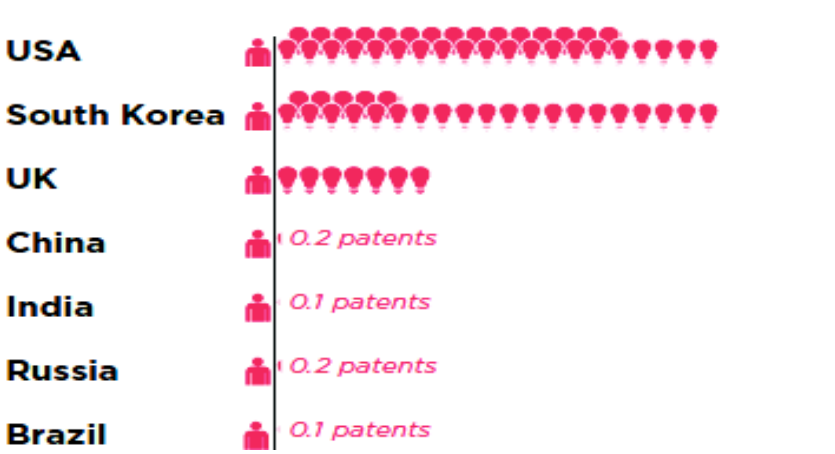
INVENTION: Patents per R&D spend
 ₹ = Billion PPP\$ of R&D spend
 💡 = 10 patents

KNOWLEDGE: Publications per R&D spend
 ₹ = Billion PPP\$ of R&D spend
 📄 = 500 publications



INVENTION: Patents per million population
 🧑 = 1 million of the population
 💡 = 10 patents

KNOWLEDGE: Researchers per million pop.
 🧑 = 1 million of the population
 👤 = 100 researchers in R&D



Policy Interventions by the Government of India to support Innovation

1. 2010-2020 declared as decade of innovation
2. National Innovation Council setup
3. Science, Technology and Innovation policy, 2013



National Innovation Council
Government of India

search...



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National Innovation Council

Realising that innovation is the engine for the growth of prosperity and national competitiveness in the 21st century, the President of India has declared 2010 as the 'Decade of Innovation'. [Read More](#)

MEMBERS

RESOURCES

MEDIA GALLERY

INITIATIVES



What's New

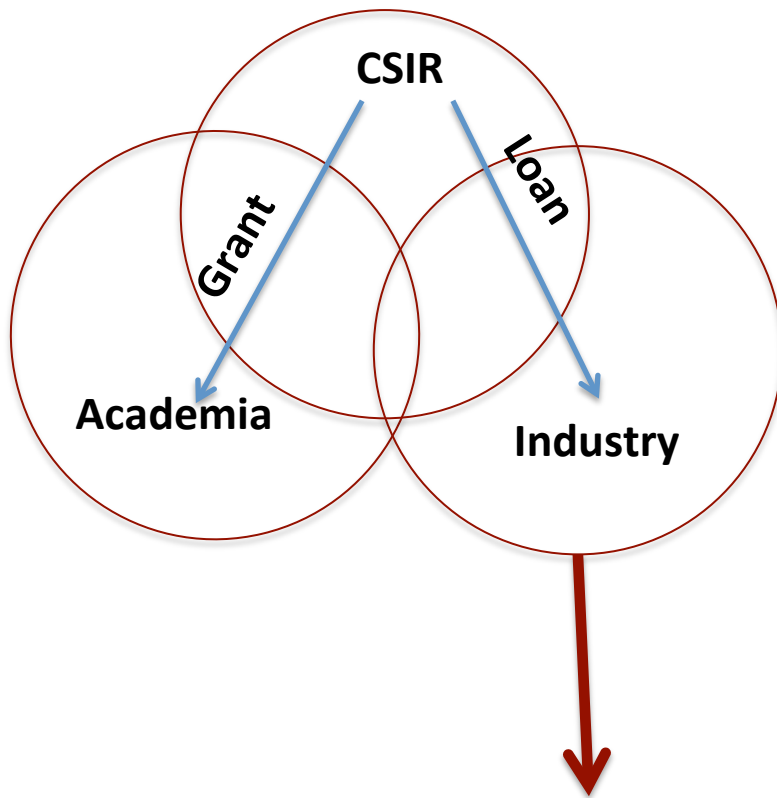
- 12th Five Year Plan Hackathon
- Google+ Hangout on the #12thplan
- Seventh Meeting of the National Innovation Council

Latest News

- 12th Plan Hackathon
- Press Release of Google Hangout on 15th march,2013
- Montek, Pitroda to host Google Hangout on 12th Plan

CSIR-New Millennium India Technology Leadership Initiative

Three Way Collaboration



To the Market

- Focus on technology development
- Push and Pull Type Projects
- Grants to Academia and soft loan to industry
- Strict monitoring
- Projects
 - Nationally evolved
 - Industry originated

Waste to Wealth - Chemicals from Bagasse

PPP Under CSIR-NMITLI

- Developed technology for Specialty Chemicals from Bagasse
- Technology transferred from CSIR-NCL to Godavari Biorefineries
- Godavari Biorefineries setting up a plant investing ~US\$ 100 Mn

THE HINDU
Business Line

Godavari Bio to raise Rs 500 cr for new plant

Kripa Raman
Mumbai, Nov.19

Sugar company Godavari Biorefineries is close to commissioning a facility that will enable conversion of B-heavy molasses from sugarcane into ethanol, keeping in mind a possible future when prices of ethanol will rise sufficiently to make this viable.

The company **will raise Rs 500 crore in both debt and equity to fund a Gujarat-based plant that will manufacture specialty chemicals from cellulose. Godavari Biorefineries will be the first company in the world to attempt chemicals manufacture from bagasse-cellulose. For this, it has developed and patented a technology jointly with National Chemical Laboratory, said Mr Vinay Joshi, Executive Director of the company.**

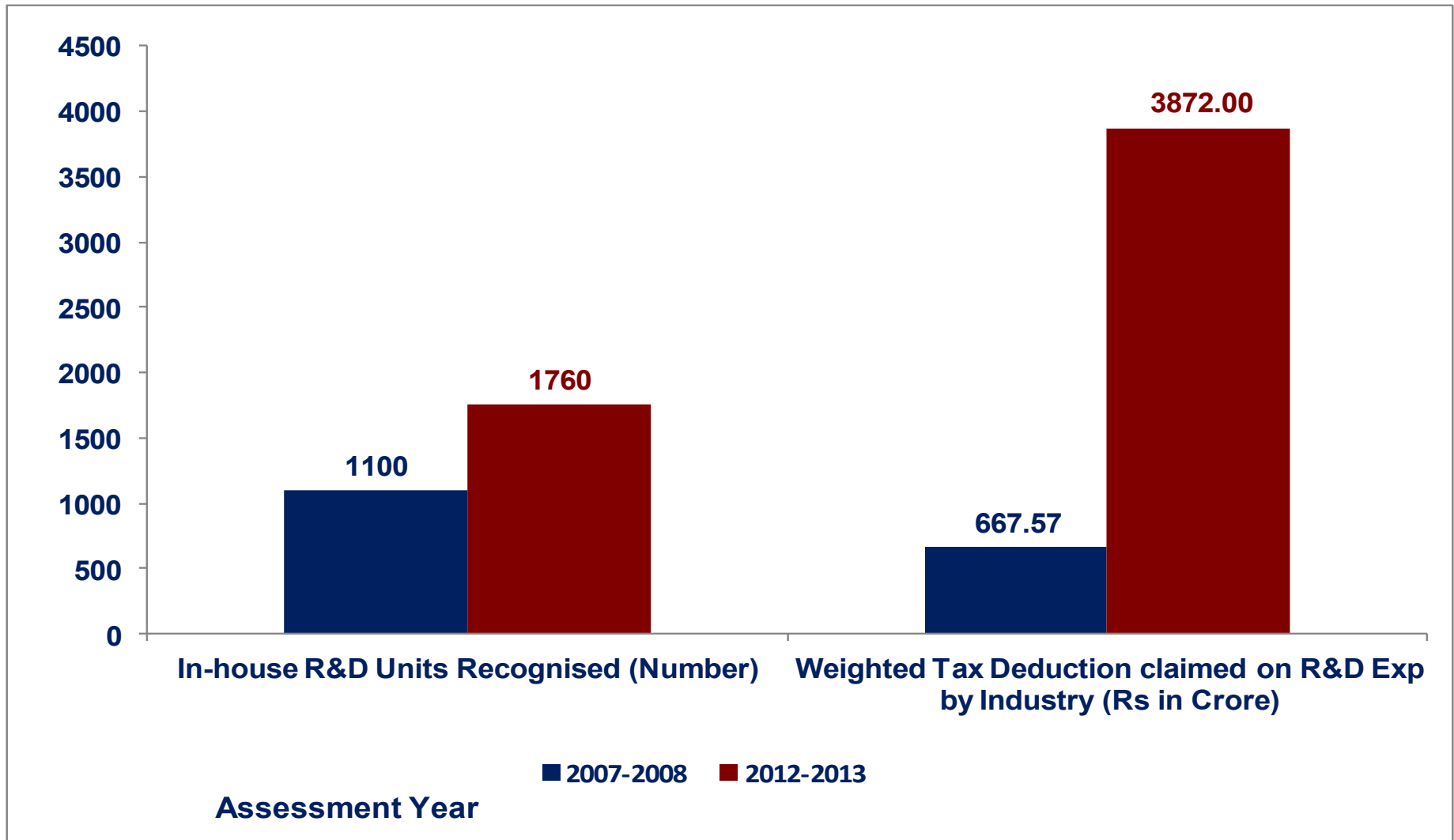
(Cellulose is now manufactured from cotton waste and wood pulp)



Pilot Plant at
Samirwadi, Maharashtra

Fiscal Incentives

Tax Incentives to Industrial R&D Units



Patent Acquisition and Collaborative Research and Technology Development (PACE)

Objectives

- Support SMEs to **acquire patented technology** at an early stage and develop products for India and abroad
- Create **enabling** environment for **collaborative research** between Indian Industry and R&D institutions in India or abroad

Operated by the Department of Scientific and Industrial Research,
Ministry of Science and Technology
Government of India

Access to Knowledge for Technology Development and Dissemination (A2K+)

Objectives

- **Access to e-Journals:** Make e-journals accessible to in-house R&D units of industry
- **Technology Development and Utilization Programme for Women**

Operated by the Department of Scientific and Industrial Research,
Ministry of Science and Technology,
Government of India

Building Industrial R&D and Common Research Facilities (BIRD)

Aim

- **Creation of Common Research and Technology Development Centres (CRTDC) for R&D and innovation dedicated for **Micro and Small Enterprises** (MSEs)**

Objectives

- **Unleash the innovative prowess of MSEs**
- **Create cluster based centers in target areas**
- **Provide customized technical support and R&D capacity building in MSEs**
- **Target R&D areas where MSEs can sustain competition**

**Operated by the Department of Scientific and Industrial
Research, Ministry of Science and Technology
Government of India**

CSIR Innovation Complexes

Driving World Class Translational Research...



How to Protect Traditional Knowledge from Misappropriation

Cancelling Granted Patents can be **Costly**

Invalidation of patent on anti-fungal properties of Neem took 10 years of legal fight at European Patent Office (EPO)

Invalidation of few claims on Basmati Patent at United States Patent Office (USPTO), Agricultural and Processed Food Products Export Development Authority (APEDA), India spent Rs. 6.5 crores (US\$1.2 Mn) in legal fees during 1996-2000.

Can we Prevent the grant of TK related Patents using existing legal framework?

Can we get wrong Patents applications rejected using existing patent framework, without cost and time of litigation

Traditional Knowledge Digital Library as a Defensive Protection Tool Against Misappropriation of TK

Supports Patent Offices in Prior Art Search

Recognition & Acceptance of Traditional Knowledge Classifications (TKRC) by Global IP Community

Feb 2001

- India submitted a proposal on inclusion of Traditional Knowledge at International Patent Classification Union
- Task Force of five Nations constituted by WIPO

Feb 2002

- Task Force recommended creation of subclass in A61 linking Traditional Knowledge Resource Classification developed by India with International patent Classification

Feb 2003

- International Patent Classification Union adopted 200 subgroup for publication by July, 2005
- Accords formal recognition and acceptance of Traditional Knowledge as a distinct discipline at International level

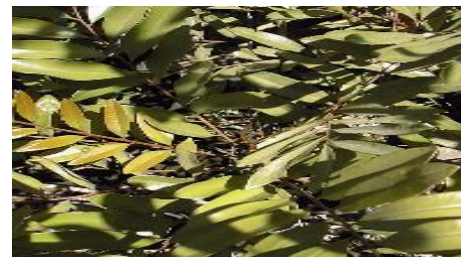
Oct 2004

- Decided to link 25000 subgroup of TKRC with IPC

Traditional Knowledge Digital Library (TKDL)

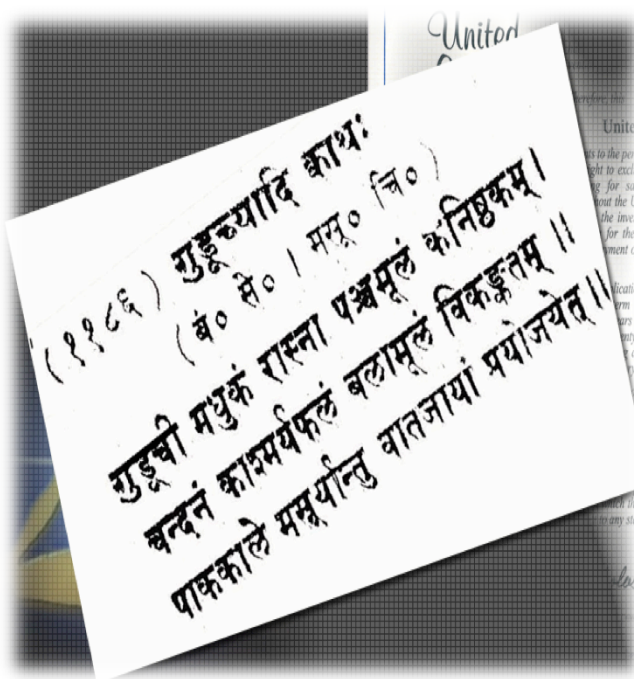
TKDL is a powerful weapon against unethical commercial exploitation of traditional knowledge

- ❖ **TKDL contain information in 34 million pages in five International languages i.e. English, Japanese, German, Spanish and French on Ayurveda, Unani and Siddha.**
- ❖ **TKDL contain information on 2.7 lakh medicinal formulations.**



Transcription of Prior art: English

Prior Art



Transcription of Prior art: English

Key Attribute of TKDL

BP/70

English

Title of Traditional Knowledge

Guducyadi Kvatha (14)

TKRC CODE : A01A-1/1512, A01A-1/1592, A01A-1/1789, A01A-1/1815, A01A-1/1988, A01A-1/2029, A01A-1/670

IPC Code : A61K35/78, A61K9/08, A61P31/12

DETAILS OF PROCESS / FORMULATION :

1. Guducyadi Kvatha (14) is a therapeutic single/compuond formulation consisting of useful parts of following ingredient(s) Tinospora cordifolia (Guduci), Glycyrrhiza glabra
2. therapeutic composition / formulation is mentioned below:
 1. Tinospora cordifolia Miers Stem 1 part
 2. Glycyrrhiza glabra Root 1 part
3. A composition as described above is formulated as (decoction/ water extract)(Kvatha)
4. it is useful in the treatment of smallpox(masurika)

List of Documents with date of publication (prior art):

Nagin Das Chagan Lal saha

Bharat Bhaisjya ratnakar, Gopinath
Vol II B . Jain Publishers(New Delhi)
Ed. Reprint August 1999

TKDL Access Agreements with Patent Offices





TKDL Access Agreement Signed with:




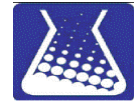
- **European Patent Office** **Feb'09**
- **Indian Patent Office** **Jul'09**
- **German PO** **Oct'09**
- **USPTO** **Nov'09**
- **UKPTO** **Feb'10**
- **Canadian IPO** **Sep'10**
- **IP Australia** **Jan'11**
- **Japan PO** **April'11**




TKDL Success against Bio-Piracy attempts of MNCs



After TKDL & Access Agreements with International Patent Offices, 1080 cases identified and pro-active action taken, in 118 cases patent claims of Multi-National Company's (MNCs) withdrawn/ cancelled within few weeks at No Cost to National Exchequer.


Some Examples of TKDL Success against Bio-Piracy attempts

Great Britain		
1	Bionature	
Italy		
1	Data Medica Padova S.p.A	
Korea		
1	UNHWA CORP	
2	DONG-A PHARM	

USA		
1	Integrated Botanical Technologies	
2	Mary Kay Inc	
3	Apptec Inc	
4	Tower Laboratories	

Norway		
1	Biotec Pharmacon ASA	
Australia		
1	Natbio Pty Ltd.	
Japan		
1	MORINAGA MILK INDUSTRY CO., LTD	

USA		
1	Johnson & Johnson	
2	Unilever N.V	

Switzerland		
1	NESTEC SA	

China		
1	Livzon Pharmaceutical	

Working with WIPO and other Countries

❖ **35 Countries learned TKDL in WIPO-CSIR International Conference – March '11, Delhi.**

❖ **19 developing Countries namely Indonesia, Thailand, Sri Lanka, Nigeria, South Africa, Cambodia, Chile, Egypt, Fizi, Kenya, Magnolia, Oman, Russian federation, Turkey, Vietnam, Kyrgyz Republic, Peru , Bhutan, Brazil visited TKDL on 18-20 March, 2013, collaboration at initiative of WIPO, DIPP, CSIR.**

Plan to add additional 3.5 lakh medicinal formulations

**WIPO has plans to Internationalise TKDL to
utilise Indian TKDL as a template for other
willing Countries rich in TK and GR**

**Dr. Francis Gurry
Director General
WIPO, Geneva
April-2011**

- **TKDL is a unique & pioneering approach against bio-piracy.**

**Dr. Manmohan Singh
Hon'ble Prime Minister,
On 16th Oct, 2012,
At High Level Segment of
The 11th CoP to the CBD, Hyderabad**

Thank You