Documentation of Traditional Knowledge for protection, preservation and wealth creation

at

International Conclave on

Traditional Medicine

17th November 2006
Traditional Knowledge

- Oral or Codified
- Disclosed or undisclosed
- Defensive and Positive Rights
- Misappropriation and Lack of Wealth Creation
<table>
<thead>
<tr>
<th>Nature &amp; Complexities of TK/TCE Documentation Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Identification &amp; Involvement of holder(s), confidence &amp; trust</td>
</tr>
<tr>
<td>• Ownership &amp; practical model on sharing of the benefits</td>
</tr>
<tr>
<td>• Unequal partnership &amp; Alliance</td>
</tr>
<tr>
<td>• Technological and Societal Barriers</td>
</tr>
<tr>
<td>• Customary laws, abuse &amp; morality</td>
</tr>
<tr>
<td>• Safeguarding vs encouragement of misappropriation</td>
</tr>
<tr>
<td>• Disclosed vs undisclosed TK</td>
</tr>
</tbody>
</table>
Access to Traditional Knowledge

National Mission of Manuscripts
Data Sheets completed 1061243
(१६८६) गुडूर्च्यादि काथा
(बोलोः मसूर चिरो)
गुडूरी मधुकं रास्ता प्रामूलं कनिष्ठकर्म.
बन्दनं काण्यरङ्गलों बाळामूले विककृतम्।
पाष्काले ममुर्यान्तु बातजाया प्रयोजयेत।
A Specific Case Study of TK

- Traditional Medicine
- Protection
- Value addition
- Valorization
Protecting Traditional Knowledge

- India
  - Turmeric
  - Neem
  - Basmati

TKDL – TKRC - IPC
IPR & Defensive Protection on TK

Problem Dimensions

4896 references on 90 medicinal plants in USPTO patent databases

80% of references on seven medicinal plants of Indian Origin.

Kumari, Mustaka, Tamraparna, Garjara, Atasi, Jambira, Kharbuza

Almost 50% of patents linked to traditional medicine
IPR & Defensive Protection on TK
Problem Dimension: Patents Granted on Unani Formulations

Study carried out in April 2003

Patent Databases studied: USPTO, UKPO, EPO

Found more than 15,000 patent references based on Unani formulations

Several unpatentable patents on Unani drugs found which include Babuna, Badam, Darchini, Gul-e-Surkh, Gurmar, Hina, Hulba, Huzuz, Kali Zeeri, Karela, Katan, Mom, Nagkesar, Nankhwah, Neeb, Panwar, Piyaz, Sana, Sandal Safaid, Seer, Shib and Zanjabeel.
Subsequent studies on Patents on Medicinal Plants

- March 2003 : 15000
- December 2005 : 35587
- Medicinal Plant Patents / Year : 5000
- Possible Patents concerning Indian Plants / Year : 4000
- Possible Patents on Indian system of Medicine : 2000
## Comparison of U.S. Patents with references cited in Ayurveda PRIOR ART

<table>
<thead>
<tr>
<th>S. N.</th>
<th>US PATENT DETAILS</th>
<th>REFERENCES CITED IN AYURVEDA</th>
<th>REMARKS</th>
</tr>
</thead>
</table>
| 4.   | 5,693,327 granted on Dec 2, 1997  
Applicant Name Shah; Eladevi  
Application was filed on July 12 1995  
Title: Herbal Composition  
Claims: There are 13 claims in this patent. Claim 1 to 9 relate to a therapeutic composition. | 1. Bhava prakasa nighantu, Guducyadi varga, page 331, sloka 97-99  
Use of Melia azardirachta in treatment of skin disorders.  
Use of Centratherum anthemminthicum in the compound formulation in treatment of skin disorder.  
Eczema, psoriasis and lichen planus are skin disorders. | References resemble the treatment described in patented invention. |
IPC & Medicinal Plants

Section A
Human Necessities

Class 61
Medical or Veterinary Science; Hygiene

Sub Class K
Preparation for Medical, Dental or Toilet Purposes

Group 35
Extracts of Animal, Plant or Micro-organisms

Sub Groups 78
Materials from Plants
### Stages of Formal Acceptance of Traditional Knowledge Classifications

<table>
<thead>
<tr>
<th>Section</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 2001</td>
<td>India drives agenda on inclusion of traditional knowledge at International Patent Classification Union</td>
</tr>
<tr>
<td>Medical or Veterinary Science; Hygiene</td>
<td>Task force of five nations constituted by WIPO</td>
</tr>
<tr>
<td>Preparation of Oral, Dental or Toilet Purposes</td>
<td>Task force recommends creation of subclass in A61 linking Traditional Knowledge Resource Classification developed by India with International Patent Classification</td>
</tr>
<tr>
<td>Feb 2002</td>
<td>Extracts of Animal, Plant or Micro-organism</td>
</tr>
<tr>
<td>Materials from Plants</td>
<td></td>
</tr>
</tbody>
</table>
Stages of Formal Acceptance of Traditional Knowledge Classifications

Feb 2003
International Patent Classification Union adopted 200 subgroups for publication by July, 2005
Accords formal recognition and acceptance of Traditional Knowledge as a distinct discipline at international level

Oct 2004
Deliberations on IPC-TKRC Concordance list of the new main group A61K 36/00
(९१८६) गुड्डवादि काथः
(बो हे ०। मसू। चि ०)
गुड्डवी मधुकं रास्ना पञ्चमूलं क्षणिष्कं।
बन्दनं काशमर्शफलं बलमूलं विक्रमतम॥
पाषाणे ममुर्यानु वात्रायणं प्रयोजयेत॥
Key Attributes of TKDL

BP/70

English

Title of Traditional Knowledge

Guducyadi Kvatha(14)

Knowledge Known Since

100 years


IPCCODE : A61K35/78,A61K9/08,A61P31/12

DETAILS OF PROCESS / FORMULATION :

1. Guducyadi Kvatha(14) is a therapeutic single/compound formulation consisting of useful parts of following ingredient(s) Tinospora cordifolia (Guduci), Glycyrrhiza glabra (Yastimadhu, Klitaka (Substitute)), Pluchea lanceolata (Rasna), Desmodium gangeticum (Salaparni), Uraria picta (Prasniparni), Solanum xanthocarpum (Kantakari, Laksamana (Substitute drugs) (Sveta)), Solanum indicum (Brahti), Tribulus terrestris (Goksura), Pterocarpus santalinus (Rakta candana), Gmelina arborea (Gambhari), Sida cordifolia (Bala), Solanum xanthocarpum (Kantakari, Laksamana (Substitute drugs) (Sveta))

2. Therapeutic composition/formulation is mentioned below :
<table>
<thead>
<tr>
<th>No.</th>
<th>Plant Name (Latin)</th>
<th>Part</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tinospora cordifolia (Guduci)</td>
<td>(Stem)</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Glycyrrhiza glabra (Yastimadhu, Klitaka (Substitute))</td>
<td>(Root)</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Pluchea lanceolata (Rasna)</td>
<td>(Leaf)</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Desmodium gangeticum (Salaparni)</td>
<td>(Root)</td>
<td>0.2</td>
</tr>
<tr>
<td>5</td>
<td>Uraria picta (Prasniparni)</td>
<td>(Root)</td>
<td>0.2</td>
</tr>
<tr>
<td>6</td>
<td>Solanum xanthocarpum (Kantakari, Laksamana (Substitute drugs) (Sveta))</td>
<td>(Root)</td>
<td>0.2</td>
</tr>
<tr>
<td>7</td>
<td>Solanum indicum (Brahtî)</td>
<td>(Root)</td>
<td>0.2</td>
</tr>
<tr>
<td>8</td>
<td>Tribulus terrestris (Gokṣura)</td>
<td>(Root)</td>
<td>0.2</td>
</tr>
<tr>
<td>9</td>
<td>Pterocarpus santalinus (Rakta candana)</td>
<td>(Heart Wood)</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>Gmelina arborea (Gambhari)</td>
<td>(Fruit)</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>Sida cordifolia (Bala)</td>
<td>(Root)</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>Solanum xanthocarpum (Kantakari, Laksamana (Substitute drugs) (Sveta))</td>
<td>(Whole Plant)</td>
<td>1</td>
</tr>
</tbody>
</table>
3. A composition as described above is formulated as (Decoction / Water Extract)(Kvatha)

4. Therapeutic composition mentioned above is prepared by Kvatha Curna/Kvatha: Drugs are cleaned and dried.

5. It is useful in the treatment of Small pox(Masurika)

LIST OF DOCUMENTS WITH DATE OF PUBLICATION(PRIOR ART):

Nagin Das Chagan lal
Saha

Bharat Bhaisjya Ratnakar, Gopinath Bhisakratnen
Saha


pp 13
## Status

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Target</th>
<th>Transcribed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayurvedic formulations</td>
<td>72,000</td>
<td>70,000</td>
</tr>
<tr>
<td>Unani formulations</td>
<td>80,000</td>
<td>77,500</td>
</tr>
<tr>
<td>Siddha formulations</td>
<td>10,000</td>
<td>6,000</td>
</tr>
<tr>
<td>Total formulations</td>
<td>162,000</td>
<td>153,500</td>
</tr>
</tbody>
</table>
TKDL Established the International Standards on TK databases

IGC in Dec’ 2002 adopted WIPO/GRTKF/IC/4/14 document entitled “Technical proposal on databases and registries of traditional knowledge and biological/genetic resources”
One recent tangible outcome of India’s strong involvement was the adoption by IGC technical standards concerning TK documentation.

Letter dt. 4.8.2003 from Dr. Kamil Idris
Director General
World Intellectual Property Organization

TKDL Presentation at IGC brought strong recognition for leading work of India in the field of Traditional Knowledge

Letter dt. 16.6.2003 from Mr. Francis Gurry
Deputy Director General
World Intellectual Property Organization
Possible International Collaboration

■ South Africa
  ■ High level delegation from Department of Science & Technology visited during Dec., 2003

■ African Regional Industrial Property Organisation
  ■ Delegation visited during May – June 2004 for replicating TKDL for ARIPO Member States.

■ Govt. of Thailand

■ Govt. of Mongolia
  ■ Delegation visited in January 2006

■ SAARC Countries
Regional consultation on Development of Traditional Medicines in the South East Asia Region, Pyongyoung, DPR Korea, 22-24 June 2005

Recommendation No.5

WHO should develop a model framework on replicating Traditional Knowledge Digital Library (India) suitable for adapting to individual Country needs
International Impact & Recognition

32,800,000
International Impact & Recognition

Web: Results for References/Citations/Documents/Web Sites

- International Patent Classification: 9,050,000 results
- Traditional Knowledge Resource Classification: 28,200,000 results
The information, along with a photographic scan of the relative verse, is then uploaded to an online database and translated into English, French, German, Spanish, Japanese and Hindi. So far, some 140,000 treatments have been entered into the Traditional Knowledge Digital Library (TKDL), a $2 million project launched five years ago to provide a direct link to what is regarded in the patent world as prior knowledge. The first of its kind, the TKDL is serving as a...
Access to TKDL by the examiners of an international patent office would only be utilized for patent search and examinations.

International patent officers and their examiners would not make any third party disclosure other than what is necessary and essential for the purpose of patent search and examination.
A Specific Case Study of TK

Traditional Medicine

Protection

Value addition

Valorization
Traditional Medicine

Modern Medicine

Modern Science