

# Ayurvedic “Intellectual Property Rights,” Past and Present an Overview

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**Abstract:** Patent or perish’ is a statement which replaced the tag line –‘publish or perish’ .World celebrates “Intellectual property Rights, “every April. This year World Intellectual property Organization (WIPO) plans to celebrate this day as - “Innovation Improves Lives”. Innovation in Ayurveda surely improves life so taking a look at the innovations past and present. Ayurveda known as ‘Medicine of the millennium.’ has a lot to offer to achieve wellness globally.

Royal patronage seems to have encouraged total health for all. Management of battlefield woes, medical emergencies, research methodology, alternatives to animal experimentations, procedures of unique surgery, special seasonal and regional therapies and diet so on are on the list which are distinctive to Indian medical Science. Since ages intellectual

Did ancient seers patent their inventions? Did the royal help scientists by bestowing financial appreciation to further their research? The public acceptance and royal patronage seems to be at its zenith in the past and the whole world seemed to be in reality one contented family.

But later the mentality of citizens and rulers seemed to have become more materialistic and patents, copy rights and trademarks must have come into vogue. Hence we find in later dates, precise names attached to medicinal formulations, theories, special contributions but were sporadic and not as widespread as today. Traditional Digital knowledge Library, its role in fighting back few patents, examples of few patents have been explained. This article explores issues of challenges and opportunities met in the past and the present with regard to Ayurveda patenting.

## 1. Introduction

Today we speak of globalization, industrialization, and computerization and a lot about Intellectual Property Rights (IPR). World Intellectual property Organization does much and 26<sup>th</sup> April is celebrated as IP day and this year the tag line is “Innovation Improves Lives”. And originality in Ayurveda is a sure way to improve lives.

Dwelling in to the pages of history we find very fascinating ideas, which would be of great interest to us now. From ancient times, Ayurveda & the Vedic sciences have made significant contributions to the world civilization, sciences and culture that are extra ordinary knowledge in all areas of human pursuits. These contributions, mostly unknown to the wider world, in many situations unacknowledged and often distorted, need attention not only for better understanding and appreciation of the human past but also to adopt these measures at present, to achieve global harmony which was the motto of our ancient rishis, who aspired to achieve peace, prosperity and perfect health for all. So it is natural to wonder if people in ancient India ever thought of issues like patent laws, intellectual property rights.

Patent is defined as a statutory grant of right to an inventor in his own invention from which all others are excluded, as long as the grant runs it is granted only to new inventions having novelty and utility, which are capable of industrial application, is granted by the controller of Patents. Application for a patent can be made by any person claiming to be the true and first inventor or by any assignee or a legal representative of such an inventor. Gone are the days when people said “Publish or Perish,” today it is replaced by “Patent or perish(or be plundered)

Were there no inventors in ancient India? If there were inventions then was the invention not commercially exploited? Did the inventor get any license or recognition or monetary benefit out of it? If patents were granted –who was competent to grant them and how was it done? Can we think of bringing back that system again to achieve universal brotherhood?

A frequent comment heard in scientific and lay circles, is that "we should patent all our traditional knowledge and biodiversity."However, neither traditional knowledge nor biodiversity can be patented by indigenous practitioners because for indigenous societies, it is not 'novel', it is ancient, it is a way of life. The reason that the collective and cumulative innovation of millions of people of thousands of years can be 'pirated' and claimed as an 'innovation' of western trained scientists or corporations, is because of two reasons. The first reason is the colonial hangover of the idea that

science is unique to the west, and indigenous knowledge systems cannot be treated as scientific. The second reason is that developed countries, where most pirated indigenous innovations are filed for patenting, do not recognize the existing knowledge of other countries as prior art. Further let us analyse the concepts of copy right, trade secrets and patents as was in vogue in ancient days and also cite see few unique contributions.

## 2. Traditional knowledge.

Traditional knowledge considered the product of individual creativity today but Knowledge was considered the most precious gift which knew no limitations of space or time, was freely given to the aspirant from the guru and this tradition was known as the guru paramapara .The guru got the knowledge from His guru and after adding his expertise (experience) passed it to his student-this was true with all ancient traditional knowledge. These residential universities or unique hermitages were given grants, protection and all facilities by the royal not because the seers needed them but as the royal thought it their duty towards the society. In such serene places where wisdom reigned supreme knowledge was handed down in all humility and received with equal or more reverence and gratitude. "Let noble thoughts come to us from everywhere, let all beings live happily, free from the fear of death and diseases," and many more such ideals were the guidelines for the (seers) scientists par excellence who worked for the betterment of every living creature and having inculcated such aims were so selfless that thinking of petty personal benefits was unknown, unheard and unthinkable too. In a conducive atmosphere each individual becomes better, then achieves the best in his chosen field of excellence and such progress of that individual is due to many reasons and also the influence of exemplary personalities.

### Sushruta Samhita translated not patented.

Susruta, who lived sometime between 800 and 600 B.C. Susruta practiced and taught the art of surgery at the University of Benares in the ancient city of the same name,

One of the most important documents in connection with ancient Indian medicine is the Bower Manuscript, housed in the Oxford University library.<sup>1</sup> It was found in eastern Turkestan in 1890 and is named after the man who brought it. Hoernle edited this document critically and placed its origin around the fifth century B.C. The fact that Susruta's name is mentioned in this document places him in the fifth century B.C. or earlier.<sup>2</sup>

The *Samhita* was translated into Arabic before the end of the eighth century A.D. and was named *Kitab-*

*I-Susrud* by Abillasiabil. Rhazes repeatedly quotes Susruta as the foremost authority in surgery.<sup>3</sup>

*Samhita* was translated into Latin by Hessler, into English by Hoernle, and into German by Muller in the last century.

Each *samhita* is worth millions of patents. Susrutha *samhita* on the orders of Caliph Mansur (A.D.774) was translated into **Kitab-Shaw Shoon-a-Hindi & Kitab-i-Susrud** and latter translated into many languages. It has description of 300 surgical procedures, 120 surgical instruments, clinical and non clinical practical training on non animal models. Rhinoplasty, cataract removal, abdominal suturing with ant heads, absorbable sutures, foetal description, human cadaver dissection. the list of contributions seem endless and today acachrya Susrutha is recognised as the "Father of Surgery and also that of Indian reconstructive surgery".

"All in all Susruta must be considered the greatest surgeon of the pre medieval period." *A.O. Whipple*<sup>4</sup> Ayurveda manuscripts around the world are innumerable. British Isles alone has Sanskrit Ayurveda manuscript estimated to be more than 30,000 and half of it has been catalogued<sup>(5)</sup>The India office library &World Records. (London),The Bodleian Library, Oxford<sup>(6)</sup> The University Library, Cambridge<sup>(7)</sup>The Wellcome Institute for the History of Medicine, London and similar manuscripts are found in Germany, France, Italy, Netherlands. United States and it is beyond any one's speculation how much knowledge was shared from those days and again in those manuscripts<sup>(8)</sup>

Nagarjuna(c 150 to 250CE) recognized as 'Father of Alchemy,' and many more contributions is worth looking into with regard to patents and concept of patents. His contributions are as follows -

*Śūnyatāsaptati* (Seventy Verses on Emptiness)

*Vigrahavyāvartanī* (The End of Disputes)

*Vaidalyaprakaraṇa* (Pulverizing the Categories)

*Vyavahārasiddhi* (Proof of Convention)

*Yuktiśāṣṭika* (Sixty Verses on Reasoning)

*Catuḥstava* (Hymn to the Absolute Reality)

*Ratnāvalī* (Precious Garland)

*Pratītyasamutpādahṛdayakārika* (Constituents of Dependent Arising)*Sūtrasamuccaya*

*.Bodhicittavivarāṇa* (Exposition of the Enlightened Mind) *Bodhisambhāra* (Requisites of enlightenment)<sup>(9)</sup>

Nagarjuna's medical contributions such as -- SiddaNagarjuna Rasavada, Nagarjunaabhra. Nagarjuna varti, Nagarjuna tantra etc and his addition to Susrutha *samhita* has been acknowledged. Pataliputra stone inscription proclaims the gold coins bestowed by the royal on Nagarjuna for his contribution of "Vimala varti ,Nagarjuna varti and it also has been inscribed for the benefit of all.

The Vedic shastras are like treasure houses of knowledge, par excellence. To name a few of them Patanjali's Yoga sutras.<sup>(10)</sup>Pannini's vyakaranashastra,

<sup>11</sup>Gautam's nyaya shastra,<sup>12</sup> Bharata's natya shastra<sup>(13)</sup> kautilya's artha shastra <sup>14</sup>are compendiums worth recalling here.

Agastya rishi known for colossal contribution has been known for his vedic hymns, Tamil language and its grammar, Agastya samhita, Agastyarasayana, Agastyahareetaki lehya, Agastyarasa, Agastyasootaraja rasa, Agastyapushpa (grandiflora)Agastyanakshatra,Agastyasamhita ,Adityahridaya mantra and Varmam-martial art. There is a pristine hill known as - Agasthyarkoodam, a huge statue of Agasthya muni is also found on this hill <sup>15</sup>

Vedic microbiologists named are Agastya, Angiras, Atri, Bhrigu, Bhargava, Bharadvaja, Visvamitra, Vasistha, Kashyapa, Gotama, Jamadagni <sup>16</sup>and others.

Exemplary patents of the past are extensive, is beyond the scope of this article and to limit the size of the article few examples above are quoted.

Present examples of IPR related to herbs, herbal formulations, nutraceuticals etc are given here. Scientists in Tropical Botanical Garden Research Institute and the kani tribes of agashyar hills jointly made a patent in Kerala. Arogyapaccha (Trichopus zeylanicus) for ever green to achieve health and vitality has been made into a formulation "Jeevani," and this joint patent is a model to look into. And it is important to explore the lessons learnt from this patent.<sup>17</sup>

Patents fought and won back include -turmeric, neem, basmati rice etc.

Turmeric wounding healing property was applied for patent by Mississippi Medical center and USA granted 5401,504 in the year 1995. RiceTec Inc, 'Kasmati' and 'Texmati' instead of Basmati issued the Patent number 5663484 on Basmati rice lines & grains Sept2, 1997. Yellow latte is sold from Sydney to California and is in great demand for its health benefits.<sup>18</sup>

Dr.R.A.Mashelkar Director general of Council of Scientific and Industrial Research from 1995 to 2006 tried to back those after refuting the patents.<sup>19</sup> Traditional knowledge digital library (TKDL)an institute set up in 2001,as a repository of traditional knowledge and it is translated into English, German, Spanish, Japanese and French. More than 148 books on Indian Medicine has been put on public domain, which includes 34 million pages of information with the main objective to check exploitation through bio piracy and unethical patents and it is done by electronically documenting traditional knowledge. International patent documentation classification systems are implemented as United States Patent and Trademark Office, United Kingdom Trademark and patent office, European Patent office have signed agreements with TKDL.<sup>20</sup>

## Present Ayurveda patents -an overview

CCRAS -Central Council for Research in Ayurvedic Sciences, a premier institute of research in India 17 patents and 19 filed and 12 patents transferred to industry. Some note worthy patents are taken as examples.<sup>21</sup>

A process for preparation of an Ayurvedic formulation for the treatment of Leukemia 191708. Ksharsutra - A medicated thread for Ano- rectal diseases 186243

A Process for the Preparation of Novel Composition from *Swertia chirata* Buch. Ham. (Gentianaceae) having Anti-carcinogenic (cancer Preventive) and anti- Tumor (Cancer Therapeutic) Action 191128 . Ayurvedic composition for diabetes :WO 2001072316 A1,Ayurvedic formulation :coronary heart disease WO 2010100652 A1, Ayurvedic formulation for treating acquired immune deficiency syndrome (HIV/AIDS) patients to obtain negative results of HIV/AIDS infection & other dreaded diseases and process for preparing the same ;US 20040071790 A1 <sup>22</sup>

### Ayurveda patents for equipments.

An apparatus allowing the treatment of human being using ayurvedic system of treatment<sup>23</sup>

Non-invasive device *nadi tarangini* useful for quantitative detection of arterial nadi pulse waveform ;US 20100152594 A1 <sup>24</sup>.

Pulse diagnostic system -US 20030212335 A1

Nadi Yantra: a robust system design to capture the signals from the radial artery for assessment of the autonomic nervous system non-invasively.<sup>25</sup>

Be inspired to become much more creative and do your best for the society. Many institutes have been making lot of patents and it is exemplary institutes. There are few individuals as good as institutes and individual contributions have not only brought them credit but also to the institutes.<sup>26</sup>

### Patents worth pondering over

Whole, leech saliva product & applications US 8685462 B1.

The extracts from saliva leech can be used to treat solid tumors, treat liquid tumors, treat diabetes, treat a viral disease, treat a parasitic disease, treat an antibacterial disease, or serve as an anti-oxidant.<sup>27</sup>

Composition :Ashwagandha & Indian Gooseberry US 20100098785 A1

A composition of ashwagandha and Indian gooseberry may: (1) lower cortisol and increase DHEA, (2) prevents free radical-induced photoaging, (3) inhibit collagenase activity in vitro, (4) inhibit hyaluronidase activity in vitro, (5) display superior cascading antioxidant activity, (6) reduce C-reactive protein, (7) enhance mood.<sup>28</sup>

The Indian Gensing 'Ashwagandha,' Gets US Patent For Vaccine Adjuvant (innovative industry-academia research project)The application of this new adjuvant

can be envisaged not only with vaccines against meningitis, polio, diphtheria, tetanus and hepatitis but also holds promise against HIV, tuberculosis and malaria.<sup>29</sup>

Pharmaceutical composition containing cow urine distillate and an antibiotic US 6410059 B1<sup>30</sup>

Use of bioactive fraction from cow urine distillate ('Go-mutra') as a bio-enhancer of anti-infective, anti-cancer agents and nutrients US 20050100610 A1.

It has been advocated as a bioavailability facilitator and pharmaceutically acceptable additives selected from anticancer compounds, antibiotics, drugs, therapeutic and nutraceutical agents, ions and similar molecules which are targeted to the living systems.<sup>31</sup>

Process for extraction of ashwagandha (withania somnifera) roots“ WO 2012160569 A1<sup>32</sup>

As every coin has two faces, IPR has advantages and disadvantages and looking at both aspects becomes essential.

1. Patents are time consuming and it takes few months or years before a patent is granted.

2. Patents are regional or territorial. Patent is protected in that particular nation.

3. Patents are expensive.

4. Patents can be slightly modified and patented in a different region while the process of patenting is occurring in a different geographical region.

Advantages of IPR –it gives the inventor legal right to stop others using it, gives time to develop it in to marketable product and provides 20 years time to deter competitors from making copying it.<sup>33</sup>

WIPO: World Intellectual Property Rights

Organization has a very informative website and a very inspiring magazine which archives and is inspiring for all researchers,<sup>34</sup>

Let our Indian researchers also make more patents and uphold this year's tag line – 'Innovation Improves Lives.'

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