

A Case Study on Applicability of Intellectual Property Rights to the Traditional Medical Systems of Asia and Africa

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Abstract: Today with an ever increasing population, and the recent Pandemic of COVID-19 still in force throughout the world, agricultural innovation is getting vital in order to increase the productivity and secure the global food supply but agriculture research and development is always a costly affair and while previously it was undertaken mainly by public sector, today the private sector is adopting the work of Research & Development specifically in the area of biotechnology. Thereafter we see that in the modern world in both the developed and developing countries use of herbal medicines, phytonutrients and nutraceuticals are expanding rapidly as many persons are resorting to these products for treatment of various health problems within various national healthcare settings but many of these products have remained untested and their use are also not monitored which has caused problems in acquiring proper knowledge of the adverse effects of these medicines and therapies used, creating safety related issues for the persons who are using them along with causing obstacles in proper promotion of these products and methods throughout the world. Intellectual Property (IP) refers to the creations of mind such as inventions, literary and artistic works, designs, symbols, names and images and these are protected by laws like Patents, Copyrights, trademarks etc, which enable people to earn recognition or financial benefits from what they invent or create. Previously machines were considered for invention or artistic creations and were protected by the Intellectual Property Rights and the assignment of IPRs to living things is relatively a recent phenomenon in the developed countries but today agriculture is seen as an industry that cannot survive without research, development and investments. This situation made it necessary to extend protections of IPRs in all its forms to the agriculture sector also. Then we see that recently not only Ayurveda of India but also other Traditional medical systems of Africa and South America has also started getting recognitions throughout the world as a rationale system of medicine and so it is absolutely necessary to understand the concept, rules, regulations, present status, controlling authorities of Intellectual Property Rights to protect and promote the ideas about these types of treatments and medicines and make them acceptable throughout the world without any constraints for the development of the developing and underdeveloped countries of the Asia, Africa and South American continents. In this paper we will study the impact of Intellectual Property Rights on the traditional medical treatment systems of continents of Asia, Africa and will try to examine how Intellectual Property Rights can be applied to protect and increase the production of medicines developed from medicinal herbs in the developing and underdeveloped countries of Asia and African countries along with a special reference to India. This study has been casual, exploratory and empirical in nature and the data needed for research work has been collected by using both direct and indirect methods of data collection..

Keywords: Traditional Medicines, Ayurvedic, Intellectual Property Rights, Patents, Research & Development.

I. INTRODUCTION

Different Ethnic groups residing in various parts of the world recognised various types of illness, symptoms and causes and have developed unique indigenous traditional methods of healing suitable to their culture, beliefs and environmental circumstances which satisfied the health needs of their communities over centuries.

1.1 Asia

Asia the earth's largest, most diverse and most populous continent is located primarily in the eastern and the northern hemisphere and produces the most various types of vegetation and animal life on the earth.

A. Traditional Asian Medicine

Traditional Asian Medicine is a collective term for several types of traditional medical systems practiced in Asia and it includes medical traditions of Kampo of China, Jamu of Indonesia, Ayurveda of Indian Subcontinent, Siddha of South India and Unani of Middle East and Central Asian countries.

B. Ayurveda in India

Ayurveda which consists of two words "Ayur" and "Veda" is considered as that branch of knowledge which is concerned with the physical health and happiness of an individual and is the traditional form of Indian medical system which was developed by the ancient sages almost more than 5000 (Five Thousand) years ago and is considered as an ancient science of healing that enhances longevity.

Ayurveda which is based on the universal principles has its influence on the various ancient traditional methods of healing including Tibetan, Greek and Chinese medical systems and so Ayurveda can be regarded as the "Mother of all Healing".

The ancient Vedic philosophy believed that human beings are also a part of the nature just like animals and plants which are interdependent on each other to have proper balances for their existences in this world and so any type of changes in the nature like weather, lifestyle, etc, can cause a negative influence on the individual human being's state of mind, body and soul. Therefore we see that Ayurveda wants a complete harmony of the human body with the elements of nature and the surrounding environment for a stress free and healthy life.

The Ayurvedic science does not only deal with medical science but its scope goes beyond the scope of conventional sciences and includes other factors also like herbal medicines, body works and surgery apart from social, psychological, ethical, spiritual and intellectual life of human beings.

C. Ayurvedic Healing Treatments

Ayurveda understands health as a reflection of a human being in harmony with nature and disease happens when this harmony gets disturbed. Ayurvedic Treatment is also called as "Ayurvedic Healing" which are specifically designed after considering a particular human being's physical, emotional and social factors by balancing between all the three of these elements alongwith combining it with products which are mainly derived from plants, herbs and minerals with balanced diet, exercise and proper healthy lifestyle.

D. Ayurvedic Medicines

Ayurvedic medicines are mostly formulated using a mix of herbs and other plants to get the benefit of drugs and therapeutic value.

E. Ayurvedic Herbs

In the ancient times many learned persons who were known as Rishis and Sages, believed and depended on Ayurvedic herbs to cure a number of health related problems and sickness. Herbs has always played a vital role in the Ayurvedic system as Ayurvedic herbs are also known to provide permanent relief from a disease by removing the metabolic toxins from the body.

F. Ayurvedic Home Remedies

Ayurvedic home remedies are considered safe as they are natural and herbal in nature and are therefore not only free from any side effects but have an advantage over other methods of treatment as Ayurvedic remedies are known to cure the diseases from the root and helps the user to get rid of the problem permanently and lead a healthy life.

1.2 Africa

Africa which is considered by most persons as the oldest inhabited territory on our earth is the world's second largest and second most populous continent in the world after Asia and is also considered as the poorest continent on the earth where most persons living in Sub Saharan African region lives below the poverty line.

Africa contains some of the world's largest reserves of fossil fuels, metallic ores, gems and precious metals along with equatorial rain forests of Central Africa and world famous wildlife population. Then we see that although still today agriculture still dominates the economies of many African countries, the exploitation of the above mentioned resources has became the most significant economic activities in Africa which has gone a huge extent to reduce the poverty of the region.

A. African Traditional Medicine

It has been observed that in the African Society illness is regarded as having both natural and supernatural causes and so it is believed that illness is to be treated by both physical and spiritual means using divination, incantations, exorcisms, animal sacrifice and herbs.

African Traditional Medicine is a form of holistic health care system which is actually organised into three levels of speciality, namely divination, spiritualism and herbalism where the traditional healer provides health care services based on the culture, beliefs, religious background, attitudes, and knowledge that are prevalent in the respective communities.

B. Clinical Practice of African Tradition

In African tradition the curative, training, promotive and rehabilitative services are referred to as clinical practices which are used to evaluate the conditions of ill-health of an individual and the respective management of that ill-health situation of that respective individual.

These traditional health care services are provided through tradition and culture as mentioned under a particular philosophy in which the norms and taboos therein are needed to be strictly adhered to as this forms the basis for the acceptability of the traditional health practitioners in the community they serve.

C. Herbal Medicine

Herbal medicines which was once regarded as primitive by the western countries is the basic essentials of any traditional medicinal system which may also include minerals and animal part and is still the oldest and most widely used system of medicine which is common to various societies and cultures throughout the world.

Herbal medicine is a special form of traditional medicine where the traditional healer who is also known as herbalist , specialises in the use of herbs to treat ailments. Herbal medicines are also known as botanical medicines, vegetable medicines or phytomedicines as defined by the World Health Organisation (WHO) and refers to herbs, herbal materials, herbal preparations and finished herbal products that contain whole of plants, parts of plants or other plant materials including leaves, flowers, barks, flowers, roots and their extracts as active ingredients needed for human therapeutic use or for other benefits in humans and sometimes for animals also.

It has been observed that the use of herbal medicines appears to be universal in various societies and cultures but the plants used for a particular type of ailments and the modes of treatment may vary from place to place. Thereafter we see that when compared with modern allopathic medicines , herbal medicines are freely available and can easily be accessed by all.

D. Major Obstacles in using African Medicinal Plants

The plants which are used for medicinal purposes are generally referred to as medicinal plants and even today there are a number of plants which are getting used as traditional medicines for many years but without proper scientific data to back and support their efficacy for using them for medical treatment, which is absolutely necessary for the proper safety of the persons using them.

E. Some Advantages of Using Medicinal Plants

Some advantages of using medicinal plants are a) Low cost, b) Affordability, c) Easy Availability, d) Better Acceptability, e) Low Toxicity.

F. Some Disadvantages of Using Medicinal Plants

The main disadvantages of using medicinal plants are their poor quality control measures which causes safety issues as most of this traditional medicinal practices are kept secret from the outside world and the knowledge of the plant species used along with the methods of preparing and administering the medication for serious ailments are kept with the traditional healers themselves only and are passed down to their relatives or trusted persons to carry on.

II. INTELLECTUAL PROPERTY RIGHTS

It is observed that the increased use of traditional medicines in various countries throughout the entire world prompted the WHO (World Health Organisation) to promote the integration of various traditional medicines, complementary medicines and alternative medicines into the national health care systems of various countries for the proper development of national policies and required regulations as essential indicators of the level of integration of such medicines within the respective national health care system of the various countries.

In the modern world although the use of herbal medicinal products and supplements has increased tremendously and the therapies involving these agents have shown better results but still many of them have remained untested and their use have been poorly monitored or not even monitored at all which results in inadequate knowledge of their actual mode of actions and potential adverse reactions.

Thereafter as the safety issue is one of the major issue for all those persons using these herbal remedies it becomes absolutely necessary for the relevant regulatory authorities of the world and the respective countries as well to implement appropriate measures to safeguard the public health by ensuring that the herbal medicines are safe and suitable to the persons using them. Intellectual Property Rights (IPRs) can be defined as legal rights established over creative or inventive ideas which allows the right holders to exclude any unauthorised commercial use of their creations and inventions by any other third persons.

2.1 Types of Intellectual Property

- Copyright:** Copyright is a legal term used to describe the rights that the creators enjoys over their literary and artistic works like books, music, films, paintings, sculptures, technical drawings etc.
- Patents:** Patent is an exclusive right granted for an invention where the patent owner is provided with the right to decide how the invention can be used and in exchange of the right, the patent owner has to publicly declare the technical information of the invention in a published patent document.
- Trademarks:** A Trademark is a type of Intellectual Property which consists of either a recognisable sign, or a design or a expression which is capable of distinguishing the goods and services of one enterprise from those of the other enterprises.
- Industrial Designs:** This is a professional practice of designing products, devices, or objects that are to be manufactured by mass production and is referred to as the creative act of determining and defining a product's form and features before the production of the product.
- Geographical Indications:** Geographical Indication tags which is a name or a sign are given to foodstuffs, handicrafts, industrial products or agricultural products which corresponds to a specific geographical location

or a place of origin. Normally it is seen that Geographical Indications includes the names of the place of origin of the goods.

6. **Trade Secrets:** Trade Secrets are IP rights on confidential information like formulas, processes, designs, practices, patterns etc which have inherent economic values, and any unauthorised use of such information by any persons other than the actual holder is regarded as an unfair practice and a violation of the trade secret.

2.2 IPRs relevant to Agriculture

It has been observed that the well being of human beings is actually and mainly depended on the food they consume and as even today more than almost half of the world population are still involved in agricultural activities, it is absolutely necessary to decide whether IP and research activities should be related to agriculture at the national, international or at the institutional levels.

Thereafter we see that as the plant breeders are always keen to generate profit from their research investments the main objectives of the researches should be to ensure that the researches are directed and guided to solve the problems and the needs of the poor farmers.

Some of the IPRs which are relevant to the agricultural sector to protect the products in the agricultural sector are Patents, Plant Breeders Rights, Trade Marks, Geographical Indications and Trade Secrets.

- **Patents:** Patents are one of the most important IPR today for agricultural goods and services as they provide the strongest protection for patentable plants, animals and biotechnological processes for their production.
- Patent laws of all countries more or less follow the basic criterias like a) not known in any prior act, b) non-obviousness, c) usefulness, etc, for granting patents but still today there are some countries which does not allow the patenting of plants, animals, microorganisms and biotechnological processes.
- **Plant Breeders Rights:** Many Countries have developed Plant Breeders Rights to protect and reward conventional plant breeding efforts.
- **Trademarks:** Trade Marks are used to protect both industrial products and services and is used to market seeds or spraying services.
- **Geographical Indications:** Geographical Indications including appellation of origin are commercial marks which are more often used in agriculture than industry. These are marks associated with products originating from a particular country, a region or a locality where the quality, reputation or other characteristics of the product are essentially attributable to its geographical origin.
- **Trade Secret:** This protection can be used by the agricultural sector to protect the hybrid varieties of plant.

2.3 Application of Intellectual Property Rights to Agricultural Research in the Developing Countries of the World

It has been observed that agricultural research has been a major contributor to the agricultural growth and economic development all over the world, but unlike in the industrialised countries, agricultural research in developing countries is mostly in the public sector where public sector programs cover the entire range of agricultural researches such as genetic resources, food, feed and fiber crops, livestock, forestry, fisheries, soil management, integrated pest control, post harvest systems, and conservation of natural resources, but now-a-days slowly more and more private organizations throughout the entire world are coming up to take up research and development in agriculture.

Now-a-days many changes in the international policies and trends in technology research areas have contributed to a huge extent to reshape the environment for public research in the 1990s.

In recent years, the value of intellectual property in the research and development (R&D) sector in general and in the agricultural research sector in particular has increased considerably to protect the agricultural production from piracy and counterfeiting of Intellectual Property. A number of justification has been offered for the introduction of IPRs in the agricultural sector with a view to foster food security in the developing countries of the world. Many people are also of the opinion that IPRs are used to defend a firm's competitive position to create revenue and to see that the private sector gets more benefits through the legal protections offered by the IPRs and so we can say that IPR is the

prerequisite for the participation of the private sector in the development of the better plant varieties. The interaction between IPR and agriculture can be seen in two phases.

1. Adoption of Intellectual Property Protections like Plant Breeders Rights.
2. Introduction of patents over life forms which leads to the growth of agro-biotechnology.

Thereafter we see that the interaction between agriculture and IPR can be broadly divided into three parts :

1. Technology developments facilitated by IPRs: Under this , IPRs can help to increase investments in R&D in two ways :
 - a. Plant breeding efforts to produce better hybrids is likely to spread to newer crops.
 - b. It grants the required protection to attract the new investments.
2. Technology Development driven by IPRs: IPRs can influence investment behavior in two ways.
 - a. The private firms will be influenced to increase outlays for research, which may lead to innovations.
 - b. Increased Technology transfers through joint ventures, mergers and acquisitions between domestic and foreign firms may lead to the innovations.
 - c. Technologies that influence IPRs: Agricultural Technologies which are grouped under different heads like crop improvement, crop protection, knowledge based natural resources management ,machinery based technologies concerning livestock revolves around improvement in crop varieties that contributes maximum growth in productivity.

Therefore it can be said that the introduction of IPRs in developing countries could lead to more amount of foreign direct investment, increased technology transfer and Research and Development by foreign companies while at the same time giving domestic sectors incentives to be more innovative and in this way it can lead to increased agricultural productivity in developing countries of the world.

2.4 Intellectual Property Rights in Perspective of Ayurveda

Now-a-days even though when we see that Ayurveda is getting its due recognition worldwide as a rationale system of medicine there are many persons in the medical and scientific fraternity of the world who has some opposite views in accepting the safety and efficiency of the Ayurvedic medicines.

At this juncture the provisions of Intellectual Property Rights under World Intellectual Property Organisation (WIPO) have attracted many individuals and organizations to explore the possibilities of commercial benefits with Ayurvedic knowledge.

2.5 Intellectual Property Rights in Perspective of Ayurveda in India

As it is known worldwide that the intellects involved behind constructing the Ayurvedic science is rooted in India from ancient times an understanding of the concept, rules, laws, regulations, controlling authorities etc, has to be understood to understand how the Intellectual Property Rights can be used to restore our scientific knowledge, to promote them and make them acceptable without any financial constraints. In this light after reviewing and evaluating the current status and conditions it is suggested that we need proper structured rules to protect our natural resources.

2.6 Intellectual Property Rights in Perspective of Traditional Medicines of Africa

It has been observed that the knowledge of African Traditional medicines has developed from the pre-historic time and now it is almost impossible to trace its actual origin. Thereafter it is also said that the African Traditional medicines has survived so long mainly because it has passed on from generation to generation orally.

This practice of Traditional Medicines in Africa has been mainly practiced within particular communities where these medicinal plants are normally referred to as divine gifts which are to be used for the benefit of the entire community and not for the personal gain of any single person.

Medicinal plants used in traditional diagnostics and therapeutics in Africa are known to have provided the required working knowledge and ingredients for the important scientific breakthroughs in the pharmaceutical medicinal world for which the patents has been wrongfully acquired by the persons or organisations from outside Africa.

Thereafter we also see that the colonialisation of Africa has not only tried to destroy the old value systems of Africa but the Colonial laws has also been used to criminalise the traditional forms of diagnostics and therapeutics like in some countries of Africa there has been instances of banning the traditional practices by branding them as witchcraft and declaring unconstitutional.

It has been observed that even though there has been big efforts, colonialism never succeeded in completely eradicating the indigenous health care system of Africa and only was able to dominate the traditional practices which caused major problems to the majority of the Africans who not only failed to afford the foreign pharmaceutical brands but were also deprived from using their own socio-economic and cultural facilities.

Therefore when it comes to the question of protection through Intellectual Property Rights within the framework of the World Trade Organisation it is suggested to establish a regional framework to recognise, protect and prompt the inalienable rights of the African peoples to properly practice the traditional medicines of the African continent.

III. OBJECTIVES OF THE STUDY

The main objectives of this study is to analyse the impact of Intellectual Property Rights on the traditional medical treatment systems of the continents of Asia and Africa and will try to examine whether modern IPR regimes can be applied properly in the underdeveloped and developing countries of these continents to enhance the productivity of the medicines developed from the medicinal plants or herbs found in the various regions of Asia and Africa to increase its benefits and adaptability throughout the world and develop the underdeveloped regions of Asia and Africa.

IV. LITERATURE REVIEW

Maredia K. Mywish in her report, “ Application of Intellectual Property Rights in Developing Countries :Implications for Public Policy and Agricultural Research” stated that agriculture research in developing countries is mostly in the public sector domain but still many developing countries throughout the world continue to experience food insecurity, poverty and malnutrition and so an infusion of new technologies that can transform an economy from subsistence agriculture to a more productive commercialized system is an essential component of the solution to projected food insecurity, malnutrition and poverty.

Agricultural systems must be reviewed and caitalized in such a manner that newly developed technologies can be integrated into the cropping systems without degrading natural resources and the ecology.

Watal Jayashree in her paper, “Intellectual Property Rights in Indian Agriculture “, stated that the public sector in India has been playing a predominant role in plant breeding efforts while some felt that the public sector should be mainly oriented towards rendering service to the small framers and should not be motivated by profit others felt that IPRs should be taken by such institutions to reward individual scientist’s efforts.

Pathak. S.V. and Joshi P.S. in their report, “ The Role of Intellectual Property Rights in Agricultural Engineering “ stated that in the modern world people look towards the agricultural sector from a industrial point of view or as a business, which cannot sustain without proper research and development alongwith needed investments and in the past decades there has been a tremendous increase in the role of intellectual property in the agribusiness leading to its impact on the technology development and its transfer. In addition to this the paper also states that there has been an increase in the interest of innovations of pre-harvest as well as post-harvest agricultural machinery which shows that inputs from agricultural engineering have played a significant role in increasing the productivity and production through proper appropriate mechanisation technique.

Chaudhary Anand and **Singh Neetu** in their report Intellectual Property Rights and Patents in perspective of Ayurveda stated that as the rules are not favoring to grant a patent on prior published knowledge, the current provisions of the Patent Law of India are obstructive in nature for getting patent on Ayurvedic medicines and so in order to ensure quality, safety and efficacy of Ayurvedic medicines, there is an urgent need to amend laws of patent with the required promotional policies. This will encourage more patents on numerous pharmaceutical, nutraceutical and cosmaceutical products based on Ayurveda leading to more new inventions which in turn will go on to increase the acceptance of Ayurveda as a Global system of medicine.

Carol C Ngang and **Patrick Agejo Ageh** in their report Intellectual Property Protection of African Traditional Medicine within the Legal Framework of the Right to Development, has specified that despite the imposition of western medicine, which has dominated the African traditional medicinal systems since the time of Colonial era, the African traditional medicine has survived and now deserves proper protections as the people of Africa are entitled by the laws to get the required benefit from them as not only this practice of traditional medicine is deeply rooted in African culture it has also been granted as their human rights under the African Human Rights Systems.

V. RESEARCH METHODOLOGY

The present study has been exploratory, casual and empirical in nature and the data needed for such research work has been collected through both direct and indirect methods of collection of primary and secondary data.

5.1 Direct Method

A. Questionnaire

This method was undertaken to collect information and find out the views of the persons who are somehow related to the administration, production and servicing of the traditional systems of medicines specifically in India.

B. Interview Method

Primary information related to this study has been collected by personal interview of randomly selected respondents who are related to the production, administration and servicing of traditional medicines specifically in India. Primary data has been collected by two stage sampling technique during field visit by personal interview through a structured questionnaire, of randomly selected respondents.

In this respect in the first stage some institutions like Universities, Hospitals, Pharmaceutical Organisations, Banks, Other Financial Organisations and various other Professional institutes etc, who are directly related to the production, teaching administration and servicing of traditional medicines in India are selected and thereafter in each of the selected areas the second stage units that is the respondents belonging to the various sectors of the society like Scientists, Agriculturists, Teachers, Bankers and other Professionals were selected to collect the necessary information needed for our study.

5.2 Indirect Methods

A number of books, newspapers, magazines, journals, websites, edited volumes, working papers, e-books and other reports were consulted to gather information's related to our study. The data obtained from both the primary and secondary sources was examined and analysed thoroughly and the results of the analysis are presented below.

VI. FINDINGS

Now-a-days with the recent COVID-19 Pandemic still creating havoc throughout the entire world the global use of herbal medicines are not only increasing but many more new products are getting introduced into the market which are increasing great concerns for public health issues and their safety.

Then it is seen that although some herbal medicines have huge potentials and are widely used many of them are not properly monitored and so potential adverse effects of them are not known properly. Thereafter it is also commonly seen that the safety of most herbal products is compromised by lack of suitable quality controls, inadequate labelling and improper patient information.

Ayurveda in India is a conceptual science where concepts have evolved around principles of health, etiopathogeneses of diseases and approaches to treatment, which include not only drugs but also therapeutic diets and therapies to correct disturbed balance of the body. In this system, use of plants has been the main source of food and medicine and although local herbs and plants are used traditionally in all countries of the world, India has remained pioneer in this field where this traditional system of medicine has flourished over centuries and milleniums in a well-codified form and even today in India Ayurveda is credited as the most authentic traditional knowledge of medicine.

Therefore in the modern world it has been essential to provide proper information to everybody concern for better understanding of the products for proper and safe use of these medicines.

VII. APPLICABILITY OF RULES OF IPR ON TRADITIONAL AYURVEDIC KNOWLEDGE

Traditional knowledge does not mean ancient, but it means a knowledge which is developed, sustained and passed on within a traditional community from generation to generation, sometimes may be through some specific customary systems of knowledge transmission. Thereafter it has been observed that a community might see some traditional knowledge as part of their cultural or spiritual identity and so we can say that it is the relationship with the community that makes it traditional.

Therefore after considering the above point we can say that Ayurveda is an integral ingredient as an inheritance of different individual communities of Indian Culture from ancient times. Therefore it is absolutely needed to develop a Protection Policy that documents and preserve traditional knowledge created in the past, but it is also important to consider how to respect and sustain the development and dissemination of further traditional knowledge that arises from the continued use of traditional knowledge systems.

These aspects regarding the development of Ayurveda in the modern world demand its legal protection to check its exploitation from the commercial houses and individuals with various fraudulent objectives. Again as per the rules of Patent, to get a patent it must be a new invention, consisting nobility with commercial industrial application, but Ayurvedic knowledge is centuries old in this continent, so it seems that it is impossible to get a patent on Ayurvedic knowledge which is in public domain and a prior act as per provisions of the Patent Act, which prohibits grant of patent in these conditions.

Over and above the huge number of verses which Ayurveda already had in its original form , describing every problem and solutions of life holistically, hundreds of texts dealing with different disciplines of medicines were created by various later days scholars of Ayurveda.

This immense treasure of Ayurveda is actually creating a problematic situation for Patent officials as they do not have the required access to this huge comprehensive knowledge due to lack of digitization or other proper methods of preservance, difference in languages, unavailability of classical text book of Ayurveda and many other problems. On the Other hand we also see that the American and European offices of Patent were also unable to cross check any claim of new inventions which has actually gone on to help some frauds to take advantage of this situation and get patent on the basis of forged documents.

Again we see that in present India the existing laws of Patent are also not made keeping in mind to protect these traditional knowledge of Ayurvedic medicines and so there is a huge necessity of proper discussion regarding what amendments are needed to protect and promote the traditional knowledge of Ayurvedic medicines throughout the world as a global medicinal systems.

VIII. SUGGESTIONS

Some measures on how Intellectual Property Rights can be applied to protect and increase the production of Ayurvedic Medicines developed from Medicinal herbs in the developing and underdeveloped countries of Asia and African Continent to eradicate poverty.

1. Ethnobotanical Surveys which involves the study of plants in relation to the culture of the people are to be conducted to gather information on plants . Ethnobotanical surveys involves the interaction of the people with their environment to help them in contributing their knowledge on the uses of the plants within their environment which may include identification, documentation, conservation and utilisation of medicinal plants but most of the ethnomedicinal information is largely not validated. The curative properties of herbal medicines are validated through scientific investigations which seeks to understand the active chemistry of the plants. The Therapeutic activity of a plant is due to its complex chemical nature with different parts of the plant providing certain therapeutic effects.

2. It is observed and suggested that the applicability of the rules of IPR on traditional Ayurvedic knowledge is needed for the development of Ayurveda by providing legal protection to check its exploitation by commercial houses or individuals with many fraudulent objectives.
3. As the current provisions of the Patent law of India are not favourable for getting patent in Ayurvedic medicines as the rules are not favoring to grant a patent on prior published knowledge there is an urgent need to amend laws of patent for better promotional policies.
4. More attention is needed for the needs of the developing countries in the making international IP policy and developmental objectives need to be integrated into the making of IP rules and practice. It is needed to find out whether and how Intellectual Property Rights(IPRs) can play a role in helping the world meet the targets of reducing poverty to combat diseases, help in improving the health of the mothers and children, enhance access to education and contribute to sustainable development of the entire world . It is also our duty or the duty of the policy makers to identify and understand the obstacles in achieving the targets specified above and how these obstacles can be removed.
5. As the demand for the herbal drugs is increasing worldwide their safety and quality of the crude drugs and finished products have become a major concern. The WHO(World Health Organisation) has published guidelines for GACPs (Good Agriculture and Collection Practices) for medicinal plants and the development of WHO guidelines on GACPs for medicinal plants should be considered to ensure quality of herbal medicines and ecologically sound cultivation practices.

IX. FUTURE OF TRADITIONAL MEDICINES

According to the World Health Organisation (WHO), now-a-days most of the world's healthcare practices involves the use of traditional medicines which is commonly referred to as Complementary and Alternative Medicine (CAM). Thereafter we see that any traditional medicine system of the world covers a wide range of therapies and practices which varies from culture to culture and from country to country and so a proper and well planned strategy for research, practice and development is needed to optimise the utilisation of Traditional Medicines throughout the entire world.

X. CONCLUSION

Today as food safety is a major concern around the world and agriculture and cultivation has become more challenging because of various constraints due to biotic and abiotic factors and new technologies are playing a major role in mitigating the problems related to biotic and abiotic challenges of agriculture, there is a need to improve the IPR regime in terms of legislation and implementation of laws like Plant Breeders Rights and Patents which are presently used in agriculture.

Then we see that in the modern days the growing awareness of the various traditional medicinal systems of the world including the Ayurvedic medicinal system of India has led the powerful and wealthier pharmaceutical companies of the world to go on for patenting various herbal medicines in their own name and brand in a deceitful manner through forged documents. Therefore in order to protect the traditional knowledge and the natural resources of the entire world from unethical practices, we need to properly formulate and implement the Intellectual Property Rights to protect and increase the production of traditional medicines including the Ayurvedic medicines developed from medicinal herbs in the developing and underdeveloped countries of the world to eradicate their poverty and help them to maintain a proper balanced life.

REFERENCES

- [1]. Maredia K Mywish, " Application of Intellectual Property Rights in Developing Countries : Implications for Public Policy and Agricultural Research Institutes ", December 2001.
- [2]. Kumar Vikas, Sinha Kunal, Status and Challenges of Intellectual Property Rights in Agriculture Innovation in India ", September 2015.
- [3]. Watal Jayashree, " Intellectual Property Rights in Indian Agriculture ", July 1998.

- [4]. Joshi P.S.,Pathak S.V., “ The Role of Intellectual Property Rights in Agricultural Engineering, November, 2018.
- [5]. Chaudhary Anand, Singh Neetu, Intellectual Property Rights and Patents in Perspective of Ayurveda “, 2012.
- [6]. Ngang C Carol, Ageh Agejo Patrick, “ Intellectual Property Protection of African Traditional Medicine within the Legal Framework of the Right to Development,” October 2018.
- [7]. <https://www.wto.org>