CHAPTER-I
INTRODUCTION

"One man should be afraid of improving his possessions, lest they be taken away from him, or another deterred by high taxes from starting a new business. Rather, the prince should be ready to reward men who want to do these things and those who endeavour in any way to increase the prosperity of their city or their state."

--- Niccolo Machiavelli

1.1 General introduction:

It is a unanimously accepted fact that civilized society is better than uncivilized one. In civilized society social relations is one of the important factors. In order of social relations, one may find the basis of different types of institutions and property is one such institution. As all institutions imply relations between individuals, the institution of property also regulates the relation between individuals apart from ascertaining their relation with reference to objects as well. Ownership is one such relation between individuals in respect of use of things. In this setting of the social order, a legal right of ownership carries with it a legally supported right to use a definite thing for more or less definite purposes and for definite or indefinite time. The meaning of this right is that, all other persons are forbidden to interfere with the owner in the exercise of his right in respect of the thing owned, up to the point at which the limits of that right are prescribed by law.¹

Property is a unique type of right to a thing, good against the world. In other words, property right is a right in rem. In fact the rem character of property as a legal and economic institution needs to be understood in order to understand the character and consequences of such an institution. Property rights historically have been regarded as in rem. In other words, property rights attach to persons insofar as they have a particular relationship to something and confer on those persons the right to exclude a large and indefinite class of other persons (the world) from the thing. Many property theorists recognized this view. William Blackstone, for instance, famously defined property as

¹ Golaknath vs. State of Punjab, AIR 1967 SC 1643 at p. 1709
"that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe."

Property according to traditional classification is either movable or immovable. The movable property is also called personal property, chattels and goods etc. The immovable property is also called real property, and fixtures etc. However both the movable and immovable properties fall in the category corporeal property, which is capable of being physically touched, sensed or perceived. The other category is incorporeal property, which cannot be physically touched, sensed or perceived. The corporeal property is also known as tangible property as it is tangible in character. Incorporeal property is also known as intangible property. The other major classification of property is into private or public property. Private property is generally subject to an exclusive control of an individual. Public property is not subject to the exclusive control of any individual. Rather it remains under the ownership of some corporate entity, which guarantees to the individuals that it will be used for the common good and in that case they will become its beneficiaries.

Intellectual property rights have never been as much in the news as they are today. Developing countries and civil society organizations rail against drug companies for charging exorbitant prices for treatments for patent-protected drugs to combat diseases such as AIDS, a disease afflicting many countries on a scale comparable to the medieval era Black Death. Indigenous peoples and advocacy groups supporting their rights condemn corporate 'bio-pirates' for making money out of their knowledge and claiming patent rights for 'inventions' essentially identical to knowledge acquired from tribal healers. Concerns are raised that patenting plants, animals, genes and gene fragments is not only immoral and even sacrilegious but may also be stifling innovation. And while the trend is towards ever stronger intellectual property right protection, increasingly determined efforts are made to buck the trend, as exemplified by Napster, the Open Source and Free Software movements, and the access to medicines and no
patents on life campaigns\(^2\). It is not necessary to accept every criticism of intellectual property rights to locate behind the strengthening of these rights a worrying tendency for policy makers to embrace – on behalf of the citizenry – 'proprietarianism', this means 'creed which says that the possessor should take all, that ownership privileges should trump community interests and that the world and its contents are open to ownership'. The result is that the rights are getting unaccountably stronger and more expansive in their scope. No doubt there is some strength in criticism but by the same time it is not acceptable to an extent that as Intellectual property itself should not be treated as property. If we look the same in a positivistic view it gives a different understanding.

**Intellectual property Rights** is a branch of the law which protects some of the finer manifestations of human achievement. The basic purpose of the patent system is to encourage innovation and the improvement of industrial techniques. In return for the disclosure of his invention the inventor is given a monopoly in the use of it for a period of 20 years after which time, it passes into the public domain.

A patent is an exclusive right granted to a person who has invented a new and useful article or an improvement of an existing article or a new process of making an article. The exclusive right is to manufacture the new article invented or manufacture an article according to the invented process for a limited period. During the term of the patent the owner of the patent, i.e. the patentee can prevent any other person from using the patented invention. After the expiry of the duration of the patent anybody can make use of the invention. The invention then becomes part of the public domain.

It is not mandatory to obtain a patent in order to protect a new invention; the inventor may instead choose to keep the details secret. Indeed, not all technical developments are patentable. Secrets of the trade, detailed process specifications and modes of operation which do not involve an inventive step may, therefore, be un-patentable, although they are capable of protection as trade secrets or know-how. As a

matter of public policy, discoveries, scientific theories and mathematical methods are not patentable. Products whose novelty resides in the design and not in the function are not patentable but may be protected either as a registered design or by means of copyright or by means of other sources.

As its economic potential has rapidly increased, patents have become a subject of current legal importance in India and throughout the world. Patent gives legal rights over process or product inventions that entitle the owner (patentee) to prevent others from unauthorized manufacture, use or sale of such inventions. The standard rationale of patent law is that it is an efficient method of enabling the benefits of research and development to be internationalized, thus promoting innovation and technological progress. It is also a response to economic problems inherent in trade secrecy and market structure. Although the basic principles of patent laws today remain the same as they were a few centuries ago, the complexities of law have arisen due to the increasing complexity of the inventions themselves and the necessity to describe the inventions sufficiently in the specification and to formulate the claims succinctly and clearly, but not going beyond certain permissible limits. Over a period of time, the courts in England and United States have evolved for the interpretation of the specifications and claims to determine the nature of the inventions and the scope of monopoly claimed by the patentees. These principles have become more and more difficult to apply in respect of patents.

While gradual, haphazard and in some ways still incomplete, the move from process patent to product patent has marked an important transformation in law which granted more monopoly to the inventor. At this time when they are coping up with the revelations that this change will bring, it is imperative to understand as to how law has been interpreted by courts now only in India but also under various jurisprudence where product patent has been a tested out phenomenon.

Biotechnology, in recent years, has created unprecedented opportunities, not only for the manipulation of biological systems for the benefit of mankind, but also for
undertaking studies to understand the fundamental life processes. Consequently, it has become the world’s fastest growing and the most rapidly changing technology. In order to train manpower in this important area, there are now at least 30 institutions in India, where a strong infrastructure for training and research in biotechnology has been established with the training and research in biotechnology has been established with the assistance from Department of Biotechnology, Government of India.

1.2 Significance of the problem

Intellectual property rights over the years in ways, allowing for the enhanced protection of the fruits of life science research and development providing a comprehensive understanding of the forces driving such transformation including the extent to which big business influences. Among all life sciences, biotechnology expanded its wings and feathers in all directions such as pharmaceutical and agricultural sectors.

Changes in Intellectual Property law at the international level have, over time, moved mostly in the direction of more and stronger private rights, and have been almost entirely driven by domestic and regional-level changes major can be classified into three which are the United States, Europe and certain developing countries like India. Most of the new developments in the system during the century first came into being within these areas, were subsequently adopted elsewhere of the world.

It is convenient that intellectual property rights are created and amended to solve new problems created by technological developments that mean existing systems need reform, replacement or the addition of new intellectual property categories. But there is every reason to doubt that policy makers have ever been able to shape and reshape such powerful economic rights in a dispassionate, informed and objective manner even when they have wanted to. After all, the full economic effects of a particular intellectual property structure are difficult if not impossible to predict. In addition, the complex and technical nature of IP regulation means that policy makers must depend on outside experts. History should shed light on the various public policy purposes that IP rights
have officially been used to promote more specifically, to what extent have the basic tenets of patent law remained the same, such as that substances existing in nature are discoveries and cannot therefore be patented? Or have they changed over time? And if they have, are the reasons purely technical? In particular, it is necessary to see whether the line drawn between the patentable and the unpatentable is objective and stable. Whether the existing provisions can extend the meaning to biotechnology advancements or is it required to develop specific directives or to include some specific provisions in the existing legislations! It is clearly important to know if the shaping and reshaping of Intellectual Property rights over time have tended to serve private economic interest at the expense of the public. There is another reason that to investigate whether developed countries benefited during their industrial revolutions from being free to tailor their patent systems to suit their development needs in ways.

The importance of Patent law is steadily increasing in India and as well globally, more and more legal implications are being increased steadily. The techno-legal approach is new and has become necessary along with changes and circumstances in the society, which is essential. Hence the researcher is very much interested in selection of this study which is a significant problem in the present day context. The problem is much relevant and there is no availability of literature.

1.3 Objectives of the study

It is necessary to study the general aspects of which includes the historical background, origin and the growth of the Patent Law in other countries and in India is a comprehensive and authoritative way. The Socio-economic dimensions of the problem and its techno-legal management also would be studied.

The following are some of the important objectives of the Study:

I. To study the historical development of Patent Law in India and in world at large.
II. To study the significance and development of harmonization of patent law in the International plane.
III. To analyze the fundamental requirements for patent protection and existing legislations in India and in world at large

IV. To study the growth of biotechnology from existing life sciences and its importance

V. To study the importance of patent protection for biotechnology inventions

VI. To study the existing legal regime for biotech patent protection in India and in world at large.

VII. To critically evaluate whether the existing legal regime is appropriate to provide patent protection to vertically growing field like biotechnology or not

VIII. To study the changes needed for the enlargement of patent protection to suit the present day biotechnology needs.

IX. To study the upcoming latest challenges posed in front of the biotech patent regime.

X. To critically analyze the renowned judicial pronouncements relating to biotechnology inventions in different countries and the position in India relating to patent protection for biotech inventions.

1.4 Scope of the study

The researcher has chosen a problem which is facing by most of the countries (all the developing countries) in the world. The researcher tried his level best to collect extensive information to analyze the problem chosen and further confined to study only at country (India) level and limited the problem for socio, economic, technical and legal aspects.

1.5 Limitation of the study

As the patents are a wide arena and the exponential growth of technology has broadened the scope of IPRs, it became inevitable for the researcher to limit his research to a specific area. The biotechnology curtain raised the new challenges to existing patent regime and created a high scope for research. So, the researcher pinpointed his research
to the burning problem i.e., patent protection related to biotech inventions. The researcher limited his research to doctrinal method only.

1.6 Hypotheses

The following are the plausible hypotheses formulated for the study

I. Exponential growth of biotechnology created lot of confusion in granting patent protection

II. The basic criteria for granting patent protection for biotech inventions which varied from country to country created a need for drawing a line for harmonization

III. Whether all the intellectual outcomes in biotechnology era need to be given patent protection or not if yes, then how to recognize and regulate it, whether the existing mechanism is sufficient or not and is there any necessity to maintain international standard of legislations, if yes whether India is maintaining the standards or not

IV. Outcomes of the patent Law while dealing with inventions of Bio-technology and other modern technologies

1.7 Methodology Adopted

The researcher had selected the problem with a great interest keeping in mind the significance, objectives and impelling need in the society in the present day conditions, circumstances socio-legal and international binding issues.

Law is a social science and in lieu of this socio scientific methods are applied in the study. The methods adapted to carryout the research work is in descriptive, structural and functionally analytical. The relevant material is collected from the primary and secondary sources and materials horizontally collected from legal and non-legal sources like law books, journals, Biotechnology journals, publications of interdisciplinary
seminars, and other related social sciences literature, newspapers, documents and other such sources. Literature also was horizontally collected by using Internet.

The researcher visited Sri. Venkateswara University Library, Tirupati, Sri Padmavathi Mahila Viswavidyalayam, Tirupati, Acharya N.G.Ranga Agriculture University, Tirupati, Central Library, Tirupati, Sri Venkateswara Institute of Medical Sciences (SVIMS) Tirupati, Tirupati Regional Library, and other libraries in Tirupati, TERI (The Energy Research Institute, Deemed University) School of Advanced Studies, Library, Delhi, Research and Information System (RIS) Library, Delhi, Indian Law Institute Library, Delhi, Indian Society of International Law (ISIL) Library, Delhi, The Library of Ministry of Information Technology, Delhi, The Library of Department of Biotechnology, Delhi, the Library of National Research Development Corporation, Delhi, Delhi University Library, Delhi, CSIR Library, Delhi, Jawaharlal Nehru University, Delhi, ICSSR Library, Hyderabad, NALSAR Library, Hyderabad, Osmania University Library, Hyderabad, National Law University Library, Jodhpur, National Law School, Bangalore, Gujarat National Law University, Gujarat, Centre for Biodiversity and Forest Studies, Madurai Kamraj University, Madurai and had useful discussions with the concerned officials like Lawyers, Judges, Scientists, Academicians, Researchers, Officials and other related persons and the results of the discussions are incorporated in the study. The collected information is systematically analyzed and placed in the appropriate chapters.

1.8 Review of literature

Review of literature is a very important part of the complete research process that helps the researcher to have a clear and wide knowledge in his field. This exposes him to the various studies and informations related to the area of research. The researcher made use of abstracts, index of journals in published and unpublished bibliographies. A thorough study of academic journals, international organization journals, conference proceedings, government reports, committees' reports, books, websites, online literature has been made. Though the study is not a complete exploratory in nature, there are no
many studies in this area. However, there are some studies in this field it not directly but indirectly relevant to the present study. Some of them are reviewed and discussed below.

William.R.Comish, in “Intellectual Property: Patents, Copyright, Trademarks and Allied Rights”, 2006 deals with intellectual property rights and its branches in general and specific reference to UK. It is also be considered as an authority with regarding to patents.


Graeme B Dinwoodie, William O Hennessey, and Shira Perlmutter, “International Intellectual Property Law and Policy”, the three authors are experts in three different branches of IPR, deals with the international development of intellectual property rights and the reasons for the harmonization of intellectual property rights in the international plane.

Elizabeth Verkey, “Law of Patents”, 2005, gives an elaborative understanding for patent law in India and comparative study with UK and US. It gives a brief understanding of the judicial pronouncements led for the development of patent law throughout the world.

Nuno Pires de Carvalho, “The TRIPS Regime of Patent Rights”, deals with Trade Related Aspects of Intellectual Property Rights in general and patents in particular. By virtue of his service in WIPO, the author gained the knowledge of pre-TRIPS talks which led to the present scenario of TRIPS and its reasons.

Graham Dutfield, “Intellectual Property Rights, Trade and Biodiversity: Seeds and Plant Varieties”, this book is a compendium of several articles relating to Biotechnology and patent regime specifically between Europe and USA.
Donald S. Chisum, "Chisum on Patents", the author is a professor in IPR at USA made an exercise of developing this book in 22 chapters which gives the comprehensive understanding of patent protection in USA.

Bainbridge David I, "Intellectual Property", the book deals with Intellectual Property Rights with all major branches in general, the explanation runs with examples of United Kingdom perspective.

UNCTAD-ICTSD 2005, "Resource Book on TRIPs and Development", actually this is the project report of UNCTAD and the same was moulded into a book by which readers can get understand the impact of TRIPs at different nations of the world and explains the object of TRIPs.


A review of literature provides a better understanding of patent law in India and world at large specifically Europe and USA. Most of the available literature belongs to western countries such as European community perspective of IPR, American perspective of IPR etc. There is a dearth in literature of IPR broadly at Asian level, regionally at south Asian level and specifically at India level. No doubt states and several organizations are doing efforts to overcome the problem, but yet to reach the result. So the researcher thought to do his level of efforts to overcome the problem and attain the result.

1.9 Scheme of the Study:

The researcher has designed the research work to carry out the objectives of the study easily and effectively. After selecting the research problem, the researcher has extensively studied the literature available on the topic. After review of literature and thorough scanning of the material the researcher organized all the material in an orderly manner. Since the methodology adopted in analytical, historical and descriptive, the researcher had collected data from various sources of information.

The entire study is divided into five chapters

First chapter covers the introduction of the patent from general property to biotech patent property and significance of the problem including objectives, methodology followed literature reviewed and plan of study.

The second chapter deals with the origin, growth and development of Patent protection India and world at large.
The third chapter covers patentability and during the discussion deals with essentials and non-patentable aspect international and national level (India).

The fourth chapter highlights an understanding of bio-technology patent protection and its nuances internationally and nationally.

The fifth chapter deals with the findings of the research problem and certain recommendations.