

# *INTELLECTUAL PROPERTY RIGHTS AND PLANT BIOTECHNOLOGY*

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# Introduction

- ▶ There are three kind of properties-
  - ❑ Movable eg. Car, pen etc.
  - ❑ Immovable eg. Land, Building etc.
  - ❑ Intellectual eg. Book, Invention etc.
- ▶ **Intellectual property (IP)** refers to creation of human mind: inventions, literary and artistic works and symbols , names, images used in commerce . Like tangible property , their creation has a value and as with all property , it needs to be protected. World intellectual property day is celebrated on 26 April.
- ▶ **Intellectual property Right (IPR)** gives protection as well as helps to control exploitation of intellectual property.
- ▶ The biotech policy of India is continuously evolving but its basic concepts have been settled for creating a vibrant industry.
- ▶ The Indian industry has the necessary ingredients to become a prominent player among the top five in the Asia pacific region.

# WIPO



# Intellectual Property Law In India

- WIPO ( World Intellectual Property Organization ) was established by the WIPO Convention in 1967
- The WIPO is a **specialized agency** of the United Nations.
- It **promote the protection** of IP throughout the world.
- Its headquarters are in Geneva, Switzerland

- There are many big and small intellectual property law firms worldwide, like in India, USA, UK, Chicago etc, providing qualitative help to inventors and creators of product.
- In India intellectual property rights are safely protected and controlled by well-established statutory and judicial framework.
- Apart From that, there are many attorneys and law firm of intellectual property in India in various states.


# Types of Intellectual property

- ▶ Copyright
- ▶ Related Rights
- ▶ Trademarks
- ▶ Geographical indications
- ▶ Industrial Designs
- ▶ Patents
- ▶ New plant varieties
- ▶ Unfair competition
- ▶ Enforcement of intellectual property Rights
- ▶ Emerging issues in intellectual property
  - a. Biotechnology
  - b. Traditional knowledge

- ▶ **Copyright:** It protects only the form of expression of ideas not the ideas themselves.
- ▶ Copyright was created to provide protection to composers, writers, authors and artists to protect their original works against those who copy, those who take and use the form in which the original was expressed by the author.
- ▶ In India, the Copyright Act, 1957 as amended in 1999 is in force.
- ▶ In biotechnology , the copyright may cover DNA sequence data that may be published.
- ▶ **Trademark :** A trademark is a symbol that helps to distinguish one product or company from another.
- ▶ Symbols help the consumer identify products and/ or a company and include designs, shapes, numbers, slogan, smell, sound or anything that helps the consumer to identify the products and/or companies.
- ▶ In biotechnology research laboratory equipments bear trademark.
- ▶ Trademark law unlike patent or copyright law confers a perpetual right.

- ▶ **Geographical indications (GIs):** GIs identify the specific geographical origin of a product, and the associated qualities, reputation or other characteristics and usually consist of the name of the place of origin.
  - The geographical indication prevents unauthorized parties from using a protected GI for products not from that region or from misleading the public as to the true origin of the product.
- ▶ **Patent:** A patent is an exclusive right granted to an inventor.
- ▶ Once issued, a patent gives the inventor the legal right to create a limited monopoly by excluding others from creating, producing, selling or importing the invention.
- ▶ This right is of limited duration, for a minimum period of 20 years from the date of filing the patent application.
- ▶ In exchange for the right of exclusion, the inventor must disclose all details describing the invention, so that when the 20-year patent right expires, the public may have the opportunity to develop and profit from the use of the invention.





**The granting of a patent is subject to the fulfillment of three conditions:**

- 1. Usefulness or industrial application**
- 2. Newness or novelty**
- 3. Inventive**

**Most biotechnology inventions are filed as utility patents and not as plant patent. As a utility patent, it is possible to protect plant genes and to control the use of genetic material of a number of plants.**

# What is biotechnology?

- ▶ The development of the genetic resources of biodiversity is known as biotechnology.
- ▶ Broadly defined, biotechnology includes any technique that uses living organisms or parts of organisms to make or modify products, to improve plants or animals, or to develop microorganisms for specific uses (Congress of the United States, Office of Technology Assessment, 1990).
- ▶ Mankind has used forms of biotechnology since the dawn of civilization. However, it has been the recent development of new biological techniques (e.g., recombinant DNA, cell fusion, and monoclonal antibody technology) which has raised fundamental social and moral questions and created problems in intellectual property rights.



# Intellectual property rights for Biotechnology

- ▶ Intellectual property protection for biotechnology is currently in a state of flux. Whilst it used to be the case that living organisms were largely excluded from protection, attitudes are now changing and increasingly biotechnology is receiving some form of protection.
- ▶ These changes have largely taken place in the USA and other industrialized countries, but as other countries wish to compete in the new biotechnological markets, they are likely to change their national laws in order to protect and encourage investment in biotechnology.

## IPR cont.

- ▶ There is at the moment no clear international consensus on how biotechnology should be treated.
- ▶ Although bodies such as the World Intellectual Property Organization (WIPO, the United Nations permanent body primarily responsible for international cooperation in intellectual property), and the Organization for Economic Cooperation and Development (OECD) have conducted separate studies and produced various reports, these have only sought to make governments more aware of the potential problems and to offer some suggested solutions.
- ▶ In view of the highly controversial nature of providing intellectual property protection for biotechnology, it is likely that in the short term developments will be at a national and regional level.

# Intellectual property protection

There are currently two main systems of protection for biotechnology: rights in plant varieties, and patents. Both systems provide exclusive, time-limited rights of exploitation and are described in detail below.

- ▶ Keeping biotechnology 'secret' can also be a valuable form of protection. National treatment of trade secrets is diverse, and all attempts to harmonize trade secret laws in Europe, have failed. Most jurisdictions do provide some form of protection against those who steal or use others' trade secrets unfairly. However, the problem with this form of protection is that the secret generally becomes public once the biotechnology is used commercially and thus the protection is lost.
- ▶ The law of copyright could afford some protection for biotechnology. Lines of genetic code are analogous to some extent with computer program code, which has now been incorporated into the copyright systems of most

## IP protection cont.

industrialized countries. However, this route to protection is fraught with practical and conceptual difficulties and is generally thought to be unsuitable. There is as yet no recorded case of biotechnologists claiming copyright in their inventions.

- ▶ Trademarks are also unlikely to be of much use in protecting biotechnology, though they may of course prove important later in regard to marketing products, processes or services. An attempt to register the name of a plant or an animal as a trade mark is unlikely to be successful as public policy would prevent it (in England, registrations for names of varieties of roses have been removed from the Trade Mark Register for lack of distinctiveness and because of the likelihood of confusion).

# Rights in plant varieties

- ▶ Due to pressure from plant breeding industries, 10 western European countries entered into a diplomatic process in the early-1960s which eventually culminated in the formation of an International Union for the Protection of New Varieties of plants (UPOV).
- ▶ The UPOV Convention requires that each member country must adopt national legislation to give at least 24 genera or species protection, in accordance with the provisions of the convention, within eight years of signing.
- ▶ A plant variety is protectable ("a protectable variety") under the UPOV system if it is distinct, uniform, stable (DUS) and satisfies a novelty requirement. There is also an important requirement that the variety be maintained throughout the duration of protection.
- ▶ Duration of protection depends on national legislation and on the plant species to which the variety belongs, but is generally for 20-30 years

# Patents for biotechnology

- ▶ A patent is a grant of exclusive rights for a limited time (around 20 years) in respect of a new and useful invention. It will provide a wide range of legal rights, including the right to possess, use, transfer by sale or gift, and to exclude others from similar rights.
- ▶ These rights are generally restricted to the territorial jurisdiction of the country granting the patent and thus an inventor wishing to protect his/her invention in a number of countries will need to seek separate patents in each of those countries.
- ▶ The exact requirements for grant of a patent, the scope of protection it provides and its duration differs depending on national legislation. However, generally the invention must be of patentable subject matter, novel (new), non-obvious (inventive), of industrial application and sufficiently disclosed.
- ▶ The majority of countries provide some form of patent protection, only a few provide patent protection for biotechnology.

## Patents cont.

- ▶ (these include: Australia, Bulgaria, Canada, Czechoslovakia, Hungary, Romania, Japan, the Soviet Union and the parties to the European Patent Convention). The reasons for this may differ, but generally it has been because biotechnology has been thought inappropriate for patent protection, either because the system was originally designed for mechanical inventions, or for technical or practical reasons, or for one or more ethical, religious or social concerns.
- ▶ In all the National Patent Offices where patents are granted for biotechnology there is a considerable backlog of pending applications. Even in those countries where patent protection is provided, the type and extent of that protection is different in nearly every national system.



# International treaties

- ▶ There are three international intellectual property treaties which are of particular importance for the protection of biotechnology:
  - ❖ the Paris Convention for the Protection of Industrial Property (the Paris Convention)
  - ❖ the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure (the Deposit Treaty) and
  - ❖ the Patent Cooperation Treaty (PCT) is an agreement for international cooperation for patenting.