

#### **What is Intellectual Property?**

The term intellectual property encompasses various types of creations of mind, like inventions. An intellectual property could be anything like a music composition, a movie, book, painting or even a brand name. According to the concept of intellectual property, such creations of mind are intangible or non-monetary assets with commercial value. The owners of such non-monetary assets (creations of mind) are assigned some exclusive rights over their creation, so that they benefit financially. However, it is not possible to recover or replace an intellectual property that is stolen. If stolen, the interests of the owner, over his/her creation will get affected. So, there must be laws to protect the moral as well as material interests of the owner over his/her intellectual property. IP law deals with the rights assigned to owners of intellectual property.

#### **Intellectual Property Rights**

As mentioned earlier, the creators or owners are granted certain exclusive rights over their creations or works. Such exclusive rights are called intellectual property rights. These rights help them benefit from their creations and also enable them to protect their work. In that way, intellectual property is like any other real property which is financially beneficial for the owner. The monetary benefits are said to encourage people to come up with new inventions and creations.

Intellectual property rights also enable the owners or creators to protect their work. These rights can be related to Article 27 of the Universal Declaration of Human Rights. According to this statute, "everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author". So, owners of intellectual property can benefit through protection of the moral and material interests of their creations.

#### **Types of Intellectual Property Rights**

An intellectual property can be either artistic or commercial. The artistic works come under the category of copyright laws, while the commercial ones (also known as industrial properties), and include patents, trademarks, industrial design rights, and trade secrets. Copyright laws deal with the intellectual property of creative works like books, music, software and painting. Industrial properties cover those created and used for industrial or

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commercial purposes. As stated earlier, intellectual property is categorized into various types as per the nature of work. The most common types are copyrights, trademarks, patents, industrial design rights and trade secrets. So, these rights safeguard the interests of the owners of IP. If you are an author, who has written a new book, you can apply for a copyright for your work. Likewise, patents can be obtained for inventions. Once you establish your IP right, you can protect your work legally.

### **Copyrights:**

A copyright is a right conferred on the owner of a literary or artistic work. It is an exclusive right to control the publication, distribution and adaptation of creative works. The right lies with the owner-cum-copyright holder for a certain period. As the time lapses, the work can be republished or reproduced by others. Usually, in most countries the timespan of a copyright extends through the entire life of the owner and lasts up to a period of about 50 to 100 (70 years in the U.S.) years after his/her death. In case of anonymous works, the right lasts for 95 years from the date of first publication or 120 years from the date of creation.

### **Trademarks:**

A trademark is a symbol generally used to identify a particular product, which indicates its source. A trademark can be a combination of words, phrases, symbols, logos, designs, images, or devices, used by an individual, legal entity or business organization to distinguish their products from others. For example, you can identify the products of Nike Inc., from the logo, which is embossed on their products. Once registered, trademarks are protected legally and the owners can sue persons for unauthorized use of their trademarks.

### **Patents:**

Patents are rights related to new inventions. Such rights are conferred on persons who invent any new machine, process, article of manufacture or composition of matter and biological discoveries. In order to be patented, the invention should fit into specific criteria, which may differ from country to country. In general, the invention must be new and should be useful or can be applied in industries. The person who receives a patent for his invention has an exclusive right to prevent others from making, using, selling or distributing the patented invention without permission. Generally, the time limit of a patent is 20 years from the date of filing the application (for the patent).

### **Industrial Design Rights:**

These rights protect the visual design of objects that are not purely utilitarian, but have an aesthetic or ornamental value. It may refer to the creation of a shape, color, pattern or a combination of all these things. It can be an industrial commodity or a handicraft. The design can be either two-dimensional (based on pattern, colors and lines) or three-dimensional (as per shape and surface). An industrial design right is conferred after considering factors like novelty, originality and visual appeal. The person who has an industrial design right has the exclusive right to make or sell any objects in which the design is applicable. The right is conferred for a period of 10 to 25 years.

### **Trade Secrets:**

Trade secrets are the designs, practices, formulas, instruments, processes, recipes, patterns, or ideas which are used by a company to gain an economic advantage over its competitors. The owner of a trade secret does not possess any right over anyone who gains access to that secret independently, but he can prevent the use of the trade secret by anyone who has learned it through the owner. For example, an employer can protect trade secrets through contracts with his employees. Trade secrets differ from other types of intellectual property rights, because it is the responsibility of the owner to keep the secret and it is not protected through government policies. Once the trade secret is leaked, it can be used by any person. Intellectual property rights have encouraged people to come up with indigenous creations, as the law protects their rights over their works. Thus, it is very important to respect these rights and refrain from infringing them.

### **Salient features of patent**

In conformity with the provisions of the TRIPS Agreement, the Indian Patent Act defines an ‘invention’ as: “a new product or process involving an inventive step and capable of industrial application.”

### **Invention must be ‘new’**

Something that is already known is not patentable. An invention is deemed to be new on the priority date if it does not form part of the state-of-the-art, i.e. part of the knowledge available to the public. Priority date is usually the date on which the applicant first makes the application for patenting his invention.

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According to the IPA, New Invention means any invention on technology which has not been anticipated by publication in any document or used in the country or elsewhere in the world before the date of filing of patent application with complete specification, i.e. the subject matter has not fallen in public domain or that it does not form part of the state-of-the-art.

Prior publication, written or oral disclosure of the invention or any other way of making the knowledge available in a public manner before the date of filing of the patent application makes the invention a part of the prior art or state-of-the-art. An invention is said to be anticipated if it forms the part of the prior art.

For example, an inventor in England was denied the patent for an improved design of a ballpoint pen just because he had published its details prior to filing the patent application and hence the invention did not qualify on the ground of novelty. However, for obtaining a patent, establishing novelty of an invention meets only one of the requirements of patentability.

Invention involves an 'inventive step' The IPA defines 'inventive step' as 'a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art.'

Thus invention should involve an inventive step, which must be non-obvious to a person skilled in that particular art, it must not follow plainly or logically from what is already known (prior art).

The inventive step has to go beyond the capacity of a craftsman skilled in the art to anticipate the problem solving development; it has to be the result of independent thought, ingenuity, and research. A craftsman with his skill may well meet the demands of a new job before him; for example, a tailor cutting cloth to meet the demands of changing fashion. This is expected from his knowledge and skill. Such skill to adapt is not inventive skill; such product is not invention. Many common examples of an inventive step can be cited from pharmaceutical, chemical or mineral processing industries where the process improvement can result into efficient use of resources. One example of such inventive step can be drying a substance without detriment to some desired characteristics but enhancing other characteristics like shelf-life or stability etc.

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In a case before the Lahore High Court, the patent of a tube well strainer, Tej, was infringing. The strainer was produced by a new combination of known processes and methods. The complainant pleaded that Tej was an invention of an American Strainer, Cook. The American strainer was made out of a solid drawn tube and a special mechanical process was used to make slots on the tube. The owner of the patent of Tej argued that the strength requirements for his strainer were totally different as they were used in the alluvial plains where the water was close to the surface, and no great pressures were met. To meet the requirements of his situation, a new process of manufacture was designed and developed for making the Tej strainer, which was different and far less costly than the Cook's. The court held that the Tej strainer possessed novelty, utility and showed sufficient inventive skill and the patent awarded on it was valid.

A popular misconception is that novelty in the context of patents requires a major technological breakthrough to claim patent protection. However, incremental inventions – small improvements in processes that make them more efficient, or in products that make them more useful – eminently qualify for patents if they are novel, have an inventive step and are capable of industrial application. The terms 'non-obvious' and 'inventive step' are used interchangeably, which is to say that to involve an inventive step, an invention must be non-obvious to a person skilled in the art. There are no uniform tests applicable in all circumstances. A broad guiding principle is that patent is given to encourage invention, and not to obstruct improvement of technologies by others.

### **Invention must have 'industrial application'**

To be patentable, the invention has to be capable of industrial application, that is, it can be made or used in an industry. However, industry in this context does not necessarily imply the use of machinery or manufacturing of an article. It may include any useful, practical activity as distinct from purely intellectual or aesthetic activity. Utility is an inescapable requirement or patentability of an invention.

### **PATENTABLE INVENTIONS**

According to the Article 27 of the TRIPS Agreement of the World Trade Organisation (WTO), patents shall be available for any inventions, whether

products or processes, in all fields of technology with the exception of certain exclusions from patentability available to the member states within their territories. Members of the WTO, also need to provide for protection to micro-organisms and non-biological and micro-biological processes. Members should also provide for the protection of plant varieties either by patents or by an effective sui-generis system.

### **Inventions those are not patentable**

In tune with the provisions of the TRIPS Agreement, the IPA lays down what are not inventions within the meaning of the Act and which therefore can not be granted patent protection. These exclusions fall into two broad categories (a) 'Inventions' which cannot be technically called inventions, and (b) 'Inventions' which are denied protection on considerations of public policy.

- Inventions relating to atomic energy. This is so because the Central Government has the sole responsibility for the development of atomic energy and for obvious reasons will not like its programmes to be hampered by patent disclosure and claims;
- An invention, whose primary or intended use or commercial exploitation could be contrary to the public order or morality or which causes serious prejudice to human, animal or plant life or health or to the environment. For example, a new type of gambling machine;
- An invention which is frivolous or which claims anything obviously contrary to well established natural laws. For example, an invention that claims a perpetual motion machine will not be patentable because the claim would be contrary to well-established laws of nature;
- Mere discovery of a scientific principle or the formulation of an abstract theory. For example, a discovery merely unveils a hidden thing; it does not involve an act that makes it useful; it is therefore not an invention and hence not patentable. Similar reasoning applies to the formulation of an abstract theory;
- Mere discovery of new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance, or the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new

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reactant. It is explained that for the purpose of this clause, salts, esters, ethers, polymorphs, metabolites, isomers, mixtures of isomers, complexes, combinations and other derivatives of known substance shall be considered to be the same substance, unless they differ significantly in properties with regard to efficacy;

- Discovery of any living thing or non-living substances or objects occurring in nature;
- A substance obtained by a mere admixture of the components, or a process of producing such mixture;
- Mere arrangement or rearrangement or duplication of known devices, each functioning independently of one another in a known way without changing the end results;
- An invention which in effect is traditional knowledge;
- A mathematical or business method or a computer programme per se or algorithms or a computer programme per se;
- A mere scheme or rule or method of performing mental act or method of playing game.

Besides these rather obvious items the following items are also not inventions within the meaning of the Indian Patents Act, as a matter of policy and are, therefore, not patentable:

- A method of agriculture or horticulture;
- Any process for the medicinal, surgical, curative, prophylactic, diagnostic, therapeutic or other treatment of human beings and animals;
- Plants and animals in whole or any part thereof other than micro-organisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals;

The following two categories of works belong to different fields of intellectual property and are not subject matter of patents:

- A literary dramatic, musical or artistic work including cinematographic work and television productions (covered by copyright);
- Topography of integrated circuits (separate field).

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Computer programmes and microorganisms have emerged as two special categories where patent protection is increasingly sought.

Under the Indian law, computer programmes are protected under the Copyright Act, 1957; they are not entitled to protection through patents. However, when a computer programme enables the computer to operate in a new way to produce a required result the computer system so programmed is patentable.

A computer so programmed is a modified equipment to operate in a new way and as such the computer, along with the programme, is patentable.

In 1980, the US Supreme Court granted a patent to Dr. Ananda Chakraborty for a genetically engineered bacterium, which could degrade oil spills. It did not exist in nature. It satisfied the criteria of novelty, non-obviousness and utility for a patentable invention. For the first time in history a living entity, the engineered microorganism, was accorded the status of a product. The issues about patenting life-forms has generated a lot of debate in different countries. A detailed account of the issues raised is given in the course on “Contemporary Intellectual Property Issues” (MIP-008).

### **PROCEDURE FOR OBTAINING PATENT**

#### *Who can apply for Patent?*

An application for a patent for an invention may be made by a person claiming to be the true and first inventor of the invention or his assignee, or by the legal representative of any deceased person who immediately before his death was entitled to make such an application. The term true and first inventor means that the claimant has to be the actual inventor and not merely be the first importer of the invention or the first person to whom the invention is communicated from outside India.

In case the inventor is an employee of an organization, the inventions made during the employment would be patentable in the name of the employee. However, the ownership of the patent (i.e. rights of preventing others from using, manufacturing, selling etc.) will be dependent on the terms of contract between the employee and employer. It is a common practice in the R&D organizations to assign the inventions to the employer although those



who contribute to the development of the invention are listed as inventors in the patent.

### **Filing a Patent Application**

There is only one application filed for one invention. It is to be filed in triplicate in a prescribed form along with the prescribed fees in the appropriate patent office. It should be accompanied by a provisional or a complete specification discussed later. The appropriate office means, an office within whose territorial jurisdiction the applicant or the first applicant in the case of a joint application normally resides, or has his domicile or has a place of business, or the place where the invention

*Subject Matter and Procedures originated falls.* If the applicant has no place of business or domicile in India, the appropriate office would mean having jurisdiction over the place of business address in India given by the applicant.

If the application is filed by the assignee, it must be accompanied with the proof of the right to make the application. Every application must state that the applicant is in ‘possession’ of the invention and shall name the assignee and the true and first inventors. Where the true and first inventor is not the applicant, a declaration is required that the applicant believes the person so named to be the true and first inventor. Possession signifies not merely the physical possession but also the conscious and intentional possession as well.

Possession of an invention is the possession of a conception, which is more than an idea. Conception has been defined as “the formation in the mind of an inventor of a definite and permanent idea of the complete and operative invention, as it is thereafter to be applied in practice” (Indian Patent Law and Procedure, D.P. Mittal (2002), Taxmann).

Every international application under the Patent Cooperation Treaty (PCT) for a patent designating India is deemed to be an application under the Indian Patents Act if a corresponding application has also been filed before the Controller in India.

The filing date of such an application and its complete specification processed by the Patent Office as designated office or elected office shall be the international filing date accorded under the PCT.

Typically, the form of application for grant of an Indian patent asks for

- (i) Full name, address, nationality of the applicant(s) and inventor(s),

- (ii) Patent specifications, and
- (iii) whether an application has been made or patent granted in a PCT or a convention country, which affords to citizens of India, or applicants for patents in India, similar privileges as granted to its own citizens in matters of patent and which has been so notified by the Central Government with relevant dates;
- (iv) Claim of priority. The application must also contain a request for a patent, a description of the invention, drawings and the filing fees.

### **Specifications**

A specification is a complete and accurate description contained in a patent document stating how the invention can be carried out by the method best known to the applicant. The specification ends with a claim or claims defining the scope of the invention for which protection is claimed.

You may refer to Sec. 10 of Indian Patents Act provided in the Supplementary Reading of this course.

Every application must be accompanied by a provisional or a complete specification. It is possible to file the application with provisional specifications. A provisional specification only prescribes the nature of invention. It relates to the stage of conception of an inventive idea in the form of proof of concept which has not yet been fully developed. Filing of an application for a patent with only a provisional specification ensures priority, however, the conception of invention given in the application must encompass all limitations of the claimed invention. You must remember that conception is the complete and definite idea formed in the mind of the inventor, when reducing the invention to practice is only a matter of ordinary skill; at this stage no extensive research or experimentation remains to be done. But it is necessary to file the complete specifications within one year of filing the original patent application. The application is deemed to be abandoned if this condition is not met.

A complete specification filed may include claims in respects of developments of or additions to the invention described in provisional specification. The inventor is entitled to apply for a separate patent in respect of such developments/additions. In case of a convention application

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the patent application must be accompanied with complete specifications only. The claim/claims of a complete specification relate to a single invention, or to a group of inventions, which form a single inventive concept e.g. in an instrument there may be 8 or 10 different inventions used. All these could be separately patented; or they can be patented together as a group; if they form an integrated instrument.

The complete specification must contain the following:

- Title, sufficiently indicating the subject-matter;
- Relevant drawings;
- Full and particular description of the invention;
- Details of its operation or use and the method by which it is to be performed;
- Disclosure of the best method of performing the invention;
- Claims defining the scope of the invention substantiated by the disclosure;
- Abstract providing technical information on the invention;
- Declaration as to the inventorship of the invention.
- If an invention is an improvement in or modification of another invention, for which the patent has been obtained or has been applied for, the Controller may grant the patent for modification/improvement, as a patent of addition; however the patentee for both the original patent and the patent of addition has to be the same.

### **Claims**

Claims appear at the end of a specification. They describe what is new and claimed as the invention for which patent is sought. A claim defines the scope of the patent and the monopoly conferred by it. It covers a process, product, a machine or manufacture, a composition of matter. It does not cover the function or result of any of these, or the scientific explanation of their operation. What is not claimed is disclaimed.

Complete specification may be amended on request by the applicant, subject to certain conditions. Amendment can be allowed only by way of disclaimer, correction or explanation, for the purpose of incorporation of actual fact. Amendment shall not be allowed if the amended specification would in effect claim something or describe matter which is not disclosed in the unamended specification.

The complete specification determines the scope of the patent protection. Thus it is the most significant part of the patent application. It is construed as a whole, that is, the title, the body

and the claims all matter. The title is a pointer to the object, scope and purpose of the specification. However, the scope of the claims allowed by the Patent Office rests on the disclosure made in a patent specification and the support available there in.

Each claim of a complete specification has a priority date, i.e. the date on which an invention is disclosed for the first time to the patent office. In a case, where a complete specification is filed in pursuance of a single application filed earlier with a provisional specification, the priority date of a claim is the date of the filing of the application. This is true if the claim is 'fairly based' on the matter disclosed in the specification. The claim should not go beyond the disclosure in the specification. The claims are often constructed in a way as to obtain broad monopoly. Sufficient experimental data made available in a patent specification helps in drafting broader claims.

### **Publication of the Application**

A patent application is not open to the public for such period as may be prescribed after the date of filing. It is then published. If the invention is considered relevant for defence purposes, the Controller may issue direction to prohibit or restrict such publication. In the case of such secrecy direction, the application will be published when the secrecy directions cease to operate. If the applicant request the Controller to publish his application earlier than the prescribed period, the Controller shall publish it as soon as possible, if there is no secrecy bar imposed and if it has not been abandoned or withdrawn.

The publication will include the particulars of the date of application, number of application, name and address of the applicant and an abstract. Upon publication of

Subject Matter and Procedures an application, the patent office will make the specification and drawings, available to the public on payment of the prescribed fees. If the specification mentions a biological material, which is not available to the public, the applicant is required to deposit the material in an international depository authority under the Budapest Treaty. From this institute, the biological material mentioned in the specification is made available to the public, if required.

The deposit of the material shall be made not later than the date of filing the patent application in India and a reference to it shall be made in the specification within the

prescribed period. The specification should contain all the available characteristics of the material required to identify it correctly. The source and geographical origin of the biological material used in an invention is also to be disclosed in the specification.

From the date of publication of application to the date of grant of patent, the applicant will have the same privileges and rights as if a patent for the invention had been granted on the date of publication of the application. However, the applicant is not entitled to institute any proceedings for infringement until the patent has been granted.

### **Examination of the Application**

For granting a patent, examination of the application is a mandatory step. However, such examination is taken up only if the applicant or any other interested person makes a request in the prescribed manner for such examination within the prescribed period. If such request is not made within the prescribed period, the patent application is treated as withdrawn. After a request for examination is made, the Controller refers the application, specification and the related documents to an examiner for making a report within a prescribed period.

The examiner looks into several aspects of the application, including the following:

- Whether the complete specification adequately describes the invention and the manner in which it is to be performed
- Whether the title of specification sufficiently indicates the subject-matter of the invention;
- Whether the claim sufficiently defines the invention;
- Whether complete specification describes substantially the same invention as does the provisional specification;
- Whether the application has been made in accordance with the requirements of the IPA;
- Whether there is any lawful ground of objection to the grant of the patent;
- Whether the invention has been anticipated by publication before the date of filing of applicant's complete specification;
- Whether there is a prior claim for the invention; and
- Any other matter which may be prescribed.

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Of these matters, Search for anticipation by previous publication and by prior claim is important. This search requires investigation in the publications and specifications of prior applications where patents have already been granted to see whether the same invention has already been published or claimed or is the subject matter of existing or expired patents.

The report of the examiner is strictly confidential, not liable to production or inspection even in any legal proceedings unless the Court directs otherwise certifying that it is desirable to do so in the interest of justice. If the examiner raises any objections, the Controller will communicate the gist of the objections to the applicant. If the objections raised by the examiner are removed satisfactorily within a prescribed period, the Controller will accept the complete specification. If the objections are not removed satisfactorily, the application is refused, if required, after giving an opportunity of hearing to the applicant.

### **Acceptance and Advertisement of Complete Specifications**

Once the complete specification is accepted, the Controller notifies it to the applicant and also advertises it in the Official Gazette. On advertisement, the application and the specification with the drawings, if any, are open for public inspection.

### **OPPOSITION TO THE GRANT OF PATENT**

The IPA has now introduced both pre-grant and post-grant opposition in India. In case of a pre-grant opposition where an application has been published but a patent has not been granted, any person may represent in writing, by way of opposition, to the Controller against the grant of patent on the ground that:

- It formed part of the prior-art on the date of application and could be anticipated; or
- The specification does not clearly and sufficiently describe the invention or the method by which it is to be performed; or
- The applicant has not disclosed the necessary information or has furnished false information in any material particular; or
- In the case of convention application (an application filed in India following a patent application for the same invention made in a convention country), the application was not made within 12 months of the filing of the first application; or
- The complete specification does not disclose or wrongly mentions the source or

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geographical origin or biological origin of biological material used for the invention.

The representation shall be considered by the Controller and disposed of; the person making such a request would not become a party to any proceedings.

As regards the post-grant opposition any person interested in opposing the grant of patent may give notice to the Controller of such opposition within one year from the date of publication of grant on the following grounds:

- The invention was wrongfully obtained by the inventor/applicant; or
- The invention, as claimed in any claim of the complete specification has been anticipated by or published in an earlier patent or any other publication; or
- The invention as claimed in any claim was publicly known/used in India before the priority date of the claim; or
- The invention is obvious and does not involve any inventive step; or
- Specification does not sufficiently and clearly describe the invention, or the method to perform it; or
- The subject of the patent is not an invention, within the meaning of the Act; or
- The information as required by the controllers regarding corresponding patent applications filed in other countries as furnished is false; or
- Geographical origin of biological material is not disclosed or falsely disclosed; or
- In the case of a convention application, the application was not made in the prescribed time; or
- The invention as claimed is anticipated having regard to the knowledge oral or otherwise available within a local or indigenous community in India or elsewhere.

**No other ground for objection is entertained.**

On receipt of the notice of opposition, the Controller notifies the patentee about it. Further, the Controller constitutes the Opposition Board and refer such notice of opposition along with the documents to it for examination and submission of recommendations to him. On receipt of recommendations, and after giving the patentee and the opponent an opportunity of being heard the Controller orders either to maintain or to amend or to revoke the patent.

### **GRANT AND SEALING OF PATENT**

Where the application for a patent along with complete specification has been accepted a

patent is granted and the Controller publishes the fact that the patent has been granted and then the application, specification and other documents are open for public inspection. The date of the patent is as of the date of filing of the patent application. The patent so granted is sealed with the seal of the patent office and the date of sealing of patent is entered in the register. The patent is given in a form prescribed in the Third Schedule of the patent rules 1972 reproduced as Appendix A.

The grant of a patent is subject to

- Provisions of the IPA;
- Conditions and provisions of any other law in force;
- Conditions that the validity of the patent is not guaranteed (it can be challenged on certain grounds); and
- Payment of fees prescribed for keeping the patent in force.

### **Rights of a Patentee**

A patent confers upon the patentee, the exclusive right to the patented invention for a limited period. The patentee not only gets a monopoly right over the said invention for a limited period to prevent third parties without his permission from making or using or offering for selling or importing a product of the subject matter of the patent relates to a product, or if the patent is for a process, then a similar right to prevent third parties from making, using selling or offering for sale or importing for those purposes a product obtained by the claimed process in India.

### **A patentee has the right to**

- Exploit the patent;
- Assign and licence the patent;
- Surrender the patent;
- Sue for infringement.

Incidentally all these rights, except the right to sue for infringement are available to an applicant for patent even before the sealing of patent during the pendency of his application for the grant of a patent.

### **Right to Exploit the Patent**



The patentee has the right to prevent third parties, from exploiting the patented invention in any such manner without the consent of the patentee. The term of every patent granted under the IPA is twenty years from the date of filing of the application for the patent. This includes the patents, which had not expired when the IPA came into force i.e. on May 20, 2003. It is necessary to renew the patent annually on payment of fee for it to remain valid throughout its term of 20 years. Failure to renew the patent results in loss of all patent rights.

### **Right to Assign and Licence**

The patentee has the power to assign rights or grant licenses or enter into another arrangement for a consideration. A licence or an assignment to be valid must be in writing and registered with the Controller of Patents.

### **Right to Surrender**

The patentee has the right to surrender the patent at any time by giving notice in the prescribed manner to the Controller. The Controller, before accepting the offer of surrender, has to give notice of surrender to persons whose names are entered in the register of patents as having interest in the patent; also, the Controller will advertise the same so as to give an opportunity to the interested parties to oppose the offer of surrender, if they choose to do so.

### **Right to Sue for Infringement**

A patentee has the statutory right to institute proceedings for infringement of the patent in a District Court having jurisdiction to try the suit.

## **JOINT-INVENTORS/CO-OWNERS OF PATENT RIGHTS**

If an invention is a work of two or more inventors who make inventive contribution to various parts of the invention or to different claims of a patent, they are recognized as joint inventors and on grant of the patent for the invention become co-owners of patent rights. Co-owners have equal undivided share in a patent, unless there is an agreement to the contrary. If the patent is for a product, each co-owner is entitled, without accounting to other owners, to the exclusive rights for his own benefit to prevent third parties who do not have his consent from the act of making, using, offering for sale, selling or importing for those purposes the patented product in India; if the patent is for a process then a co-owner is entitled to prevent

third parties from the act of using that process and from the act of using, offering for sale, selling or importing for those purposes the product obtain directly by that process in India.

### **LIMITATIONS ON PATENTEE'S RIGHTS**

#### **Use for the Purposes of Government**

- Any patented product or process or a product made using patented process may be used by or on behalf of the Government for its own use only. An invention is said to be used for the purposes of Government if it is made, used, exercised or vended for the purposes of the Central Government, State Government or a Government undertaking; this includes Council of Scientific and Industrial Research.
- In case of a patent in respect of any medicine or drug, the medicine or drug may be imported by the Government for its own use or for distribution in any dispensary, hospital or other medical institution maintained by or on behalf of the Government.

#### **Acquisition of Patents and Inventions by Central Government**

If the Central Government is satisfied that it is necessary for public purpose to acquire an invention for which a patent has been granted or an application for patent has been filed, it can publish a notification in the official Gazette and all rights in respect of the invention stand transferred to the Central Government. The Central Government will be liable to pay compensation to the applicant or the patentee as may be mutually agreed upon.

#### **Compulsory Licences**

The right of the patentee is limited by the provision for grant of compulsory licenses. The IPA lays down the following general principles applicable to working of patented inventions:

- a) that patents are granted to encourage inventions and to secure that the inventions are worked in India on a commercial scale and to the fullest extent that is reasonably practicable without undue delay; and
- b) that they are not granted merely to enable patentees to enjoy a monopoly for the importation of the patented article;
- c) that the protection and enforcement of patent rights contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual

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advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations;

d) that patents granted do not impede protection of public health and nutrition and should act as instrument to promote public interest specially in sectors of vital importance for socio-economic and technological development of India;

e) that patents granted do not in any way prohibit Central Government in taking measures to protect public health;

f) that the patent right is not abused by the patentee or person deriving title or interest on patent from the patentee, and the patentee or a person deriving title or interest on patent from the patentee does not resort to practices which unreasonably restrain trade or adversely affect the international transfer of technology; and

g) that patents are granted to make the benefit of the patented invention available at reasonably affordable prices to the public.

Thus, the purpose granting patents in India is primarily to secure that the inventions are worked in India on a commercial scale and not merely to enable patentees to enjoy a monopoly for the importation of the patented article. Patent rights are meant to encourage technological innovation and help transfer and dissemination of technology for the social and economic welfare. The benefit of the patented invention has to reach the people at a reasonably affordable price.

The IPA, provides for **compulsory license of patent to a third party by the Controller**, on application made at any time after expiry of three years from the date of sealing of the patent, on the following grounds:

- the reasonable requirements of the public with respect to the patented invention have not been satisfied; or
- the patented invention is not available to the public at a reasonably affordable price; or
- the patented invention is not worked in India.

If the controller is satisfied about the grounds and the facts as set out in the application, he may grant a compulsory license on the patent and direct the patentee accordingly to grant a license to the applicant. In deciding on the application, the controller is required to take into

account several factors including the nature of the invention, the time which has elapsed since the sealing of the patent, the measures taken by the patentee to make full use of the invention, the ability of the applicant to work the invention to the public advantage, and the applicant's capacity to take capital risk and whether the applicant has made effort to obtain a license from the patentee on reasonable terms and conditions and such efforts have not been successful within a reasonable period.

The IPA also has special provision for compulsory licences on notifications by the Central Government in a case of national emergency, or of extreme urgency or of public non-commercial use.

Compulsory licence can also be available for manufacture and export of patented pharmaceutical products to any country which has no, or insufficient manufacturing capacity for the concerned product to address public health problems, provided compulsory licence has been granted by such country, or such country has allowed importation of the patented pharmaceutical products from India. The Controller on receipt of an application in the prescribed manner will grant a compulsory licence solely for the manufacture and export of the concerned product to such country under such terms and conditions as may be specified by him.

A compulsory license can be terminated on patentee's request when the circumstances in which the grant was made no longer exist and are unlikely to recur. The holder of the compulsory license can of course object to the application and the Controller shall take into account that the licensee's interest is not unduly prejudiced.

### **Inventions for Defence Purposes**

If the Controller finds that an invention is relevant for defence purposes, he may prohibit or restrict publication of information subject to ratification from the central government. No appeal lies against these directions of the Controller.

The secrecy directions are reviewed at intervals of six months, or on the request of the applicant, and would be revoked if found no longer necessary by the Central Government. If, in the case of an application filed by a foreign applicant, it is found that the invention is already published outside India then also the secrecy directions are revoked. However, please note that an application in respect of which secrecy directions have been issued can still be

processed to the stage of acceptance of complete specification, but the acceptance shall neither be advertised nor the specification published and no patent shall be granted.

No patent application for an invention relevant for defence purpose can be filed outside India except on the written permission of the Controller. All orders of the Controller as to secrecy, as well as orders of Central Government in this context, are final and cannot be challenged in any court on any ground.

### **Revocation of Patents for Non-working**

For a patent under a compulsory licence, the Central Government or any person interested can make an application after the expiration of two years from the date of compulsory license for revocation of the patent.

### **The grounds for the revocation would be:**

- the invention has not been worked in India; or
- the reasonable requirements of the public have not been satisfied; or
- the invention is not available to the public at reasonable price.

The Controller, after giving opportunities to the patentee to oppose the application, may decide on revocation on merit.

## **TRANSFER OF PATENT RIGHTS**

A patent is an exclusive property of the inventor and hence can be transferred from the original patentee to any other person by assignment, grant of licence, or operation of law.

The IPA requires that an assignment, licence or a creation of any other interest in a patent must be in writing, clearly specifying all the terms and conditions governing the rights and obligations of the parties. The person getting such entitlement in a patent has to apply in writing to the Controller for the registration of his title.

### **Assignment**

An assignment means transfer of interest in the patent by the patentee to another person in whole or in part valid over entire India or a part of it. The person to whom the right in patent is assigned is called the assignee and the person who assigns the right is called the assignor.

**There are three kinds of assignment:**

### **Legal Assignment**

When the assignor assigns the right in a patent through an agreement duly registered, the assignment is called a legal assignment and the assignee's name will be entered in the Register of Patents maintained by the Patent Office as the proprietor of the patent. The legal assignee shall thereafter have all the rights conferred by the assignor.

### **Equitable Assignment**

When the patentee agrees to give another person certain defined right in the patent with immediate effect, by a document (e.g. a letter), and not by an agreement, the assignment is termed as an equitable assignment. However, such an assignment cannot be registered in the Register of Patents. The assignee can convert the equitable assignment to legal assignment by getting the document in writing and getting it duly registered.

### **Mortgage**

When the patentee transfers the patent rights either wholly or in part to the mortgagee to secure a specified sum of money, such assignment is called mortgage. The patentee can get the patent re-transferred on refund of the consideration money.

### **Licence**

A license confers a privilege on another person through an agreement to make, use or exercise the invention. The person to whom the privilege is transferred is called the licensee. The license agreement does not transfer any interest in the patent. A licence merely transfers a right in patent as compared to an assignment in which there is transfer of interest. There are three kinds of licenses:

#### **Voluntary License**

When the patentee, by a written agreement, empowers another person to make, use or exercise the patented invention in a particular manner and on agreed terms and conditions it is called a voluntary licence. The Controller of Patents and the Central Government do not have any role in such licence.

#### **Statutory Licence**

When the licence is granted by the Controller and the Central Government as a compulsory licence it is termed as statutory licence. In this case, the terms and conditions of the licence agreement do not depend upon the will of the patentee and the licensee.

#### **Exclusive Licence**

In case of exclusive licence, the patentee confers exclusive right to make, use, sell or

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distribute the patented invention to a particular person to the exclusion of all others including



the patentee himself. Such a person will hold an exclusive licence in the patent. The exclusive licensee has the right to initiate infringement proceedings against an infringer. The patentee has the right to impose certain restrictive conditions on the rights of the licensee. But no such restrictions can be imposed which are against the public interest.

For example, in a license to manufacture or use a patented article, or to work a process protected by a patent, it shall not be lawful to insert a condition that will require the licensee to acquire from the licensor, or his nominees, any article other than the patented article or an article other than that made by the patented process.

### **Operation of Law**

When a patentee dies, the interest in patent passes to his legal representative by transmission of right by operation of law. Another mode of such transmission is provided where the Central Government acquires a patent from the patentee for public purpose.

### **REGISTER OF PATENTS**

There is a register of patents kept at the Patent Office. The following particulars are entered in it:

- The names and addresses of grantees of patents;
- Notification of assignments and transmission of patents of licenses under patents, and of amendments and revocation of patents;
- Particulars of such other matters affecting the validity or proprietorship of patents as may be prescribed.

### **BIODIVERSITY**

The Act defines biodiversity and biological resources as follows:

Biological Diversity means the variability among living organisms from all sources and the ecological complexes of which they are part and includes diversity with species or between species and of ecosystems.

Biological Resources means plants, animals and micro-organisms or parts thereof, their genetic material and by products (excluding value added products) with actual or potential use or value but does not include human genetic material.

Biodiversity is not evenly distributed over different parts of the world. India is one of the twelve mega biodiversity countries in the world, which attracts international business players to exploit the country's rich and enormous biodiversity. India is having two biodiversity hotspots, namely the Western Ghats and the Eastern Himalayas, which are included amongst the top eight most important hotspots in the world, ten bio-geographic regions; two major realms called the palaeoarctic and the Indo-Malayan; and three biomasses, namely the tropical humid forests, tropical dry/deciduous forests and the warm deserts and semi-deserts. India has 850 species of bacteria, 14,500 species of fungi, 6,500 species of algae, 2000 species of lichens, 2,850 species of bryophytes, 1100 species of pteridophytes. The endemism of Indian biodiversity is high. About 33% of the country's recorded flora are endemic to the country and are concentrated mainly in the North-East, Western Ghats, North-West Himalaya and the Andaman and Nicobar islands. As many as 167 species of crops, 320 species of wild crop relatives, and several species of domesticated animals have originated here. The genetic diversity within these species is astounding. For example, there are 4,000 varieties of Rice, hundreds of varieties of Mango, 27 breeds of Cattle and 18 breeds of poultry. This amazing biodiversity is not a freak of nature, but a result of careful selection and even crossbreeding over centuries by India's farmers and pastoralists.

### **INTELLECTUAL PROPERTY RIGHTS (IPRs) AND BIODIVERSITY -Plants, animals, and other**

organisms become economically useful to humans when their uses are known. Indigenous people are the source of virtually all our knowledge about the uses of the plants and animals, and even of the micro-organisms in their localities. This traditional knowledge about the usage of biological resources has been unethically accessed by many vested interest groups to the detriment of indigenous communities of the South. This has left the original holders and curators of biodiversity with the feeling of having been deceived and exploited. It is now protected as an intellectual property in the form of farmers' and plant breeders' rights. In many countries patents are granted for plant varieties, micro-organisms and genetically modified animals. You know that, apart from the usual criteria of patentability, namely, novelty, non-obviousness, and utility, patenting of micro-organisms has an additional

requirement, viz. deposition of micro-organism in an internationally recognized depository authority for patent purposes.

### **Traditional Knowledge, IPR and Biodiversity**

There is an abundance of local expertise in plant genetic resources that has been in use over a considerable period of time and is still evolving. In agriculture, for instance, this knowledge is shown in the development and adaptation of plants and crops to different ecological conditions (soils, rainfall, temperature, altitude etc.). Traditional knowledge (TK) is people's awareness and understanding of this and other information, and the life technologies local communities have evolved, besides other 'cultural products' which is passed on from one generation to the next, usually by word of mouth or example within a specified group of people. TK evolved under a totally different set of values and motives than the modern knowledge; the concepts of intellectual property with its monopolistic overtones is totally alien to TK.

Traditional knowledge provides useful leads for scientific research, being the key to identifying those elements in a plant with a pharmacological value that is ultimately destined for the international markets. Ironically the very knowledge that forms much of the basis of "modern" scientific research and development is not regarded as a "science". Industry gets the rights and the profits; local communities are merely used as providers of "raw materials". For several reasons TK cannot be protected by patents or other instruments of intellectual property, as you will learn in detail in the course on Contemporary Intellectual Property Issues (MIP-008).

It is through IPR, and particularly patents, that commercial interests are taking over control and ownership of traditional knowledge. In the patent system, a patent can only be granted if an invention is novel or non-obvious. Novelty and non-obviousness are judged against everything publicly known before the invention, as shown in earlier patents and other published material. This body of public knowledge is called "prior art". Prior art means any disclosure of the contents of a claim, prior to the application for patent. Some national laws do not recognise oral knowledge as evidence of prior art. The United States regards oral disclosures as prior art only if they were made in the US. Thus, a therapeutic technique orally handed down from one generation to another by a tribe in India can still be patented in the

US, despite it being publicly known for many years. This is why western-styled patent systems are inherently incapable of recognizing the existence of, or providing protection to, traditional knowledge of other countries. Another dimension of the problem is that access and benefit sharing (ABS) arrangements – the first step that many governments take to supposedly rectify imbalances – are being premised on IPRs, despite the unsuitability of the latter to biodiversity and related traditional knowledge.

### TRADE SECRETS

#### Introduction

Competitive strength usually depends on innovative techniques and accompanying know-how in the industrial and/or commercial field. However, such techniques and know-how are not always protectable by patent law. Firstly, patents are in principle available only for inventions in the field of technology and not for innovative achievements concerning the conduct of business, etc. Moreover, some technical discoveries or information, while providing a valuable commercial advantage for a particular trader, may lack the novelty or inventive step required to make them patentable. Furthermore, while a patent application is pending, as long as the information has not been disclosed to the public, the owner of the information to be patented ought to be protected against any wrongful disclosure of the information by others, regardless of whether or not the application eventually leads to the grant of a patent. All such information can be classified as a trade secret. Although the Paris Convention does not mention trade secrets as such, Article 10bis on unfair competition requires protection against any act of competition contrary to honest practices in industrial or commercial matters; the need for protection against wrongful disclosure of undisclosed information (another term for trade secrets) is generally recognized.

There are many examples of trade secrets, which are very well guarded. To name just one, the formula of soft drink coca-cola is one of the most successfully guarded trade secret till date. Naturally, lot of efforts are taken to keep this secret, which is quite expensive affair. The trade secrets are also kept at small scale. You may have a bakery in your locality, which bakes the cakes or cookies in unique way. The recipes of these items are the trade secrets of that baker. There are many traditional dishes cooked in a family, whose recipes are passed on from generation to generation, but kept just within the family. All these types of trade secrets are also protected in some national laws.

In this Unit, you will learn about the protection of trade secrets. Some basic aspects like how to guard a trade secret, what is meant by violation of a trade secret, how to make a choice between patent protection or trade secret, are also discussed.

**What is a trade secret?** Before we start discussing the reasons for protecting a trade secret, let us first understand, what is a trade secret?

There are several lines of inquiry that serve to determine what information constitutes a trade secret: the extent to which the information is known to the public or within a particular trade or industry, the amount of effort and money expended by the trader in developing the secret information, the value of that information to the trader and to his competitors, the extent of measures taken by the trader to guard the secrecy of the information and the ease or difficulty with which the information could be properly acquired by others.

From a subjective point of view, the trader involved must have a considerable interest in keeping certain information as a trade secret. Although contractual obligations are not necessary, the trader must have shown the intention to have the information treated as a secret. Frequently, specific measures to maintain the secrecy of the particular information are also required. The fact that the information has been supplied confidentially will not always be sufficient. In some countries (for example, the United States of America and Japan), the efforts made by the owner of the information to keep it secret are considered by courts to be of primary importance in determining whether the information constitutes a trade secret at all.

From an objective point of view, the information must, in order to qualify as a trade secret, be known to a limited group of persons only, that is, it must not be generally known to experts or to competitors in the field. Even patent applications may be regarded as trade secrets as long as they are not published by the patent office. Therefore, external publications or other information that is readily available will not be considered secret. For example, the use or disclosure of a trade secret by a person who has acquired it in a legitimate business transaction and without any negligence is not deemed unfair. On the other hand, absolute secrecy is not a requirement, for the information might also be discovered independently by others. Also, business partners can be informed without loss of secrecy if it is obvious that the information has to remain secret. Factors that indicate whether the information has the necessary degree of confidentiality to constitute a protectable trade secret are whether it contains material that is not confidential if looked at in isolation, whether it has necessarily to be acquired by employees if they are to work efficiently and whether it is restricted to senior management or is also known at the junior level. Still, the most solid proof is the strict

confidentiality of the information and the contractual duty to keep it secret.

A trade secret can be any formula, pattern, idea, process, physical device or a compilation of information which provides its owner a competitive advantage in the market. The trade



secret is expected to be treated in such a way that it is not available to others (public or competitors) unless obtained by theft or by improper acquisition.

Some potential matters of trade secret can be a recipe, chemical formula, survey methods, confidential data, computer programmes, manufacturing process, marketing strategies, financial strategies or a new invention for which patent application is not yet filed.

### **Why to protect a trade secret?**

The information is usually protected as a trade secret when the other forms of IPR protection cannot be used. For example, an idea cannot be protected by patent, it cannot be protected by a copyright, unless it is expressed or fixed. However, to protect this idea can be very crucial from the commercial point of view. In such case, it has to be protected as a trade secret. Many other matters like progress of developing a new product, customer list with critical comments, a negative know-how, which gives information about ineffectiveness of certain product or process, cannot be protected by any other IPR tools, without disclosing them. All this information can be kept as trade secrets.

### **Trade Secret versus Patent**

The patent protection guarantees that nobody can work your invention without your prior authorization. This protection is valid within the term of the patent protection (typically 20 years). However, in your patent application, you disclose the patent for public knowledge and the moment the term of patent protection ends, the information disclosed in your application becomes a public domain information. Anybody is free to use it. Further, you have to pay prescribed fee for maintaining the patent protection valid and that too, in all the countries, where its protection is expected.

Now, keeping a trade secret can be a much simpler and cheaper method, if you can maintain secrecy in your organization. The less the number of people having access to the entire secret information the better are the chances of retaining the trade secret. The trade secret can be held indefinitely.

There are, however, some disadvantages of protecting confidential business information as a trade secret. If the secret is embodied in an innovative product, others may be able to inspect

it, dissect it and analyze it (i.e. reverse engineer it) and find out the secret and be thereafter entitled to use it. Trade secret protection of an invention in fact does not provide the exclusive right to exclude third parties from making commercial use of it. Only patents and utility models can provide this type of protection. Once the secret is made public, anyone may have access to it and use it at will. Also a trade secret may be patented by someone else who developed the relevant information by legitimate means.

A trade secret is more difficult to enforce than a patent. The level of protection granted to trade secrets varies significantly from country to country, but is generally considered weak, particularly when compared with the protection granted by a patent.

Hence, though decision between trade secret and patent protection will have to be taken on a case-by-case basis, in the following circumstances it would be advisable to make use of trade secret protection:

- When the secret is not patentable; or
- When the likelihood is high that the information can be kept secret for a considerable period of time. If the secret information consists of a patentable invention, trade secret protection would only be convenient if the secret can be kept confidential for over 20 years (period of protection of a patent) and if others are not likely to come up with the same invention in a legitimate way; or
- When the trade secret is not considered to be of such great value to be deemed worth a patent; or
- When the secret relates to a manufacturing process rather than to a product, as products would be more likely to be reverse engineered; or
- When you have applied for a patent and are waiting for the patent to be granted.

It is important to bear in mind, however, that trade secret protection is generally weak in most countries, that the conditions for, and scope of, its protection may vary significantly from country to country depending on the existing statutory mechanisms and case law, and that the courts may require very significant and possibly costly efforts to preserve secrecy.

### **Tools to protect a trade secret**

Contrary to patents, trade secrets are protected without registration, that is, trade secrets are protected without any procedural formalities. Consequently, a trade secret can be protected for an unlimited period of time. There are, however, some conditions for the information to be considered a trade secret. Compliance with such conditions may turn out to be more

difficult and costly than it would appear at first glance. While these conditions vary from country to country, some general standards exist which are referred to in Art. 39 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement):

- The information must be secret (i.e. it is not generally known among, or readily accessible to, circles that normally deal with the kind of information in question);
- It must have commercial value because it is a secret; and
- It must be subjected to reasonable steps by the rightful holder of the information to keep it secret.

The trade secrets are widely used by the small and medium scale enterprises (SMEs). In fact, many such enterprises rely almost exclusively on trade secrets for the protection of their IP.

This may include:

- Trade secret policy: Making sure that a limited number of people know the secret and that, all those who do, are well aware that it is confidential information.
- Employee agreement: Signing confidentiality agreements with business partners whenever disclosing confidential information.
- Non-disclosure Agreements: Including confidentiality agreements within employees' contracts. Under the law of many countries, however, employees owe confidentiality to their employer even without such agreements.
- Adequate documents: The duty to maintain confidentiality on the employer's secrets generally remains even after the employee has left the employment. This duty may be limited to a certain period of time after the employment ceases.
- Security Systems: It is important to make sure that enterprises take all necessary measures to protect their trade secrets effectively.

Case studies

### **Bayer Corporation Vs. Union of India 162(2009) DLT 371**

**IPR Law**– Bayer Corporation, instead of filing a suit for infringement, filed an inventive writ petition in the Delhi High Court desiring that since the applications of Cipla “SORANIB” allegedly infringed its patent, its (Cipla’s) marketing approval application under the Drugs Act should not even be processed or entertained. It is for the first time that an attempt is made to link drug approval to patent infringement in India. However, the Delhi High Court, denying the injunction, imposed a substantial cost of Rs. 6.75 Lakh to deter any such future attempts.

Bayer relied on the argument that a combined reading of Section 2 of the Drugs and Cosmetic Act along with Section 48 of the **(Indian) Patent Act, 1970** establishes a Patent Linkage Mechanism under which no market approval for a drug can be granted if there a patent subsisting over that drug. It also claimed that CIPLA's "SORANIB" is a "Spurious Drug" as defined under the Drugs Act, for which market approval cannot be granted.

The Hon'ble High Court of Delhi held that there is no Drug- Patent Linkage mechanism in India as both the Acts have different objectives and the authority to determine patent standards, is within the exclusive domain of the Controller of Patents. Moreover, the patent linkage will have undesirable effect on the India's Policy of Public Health. It further held that the market approval of a drug does not amount to infringement of patent. Therefore, the patent infringement cannot be presumed, it has to be established in a court of law. Such adjudication is beyond the jurisdiction of Drug Authorities.

On the issue of "SORANIB" being a spurious drug, the court held that CIPLA's "SORANIB" cannot come under the category of spurious goods as there is no element of passing off like deception or imitation present in CIPLA's drug".

### **The Rice Patent**

RiceTec Inc, was issued the Patent number **5663484** on Basmati rice lines and grains on September 2, 1997.

In abstract, "the invention relates to novel rice lines and to plants and grains of these lines. The invention also relates to a novel means for determining the cooking and starch properties of rice grains and its use in identifying desirable rice lines. Specifically, one aspect of the invention relates to novel rice lines whose plants are semi-dwarf in stature, substantially photoperiod insensitive and high yielding, and produce rice grains having characteristics similar or superior to those of good quality Basmati rice. Another aspect of the invention relates to novel rice lines produced from novel rice lines. The invention provides a method for breeding these novel lines. A third aspect...relates to the finding that the starch index (SI) of a rice grain can predict the grain's cooking and starch properties, to a method based thereon for identifying grains that can be cooked to the firmness of traditional Basmati rice preparations, and to the use of this method in selecting desirable segregants in rice breeding programs."

### **The Government of India's response to the Patent**

In an official release, the government of India reacted immediately after learning of the

Basmati patent issued to RiceTec Inc., stating that it would approach the US patent office and urge them to re-examine the patent to a United States firm to grow and sell rice under the Basmati brand name in order to protect India's interests, particularly those of growers and exporters. Furthermore, a high level inter-ministerial group comprising of representatives of the ministries and departments of commerce, industry, external affairs, Council for scientific and industrial research (CSIR), Agriculture, Bio-technology, All India Rice Exporters Association (AIREA), APEDA, and Indian Council of Agricultural Research (ICAR) were mobilized to begin an in-depth examination of the case. The contents and implications of the patent are currently being analyzed in consultation with patent attorneys and agricultural scientists. The government of India is particularly concerned about the patenting of Basmati because of an earlier case where the US granted a patent to two Indian-born scientists on the use of Turmeric as a wound healing agent. This case worked in favor of India because the patent was subsequently revoked after scientists of (CSIR) successfully challenged the patenting on the ground that the healing properties of Turmeric had been 'common knowledge' in India for centuries. There is a clause in US patent laws that will accept any information already available in published or written form anywhere in the world as 'common knowledge'. As a result, India was able to furnish published evidence to support their case that the healing characteristics of Turmeric is not a new invention and as such cannot be patented.

In the presence of widespread uprising among farmers and exporters, the nation of India as a whole feel confident of being able to successfully challenge the Basmati patent by RiceTec Inc. According to the Economic Times of India, the law firm of Sagar and Suri who won the Turmeric patent case and presently representing the government against RiceTec Inc. in existing cases, said; "RiceTec has got a patent for three things: growing rice plants with certain characteristics identical to Basmati, the grain produced by such plants, and the method of selecting the rice plant based on a starch index (SI) test devised by RiceTec Inc." The lawyers plan to challenge this patent on the basis that the above mentioned plant varieties and grains already exist and thus cannot be patented. In addition, they encountered some information from the US National Agricultural Statistics Service in its latest Rice Year book 1997, released in January 1998, which states that almost 75 percent of US rice imports are the Jasmine rice from Thailand and most of the remainder are from India and Pakistan,"varieties that cannot be grown in the US" This piece of information is rather interesting and can be used as a weapon against the RiceTec Basmati patent. India won the case.