Patent Application procedure and Preparation for Filing in India

S.K. Barolia¹, B.K. Mishra¹, G.K. Trpathi¹, M.R. Hindala² and M. Sewda²
ICAR-National Research Centre on Seed Spice Tabiji, Ajmer (Rajasthan), India-305206
²Department of Botany, University of Rajasthan, Jaipur, India.

Abstract
The ITMU at ICAR-NRCSS, Ajmer has achieved many marvels in terms of development of technologies in various aspects of seed spice crops in terms of crop improvement, crop production, crop protection, basic sciences, social sciences, post harvest and value addition, MOUs etc. The salient achievements are mentioned below under pertinent heads. The issuance of a patent by the government office is basically done by a patent application record that is an agreement between the inventor and the government office. Correspondingly, a patent application is in many ways like a contract. Preparation of a standard patent application is curious because it sets out in a transparent way, the terms and condition by which the patent owner and others will be bound. These criteria of the patent application make it different from writing a scientific paper. The technical subject matter that is available in the patent application have bear some similarities to a scientific or technical paper, although it does not usually need to rise to the level of a blueprint for making the invention protected by the patent. Public officials of government take a long time to review the patent as examiners and judges and business partners. Therefore it is necessary that a patent application should be drafted with these important audiences in mind. The parts of the patent application typically include the Background, Summary, Detailed Description and Drawings, Claims, and Abstract. The patent agent is unlikely to draft the patent application in this order and should ordinarily draft the claims first.

Keywords: application, patent, filing, government official

1. Introduction
India being a signatory to TRIPS, in response to the changing scenario of technology generation and dissemination, ICAR has developed a policy framework that will guide the management of IP created by its scientists/innovators at its institutions or elsewhere, and that developed with its support.

The technological assets of ICAR include a number of high yielding and resilient crop varieties, animal and poultry breeds and fish strains, packages of improved crop and animal husbandry practices, natural resource management technologies, improved tools, equipment and farm machinery, improved dairy, poultry and fisheries technologies, post harvest technology, computer software and data sets, and several other processes and products of agriculture and the allied sectors. Agricultural science has been the engine of growth and led to quantum
jumps in productivity in the past. Application of ICAR technologies in farmers’ fields and backyards has increased agricultural output and farm incomes. Hence to protect all the Intellectual Properties generated in the Institutes, ICAR implemented the above scheme in all institute with the following objectives:

1. To set in place an Institutional mechanism to protect/manage Intellectual Property (IP) generated within the ICAR system;
2. To implement the incentive system, incorporated in the ICAR guidelines for IP management and technology transfer/commercialization and to encourage greater creativity and rapid innovativeness in the system;
3. To maximize technology transfer by ICAR institutes and to generate income/resources through commercialization of IP
4. The above planned scheme was implemented in ICAR Research Complex Goa from 25th October 2008 and functioning under the executive control of ITMC (Institute Technology Management Committee)

At the institute level, Institute Technology Management Unit (ITMU) is constituted to process all IPR related issues which include:

1. Consultancy related issues
2. Paid Training Programmes conducted by the Institute.
3. Patenting of the Institute Technology
4. Technology Commercialization
5. Copyright of Research and technical publications
6. Germplasm Registration (Plant/Animal/Fish)

Important source of scientific and technical literature

- A treasure-house of scientific inventions
- Avoids duplication
- Paves way for further discoveries
- Stop re-inventing the wheel
- Identifies emerging technologies, emerging areas

In recent decades, national and international organizations have done everything possible to standardize the laws governing intellectual property. To attempt standardization, the small constraint is always infrastructure or capital, especially in the pharmaceutical industries. This is why there is continuing tension in multinational pharmaceutical companies (MNEs) in developing countries. Intellectual will always do his best to overcome these problems that facilitate the business environment globally. Previously, in the World Trade Organization (WTO), India does not recognize patents for pharmaceutical products. Without product patents, Indian pharmaceutical companies have been able to sell countless generic drugs. Worldwide, India contributes to the major generics manufacturers. The results of these are that the relative moderation of these generics over proprietary drugs has not only provided the leading drugs, but has also made India the de facto pharmacy for many developing countries [1]. The fundamental object of Intellectual Property Law (IPR) is to provide an indisputable absolute right on the creation of the mind and to exploit it over a specified period of time, in order to enable them to gain commercial benefits from their creative endeavors.
The intellectually proprietary note as PI of the person who owns the mind of the parrot innovation, invention and creativity in it only in which way the parrot owns physical property. The diverse ways in which it is treated is Figure2. www.ipindia.nic.in is an important role in the main area that has an impact on the pharmaceutical industry. In the first place, I prices and the access if I am concentrated in the guarantee of a competitive marketing that creates problems in the price of the pharmacy. Secondly, is an incentive for the research and the development related to an argument, what is the commercialization of the new pharmacy and the parrot price? The consequence of intellectual property rights on R&D spending and its subsidies in various diseases, countries and organizations. The preparation and the deposit of the IPR brief, the directive to the legal authority that it is possible to sell, uses, offer in sale and / or import, which are the technology that is protected by the IPR document, which is the authenticity of the trade. The inventors were completely satisfied the intellectual property legal documents were available. Because of this, this is a continuous process of the regulatory bodies in each country. Previously, the patent approved step called application provisional in some countries such as the United States of America. The duration of the provisional briefing is given for 1 year and provides the status of this problem, in a quick and convenient way. The patent is the property of a product of creativity or innovations protected by the patent claims. Before unveiling the innovative idea, it requires the presentation of the patent application. The brief must persuade everyone and legal requirements for copying, as the limit of time relative to the duration of the disclosure to the public of the inventions. First of all, I will deposit a brief order, it will be invented but it will be disclosed in public, it will not be accepted for a period of grace [2-4]. A check of details is essential to present the order. It gives this consequence the broader concept or principle which is important for the public and will be very well written. The command if you prepare your facts of the beginning or of the new idea that is evident in the beginning, the soft importance and scope in that competitive field.

In fact, patents are "regional" and are taken into consideration only in the countries where they were applied for and granted. Each country has its own registered office where it has documented that the applicability of the patent is worldwide or only for its own country. The acceptability of the patent and your innovative idea can be questioned and if you find any demerits it should be rejected. In order to maintain discipline and hierarchy in the legal department, the team must properly review the entire content of the application, so there is no possibility of dispute. After the Second World War, the international pharmaceutical industry grew rapidly. Requests for antibiotics create a challenge for the company in the research and development division. Over the course of the year following the war, it saw rapid growth in the digital industry and established itself as a multinational by infiltration in many countries. Headquarters of these multinational companies established in the developed countries from which the companies are operated. Due to the lack of qualified human resources in developing countries, as well as a necessary technology for which a large capital is needed to develop a new molecule, it is not possible to create such a company. After independence, India has faced many challenges as one of the poorest countries in the world, with also growing problems in the health sector to overcome this government taking any initiative to change the patent law that simplifies the occupations. For this government of India appoint two committees, one is the Patent Investigation Committee (1948-1950) and the Patent Review Committee (1957-1959). The objective was to review the patent law and ensure that the patent system was more conducive and interesting to the nation. India in 2020 became a world leader in the field of pharmaceutical industry. This country established itself as a leader in the manufacture of generic drugs. India passed its first
In 1856 under British colonial rule and is based on the British Patent Law of 1852, here inventors have legal privileges for 14 years. In 1911, the British government introduced the Indian Patents and Designs Act with the elimination of the Inventions and Designs Act of 1888, which was in effect until 1972. Worldwide, developing countries as consumers of many products, its importance increased partially, in 1994 all members of the World Trade Organization were asked to adopt the Trade-Related Intellectual Property Rules (TRIPS). With the growth of multinational pharmaceutical companies around the world, the World Trade Organization entered into force on January 1, 1995, and along with it came the TRIPS Agreement on Aspects of Intellectual Property Rights Related to trade. Cover international instruments for the strengthening of IPRs. India initially not in favor Different types of PPE. Intellectual Property Rights - TRIPS patent like other developing countries. As a member of the WTO, India amends its national intellectual property laws to comply with the agreement. Worldwide, the most difficult aspect of the World Trade Organization's Agreement on Trade Aspects in International Property Rights (TRIPS) is the issue of pharmaceutical patents. As of January 1, 1995, the TRIPS agreement entered into force, this agreement expands the scope of intellectual property rights. Patents will be available for any invention declared in Article 27, be it products or processes in all fields of technology. In India, Parliament granted by 1970 law that patent rights only for manufacturing processes, rather than the final products themselves ", in the world, India is the country that is not only a major drug producing exporter but also the leading drug producer alone population The market share of generic drugs is largely covered by this country [1–3].

2. Patent basic
The basic aspects of the patent system must be well known and the practical aspects are outlined first. The main rationale behind generating a patent system was to honor an inventor with full rights to the invention that lasts for several years, depending on the legal authority of the country. The new inventions they support to stimulate and promote the technological process and further innovation, is fruitful when the patent has public access. Countries or groups of countries have the legal authority that the patent is the exclusive right of the innovations. In a trade or business, a patent provides its owners who stop making, use, offer for sale, sell, or import a product or process without their permission (a license). From the patent system, it is clear how the inventor can protect his patent and it is also necessary for him to respect other innovations by participating in them. Please note that the patent itself is a regional law, which operates on a limited basis in one country or group of countries. The patent is never a "world patent" as it is only territorial. Therefore, the filing of a patent is a choice of the territory and the region in which the patent is protected. The desire for territory is based on the market potential of the country, the location of the manufacturing competitor, the location of the research center and various other locations. It is a key part of filing patent applications. The basic patentability criteria must be patentable in the geography of the United States, a unit of invention, capable of industrial application. In most countries, the main object is novelty; In some countries, the double standard of novelty is also observed depending on the place of the invention, inside or outside the territory. The comparison between novelty and technique in the invention should be superior to the existing patent in the same field. In a patent, non-evidence is one of the hardest things to define. Your contribution to defining the level of technology. The patent examiner has the ability to divulge the prior art, but also identifies the art of skill in the innovator. In the pharmaceutical world, patent protection is very important, which increases the development of new drugs for diseases that have consequences in these countries. Patent protection encourages the pharmaceutical industry to invest a billion dollars to develop the new
molecules, ensuring that the product is sold [3, 4]. The pharmaceutical product takes a very long time to develop and enter the market for human use. A new dosage form an average takes around 10–15 years during this period medicine efficacy and safety must be proved by a different phase of a clinical trial. A significant period lost the new drug before entering the market that is a disadvantage in the pharmaceutical field. On innovation Patent role is that it protect the innovation it either territorial or global, but in case of pharmaceutical product, there must be some extent of flexibility by which the monopoly right decrease so that it does not affect the cost of medicine. The world moving towards the differential pricing of medicines, making the cost of medicine cheaper in developing countries. From the developing countries, the revenue generated is very less and around 1% as compared developed countries. Developing countries contribute the minimum incentive to the research; it come maximums from the developed countries. To provide the health patent is not only the obstacle along with it has other factors like poor infrastructure lack of sanitation and shortage of funding for even generic drugs. (New drug development).

The concept behind the innovation patent is a fixed-term contract, in which the company accepts the monopoly that grants large amounts which thereby provides a strong incentive for innovation. The creation of revenue from manufacturers and production strongly supports research and development and also encourages interest in the development of the new molecule in the pharmaceutical industry. A balance between research and development is economically necessary, because there is no room for research and development to generate direct revenue for customers. Indirectly it gives a very strong income to the market [4, 6].

3. Structure of application

For filling of application, the ideal requirements of the patentability and also the application must be filed by the competent authority for a certain country or a group of countries. A quick focus must be given when filing the application and try to cover the application with the following parts.

1. Claims
2. Detailed description (or specification)
3. Drawings
4. Background
5. Abstract
6. Summary

Who submits the request; the title should be descriptive and creative in itself. The title correctly indicates the topic of the application. The patent application itself should also include all priority information, such as the identification of related applications. The audience of the application is basically the judges and the patent examiner. Furthermore, in addition to these, the client of the patent agent and the inventor are also public.

3.1 Claims

In the patent filing, the claims for the inventor prepared by the agent that is first it must be easy in language and plan should be in at least three. The patent agent outlines a diagram in the first disclosure meeting and discusses with the inventor. The language or the terminology used for the filing the might be difficult to understand by the inventor. So, the agent explains it in pictures or another diagram by which it is easy to understand. In practice, the agents prepare the several drafts for the communication and select the best one for further proceeding. The claim is the legal part of the application. For the preparation of quality contents draft, the agent must give the time
and during writing focus on that, it is concise and explanatory. In any case, it is seen that due to short of time the ideal paper not prepare and such situation the technical paper of the inventor consider a claim. For convenience, the complaint can be presented in an easy to understand image. Due to the language of the images, the novelty of the card is high. After the claims are completed, the patent agent must verify the specification for Verify and confirm that the terms of the complaint are adequately explained in the document. The section of the detailed description, sometimes known as the "preferred embodiment of the invention" section or the "described embodiment of the invention" section gives rise to the claims and provides a sufficient explanation of the invention for one person one person common skilled in the art to do so and understand the invention. In some jurisdictions, the term "specific" is also used to refer to the description in addition to the summary and background sections of the application; suffice it to say that "detailed description" and "specification" are generally the same for the purposes of drafting the patent. The detailed description section should be closely related to the drawings. This section cannot be substantially changed once the application has been submitted. Accordingly, the patent agent must ensure that the detailed description section provides an appropriate degree of technical disclosure on the day the application is submitted, as they will not have a second chance to modify this part of the application. The Patent Agent cannot amend your application to include a new technical disclosure during the prosecution. If the patent agent uses a very abstract term in the claims, they should consider using the term in the detailed description section, but in a way that links the abstract term to a specific embodiment of the invention. For example, if the claims use the term "alarm device" for a horn, the specification might say: "An example of the 10212 alarm device is a horn. Other alarm devices may be used, as per the spirit of the invention. ", or" An automobile horn 102 constitutes a warning device. Many other warning devices of this type can be used in keeping with the spirit of the invention. "As mentioned above, the detailed description section cannot be changed substantially once the application has been filed. Therefore, a patent agent must ensure that the patent application (a) reflects the disclosure material provided by the inventors, (b) provides sufficient information to allow an ordinary craftsman to reproduce the invention, and (c) provides the deep enough in so that the claims can be shortened during the filing of the patent to avoid a tight prior art. Further considerations on the scope and importance of the detailed description section will be discussed below and also illustrated by the following example [2, 5, 6].

3.2 Detailed description (or specification)

For the preparation of the submission, the specification must meet the basic requirements. The condition according to the regulation of the country rule. For example, Canadian practices are more or less different from American ones. But around the world, American practice is more respectful than Canadian practice when it comes to specifics. The specification is discussed in three parts:

I.) Description of the invention: the first objective is to provide a clue to what is being claimed. Explain the inventor's patent through the electronic circuit compromising a logic gate combination. This way, if the inventor wants to submit another question, he just has to change the logic gate where the microprocessor changes. Therefore, all declared items must be shown in the specification. In the specification there is no limit, it must be broad and require covering most points in a general way, where it fully satisfies all the terms that cover the patent application.
II.) The professional allows explaining the invention: it is about updating the software to have full knowledge of a patent agent. For convenience, the agent explains all the contents of the application in the drawing with the help of the updated version of the software. Using block diagrams, it is easy to understand the full content of the patent.

III.) Best Inventor Mode: Inventor reveals his best knowledge upon application. Two ways he explains. First, the invention is performed as claimed, do not disclose the invention for commercial purposes on the market. The second is subjective here; inventors may not disclose adequate knowledge in which case some aspects of the invention in the dilemma.

3.3 Drawings
In this part, the presentation of the invention is the best form of drawing which facilitates the understanding of the facts of the invention. The patent agent describes the innovative idea with good visual aids. It was found that the drawings are the most important of the patent after the claims. The preparation of the image itself is a revolutionary idea, the patent agent first read the entire content of the application and concentrated on the design of the image. Sometimes it is very difficult to explain the innovative principle or idea by drawing a picture. During the explanation of the innovation in the drawing phase, the agent focuses on the use of minimal and self-explanatory words, using somehow a reference in the image.

3.4 Background
This part is much less important for filing the application, the patent agent focuses on this at least in the end. If the antecedent of the application first prepares the intellectual property rights - Patent value of the draft ends. The patent agent trying to briefly explain the context. If the background of the patent application describes in detail that it is not good for the inventor, some professionals intentionally do not say too much about innovation in the background section, in the way the patent can be protected in the public space.

3.5 Abstract
This section is not necessary here, generally it is described in first or some time not requires in a patent application. The innovation idea expresses in very few words where it is smartly explained. In some countries, the court demand first abstract, by study the abstract the patent application can be understood very easily if it is discussed in properly. The preparation of abstract after completing the draft of the patent application, if it is prepared earlier, there is a chance of mistake my, it is poorly written or not completely explanatory. But the drawback of this section is that here, some time the innovation specification explains.

3.6 Summary
In most of the country, the National Law does not request the legal authority to present the summary, but in practice it is done by the patent agent. Prepares the summary parts with the help of the Expert, so it is useful for the jurisdiction to understand what the inventor means. In this section avoid putting the image or explaining the content thoroughly. The agent focuses on writing the abstract in the sense that it does not explain the parts of the entire claim. The words used in this section are not very significant and try to complete in a paragraph [4–6].
4. Patent filling strategy and tools
Since it was discussed that patents are territorial rights, the design of the application only explains how to prefer patent protection. The filing of the patent application is a fundamental requirement for every country. It is necessary to grant a brief and who has requested its protection. Application filings in many countries are a financial resource for legal bodies, some of which are uncertain of the potential success of the invention. During filing, the briefing agent has the responsibility and obligation to submit all information on specific data that the owner of the inventor uses their migration mechanism to provide and facilitate access. The chronicle must not contain any errors or misleading calculations to mislead the person directing the description and to make it difficult, not considering providing adequate experience, understanding and construction of the invention. The filing of the patent should be clear that it is useful; some points relating to its usefulness must be in the specification. The chronicle may not be valid if it is not completed correctly. It is the duty of the inventor to provide all information in a very appropriate manner to the agent for the briefing of his invention and not to hide any information that he will give later to a subsequent claim, which should be legal for the duration of the patent. The inventor, despite the content that the patent agent presents, whether it is very good language or very good language, the patent agent writes the application on the basis of cheese. The agent embodied of the patent when preparing the command must request the inventor's artwork or facts before his work; It can be useful if the agent writes the request correctly. The Patent Agent has entered the correct address, affiliation, and workplace in the application. What should appear in the application? The right of the invention can be individual or on assignment to the patent company or other, for such sews the patent agent must be written in a very effective way in the application, the latter is not questionable. [7, 8].

5. Development and importance in pharmaceutical industry
The modern Indian pharmaceutical industry was primarily shaped by the Patent Act of 1970. Before that, the Indian market dominated the Western Multinational Corporation which controlled more than the third quarter of the market primarily through imported drugs. At that time, most of the pharmaceutical product was in the hands of foreign companies, and the national price of medicines was among the highest in the world. An important point of the patent law of 1970 was the special release linked to the pharmaceutical product which allowed patent protection only for a new production method or process in the synthesis of a molecule in the Indian market. This patent protection was granted for only 7 years for pharmaceutical products. This robust national pharmaceutical industry derives, in part, from the Patents Act of 1970 which effectively encourages reverse engineering of internationally patented products. If the large price increases that some had predicted after the adoption of TRIPS materializes, they should be evident in the aggregate data. Our main identifying assumption is that the timing of the patenting was orthogonal to other events that could also have influenced the trend of the market for recently patented products. To further address concerns about the heterogeneity in patent strength or the importance of patented molecules in the Indian market, below we review the subset of identified patent applications. Perhaps the most direct is a decrease in the number of producers due to the higher exit rate of established companies or a lower entry rate of new companies. Price changes can occur without any real difference in the observed market structure. As evidence of the existence of this phenomenon, we note that some of the companies that receive patents for molecules never appear in the retail sales figures. India has granted hundreds of patents to national and multinational companies. This represents one of the first attempts to apply a completely new patent system
to an existing market of this size and scope. Before the new patent system, many products containing patented molecules were sold outside India, but produced and sold in the country by a large number of companies [9, 10].

1. Step 1 – Check if your invention is patentable.
2. Step 2 – Draft the patent application.
3. Step 3 – Filing the patent application:
4. Step 4 – Publishing the patent application.
5. Step 5 – Examining the patent application.
6. Step 6 – Decision to grant patent.

6. How to file a patent application?

Documents can be filed in the patent office

- Through online (e-filing) or
- www.ipindiaonline.gov.in/online
- Through post or
- Can be submitted by hand

7. General procedure for obtaining a patent

- Filing of patent application
- Publication after 18 months
- Pre Grant Opposition /Representation by any person.
- Request for examination
- Examination: Grant or Refusal
- Publication of Grant of patent
- Post Grant Opposition to grant of patent
- Decision By Controller
- Renewing the Patent.

8. Documents required for filing of a patent application

1. Covering letter- indicating the list of documents;
2. Form 1 [section 7, 54 & 135 and Rule 20(1)] in duplicate; Application for Grant of Patent in
3. Form 2 in duplicate [Section 10; Rule 13] in Complete/Provisional specification
4. Form 3 Statement and Undertaking in [Section 8; Rule 12];
5. Form 26 Power of Attorney in (in original) (Rule 3.3 (a) (ii)); (if filed through attorney)
6. Form 5 in Declaration of Inventor-ship
   F18 (Only in case of an Indian Application; (Rule 4.17); 7.Request for examination
Transfer of Technology

- The patent Act, 1970
- The Contract Act, 1872
- License Agreement
- Exclusive / Non exclusive

Compulsory License
Contractual Licence

Fig: Showing for General procedure obtaining a patent
References

11. WIPO- Offer free online access to all international patents. (www.wipo.int)
13. Google patents
14. Sci Finder Scholar
15. Patent Offices
16. British Library
17. www.ipindia.nic.in