Chapter No 10

Conclusions
10.0 Introduction

IP scenario of India changed substantially since 1st January 2005. Indian pharmaceutical company started exploring various business models for R&D to sustain in market. There are many more strategies or paths adapted by small, medium and large Indian pharmaceutical companies to overcome the challenges posed due to the current Indian patent system, global economies, research/innovation challenges and various other aspects like price control etc. One thing is for sure that the future for Indian pharmaceutical is too bright, provided adapt appropriate measure and policies (balanced approach).

The objectives for R&D conducted by Indian companies can be broadly classified as follows:

• Development of new chemical entities (NCEs)

• Modifications of existing chemical entities to develop new formulations, compositions, combinations (also known as incrementally modified drugs)

• Development of generics (that is, development of processes for manufacturing active pharmaceutical ingredients (APIs) and development of formulations to satisfy quality and regulatory requirements for marketing patent-expired drugs)

The industry is expected to significantly boost its share of the generics market on the back of its expertise in process engineering and its low cost advantage. With many drugs going off patent, a huge opportunity in the global generics market is set to emerge (1). The other two objectives are being looked at seriously by the Indian pharmaceutical either by own potential or via mergers and acquisitions route. Mergers & acquisitions create a favorable environment for knowledge-base transfer, market expansion, and technology sharing among companies which will increase research and development activity. India does have a long way to go but is sure to emerge as a substantial player in the generics market as well as innovative market. The best incubator for innovation is that the Indian pharmaceutical, MNCs, research Institutes and Government should focus in creating a balance between the stringent patent regime and drug price.

1- www.Pharmaexpress.com
To pursue open innovation need to build more and improved partnerships and global collaborations.

On the basis of collected information, some important conclusions regarding pharmaceutical industry and Amended patent Act, 2005 are included in the chapter. The analysis of data and its interpretation have made the task of arriving at conclusions easier.

10.1 Conclusions

1. The Indian pharmaceutical company is the fastest growing industries in the world competing with the global pharmaceutical industries (2). It is in the front rank of India's science based industries. In the post independence era that is post 1947 the Indian pharmaceutical company was completely dominated by multinational companies (MNCs) and drug price in India was among the highest in the world(3). In 1970, the Indian parliament passed the Indian Patents Act 1970 with provisions to allow only process patents for pharmaceutical molecules and new chemical entities (NCEs). The Indian Patent Act 1970 was the main reason for the fast and continuous growth of the Indian pharmaceutical company. The Indian pharmaceutical company until 2005, engaged in generic product development hence there was no significant activity in patenting in India. In 2005, the Indian Patent Act was amended to include a ‘product patent’ regime to make Indian patent law compliant with TRIPs. The shifted the Indian pharmaceutical company's focus from generic products to research based. The Indian Patents Act, 2005 introduced product patents in India and marked the inauguration of a new patent regime aimed at protecting the Intellectual property rights of patent holders. The conclusion which comes out from research is that these firms have realized the need of R&D in post TRIPS period and they have been increasing their R&D Activity.

3-CBO- Drug discovery in India—Trends and challenges Oct 2006
2. Patents are intended to stimulate invention by protecting original results for a specified period of exclusivity during which the inventor may use or voluntarily license others to use, the invention without competition from copiers.

**Objective of Patent Law:**

1. It encourages research and development activity.
2. It induces an inventor to disclose his discoveries instead of keeping them as trade secret.
3. It offers the reward for the expenses of developing invention to the stage at which they are commercially practicable.
4. It provides an inducement to invest capital in new lines of production which might not appear profitable if many competing producers embark on them simultaneously.

New patent regime has posed several challenges for the Indian pharmaceutical companies. The principal economic rationale for granting patents is to stimulate investment for research and development activity. Introducing a new drug into the market may cost a company anywhere between $ 300 million to $800 million along with all the associated risks (4). But now it does require increasing research and development activity to survive in market. Before amended Patent act 2005, where only process patent was allowed, Indian companies had liberty to reproduces drugs manufactured by patent holding companies without paying any sort of fee and used to make profit (5). So innovation was missing. The conclusion which comes out from the study is that due to amendment patent Act 2005 Indian pharmaceutical companies has been increased their research and development activity by 10 to 15%.

3. Pharmaceutical R&D (drug development) consists of several stages. If a drug emerges from the trials showing a significant therapeutic benefit, it is submitted to the Food and Drug Administration for marketing approval.

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5-Anshu Shrivastava, Report on India’s Pharmaceutical Industry on Wednesday, October 5, 2011
If approved, post-marketing surveillance ensues looking for possible safety concerns that did not emerge in the earlier trials. The entire drug development process typically takes nearly 15 years (6). The largest share of that time is devoted to the three stages of clinical trials. There is no firm figure for the cost of drug development. Any significant shortening of the development time could reduce pharmaceutical R&D costs and, possibly, prescription drug prices. One more factor in the cost equation is the contribution of basic biomedical research funded by the National Institutes of Health. Such research is very important for drug development, and benefits the pharmaceutical industry by reducing its R&D costs.

To increase their research and development activity many companies are tying up their research and development with leading Indian research institutes like IICT, Hyderabad, ICMR, Indian Institute of Sciences, Bangalore and National Chemical Laboratories, Pune etc (7). A few pharmaceutical MNCs are also availing India’s potential drug discovery base through opening independent R&D labs in India or partnering with independent Indian drugs discovery services companies and research institutes. India’s competitive advantage lies in its lower production and research costs, its large pool of low cost technical and scientifically trained personnel (8).

Research and development has always taken the back seat amongst Indian pharmaceutical companies due to process patent. In order to stay competitive in the future, Indian companies will have to refocus and invest heavily in research and development. Increase in research and development activity will help pharmaceutical company to survive in market.

7-CBO- Drug discovery in India—Trends and challenges Oct 2006
8-Daara B Patel, Indian pharmaceutical company overview: Challenges and Opportunities, Product patents & drug price controls, 2nd June 2011, Goa
The connotation which comes out from the study is that Indian pharmaceutical company is increasing their research and development share (from turnover percentage of share has been increased).

4. In today’s competitive edge invention and innovation is necessity to be in market as everyone has to do something new to be in market. To be in market and get success in today’s rapidly changing, competitive, high technology environment requires an integrated global Intellectual Property strategy, with patents as its cornerstone, in order to protect and utilize technological.

IP scenario of India changed substantially since 1st January 2005. Indian pharmaceutical company started exploring various business models for research and development to sustain, Indian Drug Companies entered into various strategies, like being strategic alliances with large generic companies, being contract manufacturing agreements with innovator companies etc. There are many more strategies or paths adapted by small, medium and large Indian pharmaceutical companies to overcome the challenges posed due to the current Indian Patent System, global economies, research/innovation challenges and various other aspects like price control etc.

Mergers, acquisitions and alliances have been taking place on an unprecedented scale, most notably with companies in the U.S, Europe and Japan (9). International and national level mergers and acquisitions have now become a common phenomenon in the pharmaceutical industries. Internationally SmithKlineBeecham with Sterling, Glaxo with Burroughs Welcome, Ciba Geigy with Sandoz and Sandoz with Novartis are some examples of big takeovers. By mergers and acquisitions these companies are becoming even larger with more financial power and with the aid of International financial companies they are trying to capture and control Asian market where almost 60% of world population is residing.

Today Indian companies are busy chalking out strategies to globalize and strengthen their presence in the domestic and international market by approaching the same route of mergers and acquisitions and some are adopting the “buy and grow method” by taking over popular brands and increasing their business. The core survivors will be the one with robust and aggressive research and development and have significant position in domestic and international market.

The new patent regime has led many multinational pharmaceutical companies to look at India as an attractive destination not only for research and development but also for contract manufacturing, conduct of clinical trials, generic drug research and co-marketing alliances.

The focus of the Indian pharmaceutical companies is also shifting from process improvisation to drug discovery and research and development. Indian companies are setting up their own research and development setups and are also collaborating with the research laboratories like CDRI, IICT etc. To conclude, the future of Indian Pharmaceutical Sector looks extremely positive. The key is innovation and creativity, and the desire for building a global business model.

5. The growth of the Indian pharmaceutical company has been shaped by the position of the Indian government on intellectual property law as outlined in the Indian Patent Act of 1970, under which only process patents were covered. India has decided to avail itself of the full transition period for developing countries and has until 1 January 2005 to extend patent protection to pharmaceutical products. In keeping with the TRIPS commitments, India has started on a process of amending the Patents Act by providing exclusive marketing rights (EMRs) and creating a mailbox system for patent applications for a period of five years or until the patent is granted or rejected, whichever is earlier (10).

The pharmaceutical industry is a knowledge driven industry and is heavily dependent on research and development for new products and growth. However, discovering new molecules is a time consuming and expensive process and is thus, dominated by large global multinationals.

The Indian patent law seems to have an unbreakable bond with the pharmaceutical industry. In the last 40 years, India has traveled from being a country where pharmaceuticals were one of the world’s costliest to the present where it is one of worlds cheapest. The backbone for such achievement is India’s patent law which helped Indian pharmaceutical company to grow at a rate of 8-10% a year (11). Indian pharmaceutical companies are ready to accept the product patent act. The impact of the introduced product patent act is, it has strengthened the presence of multinational companies in India and such changes will bring lot of foreign investment in to India. At the same time 80% of existing formulations are out of patent, so it is not affecting the Indian companies. Patent act brought more outsourcing to India and Indian pharmaceutical company experienced growth. Companies are now contributing much more capital to the goal, typically spending more compared to previous of their turnover on research & development activity.

The conclusions according to the research study are that amended patent Act 2005 is useful to Indian pharmaceutical company, intellectual property right system has helped Indian pharmaceutical companies in growth, Indian intellectual property right system is user friendly to Indian pharmaceutical company and the process of filling patent is user friendly to Indian pharmaceutical company.

6. Section 10 of the Patents Act mainly clears about the contents of the specifications in a patent. That is process of filling patent.

The section mainly tells that a patent must include with title, description of the invention, drawings, model or sample of anything illustrating the invention, description of the operation, use, method of performance of the invention, the best method of performance, ending with a claim defining the scope of the invention. The amendment includes additionally an abstract of the invention, which must be included in to the patent.

Research and development activity demands huge capital investment, skilled people, technology etc (around $300 million to $800 million of investment) where success rate is even very little (12). Even time require is long as 11.8 years to come up with patented product (13). The conclusion which comes out from the study is that period required to register to patent is more than required time. The lengthy time period between patent filing and placing a product on the market means that pharmaceutical manufacturers receive far shorter periods of patent exclusivity than is the case for other patent dependent industries.

7. All though India is trying for global market but it has weakness as, low investments in innovative research and development. Diffused nature of the Indian pharmaceutical company means that only about 20 to 30 companies are large enough to bear the transactions costs. Majority of companies lack the ability to compete with MNCs for new drug discovery, research and commercialization of molecules on a worldwide basis due to lack of resources. Strong linkages between industry and academia which are essential for growth of the industry is lacking in India.


Sales and marketing knowledge is inadequate due to lack of understanding of international Pharmaceutical marketing/pricing practices and market environment in various countries. Inadequate manufacturing practices in comparison to those accepted in developed world such as change of API source, change of manufacturing locations, equipment, etc., without proven stability/ bioequivalence may be creating inadequate technical work force for exports. The national drug regulatory system though evolved substantially, has been in the need of strengthening its manpower and systems requirements. Inadequate emphasis on Biosciences in education system leading to slower development in areas related to Biology.

Apart from all above weaknesses Still Indian pharmaceutical company is concentrating on patent grand. Every application shall be accompanied by a provisional or complete specification. Filing of a provisional specification allows the applicant to get an early application date.

The first step in securing a patent is the filing of a patent application. Patent search should be conducted before filling the application. If the application is submitted with the Patent Office, the officer then starts publication and examining the authenticity of invention. If everything is in order, the patent would be granted to the inventor. According to the research study about Problems faced by Indian pharmaceutical companies while registering IPR commonly are Documentation work, financial support, Technology, Unavailability of Research and development center. The conclusion which comes out from the work is that documentation, financial Support & Technology these are the three major problem areas respectively faced by Indian pharmaceutical companies while registering IPR.

8. Patented products are mainly launched by MNC companies having high innovation based research and patenting potential. Generally they rule the market creating a monopoly, unless a generic product comes into competition. The Patent Bill 2005 was in favor of both the branded companies and the society by giving provisions for the issue of compulsory license for manufacturing and export of patented pharmaceutical products to countries which have insufficient or no manufacturing capacities in pharmaceutical sector to address public health situations in accordance with “Doha Declaration”.

The Indian pharmaceutical market has encountered both advantage and disadvantage from the Patent Bill 2005 where the Indian residents were needed to file first to the Indian patent office for seeking permission for making a patent unless a patent application for the same invention has been made in India, not less than 6 weeks before the patent application is made outside India.

As India signed the GATT on 15 April 1994, India’s patent legislation must now include provisions for availability of patents for both pharmaceutical products and processes inventions. The problems in inventing patented molecule drug are commonly includes research and development facility, more time require for innovation, huge capital investment, lack of Human resource, insufficient venture capital funding, paucity of trained person, different private equity market and early stage funding. The conclusion is research and development facility, more time requires for innovation and huge capital investment are the main three problems respectively in inventing patented molecule.

9. In developing generic drugs, the manufacturer only needs to demonstrate the bioequivalence of its drug to the branded product, and that the manufacturing process produces acceptable purity and consistency. The development does not involve lengthy and costly clinical trials because generic manufacturers only need to prove bioequivalence. On average, the development of generic drugs takes only 3 years, in contrast to the six to seven years of development time spent on branded products (14). The generic business not only in India but throughout the world is rising. It has practically influenced all foreign and multinational companies and some are even conducting patent and generic business simultaneously.

But the urge for making quick money has affected society in two ways, firstly the MNC companies without having strong regulatory authorities are becoming incapable to find out strong loopholes in a patent and on the basis of very weak loopholes, they are applying for ANDA (Abbreviated New Drug Application) through Para IV (Para four) filing that is costing them very much when they lose to the patent holder. Many companies have lost billions of dollars in generic business due to which the foreign as well as Indian economy is suffering from great set back.

14- www.Pharmaexpress.com
Secondly, generic business is full of competitors and in the rat race the common people are suffering because of the below standard drug that are manufactured and marketed both.

India today possesses the certificate of producing high quality generic medicines that are sold around the world. In the near future we expect a tremendous surge in the demand of generic medicines followed by a huge number of patent expires which has become a major concern among the governments in US, and in developed countries like Europe so as to reduce the healthcare costs being spurred by an ageing population.

India is a place for all MNC (multinational companies) to conduct research and development due to easy availability of volunteers, skilled workers, clinicians, tax concession, etc. Moreover, the huge population of India serves as a good market because of large number of buyers. Apart from the, generic business will be well conducted here because of the rich poor stratification that mainly draws attention towards the generic products that are cheaper.

The conclusion which comes out from the study is that generic products are used mostly to increase market share, to enhance profitability and to widen market coverage these are the three major advantages.

10. Patent is an exclusive right granted to the innovator of a new medicine for manufacturing and marketing the product for a period of time. These patents are helpful as they promote research & development, discloses the discoveries in return of exclusive right granted, it also rewards the innovator through the profit he makes. India enjoys several strengths in comparison to the other developing countries in area of population, investment, diversity etc. India hosts the cheapest pharmaceutical industries. But although having these facilities India is lagging behind and facing challenges from other countries in terms of commitment from government, efficient research & Development units, strong patent regime, better data protection, exemption of duties etc.

The institutions or MNC companies invests huge amount of money in the invention of a new molecule that nearly takes 14 long years or more to develop. Now in 20 years
timeline it takes another 8-10 years to be properly indentified in the market, so it practically becomes hard to recover the money invested and make profit (15).

TRIPs the intellectual property component of Uruguay round of the GATT treaty asserted that Intellectual property rights would benefit the developing countries by encouraging of foreign investment, by enabling transfer of technology and greater domestic research & development.

Indian Patent Act 1970- Initial boost in Indian pharmaceutical company was brought by IPA 1970 that allowed innovations patented elsewhere to be freely copied and marketed in India. It restricted import of finished formulations and introduced strict price control regulation. Patentee may maximize profit by increasing prices in developed countries but this will have direct fallout on prices in developing countries. Price elasticity of demand in country like India is not significant with respect to loss in consumer welfare. The conclusion which comes out from the study is that patents majorly help pharmaceutical companies to earn through loyalty, licensing and to grow profitability of pharmaceutical company.

11. The Indian Patents (Amendment) Act, 2005 introduced product patents in India and marked the beginning of a new patent regime aimed at protecting the Intellectual property rights of patent holders.

Features of the Patents (Amendment) Act 2005 related to product patents:-
a) Extension of product patent protection to products in sectors of drugs, foods and chemical. It is helpful to encourage the people for research and invention.
b) Term for protection of product patent shall be for 20 years. It is very difficult to have a profit after working long years with one invention.
c) Introduction of a provision for enabling grant of compulsory license for export of medicines to countries which have no manufacturing capacity; provided such importing country has either granted a compulsory license for import or by notification or otherwise allowed importation of the patented pharmaceutical products from India. This avoids import and export of spurious drug.

The generic drugs would have a limitation and the multinational companies would enjoy monopolistic rights, however it would attract research and development and therefore multinational companies would prefer to open their research and development centers in India. The major concern arising out of these amendments is increased prices of drugs thus creating problems for the poor. To solve such problem other regulatory mechanisms could be put in place to control the drug prices. Indian government should make use of price controls, its bargaining power as a large purchaser, and compulsory licenses to ensure that the process does not proceed more quickly than is desirable.

The WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) introduced intellectual property rules into the multilateral trading system for the first time. The pharmaceutical industry is heavily dependent on research and development for new products and growth. However, discovering new molecules is a time consuming and expensive process and is thus, dominated by large global multinationals.

The conclusion which comes out from the study is that patented drugs are useful to pharmaceutical company for market penetration, to increase profitability and maximize global profit respectively.

12. Following are the threats from amended patent Act 2005 related to product patent as:

- Due to the less profit and high risk incurred in patent process, pharmaceutical company undergoes ever greening process where extension of patent timeline by only minor
improvements or modification is done. Thus the dice gets heavily loaded against generic market.

- The product patent regime has made drugs unaffordable due to which the healthcare status will be seriously affected.
- Number of mergers and acquisitions has risen due to unaffordable Research & Development on new drugs.
- The patent regime will restrict the access of allopathic medicines to only the affluent, affordable and privileged class of people in India & other countries.

Every coin has two sides there are some cones with the introduction of patents, the inventor will try to maximize his profits and therefore price his drug higher than if there were no patents. Correspondingly the consumption of the drug will be lower. This represents an indirect welfare loss to Indian consumers because of higher prices associated with introducing product patents and another reason for the welfare loss would be in the form of lesser availability of patented drugs.

The scope of patent protection is changing not only because the laws are changing, but also because of increase in invention activity. The creation cost of the medicines composed of research & development costs, production costs, marketing costs and its profits. The research based pharmaceutical industry is distinguished from others by relatively high research & development costs, marketing costs and profit margins. Risks incurred are very high in success and failure ratio, even though patents support high margins for new, innovative drugs because only a small proportion of chemical entities tested reach the market and of these only a few are best sellers. Consequently, research & development expenditures have to be recovered from the relatively few commercially successful products. Execution of the TRIPS Agreement may lead to high drug prices, low access to medicines and a weakening of pharmaceutical industries in the developing countries. The conclusion which comes out from the study is that due to amendment of patent Act in which product patent is granted, there in increase in cost of the medicines by 25 to 30%.

13. In India consumers are sensitive to prices as general income levels are low and consumers directly pay for drugs. This creates a sliding pressure on the medicine prices. Diminishing numbers of new drugs, as against existing drugs going off-patent, high
research and development costs, and pressure to reduce healthcare costs are forcing big pharmaceutical to line in strategic partners to contain manufacturing and drug development expenses. So India should offer a significant cost-quality proposition in end-to-end research and development.

The general impression of emerging product patent regime on drug prices is that drugs which are under patents are expensive as compare to generic products and once the product patent regime is in place, they will be unaffordable to our country and as a consequence their healthcare status will be seriously affected. The high prices of patented drugs affect not only the patients in developing countries, but also in the developed world.

The development of the Indian pharmaceutical company would create new jobs, but mainly it would provide access both to modern technology in the field of medicines and to medicines developed indigenously. As a result, it will be able to provide new drug formulations and improved healthcare treatments to Indian patients. But it may be possible due to amended patent Act 2005 there are an adverse effect on availability of medicines for the common man. The conclusion which comes out from the study is that due to amended patent Act 2005, there is moderate adverse effect on availability of medicines to the common man.

14. Government of India encouraged the research and development in pharmaceutical companies by various ways. Besides, planning commission has earmarked $34 million towards drug industry R&D promotion fund for the tenth plan (16). By providing better data protection mechanism and favorable domestic pricing issues; major MNCs pharmaceutical companies like Sanofi Aventis, Merck etc., would be ready to establish their manufacturing and R & D facilities here.

An innovative industry in India can get competitive advantage in the market if it develops the necessary expertise and skills in developing and manufacturing new products, which are patented. For example, the advantage of a three year excise duty exemption or exemption from Drugs Price Control Order may translate into reserves income which may offset the cost towards R&D.

CSR can be defined as a business commitment to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life. Corporate social responsibility can be understood as the socio-economic product of the organizational division of labor in a complex modern society. For many companies in the research-based pharmaceutical industry, CSR is a fully integrated element of their strategies and operations. This implies that, in addition to following a socially responsible business model (consistent with global standards such as health, safety and environment policies, for example), pharmaceutical companies undertake many additional activities related to healthcare, particularly (but not exclusively) in developing countries.

The activities of pharmaceutical companies cover a number of areas such as: improving access to medicines in developing countries, donation programmes, research and development for diseases prevalent in developing countries, investing in health related education and prevention programmes and establishing global safety and ethical standards into daily business practice. Confronted with new emerging diseases and increasing microbial resistance to existing medicines, the most important role of the research-based pharmaceutical industry is to continue to create and develop new products. CRR helps to provide money, medicines, time and equipment to non-profit organizations to help improve health and education in underserved communities.

Most importantly, the industry's primary role and major social responsibility is to deliver new, innovative, medicines. Besides its support for the goals of corporate social responsibility, the research-based pharmaceutical industry is the main source of all modern pharmaceutical products, responsible for saving lives and improving the quality of life in our society.

NGOs work in the areas of public health, medical research and education with the goal of providing a better health system in India. They work on several initiatives to strengthen public health through education, training, research, community empowerment and improve access to health services.

Some NGO focuses on strengthening the public health workforce capacity in India by establishing new institutes of public health, undertaking research, strengthening existing
institutions, facilitating establishment of standards in public health education and wider access to health services.

The conclusion which comes out from the study is that government subsidy, NGO support and CSR Activity are three different ways or strategies respectively to make patented drug affordable to the common man.

15. The general impression is that drugs which are under patents are expensive compared to generic products and once the product patent regime is in place, they will be unaffordable to the majority of countries of the developing world and as a consequence their healthcare status will be seriously affected. The high prices of patented drugs affect economic treatment of the patients.

The new ordinance amended patent Act 2005 ensuring product patent regime will result in price escalations of drugs. Product patent will lead to increase in drug prices and therefore expensive medicines will become inaccessible and out of reach of the common man.

The conclusion which comes out from the study is that reduction in patented life of medicinal product will result in the economic treatment of the poor population.

16. The minimum term of 20 year patent protection required by TRIPS effectively allows a pharmaceutical company a monopoly over the production, marketing and pricing of patent protected medicines. It will be able to keep the price of the drug high during the protection period, free from competition. The TRIPS Agreement extends the scope of patent protection to both products processes. It would therefore be possible to apply for patent rights over products for 20 years, and thereafter, further periods of 20 years each could be applied for products covered by patented processes. Developing country pharmaceutical producers will find themselves pushed out of the market, having to compete with the large MNCs. For the smaller producers in the developing world, which specialize and depend on manufacturing cheaper generic alternatives would no longer be possible at least, until the expiry of the 20 year period.
In the pharmaceutical sector it is patents that are especially crucial in appropriating the returns to R&D. This is because once the originator, breakthrough drug is produced through lengthy and relatively expensive R&D processes, the time, capital and effort involved in copying it is often minimal. But at the same time it will increase cost of treatment to common man.

In case of generic pharmaceutical manufacturing when the mailbox applications are cleared and patents awarded, newly introduced generics in the Indian market may have to be withdrawn. Costs to the patient will then inevitably rise. New drugs that emerge in the international arena will be available to Indian patients only from the patent holder.

The conclusion which comes out from the study is that if there is deduction in patented life of medicinal product somewhere around 5 to 15 years of patented life, it will result in the economic treatment of the poor population.