



ORGANISATION OF PHARMACEUTICAL PRODUCERS OF INDIA

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OPPI POSITION PAPER

REGULATORY DATA PROTECTION - A BUILDING BLOCK FOR PHARMACEUTICAL R&D

1. BACKGROUND:

To improve the global health situation and access to healthcare mere discovery of a new pharmaceutical entity or a vaccine is not sufficient. The journey from mind to market is an arduous one. From the viewpoint of a patient, the safety, quality and efficacy of medicines are crucial. For the purpose, substantial data needs to be generated through extensive pre-clinical and clinical trials to the satisfaction of regulatory authorities.

The generation of such data involves considerable resource in terms of time, energy and money. Since only one in 5000 molecules researched eventually reaches the market, the process is also risky. In fact, the development costs in Research are almost 70% while discovery costs are around 30%. In addition to clinical evaluation, products to be introduced in the market have to satisfy certain minimum criteria relating to environmental compatibility, toxicological clearance, pharmacological testing and stability. It is estimated that the entire process of drug development from discovery to market takes an average of 10 years and costs on an average U.S. \$ 1 Bn. in industrialised countries. Over the period, the regulatory process has become more rigorous as several adverse side-effects were discovered in post-marketing surveillance resulting in increased costs and time. For example, marketing approval of a new drug by U.S. FDA includes an 11-step approval process. The average period for approval process has now stretched to 14.2 years from 8 years in 1960. The average number of clinical trials and patients has more than doubled since the early 1980s. The clinical evaluation process consisting of Phases I to IV costs around 40% of the company financed R&D costs. This arduous process has resulted in approval of only 17 new molecular entities by U.S. FDA in the year 2007.

Since this test data is costly, time consuming and proprietary in nature, it needs to be protected. *Data Protection, therefore, is an integral part of Intellectual Property Rights.*

Even the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPs Agreement) specifically recognises the “protection of undisclosed information” as being a category of Intellectual Property subject to protection. Article 39.3 of TRIPs Agreement provides that:

“Members, when requiring, *as a condition of approving the marketing* of pharmaceutical or of agricultural chemical entities, *the submission of undisclosed test or other data*, the origination of which involves a considerable effort, shall protect such data against disclosure, except where necessary to protect the public, or unless steps are taken to ensure that the data are protected *against unfair commercial use.*”

Intellectual Property Rights (IPRs) referred to in Article 39.3 is commonly referred to as “**Data Exclusivity**” in the U.S. and “**Data Protection**” or “**Regulatory Data Protection**” in the European Union.

Data Protection is an independent IPR; and should not be confused with other IPRs, such as patents.

Bringing in a new drug to the market involves two steps. The first step is discovery of a new pharmaceutical entity. In the first step, the right of the originator is protected in the form of a patent. The second step is to bring the product to the market. Before the product is introduced in the market, the safety, quality and efficacy of the innovative drug has to be demonstrated to the



regulatory authorities through comprehensive data. This data needs to be protected. Both these steps are necessary; neither is sufficient by itself. The public reaps the benefits of the new drug only after both the steps are completed.

2. **RATIONALE FOR DATA PROTECTION:**

Irrespective of what has been indicated in Article 39.3 of TRIPS, Regulatory Data Protection is justifiable on the following grounds:

- a. Generation of Data by the originator consists of “*considerable efforts*”.
- b. Submission of clinical data is a statutory regulatory requirement. Were it not for the obligation to provide data to Government, data would have remained completely under control of the originator. It is, therefore, a reasonable obligation on Government as a gatekeeper to respect confidentiality of the data in terms of non-reliance and non-disclosure.
- c. Any failure by the Government to provide the required protection to the data is tantamount to “*unfair commercial use*”.
- d. Since the data is collected through various phases of clinical evaluation, involving considerable costs, time and energy, it becomes valuable from viewpoint of the originator and needs to be protected.
- e. Since the data is proprietary, any access or permissibility for use of such data by the second applicant without the concurrence of the originator is *unfair* on grounds of propriety and business ethics.
- f. Given the imbalance between the costs to the originator of getting marketing approval for its product and the copiers’ cost of coming to the market, the research based industry will not have an incentive without Data Protection, to engage in important R&D activities. In that case, newer and better drug therapies, particularly for untreated and under-treated medical conditions will not be available to the patients.
- g. Without Data Protection, the originator of the innovative drug would be placed at an *unfair, commercial disadvantage* when compared to their generic competitors. Generic competitors do not incur similar costs of meeting the mandatory requirements of regulatory authorities for drug approval.
- h. By requiring non-reliance and non-disclosure, a strong Data Protection regime recognises that use of reliance on such data for benefit of others unfairly, places the innovator at a disadvantage when compared to others who do not bear the same significant marketing approval costs.

The distinctiveness of the two incentives, namely, Patent Protection and Data Protection is recognised in countries which are leading in research and development in pharmaceuticals.

3. **BENEFITS OF DATA PROTECTION:**

In emerging markets like India, Data Protection will attract higher Foreign Direct Investment (FDI). Countries providing Data Protection will be the preferred destinations for R&D collaborations. Data Protection also provides substantial benefits to:

- Patients
- Doctors
- Researchers
- Industry
- Government

Benefits to Patients:

Data Protection ensures higher degree of overall safety and efficacy of drugs launched in the market. Mere proving of Bioequivalence/ Bioavailability (sometimes on as low as 12 healthy volunteers) does not guarantee Drug Safety as the impurities profile of the duplicator’s drug is likely to be different than that of the originator.



The practice of medicines is also likely to change in the near future to accommodate genetic profiling, pharmacogenetics, novel diagnostics and gene therapy. This will herald an *era of personalised and predictive medicines*. Data Protection will incentivise this process.

Benefits to Doctors:

Doctors continuously seek scientific information. Clinical evaluation becomes valuable from this perspective. Once provisions for Data Protection are made, comprehensive and quality data can be collected and scientific information to be provided to the doctors can be accelerated.

Benefits to Researchers:

Today's therapies are directed at fewer than 500 targets. Considering that the human genome consists of at least 30,000 genes, in all probability the study could lead to at least 3,000 to 5,000 potential new targets for therapy. This presents an excellent opportunity to explore new areas of R&D. This could be facilitated by the availability of new research tools such as gene profiling, protein profiling etc. This implies that a developing country like India with superior Information Technology base and cost effective quality clinical research can leap-frog approaches and move to a *new paradigm in R&D*. This will open up world class clinical trial management facilities in India.

Biotechnology drugs represent a significant part of the new innovative medicines launched worldwide. Out of 37 new active substances introduced in 2001, over 35% were biotechnology products. There are more than 350 biotechnology medicines and vaccines currently under clinical trials targeted at more than 200 diseases. The clinical research market has a potential to grow to U.S.\$ 2 Bn. India has only scratched the surface of its potential as a global centre for R&D. Clinical researchers in India can win a substantial share of this market. *Data Protection will certainly act as an effective driver* in this evolving scenario.

There will be increased R&D collaborations. India's advantages of cost speed and skills in clinical trial research can be leveraged.

According to the U.S. National Institute of Health (NIH), lack of Data Protection in India is the primary reason why India ranks only 9th (compared to China which ranks 2nd), in funding given by NIH outside U.S.A.

An **Expert Committee** under the Chairmanship of **Dr. R.A. Mashelkar**, an eminent scientist, also highlighted significance of Data Protection, as below:

"In order to ensure enabling environment, the regulatory division dealing with the applications concerning new drugs and clinical trials would be required to develop *suitable mechanisms to ensure confidentiality* of the submissions."

Benefits to the Pharmaceutical Industry:

Research is a key driver for the Pharmaceutical Industry. Scientists prefer to work in research laboratories in those countries which provide full-fledged protection to IPRs. Data Protection is one of the Intellectual Property Rights. Reversal of brain drain and retention of scientific talents will be helpful to developing economies, including India to intensify R&D efforts.

Indian research based companies, globalising their business are already engaged in partnerships with established foreign research based companies, as reflected in agreements between Ranbaxy and GlaxoSmithKline and Dr. Reddy's Laboratories with Novartis and Novo Nordisk. Our own scientists, therefore, need Data Protection to protect their Intellectual Property as many Indian pharmaceutical companies have substantially increased their R&D budgets.

Benefits to Governments:

With around U.S. \$ 8 Bn. in domestic sales and another U.S. \$ 5 Bn. in exports in 2007, the Indian Pharmaceutical Industry is emerging as a global powerhouse and is increasingly being recognised as a reliable source of quality medicines at affordable prices. Such knowledge based industries like Information Technology (IT) and Pharmaceutical Industry contribute significantly to GDP (Gross Domestic Product) in a national economy. This can be facilitated through positive policy framework. Patent Protection and Data Protection will have to be an integral part of the



policy framework to be in tune with the global trends. Indian patients will gain from the accelerated access to new medical therapies.

Once India moves from a stand-alone position to one which aligns itself with the world in terms of IPRs, including Data Protection, India is likely to increase trade not only in ASEAN (Association of South-East Asian Nations), MERCOSUR countries (Argentina, Brazil, Paraguay & Uruguay) and NAFTA (North American Free Trade Agreement), but even in regulated markets of U.S.A. and Europe. There will be increase in scientific education, technology transfer and quality employment.

4. Data Protection - An International Scene:

A review of National Laws relating to the protection of Registration Data in the major WTO Member-States, reveals that most of the countries have recognised and appreciated the role of Data Protection.

Although there is no uniform standard that is followed by the countries while enacting and implementing the Laws related to Data Protection, there is a common principle that is followed in that the laws generally specify the conditions under which Data Protection can be sought and the period for which the “originator” can enjoy the exclusivity after the marketing approval is granted in the country. The period of Data Protection is typically between 5 - 10 years. The following table indicates the details of Data Protection term and main highlights:

Table 1: A Survey of Data Exclusivity Legislation in a few countries

Country	Protection Term	Highlights
Canada	5 years	Food and Drug Regulations, Section C.08.004.1
Mexico	5 years	Article 1711. Trade Secrets, NAFTA
USA	5 years	Food and Drug Law, Section 505 (355) (D)
Costa Rica	5 years	Article 9 - Abbreviated documentation for the Authorisation of a Pharmaceutical Preparation. Article 10 - Mandatory Licences after the expiration of the period. Article 11 - Definition of an Essentially similar Medication Article 12 - Documentation and Data Exclusivity compliance
El Salvador	Not specified	Article 177 and 178 of Law of the Development and Protection of Intellectual Property
Guatemala	15 years	Article 177 - Industrial Property Law; Government Agreement No.89 - 2002 Article 87 - Protection of evidence or other information.
Honduras	Not specified	Industrial Property Law, Article 73 and 74
Nicaragua	Not specified	Article 125 - Industrial Property Law
Panama	10 years	Legislative Assembly Law No. 23; Section 7: Protection of Undisclosed Information - Article 39
Trinidad & Tobago	Not specified	Article 27/1996 - Protection against unfair competition
Cuba; Dominican Republic	--	No.39.3 Data Protection
Bolivia	5 years	Andean Pact Article 266 of decision 486 dated 12/1/2000
Brazil	Not specified	Chapter VI crimes of unfair competition Article 195



Country	Protection Term	Highlights
Colombia	5 years	Andean Pact Article 266 of decision 486 dated 12/1/2000
Colombia; Mexico & Venezuela	Not specified	Treaty of the group of three. Article 18-22: Data Protection of Chemicals used for Pharmaceutical Purposes or Agrochemicals
Ecuador, Peru Venezuela	5 years	Andean Pact Article 266 of decision 486 dated 12/1/2000
Argentina, Chile, Paraguay, Uruguay	----	No.39.3 Data Protection
Austria, Denmark, Finland, Greece, Iceland, Ireland, Norway, Portugal, Spain	6 years	Article 10 (1) (a) (iii) of Directive 2001/83
Switzerland	5 years	Decree on Medications; Section 3, Article 17
Turkey	Not specified	Annexure 8 on Protection of Industrial and Commercial Property of the Customs Union Agreement
Czech Republic	6 years	Section 32 of the Law No. 79/1997 Coll. On Drugs
Estonia	6 years	Article 2 - Submission of Application for Marketing Authorisation Article 2.5
Hungary	6 or 10 years	Health Ministerial Decree 12/2001 on Registration and Marketing Approval of Drugs for Human Use - Section 26
Latvia	6 or 10 years	Normative Documentation of Republic of Latvia Pharmacy Regulations, Article 18 - 20
Poland	3 years	Act of 6 September 2001, Pharmaceutical Law Article 15.1
Romania	6 or 10 years	Draft Reglementation Law
Russia	Not specified	Article 39 - Civil Code - Business or Commercial Secret
Slovak Republic	6 years	Coll. On Drugs and Sanitation Facilities
Slovenia	6 years	Article 15, Medical Act
Bulgaria, Croatia, Lithuania	-----	No.39.3 Data Protection
Egypt	5 years	Peoples Assembly Committees Undisclosed Information - Articles 55-62, Prime Minister Decree No.1211 concerning Data Exclusivity of Chemical, Agricultural and Pharmaceutical Products



Country	Protection Term	Highlights
Jordan	5 years	Article (8) - Unfair Competition Law
Saudi Arabia	Not specified	Provides defact Article 39.3 Protection; no separate legislation
South Africa	Not specified	Medicines Control Act 101 of 1995, Section 34
Kenya, Morocco, Nigeria	---	No.39.3 Data Protection
Australia	5 years	Data Exclusivity Provision of the Therapeutic Goods Act (Cth) 1989 (Australia) .25A
China	6 years	Implementing Regulation of Drug Administration Law of China Article 31 - Draft of February 19, 2002; Report of Working Party on Accession of China to WTO
Hong Kong	Not specified	Pharmacy and Ordinance Act
Japan	6 years	Japanese Drug Regulation Article 18 - 3
Korea	4 or 6 years	Article 26-2 of the PAL; Article 5, Paragraph 11 of the KFDA Regulations regarding the Safety and Efficacy examination of drug products
New Zealand	5 years	23B. Medicines Act 1981
Pakistan	Not specified	Drugs Act 1976. Section 43 of the Drugs Act
Singapore	5 years	Medicines (Amendment) Act of 1998; New Sections 19A and 19B
Thailand	Not specified	Trade Secret Act Chapter 3, Section 15
India, Indonesia, Malaysia, Philippines, Taiwan	----	No.39.3 Data Protection

Source: "Complying with Article 39.3 of TRIPs... A Myth or Evolving Reality"
Article by Dr. Prabuddha Ganguli, Advisor, VISION-IPR

5. OBLIGATIONS UNDER TRIPS ARTICLE 39.3 :

Article 39.3 requires a WTO Member-State to protect registration test data submitted to regulatory authorities against "unfair commercial use and disclosure", except when necessary to protect the public, or unless it can ensure that the data is protected against unfair commercial use.

Article 39.3 contains **two obligations**:

The **first requirement** is that test data must be **protected against disclosure** to the public or even within the Government.

The **second requirement** relates to **unfair commercial use**. TRIPs Agreement negotiators understood this term to mean that the data will not be used to support, clear or otherwise review other applications for marketing approval for a set amount of time unless authorised by the originator of the data. Any other definition of this term would be inconsistent with the logic and the negotiating history of this provision.



A misconception prevails that TRIPs provisions are ambiguous. This is not true. WTO Members generally have not found the provisions of Article 39 to be ambiguous. It is clear from the negotiating history that the authors of TRIPs Article 39.3 had in mind a period of protection during which Governments could not directly or indirectly use or rely upon proprietary test data of one company to provide a marketing authorization for another company for the same drug. Practices implemented by WTO Members adopting Data Protection in conformity with TRIPs Article 39.3 support this view.

6. DATA PROTECTION AND GENERICS:

A bogey is raised to create an impression that Data Protection provisions will act as a barrier to the development of generics, resulting in loss of the market. Possible decline in export market is also highlighted. *This argument is based on invalid assumptions. The following facts will prove the irrelevance of various arguments propounded by the generic lobby.*

Data Protection refers only to new products registered/patented in India. It will not affect the generic drugs already in the market.

U.S.A. is an outstanding example which shows that research based industry and generic industry can co-exist, giving dual benefits of innovative medicines and cheaper copies of off-patented medicines to the general public. In fact, the more the patented medicines, the more will be generic drugs after expiry of the patents. In U.S.A. which has a long standing Data Protection Regime, the market penetration of Generics is amongst the highest in the world and stands at nearly half of all the prescriptions. In fact after the introduction of Hatch Waxman Act in 1984 that provided for a 5 year period of Data Protection, there has been a spurt of development of New Drugs as also entry of generics into the market.

The apprehension that growth of generic market will be slackened is ill-founded. Indian companies are aggressively seeking opportunities for generics even in regulated markets mainly U.S.A. and European Union. Co-licensing and co-marketing arrangements between Indian companies and companies in these markets will certainly be dependent upon recognition and implementation of a fully compliant TRIPs Regime, including Data Protection.

Data Protection does not prevent generic manufacturers from submitting their own pharmacological, toxicological and clinical data within the period of Data Protection and thus gain marketing approval for their products.

In next three years, around U.S.\$ 60 Bn. worth of drugs will come off patents in U.S.A. India is well poised to capitalise on this opportunity provided it observes the norms of global play like honoring IPR and Data Protection.

The entire controversy is based on a narrow perspective. Data Protection is not an issue of "Generics vs. Research based companies". It is a much larger issue. Data Protection and patents are not only important for research based global companies; it is also for all knowledge based Indian companies.

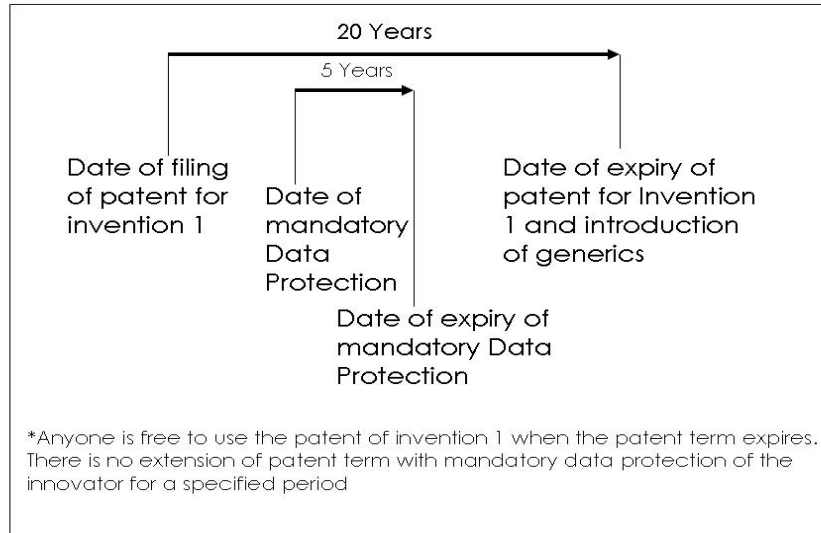
7. DATA PROTECTION IS EVERGREENING - A MYTH:

In most of the cases, the period of patent protection and Data Protection will run concurrently. The ground reality will be that innovator companies will launch their products in India within as short a time as possible from the launch of that product anywhere in the world. The period between introduction of a drug elsewhere and its introduction in India has been continuously shrinking. The range of such period between 1965 and 1988 was 4 years to 13 years. The period during 1990 to 1999 ranges between 0.25 year and 2 years.

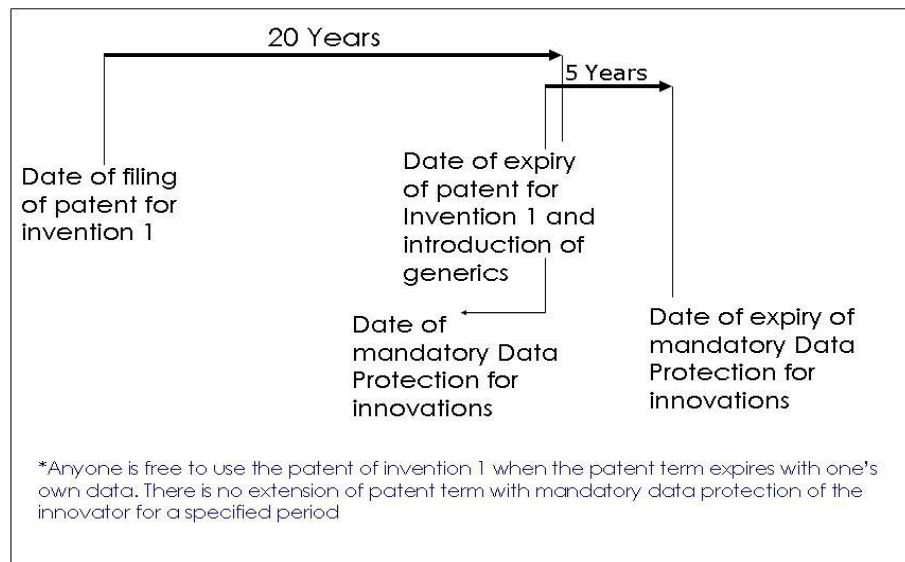
During the debate on Data Protection it is asserted in some quarters that Data Protection and patents offer "double protection". They do not. Fundamentally, the two forms of Intellectual Property are like different elements of a house which needs both a strong foundation and a roof to protect its inhabitants. Data Protection cannot extend the length of a patent which is a totally separate legal instrument. While patent protects the invention underlying the product, Data Exclusivity protects the clinical Dossier submitted to the regulatory authority from unfair commercial use. The duration of Data Protection is typically half or less than that of a patent. Following two example will illustrates the point:



Scenario 1



Scenario 2



8. DATA PROTECTION: A PERSPECTIVE

Health Perspective:

Besides the logic and legal aspects justifying the need for Data Protection, more important aspects of public health like consumer safety should be the overriding consideration to initiate Data Protection in India. Data Protection ensures higher degree of overall safety and efficacy of drugs launched in the market. Mere proving of bioequivalence / bioavailability does not guarantee drug safety as the impurities profile of the duplicator's drug is likely to be different than that of the originator. This consideration will assume increasing importance from consumers' angle particularly when the patients are having access to varied information through internet.



Scientific Perspective:

The Pharmaceutical Industry, although known for its business success, is basically a life-science industry. Research and Development is an integral part of the Pharmaceutical Industry all over the world. There are many diseases for which guaranteed remedies are still not available. These diseases include various types of cancers, Alzheimer's, heart diseases, diabetes, multiple sclerosis, AIDS and arthritis.

Data Protection adds a positive impetus for pharmaceutical innovation. Scientific talents thrive in environments which are conducive to creativity. Protection of Intellectual Property is an essential ingredient for fostering the spirit of innovation. India is rich in scientific talents. India has nothing to lose but gain substantially by providing Regulatory Data Protection as is being done almost universally.

Economic Perspective:

The business model for the Pharmaceutical Industry has moved away from copying and re-engineering to a product patent system after January 1, 2005. Many Indian companies will transform into global companies. In a borderless world with intensely competitive conditions, business will shift where superior economic benefits are available. India is the fourth largest economy of the world in terms of purchasing power parity. It has multiple strengths that can make it a preferred destination for outsourcing both manufacturing and research or research support services. If India has to leverage these strengths, entrepreneurs will have to move away from fear arising out of imaginary threats due to Regulatory Data Protection. The grant of Regulatory Data Protection will only accelerate the process of business transition. Confidentiality of data is an essential part of Business-to-Business transactions.

McKinsey has estimated the market size for Pharmaceutical Industry in India in the range of U.S.\$ 25 Bn. by 2010. Indian Pharmaceutical Industry will benefit from Data Protection for the substantial efforts associated with development of New Drug Delivery Systems (NDDS) such as Ranbaxy's once a day Cipro™ formulation licensed to Bayer. Indian firms are increasingly engaged in development of NDDS (Novel Drug Delivery System) which represent a high rate of return on a much smaller investment than that needed for development of an entirely novel chemical compound. The only protection available to bring an NDDS to the market would be Data Protection for the new chemical research supporting the application for marketing approval.

Taking an overall view, the Pharmaceutical Industry in India, irrespective of its various sectors, should welcome various business opportunities in the globalised markets and accept unhesitatingly all the enablers like Regulatory Data Protection to drive this growth.

9. RECOMMENDATIONS:

Regulatory Data Protection will benefit India, as has happened in many other countries. Hence India should implement RDP without further delay.

It will be reasonable to have a provision of **at least 5 years** of Data Protection from the date of marketing approval **in India**, on the same lines as China has done.

Data Protection should be provided by making an appropriate amendment in Schedule Y of the Drugs Act to bring India into conformity with its international legal obligations and with the practices of other developing and developed WTO Members.

The above provisions will go a long way in sending a positive signal to the international community as well as our own research based pharmaceutical companies to accelerate investment in this vital sector and making India emerge as a global powerhouse in pharmaceuticals.