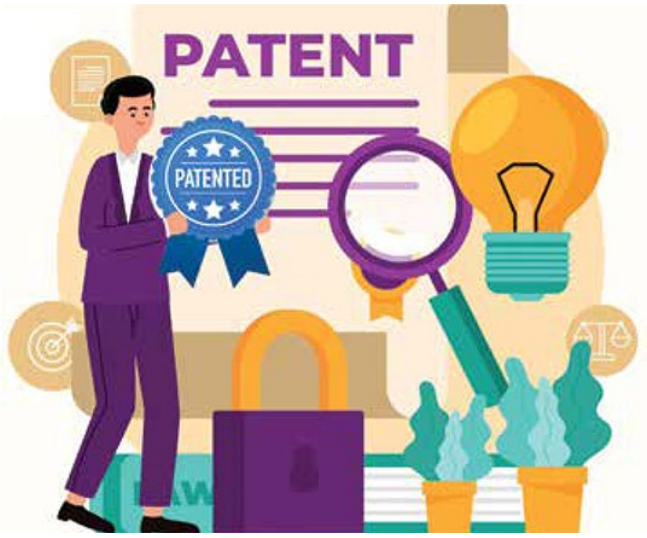
Drug patents and drug exclusivity. How are they different from each other? Why should the applicants/sponsors be fully aware of the Regulatory patent protection and exclusivities? The draft covers a comprehensive perspective on drug patents and exclusivities in relation to the United States.

When a pharmaceutical company first develops a new drug or any device to be used for the treatment of a disease, it is initially marketed under a brand name by which clinicians can recommend or prescribe the drug or any device for use by patients. The drug or device is covered under patent protection, which means that only the pharmaceutical company that holds the patent is allowed to manufacture, market the drug and eventually profit from it.



The United States Patent and Trademark Office (USPTO) will have the right to issue a patent to a discoverer or inventor to "eliminate others from manufacturing, utilising, offering for sale, or marketing/selling the innovation to over the United States or importing the discovery into the United States" for a constrained time, in exchange for public exposure of the discovery, when the patent is granted.

Generally, the term of a new patent is twenty (20) years from the date on which the application for the patent was filed with the USPTO. For any new patent, a company may submit an application from the USPTO anywhere with the development lifeline of a drug and can cover a wide range of claims. However, so many other factors can affect the time period of a patent.

The original New Drug Applications (NDAs) and supplements can be submitted on the FDA Form 3542a, prior to approval, along with patent information and if it is upon post approval, the patent information should be submitted on the FDA Form 3542. After approval of an NDA, if the patent has been issued, the applicant has thirty (30) days to file the patent to have it counted/deemed as a timely filed patent. Beyond the thirty (30) day period, the patents may be submitted, but the patent is not counted or considered a timely filed patent. If the generic application is submitted prior to the patent, an Abbreviated New Drug Application (ANDA) holder is not required to make a certification to an untimely filed patent. Patents protect the approved drug substance, drug product, or approved methods of use for the manufacturing or marketing of drugs. New Drug Application sponsors are required to submit for listing patents that protect their approved drug substance, drug product, or approved methods of use. For submission of patent information, applicant must use the FDA provided form 3542a before approval or Form 3542 within 30 days of approval or issuance of patent (for later issuing patents). If there are no patents to list, that must be declared via a Form 3542/3542a submission.

For every patent in orange book, an ANDA applicant must certify :

- Patent has expired (**Paragraph II Certification**)
- Generic manufacturer will stay off market until patent expires (**Paragraph III Certification**)
- Generic manufacturer believes that the listed patent is either invalid or would not be infringed by the proposed generic product (**Paragraph IV Certification**) [if patent information has not been filed: **Paragraph I Certification**].

Inventors can search the USPTO's patent database to see if a patent has already been filed or granted, that is similar to your patent. Patents may be searched in the USPTO patent full text and image Database (Pat FT). The full texts of the patents issued from 1976 to the present and the PDF images of the patents from 1790 to the present are housed by the USPTO.

Exclusivity

Exclusivity is originated to promote a balance between new drug innovation and generic drug competition. It is a period when an innovator drug is protected from generic drug competition. There are different types of exclusivities for different circumstances.

Types of Marketing Exclusivity in Drug Development:

Unlike a patent, marketing exclusivity is generally acquired early in drug development, runs considerably longer and is based upon intellectual property rights, rather than evidence of safety and effectiveness. When the constitutional or statutory requirements are met for a drug, the FDA would issue the approval and also the marketing exclusivity, where the exclusivity is a period of time during which no other applications can be accepted and/or approved for the same active ingredient. This means that, other manufacturers that may wish to develop alternative formulations or generic versions of the drug will not be able to have their products approved during the exclusivity period. The type of exclusivity would decide the length of the exclusivity period. Importantly, the exclusivity period is not added to patent life, so sponsors will need to be mindful of both durations and plan, accordingly.

The exclusivity duration: There are a few types of marketing exclusivity, and all of them vary in duration and the statutory requirements that must be met. Some are based on product classification, others on the indication being treated on the intended patient population.

The types of exclusivity include:

- **Orphan Drug Exclusivity (ODE):** This type of exclusivity is seven (7) years and is granted to drugs designated and approved to treat a rare disease or condition affecting fewer than 200,000 or more than 200,000 and no hope of recovering costs in the United States.
- **Biologic Exclusivity:** For Biologics License Applications (BLAs), Under section 351(k)(7)(A) of the Public Health Service Act, the duration of the exclusivity is twelve (12) years. The USFDA will not accept biosimilar filings (under its 351 (K) pathway) until five (5) years after the original biologic is licensed.
- **New Chemical Entity (NCE) Exclusivity:** In most cases, a brandname drug with a new active moiety has a five-year exclusivity. During this five-year exclusivity period, no other company can submit an Abbreviated New Drug Application (ANDA) to the FDA seeking approval of a drug product containing the NCE.
- **Generating Antibiotic Incentives Now (GAIN) Exclusivity:** GAIN is a new law that addresses the antibacterial drug resistance by encouraging the pharmaceutical research, development and approval of new type of antibacterial and antifungal drugs. The drug products have been granted or designated by the FDA as “Qualified Infectious Disease Product” (QIDPs) and have the additional five (5) years of exclusivity.
- **New Clinical Investigation Exclusivity:** A brand industry’s new brand-name drug with an active ingredient that has been approved before may be awarded a three-year exclusivity in certain

circumstances, such as, if a new way of delivering the active ingredient is proposed (for example, a tablet rather than a liquid) or a different disease or condition the drug can treat is identified. To get this approval, the drug company must conduct new clinical studies in humans.

- **Paediatric Exclusivity (PED):** A patent protection for a new drug applicant for which the sponsor has done paediatric studies (in response to a written request from the FDA) may be eligible for a six-month exclusivity, which is added on to any other exclusivities or patents for that drug (six months added to existing Patents/Exclusivity). This exclusivity is an effective tool for drug developers, delaying the FDA ANDA and 505(b) (2) approvals six months after the patent expiration.
- **Patent Challenge (PC):** This exclusivity is for Abbreviated New Drug Applications (ANDAs) only and the exclusivity period is 180 days.
- **Competitive Generic Therapy (CGT) or Generic Drug Exclusivity (GDE):** This exclusivity is for 180 days and is applicable for ANDAs only.
- **Qualified Infectious Disease Product (QDIP) Exclusivity:** This exclusivity is for five years and it can be added to any existing exclusivity.

An Exclusivity Board has been established by the Center for Drug Evaluation and Research (CDER) to give oversight and recommendations about exclusivity determinations made by the Center. The CDER exclusivity board manages the granting of exclusivity determinations, that means whether and what type of exclusivity will be granted. The CDER board will not review or provide any recommendations with respect to exclusivity determinations. The five year New Chemical Entity (NCE), three year new clinical trial exclusivity and biological product exclusivity will be focused by the CDER board.

Difference between Drug Patents and Drug Exclusivity

Regardless of the drug product approval status, the patents can be issued or expired at any time – before, during or after the FDA approval process. If the drug product meets the statutory requirements of the FDAs, the drug product will be approved with an attachment of an exclusivity. Further, few drug products have both patent and exclusivity protection while others have just one or none.

The patents will expire in 20 years from the date of filing, but the exclusivity is granted upon the basis of the drug product. For instance, the New Chemical Entity (NCE) gets five years of exclusivity, while orphan drugs get seven years of exclusivity.

According to the FDA, the other major difference between patent and exclusivity is patents can be issued or expired at any time irrespective of the drug approval status,, while the exclusivity is granted upon approval.

The expired patent or exclusivity drug products may not be available, or it is removed from the Orange Book. Patents and Exclusivity protection may or may not run concurrently and may not run the same aspects of the drug product. Exclusivity was developed to promote a balance between new drug innovation and greater public access to drugs that result from generic drug competition.

In some countries, like India and Brazil, they have compulsory licenses, which basically allow local companies to produce and locally market drugs that have not reached a point in time when generic competition is legally allowed.

Conclusion

The applicants/sponsors should fully be aware of the Regulatory patent protection and exclusivities. These exclusivities are developed to encourage the innovation in pharmaceutical research and development of new, safe and cost-effective treatment. While taking the advantage of Regulatory exclusiveness of the target country, it can help to sponsor to realise a return on investment by utilising

the Regulatory exclusivities. In the way of product identification or broadening of the line of products or market extension, one needs to evaluate patent as well as Regulatory exclusivities of the target country to have profit-making products, while serving the patient population.

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Author Bio

Praveen Kumar Boga,

Assistant Manager, Departmentof Medical Writing, Freyr Solutions

Praveen Kumar B is a Postgraduate in Pharmacy with a significant experience in the field of Medical Writing. He has been working in medical writing profession for the last ten years. He has a few international and national publications and presentations to his credit. His experience spans across authoring and review of the various clinical and Regulatory documents. He has been a part of Freyr Solutions for a year now and currently holds the position of an Assistant Manager in the department of Medical writing.