Is latest US Appeal Court's En Banc judgement anti-"Evergreening" ?

While the review of TRIPs within 4 years (from 1995) proposed / promised in Art. 27 (3) (b) of TRIPs remains uninitiated, the SPLT (Substantive Patent Law Treaty) proposals are knocking on the Indian doors, offering assistance to have a single patentability criteria for all countries leading to a "Single Global Patent". The proposal looks enticing and tempting to the layman and the novice inventors. However, the loss of sovereignty and freedom to provide for National priorities and solutions are at stake if SPLT option is adopted. This has to be seen in the light of latest pressures on "evergreening" of expiring patents, in view of slowing down or drying of the "NCE" (new chemical entities) pipelines and the shift of new drug discoveries to New Biological entities (more popularly known as New Molecular Entities or NMEs) (while NCEs are known as small molecules, the NMEs are mostly large molecules).

The impact of "Evergreening" on the Indian Pharma Scenario being all the more a matter of concern to the Indian lawmakers, the Parliament itself undertook upon itself the need to amend Section 3(d) of the Patent Act, 1970. As per the final amendment proposed and passed by the Parliament in 2005, the Section 3(d) reads as follows,

"*the mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant.*"

Explanation – For the purposes of this clause, salts, esters, ethers, polymorphs, metabolites, pure form, particle size , isomers, mixtures of isomers, complexes, combinations and other derivatives of known substance shall be considered to be the same substance, unless they differ significantly in properties with regard to efficacy.

It is expected that "evergreening" on NCEs and (may be also on NMEs) will, to a large extent, be restricted in view of the wide and extensive negative coverage against patent extensions from the S.3(d) explanation. Specifically, for India, which has not been honoring product patents till 1995 and which disqualifies pre-1995 molecules for product patent grants post-1995, the provisions of S. 3(d) effectively blocks "*salts, esters, ethers, polymorphs, metabolites, pure form, particle size , isomers, mixtures of isomers, complexes, combinations and other derivatives of known substance*" from patentability. Since most of these simple improvements are mostly "physical" and not "therapeutic", these are all the more ineligible for grant of product patents and also for process patents (due to lack of inventiveness) in process.

Paroxetine Case

A typical example of "evergreening" is Paroxetine. A recent and final judgement on Paroxetine is quoted below which exemplifies the judicial support for "anticipation" and "anti-evergreening"

While the original inventor of Paroxetine was "Ferrosan", the rights to the molecule was acquired by GSK and successfully marketed to a $ 4 billion plus molecule. Hundreds of patents have been applied for and granted in countries across the world to GSK. The generic companies like Teva and Apotex were also filing patent applications on processes, dosage forms and NDDS. While the 1970 patent for 'Anhydrous' Paroxetine expired in 1992, the 'Hemihydrate' patent obtained by GSK became listed for the marketing permission of "PAXIL". When Apotex filed the ANDA based on "Anhydrous", the litigation started. Apotex challenged the Hemihydrate patent in counterclaim. The Paroxetine litigation is unique because, as it moved from District Court to Federal Circuit and to the En Banc (Full bench) of the Federal Circuit on appeals, each of the judgements left behind quotable landmark decisions for the patent law students and practitioners. The history is as follows.

The "Hemihydrate" patent (US 4,721,723) was invalidated in the 7th Circuit Judge Richard A. Posner's Court. J.Posner opined that patents are for public use after its expiry

and presence of minor “impurities” of subsequently patented materials should not prevent such commercial use of patent-expired materials.

This decision was appealed to Federal Circuit by GSK. The Federal Circuit did not agree with J.Posner’s. Even if a single crystal of a patented molecule is present in the prior art material, it could infringe, the F.C. said. However, the question of experimental use [S.102(b) of 35 USC], before one year of application, came up. SKB had conducted clinical trials on the hemihydrate which was done more than one year before the filing of the patent application (for the ‘723 patent). A public use (unless in-house or with confidentiality – nondisclosure agreement) outside the one year grace period invalidates the patent under 35 USC [S. 1029b)]. The argument of GSK that the clinical study was “experimental use” was not accepted by the Federal Circuit in 2004. Hence the ‘723 patent was invalidated.

This decision was appealed by GSK on En Banc (Full bench) Federal Circuit Hearing. On April 8, 2005, the En Banc (CAFC) Judgement was delivered by the Federal Circuit. CAFC in its latest judgement, invalidated the later ‘723 (hemihydrate) patent for anticipation by the earlier ‘196 (Ferrosan patent for Anhydrous) under S. 102(a) of USC 35. While doing so the CAFC avoided the issue of “experimental / public use” entirely.

While this Paroxetine litigation was ongoing in USA from early 2000 till April, 2005, the parallel litigation in UK led to a judgement of non-infringement in favour of Apotex and invalidation of the GSK’s UK Patent 2,297,550 by Justice Pumfrey. The anticipation judgement opens up valid support for India’s S. 3(d) provision. The finding that the hemihydrate is anticipated in the light of earlier “anhydrate” strengthens the Indian Patent Act provisions for not granting patentability status to “salts, esters, ethers, polymorphs, metabolites, pure form, particle size, isomers, mixture of isomers, complexes etc.”.

The Paroxetine case has thereby touched very significant issues in its trial.

1) Anticipation and invalidation (non-patentable) for a new form in the wake of an earlier patent in prior art for the same entity.
2) Definitions, physical & chemical characterizations of anhydrates, hydrates etc.
3) Stability issues and trivialities involved .
4) Influence of moisture, seeding, pressure, temperature etc. in different forms
5) Seeding for crystallization and its impact on patentability.
6) Compositions of mixture of crystalline forms and the impact of analytical methods in determining transient differences impacting patentability adversely.

These case laws in USA and UK can greatly contribute to the study and analysis of techno-legal issues in patentability or subsequent invalidation in patent challenges. It is proposed to cover these issues in greater details hereafter / later.

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