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* **IN THE HIGH COURT OF DELHI AT NEW DELHI**

Date of decision: 22nd November, 2023

\+ **C.A.(COMM.IPD-PAT) 33/2022 & I.A. 23186/2023**

ISCHEMIX LLC ..... Appellant

Through: Mr. Ankush Verma, Mr. Vineet Rohilla, Mr. Debashish Banerjee, Mr. Pankaj Soni, & Ms. Vaishali Joshi, Advs. (M. 88603021752).

versus

THE CONTROLLER OF PATENTS ..... Respondent

Through: Mr. T. P. Singh, Sr. Central Govt. Counsel (M. 9971529687).

CORAM:
JUSTICE PRATHIBA M. SINGH

Prathiba M. Singh (Oral)

1. This hearing has been done through hybrid mode.

I.A. 23186/2023 (for delay)

2. This is an application for 62 days delay in filing a brief note of submissions. Delay in filing of submissions is condoned.

3. Application is disposed of.

C.A.(COMM.IPD-PAT) 33/2022

4. The present appeal under Section 117A of the Patents Act, 1970 arises out of an application for grant of a patent bearing no. *'9739/DELNP/2011'*, filed by the Appellant-Ischemix LLC for the application titled *'Compositions and Methods for Treating Ischemia and Ischemia-Reperfusion Injury'* (hereinafter, *'subject patent'*). The subject patent application was filed on 12th December, 2011, as a national phase application claiming priority from the

US patent application – US 12/466170 filed on 14th May, 2009 and a PCT application bearing number PCT/US2010/034701 having International Filing Date of 13th May, 2010. However, vide order dated 13th May, 2020 (hereinafter, *'the impugned order'*), the subject patent application was refused by the ld. Assistant Controller of Patents and Designs under Section 15 of the Patents Act, 1970 (hereinafter, *'the Act'*).

5. The subject patent application, admittedly, relates to an isomer of a known compound. The case of the Appellant is that the patent application was primarily refused under Section 3(d) of the Act. Ld. Counsel for the Appellant urges that in order to overcome objections under Section 3(d) of the Act, a substantial enhancement of efficacy has to be shown, which has been shown in this case. As per the Appellant, the therapeutic efficacy of the isomer has been demonstrated by giving data relating to *in-vitro* and *in-vivo* studies as also data from clinical trials. In addition, the Appellant has also placed on record reports of two experts to support the plea for enhanced therapeutic efficacy. Ld. Counsel for the Appellant submits that there is no discussion in respect of the same in the impugned order.

6. On the last date of hearing, i.e., on 16th August, 2023, Mr. Sunil Kumar Gautam, ld. Deputy Controller of Patents and Designs had joined the proceedings virtually, and submitted that the Appellant may have given some data in support of the claim for enhanced efficacy, but failed to show how the same constituted therapeutic efficacy. Upon being queried as to what should be the method to show therapeutic efficacy, Mr. Gautam and ld. Counsel for the Respondent submitted that when a substance cures the disease in a better way than the existing substances, the substance has a better effect for curing of diseases, it can be termed as showing enhanced therapeutic efficacy.

7. After having heard ld. Counsel for the Appellant, and the official from the Patent Office, the Court vide order dated 16th August, 2023 observed as under:-

> *"5. The Court has heard ld. Counsels for both parties and perused the record. A perusal of the complete specification of the subject patent application would show that various tables have been set out therein, giving comparative data relating to specific isomers which are sought to be patented. A perusal of the data further would show that the same has been explained in technical terms in the complete specification.*
> *6. Let a short note be filed on record by the Appellant explaining, on the basis of the data as to how the subject compound would have better therapeutic efficacy. Let the said note be filed within four weeks."*

8. As per the above directions, the Appellant filed a note on enhanced therapeutic efficacy of the said isomer, basis the comparative data. An advance copy of the same was supplied to Mr. T.P Singh, ld. Counsel for the Respondent, who then sought instructions in the matter.

9. Today, Mr. T. P. Singh placed on record an email dated 21st November, 2023 by the ld. Deputy Controller of Patents. In the said email, it has been stated that in the note recently filed by the Appellant, a clear and definitive explanation has been given on how the Appellant wishes to substantiate its claim of enhanced therapeutic efficacy. The same was not presented during the course of patent prosecution. Thus, the Patent Office is willing to reconsider and re-examine the subject patent application.

10. Heard. In the context of Section 3(d) of the Act, the requirement for demonstrating significant enhancement of therapeutic efficacy has been categorically laid down by the Supreme Court in ***Novartis AG v. Union of***

India and Ors. [(2013) 6 SCC 1]. The relevant extract of the said judgement is set out below:

> *"157. What is "efficacy"? Efficacy means "the ability to produce a desired or intended result". Hence, the test of efficacy in the context of section 3(d) would be different, depending upon the result the product under consideration is desired or intended to produce. In other words, the test of efficacy would depend upon the function, utility or the purpose of the product under consideration. Therefore, in the case of a medicine that claims to cure a disease,* ***the test of efficacy can only be "therapeutic efficacy".*** *The question then arises, what would be the parameter of therapeutic efficacy and what are the advantages and benefits that may be taken into account for determining the enhancement of therapeutic efficacy? With regard to the genesis of section 3(d), and more particularly the circumstances in which section 3(d) was amended to make it even more constrictive than before, we have no doubt that the "therapeutic efficacy" of a medicine must be judged strictly and narrowly.* ***Our inference that the test of enhanced efficacy in case of chemical substances, especially medicine, should receive a narrow and strict interpretation is based not only on external factors but there are sufficient internal evidence that leads to the same view. It may be noted that the text added to section 3(d) by the 2005 amendment lays down the condition of "enhancement of the known efficacy". Further, the explanation requires the derivative to "differ significantly in properties with regard to efficacy". What is evident, therefore, is that not all advantageous or beneficial properties are relevant, but only such properties that directly relate to efficacy, which in case of medicine, as seen above, is its therapeutic efficacy****.*
>
> *158. While dealing with the explanation it must also be kept in mind that each of the different forms mentioned in the explanation have some properties inherent to that*

form, e. g., solubility to a salt and hygroscopicity to a polymorph. These forms, unless they differ significantly in property with regard to efficacy, are expressly excluded from the definition of "invention". Hence, the ***mere change of form with properties inherent to that form would not qualify as "enhancement of efficacy" of a known substance****. In other words, the explanation is meant to indicate what is not to be considered as therapeutic efficacy.*

159. We have just noted that the ***test of enhanced therapeutic efficacy must be applied strictly, but the question needs to be considered with greater precision****. In this connection, we take note of two slightly diverging points of view urged before this Court.*

xxx xxx xxx

166. Thus, even if Mr. Grover's submission is not taken into consideration on the question of bioavailability, the position that emerges is that just increased bioavailability alone may not necessarily lead to an enhancement of therapeutic efficacy. ***Whether or not an increase in bioavailability leads to an enhancement of therapeutic efficacy in any given case must be specifically claimed and established by research data.*** *In this case, there is absolutely nothing on this score apart from the adroit submissions of the counsel. No material has been offered to indicate that the beta crystalline form of Imatinib Mesylate will produce an enhanced or superior efficacy (therapeutic) on molecular basis than what could be achieved with Imatinib free base in vivo animal model."*

11. It is the settled position that whenever any patent Applicant wishes to place on record and demonstrate therapeutic efficacy, to satisfy the requirements laid down in ***Novartis AG (supra)***, the same has to be done precisely. The Applicant must ensure that comparative tables, and a clear explanation as to the manner in which the new form of the known substance

has significant enhancement in therapeutic efficacy is placed before the Patent Office during prosecution of the application. The same could be in the form of comparative tables, *in-vitro* and *in-vivo* data as also clinical trial data.

12. Vide judgement dated 30th August, 2022 in ***DS Biopharma Limited v. The Controller of Patents and Designs and Anr. 2022:DHC:3563***, this Court has given certain directions to be followed by patent applicants while attempting to overcome the objections under Section 3(d) of the Act. The relevant extract of the said judgement is set out below:

> *"22. In order to afford the Appellant a fair opportunity to deal with this objection, the following directions are issued:*
> *i)* ***The Appellant shall file its response on the basis of the identified known substances and the extracts of the impugned order as set out above. In response, the Appellant may also produce efficacy data and support its submissions as to how Section 3(d) is not applicable****.*
> *ii) The said response shall be filed by the Appellant within a period of 8 weeks - upon which, a fresh hearing shall be granted on the issue of whether the claims 1-4 are liable to be granted or not in view of the objections under Section 3(d) of the Act.*
> *iii) The Controller is also permitted to consider along with the objection of Section 3(d) the objection relating to lack of inventive step, if any."*

13. In a patent application for such subject matter, the patent specification, itself, ought to contain some data and results of lab experiments which demonstrate enhancement of efficacy of the subject invention for which patent is sought. However, if there is any additional data which becomes

available, the said data ought to be submitted by the patent Applicant, and be placed before the Patent Office prior to the date of final oral hearing. It is often observed that patent applicants file such data in written submissions, after conclusion of oral hearings before the Patent Office, without referring to the said data during oral hearings. This may potentially lead to a situation, as in the present case, where the Patent Office may have overlooked the data and failed to consider the same. There is also the possibility of the data not being completely understandable, in mere written submissions without oral explanation.

14. As this matter is technical in nature, the note on enhanced therapeutic efficacy ought to have been handed over by the concerned Patent Agents/ Attorney of the patent Applicant during the final oral hearing. Further, the therapeutic efficacy of the substance ought to have been clearly explained by the Agent/ Attorney of the patent Applicant to the concerned official reviewing and examining the patent application.

15. Such detailed notes and explanations at the hearing stage would obviate any chances of the Patent Office not considering the efficacy data as appears to have taken place in the present case. However, since the Patent Office has fairly agreed to reconsider/re-examine the patent application, the Court does not wish to go into the merits of the appeal.

16. Further, since this Court is directing a fresh hearing for the Appellant, as per the communication issued by the ld. Controller, it is emphasised that any benefit of placing reliance on data filed after the priority date of the subject patent application would be permissible subject to the same having a basis in the complete specification. This requirement is in line with the decision by a ld. Single Judge of this Court, in ***AstraZeneca AB and Ors. v.***

Intas Pharmaceuticals Limited and Ors., 2020/DHC/3125. The relevant extracts of the said decision are set out below:

> *"30. In my opinion, if this information was not available at the time the application for grant of patent was filed, then, this cannot be taken into account, at this juncture, by the plaintiffs in support of their plea that IN 625 involved an inventive step. There is no clue in IN 625 of an unknown technical effect on its priority date.* ***Dr. Washburn's affidavit, who professes to be the co-inventor of DAPA, could have come to the rescue of the plaintiffs to demonstrate technical advance if, at least a seed of that nature had been planted in IN 625, on its priority date****.*
> *30.1 The plaintiffs' argument that post filing data relating to the invention is admissible is based on two grounds.*
> *i. First and foremost, the applicant may not be fully aware of the advances and properties of the subject invention, in this case, the compound DAPA, on the priority date. In this behalf, it is stated that DAPA's properties for treatment of heart failure came to be known only subsequently.*
> *ii. Second, there is no requirement in law that all properties, advantages, and characteristics should be stated on the filing date of the patent application. In support of their plea, the plaintiffs relied upon Genetics institute, LLC, v. Novartis vaccines, 655 F.3d 1291 (2011); and Knoll Pharm. Co. v. Teva Pharms. USA, Inc., 367 F.3d 1381, 1385. It was argued that the plaintiffs had complied with the best code rule as engrafted in Section 10(4) of the Act which is qualified by the expression "known to the applicant". It was also contended that they had satisfied the examiner on the aspect of inventive step and factually the examiner had raised no such objection in his examination report of October 2007. The plaintiffs also sought to contend that they met the plausible unknown technical effect test as*

formulated in Generics (UK) Limited v. Yeda Research and Development Company Limited, (2017) EWHC 2629 (Pat).

30.2 In this context, I may refer to the judgement in Generics (UK) Limited v. Yeda Research and Development Company Limited, (2017) EWHC 2629 (Pat) *cited on behalf of the defendants. In this case, Generics, which was the claimant, sought revocation of a European patent [entitled low-frequency glatiramer acetate therapy] of which the defendant i.e. Yeda was the registered proprietor and a third party [i.e. Teva] was the exclusive licensee. One of the issues which arose for consideration before the Court concerned the lack of inventive step for want of technical contribution and insufficiency.*

30.3 On behalf of Generics, it was contended that the claimed inventions made no technical contribution to the art and, therefore, did not involve inventive steps as summarized in another judgement i.e. Generics (UK) Ltd v. Yeda Research and Development Co Ltd, [2013] EWCA Civ 925. Alternatively, it was argued that the technical contribution was insufficient as per principles summarised by Kitchin LJ in Ide nix Pharmaceuticals Inc vs. Gilead Sciences Inc, [2016] EWCA Civ 1089. The Court after discussing the issue made the following crucial observations.

> *197. In case this case goes further, I must briefly address the Defendants' reliance upon evidence which post-dates the priority date of the Patent. It is common ground that such evidence can only be relied upon to confirm the existence of a technical effect which is plausible in the light of the specification and the skilled person's common general knowledge, and not to establish the existence of a technical effect for the first time.*

30.4 Therefore, what emerges is this: that post priority date evidence which has been furnished in Dr. Washburn's affidavit to show technical advance can

> *only be taken into account to confirm the existence of technical effect which is found embedded in the specification of IN 625 and is capable of being understood by a skilled person having common general knowledge and not to rely upon the same to establish its effect for the first time"*

17. Considering the decision in ***AstraZeneca (supra),*** one of the only exceptions to the said requirement could be that there were on-going clinical trials for the new form of the known substance at the time of filing of the subject patent application. This Court has also considered the decision of the Calcutta High Court in ***Oyster Point Pharma Inc v. The Controller of Patents and Designs***, ***MANU/WB/1544/2023***, in arriving at the said conclusion. In the said decision, the Calcutta High Court acknowledged the inherent complexities and protracted nature of the process of drug development. The Court noted that empirical evidence of a drug's efficacy may not be available at the time of filing of the patent application, primarily because such data typically emerges subsequent to the execution of clinical trials. The relevant extracts of the said decision are set out below:

> *"12. A new form of a known substance can only be considered patentable provided the same demonstrates enhanced efficacy. However, it is not possible to determine the efficacy of a substance without considering the results of the experiments conducted and the comparative studies made before arriving at any conclusion by a skilled person. The details of the experiments conducted, comparative studies made and their conclusive results had been discussed in Appendix A, B and C in support of the claimed invention and the same ought to have been considered before passing of the order. There is no substance in the contention that the additional documents could not be considered after*

filing of the patent application at a later stage. No specific time bar has been provided in the Act which prevents an applicant from filing additional documents after the filing of the patent claim.

13. Drug development is a lengthy and complex process. It may not be possible to provide all data at the time of filing of the application. Further screening may be required to be carried out before a prospective compound ultimately makes it to clinical trials. Appendix C included the data which showed the activity of the mono-citrate salt at different nAChR subtypes which provides for structural and functional flexibility to play different roles and enhance the efficacy of the compound. In fact, Appendix A, B, C contained data to show that the claimed compound possesses efficacy. The Controller has without assigning any reasons rejected Appendix C and has failed to deal with Appendix A and Appendix B. The object of the present invention was to obtain a stable salt for the preparation of a pharmaceutical formulation. The stability data was provided in Appendix A which has not even been dealt with nor considered in the impugned order."

Thus, clinical trial data can be submitted – however, to only support the stand of the applicant in the Specification to demonstrate a significant enhancement of therapeutic efficacy.

18. Accordingly, let the record of this appeal be transmitted as it is to the Patent office.

19. Considering the fact that the application was filed way back in December, 2011, re-examination and the final adjudication shall be concluded within three months from the first date of hearing before the Patent Office. The date of hearing before the Patent Office be fixed within a period of four weeks from today.

20. The appeal is disposed of in the above terms. All pending applications are also disposed of.

21. Let the Registry communicate a copy of the present order to the office of the Controller General of Patents, Designs & Trademarks of India on the e-mail- llc-ipo@gov.in for compliance of this order. The record of the present appeal be also emailed or despatched to the said office.

PRATHIBA M. SINGH
JUDGE

NOVEMBER 22, 2023
mr/bh/am

[Corrected and released on 29th November, 2023]