

Study on the Supreme Court Decision No. 2017HU1854

1. Overview of the Matter

- Court Case No.: 2017HU1854
- Related Patent: Korean Patent No. 10-0763288 B1 "5-HT1A receptor subtype agonist"
- Judgment Date: April 29, 2021

2. Gist of the Court Decision

Criteria for determining whether or not the description requirements of the specification are satisfied in the pharmaceutical use invention where descriptions of pharmacological effect is required

In the pharmaceutical use invention where descriptions of pharmacological effect is required, unless there are special circumstances, such as when the pharmacological mechanism showing the pharmacological effect described in the specification is clearly explained prior to the filing of the application, it can be considered that the description requirements of the specification are satisfied only when the pharmacological effect of such a specific substance is clearly described through test examples showing pharmacological data, etc. or as a specific description that can substitute it (refer to Supreme Court Decision 2001HU65 dated November 30, 2001, Supreme Court Decision 2013HU730 and 2015HU727 dated April 23, 2015)

3. Details of the Case

(1) Facts

Against the defendant, claiming that in the invention, which is a pharmaceutical use invention based on the fact that aripiprazole is effective in treating bipolar disorder, it is difficult to say that a clearly defined pharmacological mechanism exists between aripiprazole and the therapeutic effect of bipolar disorder prior to the priority date of the patent invention, and that the description of the specification violates Article 42(3) of the Old Patent Law (before it was amended by Act No. 8197 on January 3, 2007, hereinafter the same shall apply), the plaintiff filed a invalidation trial against the patent invention.

In this regard, the Intellectual Property Trial and Appeal Board (IPTAB) determined that, from the contents described in the detailed description of the patent invention and the facts known prior to the priority date of the patent invention, a person

skilled in the art can understand and reproduce the bipolar disorder treatment effect of aripiprazole without undue trial and error and repeated experiments, and dismissed the request of the plaintiff for invalidation trial, and the plaintiff filed a lawsuit to cancel the trial decision.

(2) Determination of the Original Court (Patent Court)

Claim 1 of the patent invention of the present case comprise 'carbostyryl compounds and pharmaceutically acceptable salts or solvates thereof,' as an active ingredient and is an invention for pharmaceutical use for the purpose of 'treatment of bipolar disorder,' and Claim 5 of the patent invention corresponds to an invention for pharmaceutical use in which the therapeutic use is the same as that of Claims 1 or 4 and comprises 'aripiprazole' as an active ingredient.

i) In the specification of the patent invention of the present case, it is stated that "5-HT_{1A} agonists are also effective in the treatment of depression; it has been reported that aripiprazole (...) binds with high affinity to the dopamine D₂ receptor, and binds to the dopamine D₃ and 5-HT₇ receptors with moderate affinity; and it has been reported that aripiprazole has presynaptic dopaminergic autoreceptor agonist activity, postsynaptic D₂ receptor antagonist activity, and D₂ receptor partial agonist activity." However, with only such descriptions, it is difficult to deem that the invention discloses objective pharmacological data or clinical trial examples to show that aripiprazole as a D₂ receptor antagonist and a 5-HT_{1A} receptor agonist is effective for patients with bipolar disorder, or that they are specific descriptions that can substitute it.

ii) Meanwhile, after the priority date of the patent invention, the treatment effect of aripiprazole alone was known in the treatment of bipolar disorder, but since this was known after the priority date of the patent invention, it cannot be said that it can replace objective pharmacological data or clinical trial examples.

iii) Unipolar depression and bipolar depression in bipolar disorder are different in psychopathology, pathophysiology, and pharmacological response, and the concept, diagnosis, and treatment methods of the disease are different. Even if the pharmacological mechanism that the activity of 5-HT_{1A} receptor agonist exerts a pharmacological effect on **unipolar depression** was clearly explained at the time of the priority of the patent invention of the present case (hereinafter referred to as 'priority date'), it cannot be said that the pharmacological mechanism of 5-HT_{1A} receptor agonist activity having a pharmacological effect on **bipolar depression** has been clearly explained. Further at that time, it was difficult to say that there were publicly known experimental results showing that 5-HT_{1A} receptor agonist activity was used to treat bipolar depression.

iv) At the time of priority of the patent invention, in regard to aripiprazole, a substance belonging to the compound of the present case, associated with D₂, one of the dopamine receptors, it was conventionally known that it had presynaptic dopaminergic autoreceptor agonist activity, postsynaptic D₂ receptor antagonist activity and D₂ receptor partial agonist activity. However, in the description of the invention in the specification of patent invention, it is not described that the compound of the patent invention exhibits a pharmacological effect on bipolar disorder due to the above activity of aripiprazole on the D₂ receptor. At the time, there is no data to suggest that the pharmacological mechanism that the activity of a D₂ receptor antagonist and the like and the 5-HT_{1A} receptor agonist activity are exerted together to have a pharmacological effect on bipolar disorder has been clearly identified.

(3) Determination of the Supreme Court

In the description of the invention in the specification of the patent invention, it does not specifically describe that the compound has a pharmacological effect for treating bipolar disorder according to the activity of a 5-HT_{1A} receptor agonist through test examples showing pharmacological data, etc. and it cannot be said that the pharmacological mechanism showing the pharmacological effect described in the specification prior to the priority date has been clearly explained, and thus, it is reasonable to deem that the description requirements provided in Article 42(3) of the Old Patent Law (before it was amended by Act No. 8197 on January 3, 2007, hereinafter the same shall apply) were not met.

4. Comments

(1) Significance of the Description Requirements for the Invention Related to Medicinal Use

Inventions for pharmaceutical use comprise a 'substance' and 'medical use,' which is a disease to be treated with the medicinal substance. In general, unlike inventions related to mechanical devices, etc. which the action and effect can be clearly understood and easily reproduced from the configuration of the invention by a skilled person in the art, in the case of a chemical invention called the science of experiment, predictability or feasibility is remarkably lacking. Thus, if an experimental example with experimental data is not described, it is difficult for a skilled person in the art to clearly understand and easily reproduce the effect of the invention, and it is difficult to see it as a complete invention in many cases. In particular, a more stringent description requirement for the specification is required of pharmaceutical use invention where description of pharmacological effects is required.

(2) Court Precedents on the Description Requirements for the Specification of Pharmaceutical Use Inventions

There had been cases such as 95HU1326, etc., where a description of pharmacological effect is sufficient and that the description of experimental data or test report is not an essential element for the requirement, but there have been criticisms against such precedents.

Afterwards, the Korean Supreme Court's consistent stance is that "In a use invention for a pharmaceutical, unless there are any special circumstances where a pharmacological mechanism indicating the pharmacological effect of the invention had been publicly known in the art prior to the time of filing a patent application, the specification of a patent application will be acknowledged to satisfy the description requirement, and the invention acknowledged to be complete, only if the pharmacological effect of a specific substance is described with experimental examples showing pharmacological data, etc. or is described in such a detail that any person having ordinary skill in the art can easily understand it."

(3) As to the Determination on the Description Requirements for the Specification of the Present Patent Invention

The Supreme Court said that there were some inappropriate parts in the reasons given by the original court, but held that there was no error in interpreting the description requirements for the specification in the determination of the original court that the description requirements for the specification were not met, and thus, we will comment on the specific determination method of the original court.

i) The Specific Pharmacological Effect of the Present Patent Invention

The specification of the patent invention discloses that the therapeutic effect on schizophrenia, central nervous system modulation, D₂ receptor antagonist activity and D₂ receptor partial agonist activity of carbostyryl compound or aripiprazole had been conventionally known, and that the compounds of the present patent have not been reported to have agonist activity in the 5-HT_{1A} receptor subtype, and thus, the pharmacological effect of the patent invention is to treat bipolar disorder based on the 5-HT_{1A} receptor agonist activity of aripiprazole.

In addition, the therapeutic effect of treating bipolar disorder comprises both a therapeutic effect on manic episodes/depressive episodes/mixed episodes, and the effect of suppressing the conversion to other symptoms or the development of other symptoms at the same time as the treatment of each of the above episodes (the defendant sometimes calls this a 'mood-regulating effect' or a 'mood stabilizing effect').

ii) Whether There Are Test Examples or Specific Descriptions for Pharmacological Effects in the Specification of The Present Patent Invention

In the present patent invention, as described above, it is only described that potent partial 5-HT_{1A} receptor agonists are useful in bipolar disorder, along with previously known pharmacological effects of carbostyryl compounds or aripiprazole;

There are no objective pharmacological data or clinical trial cases where aripiprazole is both a D₂ receptor antagonist and a 5-HT_{1A} receptor agonist and that it is effective in treating depressive episodes/manic episodes/mixed episodes in patients with bipolar disorder, and at the same time suppressing the conversion to other symptoms or the onset of other symptoms.

iii) Whether There Are Special Circumstances in which the Pharmacological Mechanism of the Pharmacological Effect Is Clearly Explained Prior to the Priority Date of the Present Patent Invention

1) In the present case, it is acknowledged that, prior to the priority date of the present patent invention, the pharmacological mechanism of the 5-HT_{1A} receptor agonist for the treatment of depression and the pharmacological mechanism of the manic treatment effect of the D₂ receptor antagonist were clearly explained, respectively.

2) However, based on the fact that the therapeutic effect of treating bipolar disorder includes both the effect of treating a manic episode/depressive episode in a bipolar disorder patient and inhibiting the conversion to other symptoms at the same time, it does not acknowledge special circumstances for the following reasons:

- ① The conventionally known antidepressant effect of 5-HT_{1A} receptors is for unipolar (major) depression and not for bipolar depression;
- ② Even if it is conventionally known that 5-HT_{1A} receptor agonists have an effect on the treatment of bipolar depression, it is difficult to conclude that the pharmacological mechanism has been clearly explained;
- ③ At the time of priority date, 'bipolar disorder treatment effect appears when a medicine with D₂ receptor antagonist activity and a medicine with 5-HT_{1A} receptor agonist activity were administered concurrently to patients with bipolar disorder or when a medicine containing both of the above two activities as an active ingredient were administered', or the pharmacological mechanism for this is not clearly explained.

(4) Significance of the Precedent of the Present Case

In the present case, the Supreme Court shows a consistent stance in the jurisprudence on the description requirements of the specification for the invention related to the pharmaceutical use.

In particular, by specifically identifying the pharmacological effect that serves as a criteria for determining the description requirements of the specification, the difference between unipolar depression and bipolar depression in bipolar disorder is presented as a basis that there is no 'special circumstances in which the pharmacological mechanism that 5-HT_{1A} receptor agonist activity has a pharmacological effect on bipolar depression has been clearly explained.' From this, it should be noted that in the case of amendment to the specification or claims of the invention related to pharmaceutical use, it is necessary to clearly define the pharmacological effect in the patent invention.

In addition, while acknowledging that prior to the priority date of the present case, the pharmacological mechanism of the 5-HT_{1A} receptor agonist for the treatment of depression and the pharmacological mechanism of the manic treatment effect of the D₂ receptor antagonist were clearly explained, it held that the pharmacological mechanism of the pharmacological effect on 'bipolar depression' was not deemed to have been clearly explained. Therefore, in order to be recognized as 'special circumstances,' it is not sufficient to presume the pharmacological effect of a claimed invention from multiple pharmacological effects, and the pharmacological mechanism for the pharmacological effect should be clearly explained.

However, it should be noted that proving 'special circumstances such as a case where the pharmacological mechanism showing the pharmacological effect described in the specification is clearly explained prior to the filing of the application' conflicts partly with proving the inventive step of an invention on pharmaceutical use with the pharmacological effect as a feature of the invention. Thus, regarding the description requirement for the specification of the invention on pharmaceutical use, rather than proving 'special circumstances,' it would be advised to prove that 'the pharmacological effect of a specific substance is clearly described through test examples showing pharmacological data, etc. or that the description is specific enough to substitute it.' Therefore, it is desirable to pay attention to the description of pharmacological data or test examples when filing an invention on pharmaceutical use.