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Anticompetitive effect of drug name trademark registration: lessons from China

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The Chinese Trademark Law does not entirely exclude the possibility of generic names being registered as trademarks, which is inconsistent with the international standards. The necessity and rationality of allowing the trademark registration of drug names are worth of further research. This study analyzes the rules and cases that involve the trademark registration of drug names and makes comparisons with international counterparts. It displays that in Chinese judicial practices, drug name listed in the National Drug Standards may be registered as a trademark if it has acquired distinctive characteristics by use, which contradicts the nature of generic names and may exert an anticompetitive effect and have adverse implications on the development of the related drug industry and patient well-being. This study proposes that the drug name sign is different from descriptive sign, and cannot obtain distinctiveness through use. Based on the particularity of the drug industry, the trademark registration of drug names in the National Drug Standards should be prohibited. This arrangement is conductive to addressing the imbalance of interests among drug operators and safeguarding public health. This study can provide insights and policy recommendations for Chinese lawmakers offering a framework to reconcile trademark protection with the pharmaceutical industry's unique characteristics and regulatory demands.

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Introduction

Trademark registration of generic names is a complex issue in trademark law. A generic name reflects the essential difference between different types of commodities, which are publicly available goods (Grabowski and Vernon 1996). However, a trademark is a private right belonging to the brand's owner. In judicial adjudication concerning drug name trademarks, a slight misidentification of a trademark or a generic name can affect the competition pattern of all parties' interests.

The principle that generic terms cannot be registered as trademarks in the perspective of trademark law is well accepted internationally. A generic term does not intrinsically convey a message of distinction, i.e. it is not able to accomplish the distinctiveness function (Fezer 2009). The capacity to distinguish, however, changes over time: it may be lost or may be acquired (Ghidini and Cavani 2014). The generic sign is different from descriptive sign, and cannot obtain distinctiveness through use (Almeida and Carls 2021). The lack of generic names can occasion substantial confusion among providers and consumers (Roger and Félix 2012). These terms must be left free for all competitors on behalf of the general interest (Massimo and Fransozi 2014). Generic name signs cannot be used for trademark registration because they do not fulfill the criterion of distinctiveness. Nevertheless, this situation is different in the Chinese Trademark Law (hence referred to as"CTML"). The CTML does not entirely exclude the possibility of generic names being registered as trademarks, which is inconsistent with the international standards. According to the CTML, drug name listed in the National Drug Standards may be registered as a trademark if it has acquired distinctive characteristics by use and is easily recognizable. This arrangement is different from the well accepted international standard that generic names cannot be protected as trademarks. The necessity and rationality of allowing the trademark registration of drug names are worth of further research.

This study analyzes the cases that involve the trademark registration of drug names. "SanLieTong", "BaBaoDan", "PianZaiHuang", "GangTai" and other cases regarding the trademark registration of drug names in the National Drug Standards[1] have occurred continually in recent years. Different courts have their interpretations of the regulations. Profound disagreements arose among litigants due to the following issues: Is it permissible to register drug names in the National Drug Standards as trademarks? What are the registration requirements and consequences? Can the "fair use" rule balance the interests of related parties? by conducting in-depth analyses, summarization, investigation, and evaluation of these cases on the application of laws and the trial rules and making comparisons with international counterparts, the study aims to reveal the internal conflict between generic name and drug name, the anticompetitive effect and adverse implications of drug name trademark registration on the development of the related drug industry and patient well-being.

Based on the particularity of the drug industry, this study proposes that the trademark registration of drug names in the National Drug Standards should be prohibited. This arrangement is conductive to addressing the imbalance of interests among drug operators and safeguarding public health. For China, this study can deepen the understanding of generic names and provide insights and policy recommendations for Chinese lawmakers offering a framework to reconcile trademark protection with the pharmaceutical industry's unique characteristics and regulatory demands; for other countries, it provides a comparative perspective. From the lessons obtained by analyzing the Chinese scenarios, scholars can possess an in-depth understanding of the side-effects pertaining to the trademark registration of generic names through the concrete cases.

The rest of the article is organized as follows. Section "The trademark registration of drug names under the CTML and the CDAL and its inconsistence with the international standards" first describes the legislative evolution pertaining to the rules on the trademark registration of drug names under the CTML and the CDAL and then make comparisons with international standards; Sections "Courts' opinions of trademark registration concerning drug names" and "Reflections on cases of the trademark registrability of drug names" analyze the application of these provisions in judicial practices and reveal the internal conflict between generic name and drug name, the anticompetitive effect and adverse implications of drug name trademark registration on the development of the related drug industry and patient well-being; Section "Rationality of the prohibition registration of drug names" presents the proposal for prohibiting the trademark registration of drug names in the National Drug Standards of China and illustrate the rationality of registration prohibition. Last, in Section "Discussion and Conclusion", some conclusions are drawn, and recommendations are provided.

The trademark registration of drug names under the CTML and the CDAL and its inconsistence with the international standards

Trademark registration of drug names under the CTML. The first version of the CTML was effected in 1983, and the latest revision in 2019. The previous revisions of the CTML exhibit different attitudes toward whether generic names can be registered. The CTML (1982) and CTML (1993) revisions adopt the "prohibition of registration" principle, which states that words and visuals, including generic names, shall not be registered as trademarks.[2] The CTML (2001 revision) modified this perception by enabling the registration of trademarks under specific circumstances. A generic name may be registered as a trademark if it has acquired distinctive characteristics by use and is easily recognizable.[3] The Chinese Trademark Law Implementation Regulations (2002) stipulated the "fair use" rule, which is explained as follows: If the trademark contains the product's generic name, the trademark owner has no right to prohibit others from fair use of the generic name.[4] The CTML (2013) added the regulations for revoking generic name trademarks: any unit or individual shall apply to the Trademark Office to revoke a registered trademark if it has become a generic name of this commodity.[5] Consequently, the "allowed to register + fair use + able to revoke" regulatory system is developing and has not been modified in the CTML (2019). Under the present CTML, a sign only bearing the generic name may not be registered as trademark. But if the sign has obtained distinctiveness through use and can be easily identified, it may be registered as a trademark. The CTML does not entirely exclude the possibility of generic names being registered as trademarks.

The inconsistency between the CTML and the international standards on trademark registration of generic name. What is a generic name? The CTML does not specify or explain what a generic name is. The Supreme People's Court of China issued a judicial interpretation on determining whether a sign is a common name. Article 10 of the Provisions of the Supreme People's Court on Several Issues concerning the Trial of Administrative Cases involving Trademark Authorization and Confirmation provides that "Where a disputed trademark is a legal commodity name or a commodity name established by usage, the people's court shall determine it as a generic name; a trademark that is the name of a commodity under the provisions of the law or the national standards and industry standards shall be recognized as a

generic name; where the relevant public generally believes that a certain name can refer to a category of goods, it shall be recognized as a generic name established by usage; and a trademark that is listed as a commodity name by items such as professional reference books and dictionaries may be utilized as a reference for recognizing the generic name established by usage." This method of identifying generic names rationally reflects the essential attribute of the generic name, which is identifying the good or service category.

What it means distinctiveness? According to Interpretation of Trademark Law of People's Republic of China issued by legislative affairs committee of standing committee of the National People's Congress, a trademark is a sign used to identify the source of goods or services. The ability to distinguish goods or services of the producers or business operators from those of other producers or business operators is the distinctiveness of a trademark (Kong 2016). This connotation of distinctiveness is not much different from the international counterparts. Thomas Cottier and Pierre Veron argue that distinctiveness is the capacity to identify one's goods and distinguish them from those of anther (Thomas and Pierre 2008).

The true inconsistency exists in the issue of registrability of generic names. The Chinese Trademark Law does not entirely exclude the possibility of generic names being registered as trademarks, which differs from other countries. In china, a sign bearing generic name of the goods may be registered as a trademark if it has obtained distinctiveness through use and can be easily identified, just like the registration of descriptive sign. This essentially blurs the line between generic names and trademarks. In the United States, Lanham Trade-Mark Act prevents the trademark protection of generic terms. A descriptive mark can acquire a secondary meaning in customers' minds, whereas a generic mark cannot gain a secondary meaning because it relates to a product or service category. Moreover, the Trademark Law of Japan[6] and that of the Republic of Korea also includes similar rules that preclude the possibility of trademark registration for generic terms. According to Trademark Law of Japan, any trademark to be used in connection with goods or services pertaining to the business of an applicant may be registered, unless the trademark consists solely of a mark indicating, in a common manner, the common name of the goods or services.

Relevant case for this discussion, which involves generic name trademark registration concerns "Booking.Com"[7]. The case affirms that, for descriptive terms, descriptive terms must achieve significance in the minds of the public as identifying the applicant's goods or services, a quality called "acquired distinctiveness" or "secondary meaning." Generic terms are different from descriptive terms. A generic name—the name of a class of products or services—is ineligible for federal trademark registration.

The CTML does not entirely exclude the possibility of generic names being registered as trademarks; A sign displaying the generic name of the goods may be registered as a trademark under the present CTML if it has acquired distinctiveness through usage and can be easily identified. The Chinese scenario differs from that of the other countries. The necessity and rationality of allowing the trademark registration of drug names are worth of further research.

Trademark registration of drug names under the CDAL and analogy with International Nonproprietary Names (INN). Can drug names be registered as trademarks? Do drug names that acquire characteristics via usage and are easily identifiable qualify for trademark registration if they meet the CTML regulations? To answer these questions, it is crucial to determine the generic names of drugs in the Drug Administration Law (hence referred to as "CDAL") context.

The CDAL adopts more stringent regulations than the CTML on the trademark registration of generic names. The CDAL (1985) has no provisions for registering drug names. Article 50 of the CDAL (2001, 2013, and 2015 revisions) and Article 29 of the CDAL (2019) stipulate that drug names included in the National Drug Standards are the generic name of the drug; drug names already utilized as generic names shall not be used as trademarks. From these regulations, we conclude that drug names listed in the National Drug Standards are their generic names and cannot be utilized as trademarks of medicinal products, which is quite different from the regulations of generic names in the CTML. Can generic drug names be registered as trademarks? The CDAL includes no clear regulations, and the precedents of jurisdictions have different opinions on this question; thus, further analysis is necessary.

For easy understanding, we analogize with International Nonproprietary Names (INN), which identifies pharmaceutical substances or active pharmaceutical ingredients. A nonproprietary name is also referred to as a generic name. Each INN is a distinct, globally recognized, publicly owned name. To avoid confusion, which could jeopardize the safety of patients, trademarks cannot be derived from INN and, in particular, must not include their common stems. The National Drug Standards exerts a similar role in drug name regulation. The National Drug Standards, issued by the National Medical and Products Administration, specify the drug names identifying pharmaceutical substances. Under the CDAL, the National Drug Standards are legal and technical standards that relevant institutions should follow in drug R&D, production (import), distribution, use, supervision, and administration. The implementation of National Drug Standards aims to enhance the quality of drugs and protect public health. Similar to INN, according to Article 29 of the CDAL, drug names listed in the National Drug Standards shall be the generic names of medicinal products; the names that have become generic names for pharmaceutical items shall not be utilized as pharmaceutical trademarks.

Particularity of the trademark registration of drug names in the National Drug Standards. Compared with ordinary commodities, the usage of drug names also has special regulations, making the registration of generic names more complex. According to the National Drug Standards, with regard for drug names, drug enterprises shall significantly mark the drug names on the packages according to the specific standard;[8] otherwise, they shall bear the unfavorable consequences of violating drug administration regulations.[9] The requirement that generic names be displayed prominently on the drug label is a specific rule for the utilization of drug names. Signs became trademarks that identified the source of a product and, thus, its quality and reliability (Hooke 1980). Generic drug names that are significantly identified may progressively gain distinctiveness after this type of use and may, thus, accomplish the function of trademarks. Due to factors such as history and culture, some names pertaining to traditional Chinese medicines exhibit an exceptionally high degree of distinctiveness. Hence, there is a significant overlap between the characteristics pertaining to the names of the drugs and the trademarks utilized to identify them. During this process, the boundary between generic names and trademarks becomes increasingly indistinct, even satisfying the conditions of trademark registration. Under these circumstances, discussing whether they can be registered is essential.

The CDAL stipulates that generic names shall not be utilized as trademarks. Simultaneously, the CTML does not entirely exclude

the possibility of generic names being registered as trademarks, which leads to such a dilemma. The generic name of a drug cannot be a trademark at the same time; otherwise, the prominent use of the generic name, although complying with the provisions of the CDAL, may violate the provisions of the CTML and constitutes trademark infringement. With the registration of such trademarks, the trademark owner has the exclusive right to utilize the trademark. By monopolizing the generic name of the drug, the drug owner may permanently monopolize the production and operation of the drugs, which may lead to the accessibility problem. The distinction between generic names and trademarks in drug name trademark registration proceedings is exceedingly complex, particularly in the pharmaceutical's domain. It is worth discussing whether the CTML should enable the trademark registration of drug names. This issue must be examined not only from the CTML perspective, but also from the CDAL perspective.

Courts' opinions of trademark registration concerning drug names

Are drug names listed in the National Drug Standards identified as generic names? The National Drug Standards are defined in Article 28 of the CDAL as the Pharmacopoeia of the People's Republic of China (hence referred to as the "Pharmacopoeia") and the specific national drug standards promulgated by the Drug Supervision and Administration Department of the State Council. Can the drug names listed in the National Drug Standards be determined as generic names and registered as trademarks? In Chinese judicial practices, different courts have different judgments. Generally, the cases can be classified under two categories.

One type maintains the registration of trademarks, such as "BaBaoDan"[10] "YiMaDaZheng,"[11] "GangTai,"[12] and "XingLing"[13], even though these trademarks are drug names listed in the National Drug Standards. The second type rejects the registration of trademarks because courts affirm that the drug names involved in these cases belong to generic names represented by the "YuPingFeng"[14] and "YinHuang"[15] cases. Reasons for refusing the registration effected by courts include two similarities. First, trademarks of related cases were mentioned in the National Drug Standards before the date of trademark registration. In the "YuPingFeng" case, the "YuPingFeng Oral Liquid" was listed in the Pharmacopoeia in 1990, and "YinHuang Oral Liquid" in the "YinHuang" case was listed in the Pharmacopoeia in 1995. Second, trademarks of the related cases were generalized, and other businesses had been selling the same type of drugs under the same names. In the "YinHuang" and "YuPingFeng" cases, many market enterprises acquired the production permit of these kinds of drugs. Therefore, it can be observed that "listed in the National Drug Standards" + "generalized using" is the guiding concept for refusing to register trademarks for generic names in the National Drug Standards. When medications are listed in the Pharmacopeia, it is confirmed that they have become their generic names.

Although the circumstances surrounding maintaining registration are more complicated, the judicial rationale of cases regarding registration rejection is apparent. Distinct courts have different perspectives on whether the names of medications published in the National Drug Standards are generic when preserving registration.

Generally, two opinions exist. The first opinion is "pending," which indicates that the fact supporting the validity of generic names listed in National Drug Standards is insufficient. In the cases of "BaBaoDan," "PianZaiHuang," and "YiMaDaZheng," relevant drug names listed in the National Drug Standards do not directly prove that their names are confirmed as statutory generic names. In the "BaBaoDan" and "PianZaiHuang" cases, the Supreme People's Court considered that the "BaBaoDan" drug name implicitly indicated a drug source and was not generalized. In the "YiMaDaZheng" case, although the disputed drug name was included in the National Drug Standard, it still has the function of distinguishing merchandise sources and does not belong to the following scenario: "only indicating the category of this medicine."

The second is "affirmation." Drug names in the National Drug Standards should be identified as statutory generic names, and it is not necessary to stress if they have been generalized. In regard to the "GangTai" case, it was listed in the National Drug Standard before March 25, 2012. Although "GangTai" was mentioned in the National Drug Standards before litigation for trademark registration, the Trademark Review and Adjudication Board stipulate that it is insufficient to indicate that the drug name in question is a generic name for the approved product. However, the Beijing Intellectual Property Court postulates that "GangTai" was listed in the National Drug Standards before March 25, 2012. Thus, it is a generic name for a drug and a statutory generic name. The drug name in the National Drug Standards becomes the basis of asserting the statutory generic name. It can be observed from the aforementioned cases that in the cases of maintaining registration, it is divergent on whether drug names listed in the National Drug Standards can be directly determined as statutory generic names.

Is it necessary to consider the "being generalized" factor when identifying generic names? The notion that the drug name listed in the National Drug Standards is the generic name does not become a consensus. For courts, other scenarios must be considered. In the cases of maintaining the trademark registration of the drug names listed in the National Drug Standards, the "SanLieTong," "BaBaoDan," "YiMaDaZheng," and "GangTai" cases exhibit similarities. In these cases, the provider of the drug is unique. The trademark owner is the only provider for this kind of drug, which dramatically influences whether the court considers maintaining registration. In the "BaBaoDan" case, the trademark owner, Xiamen Traditional Chinese Medicine Co, LTD, is the exclusive producer and provider of "BaBaoDan" medication. Based on this relationship, the Beijing Superior People's Court considers that the mark of "BaBaoDan" possesses the meaning of source identification and that sign has not been generalized. In the "YiMaDaZheng" and "GangTai" cases, there are no other manufacturers of the "YiMaDaZheng" and "GangTai" drugs. The mark has formed a unique relationship with the company. Moreover, the production and the enterprise form a one-to-one corresponding relation. In these cases, due to some other protection measures, such as the protection of patented or traditional Chinese medicine varieties,[16] the trademark holder has become the sole manufacturer and distributor of the drug. Although the mark involved is the drug's generic name, it is utilized only by the manufacturer. The courts think that they have not been generalized in essence. From the CTML perspective, the generic name involved indicates the source of goods and is distinctive, thereby enabling it to maintain the registration of the trademark concerned. This maintenance of trademark registration is the basis of the CTML; however, the drug is a particular commodity, and the rationality of maintaining registration should be based on the various legal systems involved, and not just on the CTML.

Application of the "fair use" rule. The "fair use" rule stipulated in the Trademark Law has been applied in cases involving the trademark infringement of drug names. In the trademark infringement cases represented by the "BaiLing"[17] and

"YiMaDaZheng"[18] cases, the courts affirm that "BaiLing" is the generic name of the drug listed in the Pharmacopoeia. The defendant's use of the drug name does not infringe the plaintiff's exclusive right to the registered trademark. The defendant's use of the word "BaiLing" constitutes "fair use." In the "YiMaDaZheng" case, the court decided that the drug names included in the National Drug Standards are generic; however, other enterprises can use the marks based on "fair use" and do not infringe the trademark right.

The fair use rule in these cases is a relief measure for the trademark registration of the drug name in a specific period; however, it does not mean that the fair use rule appropriately balances interests between the trademark owner and other operators. The trademark "BaiLing" was approved for registration on February 14, 1995, and "YiMaDaZheng" was approved for registration in 1983. Meanwhile, the CDAL (1983 version) had not yet developed special provisions on drug names. The registration of the two trademarks did not violate the applicable CDAL, and the registration was a consequence of the specific historical period. For generic name trademarks successfully registered in the particular period, to balance the interests of trademark owners and other drug dealers, it is necessary to make remedies through "fair use", thereby preventing the monopolization of the production and operation of such drugs.

Reflections on cases of the trademark registrability of drug names

Confusion of the concept and identification of generic names. Drug names listed in the National Drug Standards shall be recognized as generic names, which can be referred to as the "generic name in form" recognizing principle. The recognizing principle, further considering the generalized factor, shall be referred to as "generic name in substance." Courts at different levels do not possess unified standards on whether a sign constitutes generic names; however, for the trademark registration of generic names, all cases on maintaining or not maintaining exhibit a internal logical identity. The "generic names in substance" principle is upheld by Chinese courts, which indicates that when determining whether to allow the registration of a drug name, they carefully consider whether the name is listed in the National Drug Standards and whether it has been generalized. In Chinese court practices, generalized drug names are difficult to register, whereas non-generalized ones may be registered.

In judicial practices, the standard of generalized or non-generalized tends to further identify whether this drug is operated by only one particular enterprise or there are other operators. The sign should not be identified as "been generalized" if the drug name sign's owner is the only provider of the drug and if the sign forms a one-to-one corresponding relationship with the drug provider, which apparently indicates the source of the drug.

The CTML does not exclude the trademark registration of generic names. Article 11 stipulates that a generic name that has acquired prominent characteristics through use and is easy to identify may be registered as a trademark. The aforementioned provision stipulates two requirements for registering a generic name as a trademark, namely "acquired distinctive characteristics through use" and "easy to identify." Since there is only one enterprise that supplies the drug, the drug name has the mixed attributes of a generic name indicating the type of product and a brand indicating the source of the product (Shipley and David 1978). There is a one-to-one correspondence between the commercial symbol and the drug provider, and the drug name becomes exceedingly distinguishable. The drug name involved in the "SanLieTong," "GangTai," and "YingMaDaZheng" cases has a one-to-one corresponding relation with the operator of the drug, which is exceedingly distinctive (Kong 2016). This scenario satisfies the requirements of distinctiveness and identification, as well as the requirements for the registration of generic name trademarks from the CTML perspective.

This identification method is apparently rational if we recognize that generic names can acquire distinctiveness through use. The CTML stipulates that a sign may obtain distinctiveness through use and does not exclude the trademark registration of generic names, and judicial practices adopt the same opinions. However, this arrangement would undermine the foundation of the generic names concept and lead to immense confusion on generic names. Essentially, generic signs refer to the words or symbols that communicate what type of product or service is offered; they do not refer to the source of product or service. Generic signs are different from descriptive signs. Unlike descriptive signs, the generic signs' function of class indicator determines that they could not acquire a secondary meaning because it refers to the product or service category. The role of the generic name and that of the trademark are inherently conflicting and incompatible.

It is widely accepted that generic names cannot acquire distinctiveness. The WTO specifications do not affirm the issue pertaining to the distinctiveness of generic names, neither do they include a provision for the registration of generic names. Under the Paris Convention for the Protection of Industrial Property (hereinafter referred to as Paris Convention), trademarks that may serve in trade to designate the kind of goods or have become customary in the contemporary language or the bona fide owner may be denied registration or invalidated. According to the Paris Convention, generic and descriptive terms belong to the same signs devoid of distinctive characters. Under Article 15 of the Trade-Related Aspects of Intellectual Property Rights (TRIPS), signs are not inherently capable of distinguishing the relevant goods or services, and members may attain registrability depending on the distinctiveness acquired through use. This provision provides a legal basis for registering descriptive signs but not for registering generic signs. From the perspective of intellectual property rules, the generic name apparently bears no inherent distinctiveness, and there is no possibility of obtaining distinctiveness by use. In the United States, Lanham Trade-Mark Act prevents the trademark protection of generic terms. A descriptive mark can acquire a secondary meaning in customers' minds, whereas a generic mark cannot gain a secondary meaning because it relates to a product or service category. Even in East Asia, the trademark laws of Japan and those of the Republic of Korea also preclude the possibility of trademark registration for generic terms based on the lack of distinctiveness.

Damage to the stability and authority of drug names. Drugs are exceptional commodities with particular regulatory systems. For the trademark registration of drug names, Chinese courts ignore the particularity of drug administration laws and regulations and emphasize the principle of "generic name in substance" from the CTML perspective. Such an identification method without distinguishing the particularity of the CDAL can lead to a scenario in which the "statutory generic name" concept in the CDAL exists just in name. The Supreme People's Court of China issued a judicial interpretation aimed at determining whether a sign constitutes a generic name. Under Article 10 of the Provisions of the Supreme People's Court on Several Issues concerning the Trial of Administrative Cases involving Trademark Authorization and Confirmation, a trademark that is the name of a commodity under the provisions of the law or the national standards and industry standards shall be recognized as a generic name. Specifically, the National Drug Standards are national and industry

standards in pharmaceuticals. Drug names in the National Drug Standards should be regarded as generic names. Article 28 of the CDAL states that the National Drug Standards are the Pharmacopoeia of the People's Republic of China and drug standards promulgated by the drug regulatory department under the State Council. Article 29 stipulates that the drug names listed in the National Drug Standards shall be generic. Lawmakers propose the following: All the medicine names listed in the National Drug Standards are generic drug names, which are commonly utilized "statutory names". The generic names of drugs are formulated by the State Committee and reported to the State Food and Drug Administration. Drug names listed in the National Drug Standards are the generic names of drugs and the "statutory generic names" that individuals are familiar with. The generic names of drugs are derived from the National Drug Standards and are commonly utilized nationwide, and they also reflect the fundamental differences of normalized appellation between different classes of drugs. If the drug names listed in the National Drug Standards are not considered the generic names of drugs, the existence of legal generic names is prohibited. Moreover, the naming of the generic names of drugs is not arbitrary. The generic names of the drug are approved first as the legal names to prevent the confusion occasioned when one drug has multiple names. The names utilized as trademarks shall not be included in the National Drug Standards. The names can either be utilized once generic names have been approved or registered as trademarks, preventing prescription errors occasioned by name ambiguity and ensuring public health and safety.

Therefore, we propose that, unlike descriptive signs, generic names cannot acquire distinctiveness. The one-to-one correlation between a commercial symbol and the manufacturer of a drug should be considered when choosing whether to register descriptive signs as trademarks; however, it does not apply to the identification of generic signs. The consideration of whether the sign has been generalized only applies to determining whether the registered trademark has become a generic name in the cases of trademark revocation, instead of trademark registration. In regard to trademark registration, the generalization problem should not be considered. In the drugs domain, drug names listed in the National Drug Standards should be considered as the generic names of drugs for drug use safety and public health.

Imbalance of interests among drug operators. The lack of generic names can occasion substantial confusion among providers and patients (Roger and Félix 2012), leading to an imbalance of interests among drug operators. The trademark registration of drug names should be considered not only from the CMTL perspective but also from the CDAL perspective. The CDAL should delimit the boundary between drug names and trademarks.

Drug names listed in the National Drug Standards are Chinese-approved drug names. According to drug administration laws and regulations, any drug operator must conduct drug operations in accordance with the provisions of the drug administration on that kind of drug. Specifically, their operation must follow the National Drug Standards, especially with respect to drug names. Otherwise, they will be punished for violating drug administration laws and regulations. According to the CDAL, the generic names of drugs must be indicated prominently and distinctly on the label or instruction manual. In addition, the Provision on the Administration of Drug Instructions and Labels also provides detailed requirements for labeling generic names and includes specific provisions in regard to the standard position, size, and color of the generic medicine names, thereby facilitating identification through prominent labeling. After such drug names are registered as trademarks, substantial problems arise among these provisions. According to the CTML, using the same or similar trademarks on the same or comparable products without the trademark owner's permission is forbidden. Prominently and distinctly using generic names according to the CDAL can significantly increase the risk of trademark infringement. The conflicting obligations imposed by the CDAL and the CTML put drug operators in a dilemma—on one hand, they can confront the risks of trademark infringement if they follow drug administration laws and regulations, and on the other hand, if they follow the CTML, they can breach drug administration laws and regulations and be barred from conducting drug business. Where patents are granted for limited terms, trademarks can be perpetually protected (Jeremy and Greene 2013). Accordingly, the scenario in which drug names listed in the National Drug Standards may be registered as trademarks can lead to a subjective permanent monopoly on the specific drug from which other operators can be excluded. With the registration of such trademarks, the trademark owner has the exclusive right to use the trademark. Monopolizing the generic name of the drug can permanently monopolize its production and operation, which may lead to a drug accessibility problem. In the specific cases, the courts of final instance maintain the registration of trademarks of the drug names in the cases, such as "BaBaoDan" "YiMaDaZheng," and "GangTai". This leads to such a consequence. The signs of "BaBaoDan" "YiMaDaZheng," and "GangTai" are the drug names according to the National Drug Standards. Meanwhile, they are also the registered trademarks. If other operators plan to do the particular drugs business, they inevitably should mark the generic names of "BaBaoDan" "YiMaDaZheng," and "GangTai" prominently and distinctly in the packages to comply with the provisions of the CDAL. But these practices can expose them to the risk of trademark infringement. The fear of infringement risk has discouraged other operators from entering these specific drug industries. Currently these drugs are sold exclusively. And the protection of trademark rights would give trademark owners of "BaBaoDan" "YiMaDaZheng," and "GangTai" exclusive right to operate the drugs in perpetuity.

The current institutional procedures for the protection of patented or traditional Chinese medicine varieties have resulted in the development of the exclusive business status of pharmaceuticals. The institutional arrangements are impermanent. Drug names can, however, become a permanent monopoly if they are permitted to be registered as trademarks and if there are no remedies or they are not apparent. The decisive competitive advantage is not within the protection scope of the trademark right. The CTML's value connotation also relates to protecting lawful competition orders (Zhao 2016). The CTML protects two types of fair competition. One is to protect the fair competition interest of trademark owners by preventing confusion. The protection of other operators is also an essential connotation of the protection of the CTML. The CTML rejects generic names without distinctiveness to stop illegal competition occasioned by monopolizing the generic names that market operators must utilize in the form of trademark rights.

In response to this scenario, the CTML has established the "fair use" rule, which has been applied in cases involving the trademark infringement of generic names. Nonetheless, it does not imply that rule of "fair use" properly balances interests between trademark owners and other operators. The "fair use" rule can alleviate the infringement concerns of other operators conducting relevant drug businesses; however, it increases the dilution risk that affects the distinctiveness of generic name trademarks. The trademarks of "BaiLing" and "YiMaDaZheng" also possess the "source identification function" and bear goodwill, which is consistent with the nature of trademark

protection. After fair use, the one-to-one correspondence between the drug and drug manufacturers disintegrates, and the connection between trademarks and specific manufacturers is divided. The distinctiveness of the trademarks reduces, and they continually manifest a generalization tendency; moreover, the benefits of trademark owners decreases. It also limits the confidence of trademark owners, who fail to effectively make continuous investments in trademarks, which leads to the failure of the incentive function of trademark law.

Rationality of the prohibition registration of drug names

Necessity and rationality of restrictions on trademark rights in the drugs domain. Posner and Landers propose that suggestive, arbitrary, and artificial marks are suitable for trademark law protection because of the extensive vocabulary supplement that offers other operators multiple choices without increasing costs (William and Richard 1987). However, the generic names of goods are different, and other operators have few options. Enabling the exclusive utilization of generic names can significantly increase the cost for other competitors. Therefore, it is necessary to set a higher degree of distinctiveness to attain registration (Roger 2006). The drugs domain is more specific than other commodity domains. Due to the significant impact of drugs on public health, the government implements strict national drug standards for the production and sales of drugs. If other drug dealers want to enter the business arena of such drugs, they must mark drug names in accordance with the National Drug Standards, which is a compulsory obligation that is quite stringent. Therefore, the trademark registration of generic drug names should be subject to stricter restrictions than that of the generic names of common goods. As regulated in the CDAL, generic names shall not be used as drug trademarks. It is rational to expand the interpretation of this provision, which should restrict not only the use of trademarks for generic drug names, but also the registration of trademarks.

Drugs are commodities that affect public health. TRIPS also support restrictions on intellectual properties, including trademark rights, for reasons such as public health concerns. Under TRIPS, members may, in formulating or amending their laws and regulations, adopt measures that facilitate the protection of public health and nutrition and promote the public interest in sectors vital to their socioeconomic and technological developments. By not registering a drug name as a trademark, the courts aim to protect the market operators' free use of the generic terms, which is a necessary condition for the existence of generic drugs. The registration of drug names is not conducive to the emergence and development of generic drugs, which ultimately harms the interests of patients. According to the World Health Organization (WHO), a "generic drug" or "generic medicine" is a pharmaceutical product that is marketed after the patent or other exclusive right expiration. The advantage that the owner of the generic name sign is the exclusive provider of the drug does not derive from the commercial sign. This monopoly or semi-monopoly market pattern is rationalized as follows: drug manufacturers have adopted the protection of patent rights or traditional Chinese medicine varieties, which are protected for a limited period. With the trademark registration of generic names, generic drugs cannot be produced and still becomes impossible after the expiration of the patent or other exclusive rights. Trademark rights could be protected in perpetuity; however, providing a generic term with trademark protection would be similar to granting a monopoly on the product. The generic drug is much cheaper than its nongenetic drug. The drug's production and sales can be completely controlled by monopolizing the name. Thus, patients have to pay more for drugs, which may lead to drug accessibility problems. Therefore, there is a need to restrict the trademark registration of drug names in the pharmaceutical field, which crucially affects the development of generic drugs and the well-being of patients.

Prohibition on registration is conducive to achieving the balance of interests. The cases following the identification standards of "generic name in substance" enable the registration of drug names. Infringement cases may apply the "fair use" rule as a remedy measure. This type of rule temporarily balances interests between the generic signs' owners and other operators but objectively complicates the identification standards of generic names. Furthermore, enabling the fair use of others is a process of lowering distinctiveness (Thomas and Pierre 2008), weakening its functions of trademarks, and increasing the risks of trademark dilution. Owing to the aforementioned strategy, the rights and interests enjoyed by relevant manufacturers of drugs enter an uncertain state of hovering between the "public domain and propriety rights" (Zhang and Lu 2019). It is not conducive to continuous investment in trademark brand construction. In intellectual property, the balance between exclusive rights and the public domain is necessary, and effective regulation should balance the interests of all parties (Feng 2019). The generic medicine names listed in the National Drug Standards should be prohibited from registration.

Those wishing to name pharmaceuticals must apply to the Chinese Pharmacopoeia Commission, which approves generic names in China. If the drug names listed in the National Drug Standards are forbidden to be registered absolutely, this arrangement could encourage enterprises from the origin to apply discreetly for generic names. Distinguishing generic names and trademarks early on avoids the scenario where firms apply for generic names of medications using unregistered but prominent trademarks owned by firms. Trademarks facilitate consumer purchasing while incentivizing firms to produce goods of desirable quality (Ramello 2006). The strict differentiated management of generic drug names and trademarks is conducive to the accumulation of goodwill pertaining to enterprise commercial signs, enabling enterprises to strengthen their continuous investment in trademark brand construction.

The registration of trademarks for the generic names listed in the National Drug Standards should be forbidden. Even if, similar to "BaBaoDan," a drug name has extraordinary importance and identifiability, generic names of pharmaceuticals are nonetheless barred from registration.

Administrative procedure of changing generic name before trademark registration. The interests of the owners of the signs should also be entitled to get relief. The signs of "generic names" are used by the Enterprises. They put a lot of effort into operating these signs. Simply banning trademark registration of these signs is also unfair. The external business environment is a factor that affects firms' efficiency beyond the control of firms, and the government is the subject of external governance (Qiu et al. 2023). The drug provider should be allowed to change the drug's generic name through an administrative procedure. They can first apply to change the generic drug names through an administrative procedure that strips away the characteristics of "generic name" from the mark. When the signs are no longer generic names of the drugs, they can apply for trademark registration of the signs subsequently. In this approach, the purpose of trademark registration can also be realized. Thus, the mark can obtain complete trademark law protection, and the exclusive right of registered trademarks can be more stable. The trademark owners no longer need to worry about the dilution risk of the trademark

(Ma 2016). The generalization of the "SanLieTong" trademark can be effectively avoided if Southwest Pharmaceutical Co., Ltd. changes its generic name from "SanLieTong" to "Compound Paracetamol Tablets."

Discussion and conclusion

This study analyzes the particularity pertaining to the trademark registration of a generic name in China and the anti-competitive effects that it had occasioned in the drugs domain. The current Chinese Trademark Law does not entirely exclude the possibility of generic names being registered as trademarks, which is inconsistent with the international standards. The provisions in Trademark Law and the judicial verdicts on the trademark registration of generic names in China are problematic. Under the currently effective CTML, a sign of generic name may obtain distinctiveness through use, and a generic name is not excluded from trademark registration. This arrangement contradicts the nature of generic names and may exert an anticompetitive effect and have adverse implications on the development of the related drug industry and patient well-being. This scenario can lead to an imbalance of interests between the owners of trademarks with generic names and other operators. It raises the possibility of a long-term monopoly in the drug trade when trademarks are used. To address this unfavorable scenario, the regulation of fair use is apparently crucial for the registered generic trademarks of drugs; however, this remedy is not the most optimal option because, in the long run, it not only increases the distinctiveness desalination risk of generic trademarks but also limits the owner's confidence in continuous investment in the trademarks.

This study proposes that the sign of a generic name is different from its descriptive sign, and cannot obtain distinctiveness through use. The trademark registration of drug names listed in the National Drug Standards should be prohibited. The drug names listed in the National Drug Standards are statutory generic names, and there is no need to consider the generalization scenario. This arrangement is conductive to addressing the imbalance of interests among drug operators and safeguarding public health. The strict distinction between generic drug names and trademarks may encourage enterprises to discreetly apply for generic names from the outset. It helps the enterprises avoid applying unregistered but prominent signs owned by enterprises for the application for generic drug names, as well as effectively avoiding future legal risks associated with barriers to trademark registration and trademark dilution. Additionally, simply banning trademark registration of these signs is also unfair. The "source identification" and "goodwill" are the nature of trademark protection. This study proposes that for registered generic name trademarks, the drug provider should be able to modify the drug's generic name through an administrative procedure. When the signs are no longer generic names of the drugs, they can apply for trademark registration of the signs subsequently. The remedy can thereby restore trademark rights to a satisfactory state and protect trademark owners' interests.

This study discusses the policy implications and recommendations for lawmakers in China. This study proposes that generic name should be prohibited from trademark registration. And for registered generic name trademarks, the drug provider should be able to modify the drug's generic name through an administrative procedure. These suggestions can provide references for the improvement of related CTML rules for lawmakers in China; for other countries, it provides a comparative perspective. From the lessons obtained by analyzing the Chinese scenario, scholars can possess an in-depth understanding of the side-effects pertaining to the trademark registration of generic names through the concrete cases.

This study has some noteworthy limitations. The first is that more quantitative analysis of the anticompetitive effects pertaining to generic name trademark registration from the economics perspective is beneficial. Economics exerts a dual role in antitrust decision-making (Jan 2023). Thus, a foundation for legislative amendments becomes more convincing. Moreover, the markets and corresponding legal institutions operate differently in different countries (Gao and Petrova 2022). The concept and identification of generic names must be strictly interpreted and defined. This study proposes that the trademark registration of drug names should be prohibited. If the generic name is inappropriately identified, the trademark rights of the relevant parties may be damaged.

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Notes

1 The National Drug Standards are enacted to improve the quality of drugs and protect public health. Under article 32 of CDAL, the Pharmacopeia of the People's Republic of China and the drug standards issued by the drug regulatory department under the State Council shall serve as the National Drug Standards.
2 Article 8 of CTML (1982) provides that "The following words or graphics shall not be used in trademarks:(I) the generic names and design".
3 Article 11 of CTML (2001) provides that "symbols that only have a product's generic name, graphics or model shall not registered as trademark. Those symbols listed in the previous paragraph that acquire prominent characteristics through use and are easy to identify may be registered as trademarks".
4 Article 49 of Regulations for the Implementation of the Trademark Law (revised in 2002) provides that "Where an registered trademark contains the generic name, shape or model of the goods in respect of which it is used, or directly indicates the quality, main raw material, function, use, weight, quantity and other features of the goods, or contains a place name, the holder of the exc1usive right to use the registered trademark has no right to prohibit others from duly using it".
5 Article 49 of CTML (2013) provides that "Where a registered trademark is becoming a generic name in a category of approved goods, and the mark has not been used for a period greater than three years without any justifiable reasons, any organization or individual may request that the Trademark Office make a decision to cancel such registered trademark".
6 According to Trademark Law of Japan, any trademark to be used in connection with goods or services pertaining to the business of an applicant may be registered, unless the trademark consists solely of a mark indicating, in a common manner, the common name of the goods or services.
7 US Patent and Trademark Office (PTO) V. Booking.Com B. V. NO.19-46.
8 Article 25 of the Regulations on Administration of Drug Instructions and Labels provides that "Drug generic name should be marked obviously and prominently. (a) For horizontal labels, they must be marked in a conspicuous position within one-third of the upper range; For vertical labels, they must be marked prominently within the right third; (b) Must not use cursive, seal, or other fonts that are not easily recognizable, and must not use italics, hollow, shadows, and other forms to modify fonts; (c) The font color shall use black or white, which forms a strong contrast with the corresponding light or dark background".
9 Article 49 of the Drug Administration Law provides that "drugs which are not conformed with the drug standard are regarded as substandard drugs".
10 The Supreme People's Court, 25 April 2019, Case No. (2019) Zui Gao Fa Xing Shen No. 2811. The court considers that "BaBaoDan" possesses the function of identifying the merchandise resource, and that the documented evidence cannot sufficiently prove that "BaBaoDan" has become the legal or conventional generic name of the drug.
11 Beijing High People's Court, 20 November 2014, Case No. (2014) Gao Xing (Zhi) Zhong Zi No. 2092. The court considers that this controversial trademark possesses the function of distinguishing merchandise resource, and does not belong to "the situation scenario where the generic name is exclusively reserved for this medicine".
12 Beijing IP Court, 13 June 2017, Case NO. (2016) Jing 73 Xing Chu NO. 1872. The court considers that "GangTai" has been the legal generic name of this medicine. Although "GangTai" is the generic name of this medicine, it has not been generalized. The name possesses the significant characteristics of trademark, and maintains its registration.
13 Beijing High People's Court, 28 February 2011, Case NO. (2011) Gao Xing Zhong Zi NO. 11. The court considers that this controversial trademark has not become the generic name of this medicine when it is allowed to register and does not process the scenario for not approving to register.

14 Beijing IP Court, 21 December 2018, Case NO. (2016) Jing 73 Xing Chu NO. 1564. The court considers that "YuPingFeng" trademark belongs to the scenario that this medicine has a generic name, and is not approved to maintain it.
15 Beijing High People's Court, 10 November 2010, Case NO. (2010) Gao Xing Zhong Zi NO. 1162. The court considers that before the "YingHuang" trademark was registered, many enterprises have acquired a production permit of "YingHuang" series of medicine, and "YingHuang" has become the generic name of this kind of medicine. "Yinhuang" is the generic name, and is not approved to register.
16 Regulations on Protection of Varieties of Traditional Chinese Medicines is formulated by the State Council, and is aimed at raising the quality of all varieties of traditional Chinese medicines, thereby protecting the legal rights and interests of enterprises engaged in the production of traditional Chinese medicines. All varieties covered by the regulations are divided into Grade 1 and Grade 2 in its protection. The protection period of those under Grade 1 lasts for 30 years, 20 years, and/or 10 years, and Grade 2 lasts for 7 years. The production of varieties of traditional Chinese medicines granted with a protection shall be limited to enterprises under the protection period.
17 Shandong High People's Court, 15 August 2007, Case No. (2007) Lu Min San Zhong Zi No. 56.
18 Guangdong High People's Court, 20 December 2012, Case No. (2012) Yue Gao Fa San Zhong Zi No. 530.

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Author contributions

Jun Shen wrote and refined the manuscript. Xiaoting Song helped perform the analysis with constructive discussions.

Competing interests

The authors declare no competing interests.

Ethical approval

Ethical approval was not required as the study did not involve human participants.

Informed consent

This article does not contain any studies with human participants performed by any of the authors.

Additional information

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