United States Court of Appeals for the Federal Circuit

IN RE: XENCOR, INC.,
Appellant

2024-1870

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. 16/803,690.

Decided: March 13, 2025

JULIE S. GOLDEMBERG, Morgan, Lewis & Bockius LLP, Philadelphia, PA, argued for appellant. Also represented by MICHAEL J. ABERNATHY, CHRISTOPHER JOHN BETTI, MARIA DOUKAS, AMANDA SCOTT WILLIAMSON, Chicago, IL; WILLIAM R. PETERSON, Houston, TX.

PETER JOHN SAWERT, Office of the Solicitor, United States Patent and Trademark Office, Alexandria, VA, argued for appellee Coke Morgan Stewart. Also represented by MARY L. KELLY, AMY J. NELSON, FARHEENA YASMEEN RASHEED.

Before HUGHES and STARK, *Circuit Judges*, and SCHROEDER, *District Judge*.[1]

SCHROEDER, *District Judge*.

Xencor, Inc. ("Xencor") appeals a decision of the Appeals Review Panel ("ARP")[2] of the Patent Trial and Appeal Board ("Board") rejecting the claims of its patent application as unpatentable for lack of written description. Specifically, Xencor contends that the Board and the ARP erred by construing part of one claim's preamble as limiting and requiring written description for the Jepson claim preamble of another claim. The Director of the United States Patent and Trademark Office ("Director") responds that the preamble should be read as a whole, with all parts limiting and requiring written description, and neither the specification nor Xencor's extrinsic evidence established that the relevant Jepson claim limitation had sufficient written description.

We hold that the limiting preamble of a Jepson claim must be supported with sufficient written description, and what constitutes sufficiency varies depending on the knowledge of the pertinent person of ordinary skill in the art. A patentee has the burden of providing written description; in a Jepson claim, that burden extends to the limiting preamble. We additionally hold that substantial evidence supports the Board's finding that Xencor failed to

---

[1] The Honorable Robert W. Schroeder III, District Judge, United States District Court for the Eastern District of Texas, sitting by designation.

[2] The ARP—comprised of members of the Patent Trial and Appeal Board including the Director of the United States Patent and Trademark Office, the Commissioner for Patents, and the Chief Judge of the Board—is available to review Board decisions in ex parte appeals, reexamination appeals, and reissue appeals.

provide adequate written description for its Jepson claim and for its other claim, the preamble of which we agree with the Board and the ARP is limiting. Accordingly, we affirm.

BACKGROUND

Anti-C5 antibodies are monoclonal antibodies that bind to C5, a protein that performs complement activation. One specific type of monoclonal antibody, 5G1.1, can bind human C5 protein to block the progression of the complement cascade. A version of 5G1.1, called eculizumab, was used in clinical trials and had a known sequence. At the time of the patent application, eculizumab had been used to treat paroxysmal nocturnal haemoglobinuria ("PNH"), "a chronic blood disease caused by a defective enzyme that leads to a lack of protective natural complement inhibitors," and was being studied in "the treatment of asthma and transplantation." J.A. 206. Xencor additionally contends that anti-C5 antibodies have an anti-inflammatory effect and may be useful in treating various autoimmune disorders.

A. The Relevant Claims

The application at issue, U.S. Patent Application No. 16/803,690 (the "'690 application"), is a continuation application and has an earliest claimed priority date of February 25, 2008.[3] The '690 application asserts that modifying antibodies with certain amino acid substitutions provides for longer staying power in the body and reduces the need for more frequent treatment. For instance, the specification states "[t]herapeutics against these targets are frequently involved in the treatment of autoimmune diseases and require multiple injections over long time periods.

---

[3] The operative version of the patent application, and the version we refer to throughout, is the version as amended after an initial rejection in August 2020.

Therefore, longer serum half-lives and less frequent treatments, brought about from the variants of the present invention, are particularly preferred." J.A. 157. It provides one example of an anti-C5 antibody, 5G1.1.

There are two claims at issue on appeal, claim 8 (a Jepson claim) and claim 9 (a method claim).

> 8. In a method of *treating a patient by administering an anti-C5 antibody with an Fc domain*, the improvement comprising
>
> > said Fc domain comprising amino acid substitutions M428L/N434S as compared to a human Fc polypeptide,
> >
> > wherein numbering is according to the EU index of Kabat,
> >
> > wherein said anti-C5 antibody with said amino acid substitutions has increased in vivo half-life as compared to said antibody without said substitutions.
>
> 9. A method of *treating a patient by administering an anti-C5 antibody* comprising:
>
> > a) means for binding human C5 protein; and
> >
> > b) an Fc domain comprising amino acid substitutions M428L/N434S as compared to a human Fc polypeptide,
> >
> > > wherein numbering is according to the EU index of Kabat,
> > >
> > > wherein said anti-C5 antibody with said amino acid substitutions has increased in vivo half-life as compared to said antibody without said substitutions.

J.A. 903 (emphasis added). As relevant here, the claims were rejected by the examiner in March 2021 for lack of written description.

B. Procedural History

Xencor appealed the examiner's finding to the Board, which issued its initial decision on January 10, 2023. Relevant here,[4] the Board concluded that the preambles to claims 8 and 9 were limiting—but did not specifically grapple with case law saying preambles are not always limiting—and that Xencor had not shown that the application had sufficient written description for either claim. The Board also determined that Xencor had not demonstrated that anti-C5 antibodies or methods of treating patients with anti-C5 antibodies were well-known in the art.

Xencor petitioned for reconsideration and the Board issued a second decision, finding against Xencor on the same grounds. Of note, on rehearing, the Board further considered whether the preamble of claim 8 was limiting and held that it was.

The decision on rehearing was appealed to us. *See In re Xencor*, No. 23-2048. Before it could be heard, the Patent Office asked us to remand the case for consideration by the ARP. *Id.* at ECF No. 32. We agreed and remanded the case for this purpose. *Id.* at ECF No. 35.

The ARP issued its decision on May 21, 2024. The ARP first addressed whether written description was required for Jepson claim preambles generally and found that it was, because Jepson preambles define the scope of the

---

[4] The Board's decisions were superseded by the decision of the ARP, except to the extent that the ARP adopted the findings of the Board. Because most of what we are reviewing is the decision of the ARP, we discuss the Board's decisions only insofar as they were adopted by the ARP.

claim. It then, however, considered whether the preamble language of "treating a patient," even without the Jepson claim format, was limiting. It found that "'treating a patient' is necessary to give life, meaning, and vitality to both the 'increased in vivo half-life' limitation recited in the body of the claim, and also to 'administering,' which is the sole method step recited in the claim." J.A. 13. The ARP then applied its analysis to the same language in the non-Jepson claim 9. The ARP found that the rest of the language in claims 8 and 9, as well as the specification, indicated that "treating a patient" should be considered limiting and that this language was necessary to understanding the scope of the claims.

The ARP then turned to whether the claims had sufficient written description. It first found that claim 8 lacked written description because the specification did not provide a representative number of species to sufficiently support the broad genus of anti-C5 antibodies being claimed. The specification only disclosed one anti-C5 antibody, 5G1.1, which the ARP found was insufficient given the "various specificities and epitopes" of the genus. J.A. 22. The ARP also adopted the Board's findings that Xencor's expert was not credible and that Xencor had not demonstrated that anti-C5 antibodies were well-known and did not require further support in the specification.

The ARP then turned to the claim language "treating a patient" and found that it was not supported with adequate written description. It found that "[t]he Specification does not describe what patients with what diseases or conditions can be successfully treated with an anti-C5 antibody . . . . Nor is there a single working example describing treatment of patients with a disease or condition with an anti-C5 antibody possessing the claimed Fc modifications." J.A. 26. The limited disclosure of three potential uses, the ARP held, was inadequate to demonstrate possession of "treating a patient" with the claimed anti-C5 antibodies. It then adopted the same reasoning it used in claim 8 for

claim 9. The ARP noted that while claim 9 was directed only to 5G1.1, the specification of the '690 application did not provide any examples of treating patients with 5G1.1 or any other written description support even for the single named anti-C5 antibody.

Xencor timely appealed the decision of the ARP.[5]

LEGAL STANDARDS

"[W]e review the Board's legal determinations de novo and its factual findings for substantial evidence."[6] *See Almirall, LLC v. Amneal Pharms. LLC*, 28 F.4th 265, 271 (Fed. Cir. 2022). "A finding is supported by substantial evidence if a reasonable mind might accept the evidence as adequate to support the finding." *In re Couvaras*, 70 F.4th 1374, 1378 (Fed. Cir. 2023). Sufficiency of written description is a question of fact. *See Knowles Elecs. LLC v. Cirrus Logic, Inc.*, 883 F.3d 1358, 1365 (Fed. Cir. 2018). Claim construction, however, is a question of law. *E.g.*, *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 332–33 (2015). Finally, we "defer to the Board's findings concerning the credibility of expert witnesses." *Incept LLC v. Palette Life Scis., Inc.*, 77 F.4th 1366, 1377 (Fed. Cir. 2023).

"What is required to meet the written description requirement 'varies with the nature and scope of the invention at issue, and with the scientific and technologic knowledge already in existence.'" *Juno Therapeutics, Inc. v. Kite Pharma, Inc.*, 10 F.4th 1330, 1335 (Fed. Cir. 2021) (quoting *Capon v. Eshhar*, 418 F.3d 1349, 1357 (Fed. Cir. 2005)). "Whether to treat a preamble as a limitation is a determination 'resolved only on review of the entire[] . . .

---

[5] The Board had jurisdiction under 35 U.S.C. § 134(a) and we have jurisdiction under 35 U.S.C. § 141(a).

[6] The Director states that the standard of review of the ARP's decisions is the same as for decisions from the Board. Xencor does not disagree. Nor do we.

patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim.'" *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (alteration in original) (quoting *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989)). "[T]he mere fact that a structural term in the preamble is part of the claim does not mean that the preamble's statement of purpose or other description is also part of the claim." *Marrin v. Griffin*, 599 F.3d 1290, 1295 (Fed. Cir. 2010). That is, "where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation." *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997). However, we do read the preamble as limiting "[i]f the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is 'necessary to give life, meaning, and vitality' to the claim." *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999) (citations omitted).

In a Jepson claim, a patentee uses the preamble to recite "elements or steps of the claimed invention which are conventional or known." 37 C.F.R. § 1.75(e) (1996). "[T]his court has held that Jepson claiming generally indicates intent to use the preamble to define the claimed invention, thereby limiting claim scope." *Catalina Mktg. Int'l*, 289 F.3d at 808 (collecting cases).

DISCUSSION

Before us, Xencor argues that the method claim's preamble of "treating a patient" is not limiting, that the preamble of the Jepson claim does not require written description, and that in the alternative, written description was satisfied for the preambles of both claims. We first address the method claim and then the Jepson claim.

Claim 9

The preamble of claim 9 recites "[a] method of treating a patient by administering an anti-C5 antibody comprising," and the first question we must address is whether the phrase "treating a patient" is limiting here. Xencor agrees that the "administering" portion of the term is limiting but contends that we should deconstruct the preamble and find all other parts of it are non-limiting. Specifically, Xencor argues that the "treating a patient" portion is not limiting because "administering" inherently includes "administering to a patient" and nothing else in the claim relies upon treatment or a patient. Accordingly, it contends that the Board erred in holding that "treating a patient" is necessary to give life, meaning, and vitality to the claim. Xencor further argues that the only portion of the preamble that requires adequate written description is the portion that is limiting; that is, the requirement that an anti-C5 antibody is administered. Xencor also argues in the alternative that if we find "treating a patient" to be limiting, there is adequate written description for the limitation. The Director responds that "treating a patient" is not merely a statement of purpose but is necessary to give meaning to the claim, particularly because the claim associates a therapeutic use with the "increased in vivo half-life" of the antibodies.

1

We first address whether "treating a patient" is limiting in the preamble of claim 9.[7]

As Xencor argues, the different sections of a preamble may be considered independently. *See Marrin*, 599 F.3d at 1295. A preamble or a portion of it is limiting when

---

[7] Most of the ARP's analysis regarding claim 9's limitations relies on its discussion of claim 8. We therefore cite to the claim 8 section for this discussion as needed.

other parts of the patent's claims rely on predicates in the preamble, or when the preamble is otherwise necessary to give "life, meaning, and vitality" to the claim language. *E.g.*, *Eli Lilly & Co. v. Teva Pharms. Int'l GmbH*, 8 F.4th 1331, 1342 (Fed. Cir. 2021). It should not be read as limiting, on the other hand, when it merely gives a statement of purpose or intended result. *E.g.*, *Bristol-Myers Squibb Co. v. Ben Venue Lab'ys, Inc.*, 246 F.3d 1368, 1375–76 (Fed. Cir. 2001).

In *Rapoport v. Dement*, 254 F.3d 1053, 1056, 1059 (Fed. Cir. 2001), we found that the preamble language "[a] method for treatment of sleep apneas comprising administration of a [therapeutically effective regimen]" was necessary to give meaning to the limitation "to a patient in need of such treatment." And in *Jansen v. Rexall Sundown, Inc.*, 342 F.3d 1329, 1330, 1332–33 (Fed. Cir. 2003), we held that the preamble language of "[a] method of treating or preventing macrocytic-megaloblastic anemia in humans which anemia is caused by either folic acid deficiency or by vitamin B_{12} deficiency which comprises" was limiting because the claim then recited a "human in need thereof," and the "need" linked back to the previously recited anemia. "In both cases," we found, "the claims' recitation of a patient or a human 'in need' gives life and meaning to the preambles' statement of purpose." *Id.* at 1333.

Similarly, "preamble language will [also] limit the claim if it recites not merely a context in which the invention may be used, but the essence of the invention without which performance of the recited steps is nothing but an academic exercise." *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1345 (Fed. Cir. 2003). In *Boehringer*, the language of the preamble did not provide an antecedent basis for other parts of a claim. *Id.* Rather, it provided the "*raison d'être* of the claimed method itself" because without the preamble language, the claim did not make sense—"[d]ivorced from the process of growing and isolating virus, the claimed method reduces to

nothing more than a process for producing cytopathic effects in sheets of cultured MA–104 cells[—]a process whose absence of fathomable utility rather suggests the academic exercise." *Id*.

Here, we agree with the Director that the preamble term "treating a patient by" is limiting. First, it is important that Xencor does not dispute that the second part of the preamble, "administering an anti-C5 antibody," is limiting. The claim language refers back to this section of the preamble—"wherein *said anti-C5 antibody* with said amino acid substitutions has increased in vivo half-life as compared to said antibody without said substitutions." At least one portion of the preamble is therefore limiting. Although we may split a preamble into limiting and non-limiting parts, and have done so in cases such as *TomTom, Inc. v. Adolph*, 790 F.3d 1315, 1323–24 (Fed. Cir. 2015), the preamble here "cannot be neatly packaged into two separate portions." *Bio-Rad Lab'ys, Inc. v. 10X Genomics Inc.*, 967 F.3d 1353, 1371 (Fed. Cir. 2020). Here, the phrase "treating a patient" is directly connected with the word "by" to the phrase "administering an anti-C5 antibody." And given our "disinclination" to "splic[e]" a preamble into limiting and non-limiting parts, *id.* at 1371, this lends credence to the argument that the entire preamble should be considered limiting.

Second, we do not find convincing Xencor's contention that "administering an anti-C5 antibody" inherently includes a patient. Rather, when the claim is read as a whole, the more reasonable reading is that both sections of the preamble, the "administering" part and the "treating a patient" part, give color and meaning to the other. *See Storage Tech. Corp. v. Cisco Sys., Inc.*, 329 F.3d 823, 831 (Fed. Cir. 2003). The treating of the patient is done *by* administering the anti-C5 antibody. This is not a mere statement of purpose or a statement of intended result that does not affect the performance of the claimed method. *See, e.g., Bristol-Myers Squibb*, 246 F.3d at 1375–76. As the ARP

noted, the claim "lacks a specifically recited dosage and rate," which means "a person of ordinary skill in the art reading the claims would have to read 'increased in vivo half-life'" in light of "treating a patient" to make sense of the scope of the claim. J.A. 14. The specification discloses that "[t]he exact dose will depend on the purpose of the treatment" and on characteristics of the patient. J.A. 175–76 (¶ 187). "[T]reating a patient" therefore gives life to "administering," the sole method step otherwise recited in the claim. J.A. 13.

Third, as the ARP and the Board found, the language in the preamble provides a *raison d'être* for the claim. An increased in vivo half-life (a) only makes sense with respect to a living being, because it could not otherwise be "in vivo," and (b) has a specific utility with respect to treatment. When a patient is treated with a modified anti-C5 antibody, the treatment lasts longer, allowing the treatment to be administered less frequently. The preamble therefore informs the meaning of the claim language. *See generally Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1358 (Fed. Cir. 2012) (concluding "rotary cutter deck" in the preamble informed the meaning of the "torsional stiffness" limitation). Otherwise, performing the claim would be, as we said in *Boehringer*, a mere "academic exercise." 320 F.3d at 1345; *see also Eli Lilly*, 8 F.4th at 1341.

Finally, the specification discloses that "[t]he administration of antibodies and Fc fusion proteins as therapeutics requires injections with a prescribed frequency relating to the clearance and half-life characteristics of the protein. Longer in vivo half-lives allow more seldom injections or lower dosing, which is clearly advantageous." J.A. 131 (¶ 5). The ARP credited the Board's reference to this section of the specification and "not[ed] repeated reference to beneficial use of the invention as applied to antibodies in clinical trials or otherwise intended for therapeutic use/treatment." J.A. 13. In this way, the specification

gives further color to the language of the claims and the understanding we have of the language as limiting.

The ARP therefore correctly determined that "treating a patient" is limiting in the context of the claim 9 preamble.

2

We next address whether the '690 application satisfies the written description requirement for "treating a patient." Substantial evidence supports the ARP's determination that it does not.

To assess whether the written description support for "treating a patient" is sufficient, it is necessary to understand the scope of this limitation. The ARP acknowledged Xencor's argument that "treating" does not require a particular effectiveness or result, and we agree. But while no specific amount of efficacy is claimed, and therefore no specific amount of efficacy requires written description support, the ARP also correctly observed that the application "does not define the term 'treating,' and it does not describe or provide any data associated with treating any patient with any disease or condition with any anti-C5 antibody, including an anti-C5 antibody with the claimed Fc modifications." J.A. 16. Because the specification did not limit the treatment to any specific disease, "'treating a patient' means 'treating all patients and all diseases.'" J.A. 18. We agree with this analysis as well.

The ARP then comprehensively addressed whether there was written description for treating a patient:

> The Specification does not describe what patients with what diseases or conditions can be successfully treated with an anti-C5 antibody possessing the claimed Fc modifications. Nor is there a single working example describing treatment of patients with a disease or condition with an anti-C5 antibody possessing the claimed Fc modifications. At best, the Specification lists three classes of

> diseases/conditions that might benefit from administration of various antibodies with an Fc modification, and lists various unmodified antibodies, including an anti-C5 antibody (5G1.1), that could be modified and used to that end.

J.A. 26. This disclosure, it found, was "inadequate to demonstrate possession of a method of treating any particular disease/condition with the claimed anti-C5 antibodies, let alone all diseases/conditions within the three enumerated classes." J.A. 26–27. Specific to claim 9, which is limited to the anti-C5 antibody 5G1.1 and equivalents thereof, the ARP found that the specification likewise did not demonstrate possession of even the use of 5G1.1 in treating a patient—"the Specification does not describe treating any disease or condition with an anti-C5 antibody, and merely mentions three general classes of diseases/conditions as possible avenues to pursue." J.A. 38.

Substantial evidence supports this finding. For instance, as the ARP stated, the specification does not include any example of treating a disease or condition with an anti-C5 antibody. This is in comparison to other examples in the specification, such as a description of how to administer IgG antibodies in cancer treatment. Moreover, Xencor only presented evidence of trials—that had already been discontinued when they were submitted—studying the use of eculizumab, which was not sufficient to show eculizumab was used to treat those diseases, let alone all diseases.

Xencor does not point to any error of fact the Board or the ARP made.[8] Instead, it reiterates its argument that

---

[8] Neither party suggests that the originally filed claims provide written description support for the limitations at issue. *Allergan USA, Inc. v. MSN Lab'ys Priv. Ltd.*,

the "claim does not require the treatment to be effective," that the claim merely requires the *intent* of treatment. Appellant's Opening Br. at 30–31. Contrary to Xencor's argument, the ARP did not import any requirements, including efficacy. The ARP merely required that the application demonstrate that the applicant had possession of a method of treating a patient with 5G1.1 and its equivalents and found it did not.

Claim 8

1

The question arising with respect to claim 8 is whether the preamble of a Jepson claim requires written description, and if so, whether Xencor's application contained sufficient written description for said preamble.[9] Xencor argues that because the "invention" in a Jepson claim is the improvement, it needed only to have written description for that improvement—here, everything other than the preamble. It argues that because the sufficiency of the written description supporting its improvement has never been doubted, the Board erred as a matter of law. The Director responds that Jepson claim preambles are part of the invention and, therefore, require written description. The Director further contends that Xencor's application does not have this written description because it does not contain an adequate description in the specification and

---

111 F.4th 1358, 1374 (Fed. Cir. 2024) ("Originally filed claims have long been held to be part of the specification to be considered in any § 112 analysis.") (citing *In re Gardner*, 480 F.2d 879, 879 (CCPA 1973)). Therefore, we do not consider this argument for any of the limitations at issue in claims 9 and 8.

[9] Xencor does not dispute that the preamble of its Jepson claim is limiting.

because the genus of anti-C5 antibodies was not well-known in the art.

Pursuant to 35 U.S.C. § 112, a specification must "contain a written description of the invention . . . , in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same." As we have previously noted, while

> claimed subject matter need not be described in haec verba in the specification to satisfy the written description requirement, it is also true that the requirement must still be met in some way so as to describe the claimed invention so that one skilled in the art can recognize what is claimed.

Univ. of Rochester v. G.D. Searle & Co., Inc., 358 F.3d 916, 922–23 (Fed. Cir. 2004) (internal quotation marks and citation omitted). Such a description is context-specific: "[T]he level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology." *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010); *see also Univ. of Rochester*, 358 F.3d at 923 (explaining that merely stating "automobile" in a claim would not have been sufficient written description at the time of invention of the automobile).

We agree with the ARP that a Jepson claim preamble requires written description. This is because when the Jepson form is employed, the claim preamble is used "to define the claimed invention, thereby limiting claim scope." *Catalina Mktg. Int'l*, 289 F.3d at 808; *see Rowe*, 112 F.3d at 479 ("When [the Jepson] form is employed, the claim preamble defines not only the context of the claimed invention, but also its scope."); *Pentec, Inc. v. Graphic Controls Corp.,* 776 F.2d 309, 315 (Fed. Cir. 1985) ("Although a preamble is impliedly admitted to be prior art when a Jepson

claim is used, . . . the claimed invention consists of the preamble in combination with the improvement.") (internal citations omitted). In other words, the Jepson claim invention is the totality of what is set out in the claim, just as it is for a non-Jepson claim. The invention is not only the claimed improvement, but *the claimed improvement as applied to the prior art*, so the inventor must provide written description sufficient to show possession of *the claimed improvement to what was known in the prior art*.

While a Jepson claim is directed to the improvement it makes to the prior art, the claim is a singular thing and cannot be separated; its totality is what must have written description support, which necessarily includes support sufficient to lead an ordinary artisan to understand that the inventor did, indeed, possess what the patent contends was in the prior art.

If we were to accept Xencor's argument, we would be doing away with the requirement that the written description "clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." *Ariad*, 598 F.3d at 1351 (alteration in original). "[W]ritten description requires that the specification reasonably convey to those skilled in the art that the inventor had possession of the claimed invention as of the filing date." *United Therapeutics Corp. v. Liquidia Techs., Inc.*, 74 F.4th 1360, 1370 (Fed. Cir. 2023). If an inventor were permitted to simply assert, without showing, that she possessed what is claimed to be in the prior art, she might be able, improperly, to obtain a patent on something she does not actually possess.

A patentee cannot be permitted to use a Jepson claim to avoid the requirement that she be in possession of the claimed invention simply by asserting something is well-known in the art. For example, a patentee cannot obtain a Jepson claim with a preamble that says that a time machine is well-known in the art without describing a time

machine, in sufficient detail to make clear to a person of ordinary skill in the art that the inventor is in possession of such a time machine. Adoption of Xencor's position would leave the patent system vulnerable to such abuse.

2

To provide adequate written description for a Jepson claim, the applicant must establish that what is claimed to be well-known in the prior art is, in fact, well-known in the prior art. What matters, as with all written description inquiries, is the disclosure in the patent (or patent application) itself, but the finder of fact conducting the written description inquiry may consider evidence outside the patent to understand what a person of ordinary skill in the art would have known as of the pertinent date. The amount and content of the disclosure that is necessary to supply an adequate written description will vary depending on factors including the level of knowledge of the person of ordinary skill in the art, the unpredictability of the art, and the newness of the technology. For example, while using the claim term "automobile" in the nineteenth century would have been insufficient without extensive explanation in the specification, the same term today in a patent directed to mechanical engineering is likely to be well-known and need no further elaboration. *See Univ. of Rochester*, 358 F.3d at 923.

Here, the ARP and the Board, serving as fact-finders, determined that Xencor had not established that the limitation in the Jepson preamble, the anti-C5 antibodies, was well-known in the art. The Board found that Xencor's expert was not credible and that none of the other evidence indicated that anti-C5 antibodies were well-known in the art, and the ARP agreed. The ARP summarized the Board's findings as follows: "the Board found that the examples of anti-C5 antibodies in the prior art were insufficient to establish that anti-C5 antibodies were well-known and thus did not require further written description

support in the Specification." J.A. 23–24. With respect to Xencor's expert, the Board held that "Dr. Dahiyat does not explain how the publications, coupled with the [disclosure] of the 5G 1.1 antibody in the Specification, convey possession of the full scope of the claimed genus." J.A. 83. The ARP agreed, pointing to the large number of possible antibodies in the genus and finding no evidence that they were well-known in art. The Board and the ARP also determined that Xencor had not otherwise shown adequate written description support.

Xencor does not argue that there was any error in the Board's determination or in that of the ARP. Instead, as we have explained, Xencor contends that the invention was the "specific improvement to treating patients"—and that it did not need to provide written description for what was already in the prior art. Appellant's Opening Br. at 16–17; *see also id.* at 39 ("If the inventor provides a written description of the improvement, then nothing more should be required."). As discussed above, this position is unavailing.

Because the Board's findings are supported by substantial evidence, and even Xencor does not contend otherwise, our legal conclusion regarding the necessity of written description for Jepson claims compels us to affirm.

CONCLUSION

We have considered Xencor's other arguments and find them unpersuasive. For the reasons stated above, we affirm the ARP's decision.

AFFIRMED