



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
13/442,189 04/09/2012 Karine Deffez PAT032680-US-CNT03 7085

1095 7590 12/06/2016
NOVARTIS PHARMACEUTICAL CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
ONE HEALTH PLAZA 433/2
EAST HANOVER, NJ 07936-1080

Table with 1 column: EXAMINER

YOUNG, MICAH PAUL

Table with 2 columns: ART UNIT, PAPER NUMBER

1618

Table with 2 columns: NOTIFICATION DATE, DELIVERY MODE

12/06/2016

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

phip.patents@novartis.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KARINE DEFFEZ and
JEAN-PIERRE CASSIERE¹

Appeal 2014-005333
Application 13/442,189
Technology Center 1600

Before ERIC B. GRIMES, ULRIKE R. JENKS, and RACHEL H.
TOWNSEND, *Administrative Patent Judges*.

GRIMES, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to a dispersible tablet, which have been rejected as obvious. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

STATEMENT OF THE CASE

The Specification states that “[c]ompound I is an orally active iron chelator that is indicated in the treatment of iron overload in transfusion

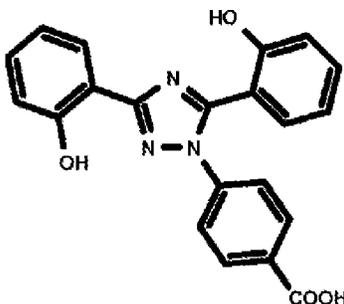
¹ Appellants identify the Real Party in Interest as Novartis AG. (Appeal Br. 2.)

dependent anemias, in particular thalassemia major, thalassemia intermediate and in sickle cell disease.” (Spec. 1.) “Typically, prescribed daily dosages of Compound I for the treatment of thalassemia are high, e.g. 5 to 40 mg/kg of body weight/day in adults or children.” (*Id.* at 2.) “Due to the high dosage strength, the tablet dimensions do not permit the formulation of a conventional tablet. Thus, there is a need for an oral dosage form that is convenient to administer.” (*Id.*)

The Specification discloses “the formulation of Compound I in form of a dispersible tablet allows an oral dosage form with a high drug loading and which is convenient to administer.” (*Id.*) The Specification defines a “dispersible tablet” to mean “a tablet which disperses in aqueous phase, e.g. in water, before administration.” (*Id.*)

Claims 1–15 are on appeal. Claim 1 is illustrative and reads as follows:

1. A dispersible tablet comprising Compound I of the formula



or a pharmaceutically acceptable salt thereof present in an amount of from 5% to 40% in weight based on the total weight of the tablet and (b) at least one disintegrant in a total amount of 10% to 35% in weight based on the total weight of the tablet.

DISCUSSION

The Examiner has rejected claims 1–15 under 35 U.S.C. § 103(a) as obvious based on Lattman² and Patel.³ (Ans. 2.) The Examiner finds that Lattman discloses a dispersible tablet formulation of compound I. (*Id.*) The Examiner finds that Lattman’s formulation includes 0.1–50% compound I and can also contain excipients, including disintegrants. (*Id.* at 2–3.)

The Examiner finds that Patel discloses a dispersible tablet containing 15–50% of a compound for treating Alzheimer’s disease, together with up to 30% disintegrants. (*Id.*) The Examiner concludes that it would have been obvious to combine Patel’s formulation with Lattman’s “since both patents disclose dispersible tablets comprising Alzheimer’s medications.” (*Id.* at 3–4.) The Examiner also concludes that it would have been obvious to vary the amount of disintegrant because increasing the amount of disintegrant will decrease dissolution time, and therefore the disintegrant amount is a result-effective variable. (*Id.* at 4.)

We agree with the Examiner that the dispersible tablet of claim 1 would have been obvious based on Lattman and Patel. Lattman discloses compounds for treating Alzheimer’s disease and diseases caused by iron overload. (Lattman 1.) Lattman specifically discloses compound I. (*Id.* at 19, Example 5; cf. Spec. 1 for the chemical name of compound I.)

Lattman discloses unit dosage forms that include dispersible tablets. (*Id.* at 7.) Lattman discloses that dispersible tablets

² WO 97/49395, published December 31, 1997.

³ US 5,698,221 issued December 16, 1997.

can advantageously be employed for the oral administration of large individual doses, in which the amount of active ingredient to be administered is so large that on administration as a tablet which is to be swallowed in undivided form or without chewing that it can no longer be conveniently ingested, in particular by children.

(*Id.* at 8.) Lattman states that “[t]he doses to be administered daily in the case of oral administration are between 10 and approximately 120 mg/kg, in particular 20 and approximately 80 mg/kg.” (*Id.* at 9.)

Lattman discloses that its preparations can contain “customary pharmaceutical adjuncts,” including “binders, such as starch pastes, using, for example, maize, wheat, rice or potato starch, . . . and, if desired, disintegrants, such as the abovementioned starches, furthermore carboxymethyl starch, crosslinked polyvinylpyrrolidone, agar or alginic acid or a salt thereof, such as sodium alginate.” (*Id.* at 7.) Lattman also discloses that its pharmaceutical preparations “contain (in percentages by weight), for example, from approximately 0.01% to 100%, preferably from approximately 0.1% to approximately 50%, of the active ingredient.” (*Id.* at 10.)

Patel discloses “a water-dispersible tablet comprising within the granules of the tablet AMTP together with a pharmaceutically acceptable swellable clay disintegrating agent and a further pharmaceutically acceptable disintegrating agent.” (Patel 1:32–36.) AMTP is an agent used to treat Alzheimer’s disease, among other things. (*Id.* at 1:6–12.)

Patel discloses that the swellable clay disintegrating agent is suitably included in its tablets at “0.25 to 60% w/w, . . . still more preferably 3 to 10% w/w, and most preferably 5 to 10% w/w, most desirably about 5%

w/w.” (*Id.* at 5:5–13.) Patel states that, “[i]n addition to the swellable clay disintegrating agent, the tablets according to some aspects of the invention contain a further disintegrating agent.” (*Id.* at 5:54–56.) Among other disintegrating agents, Patel discloses “cross-linked povidone 0 to 10% w/w, preferably 2 to 6% w/w, alginic acid and alginates 0 to 10% w/w,” and “starch (e.g. potato/maize starch) 0 to 15% w/w, preferably 0.2 to 10% w/w.” (*Id.* at 5:64 to 6:4.)

Thus, Lattman discloses a dispersible tablet that can include the same active agent as recited in claim 1, and discloses including it in a percentage range that encompasses the range recited in claim 1. Lattman also suggests including a disintegrant in its preparation, and Patel discloses dispersible tablets with a percentage range of disintegrant(s) that encompasses or overlaps the range recited in claim 1. We therefore agree with the Examiner that the tablet of claim 1 would have been obvious based on Lattman and Patel. *See Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1322 (Fed. Cir. 2004) (“[W]here there is a range disclosed in the prior art, and the claimed invention falls within that range, there is a presumption of obviousness.”); *In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003) (“A prima facie case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art.”).

Appellants argue that Lattman discloses dispersible tablets only among numerous other possibilities. (Appeal Br. 19.) Appellants argue that “one of ordinary skill in the art seeking to develop an efficacious dosage form at the time of the invention would be no more likely to attempt a

dispersible tablet formulation than any of the other recited possible means for administration.” (*Id.* at 21.)

This argument is unpersuasive, because Lattman discloses that daily oral dosages of its compounds ranged “between 10 and approximately 120 mg/kg, in particular 20 and approximately 80 mg/kg.” (Lattman 9.) Lattman also discloses that dispersible tablets “can advantageously be employed for the oral administration of large individual doses.” (*Id.* at 8.) Thus, it would have been obvious to use dispersible tablets to administer the large oral dosages disclosed by Lattman.

Appellants also argue that a skilled worker would not have looked to Patel because formulating an effective dosage form “is highly dependent on the chemical species, amount, and physiochemical characteristics of the agent,” and Patel teaches a different active agent than Lattman. (Appeal Br. 22–25.)

This argument is also unpersuasive. Lattman discloses that disintegrants are among “customary pharmaceutical adjuncts” and Patel discloses using some of the same disintegrants disclosed by Lattman. (Lattman 7, Patel 5:64 to 6:4.) Thus, the references show that the disintegrants suggested by Patel would have been considered appropriate for use with Lattman’s active agent, and Appellants have not pointed to evidence showing that the amount of disintegrant suggested by Patel for use in its dispersible tablet would have been considered inappropriate for use in Lattman’s dispersible tablet.

Appellants argue that Patel teaches away from claim 1 because it states that 5% disintegrant is most preferable in its tablets. (Appeal Br. 25.)

However, Patel also teaches that preferred ranges of its swellable clay include 10% or more (Patel 5:5–13) and that the swellable clay can be used in combination with a further disintegrant (*id.* at 5:64 to 6:4). Thus, Patel does not teach away from including at least 10% disintegrant.

Appellants argue that their Specification “identifies the technical difficulty in formulating deferasirox [compound I].” (Appeal Br. 26.) Appellants point to the Specification’s statement that

[t]he present inventors have encountered difficulties in the production of dispersible tablets comprising Compound I which may be due to the low density of the active ingredient, to its electrostatic characteristics which may lead to a poor flowability and to its sticking tendency.

(*Id.*, citing Spec. 6.) However, Appellants have not pointed to evidence showing that *undue* experimentation would have been required to practice Lattman’s dispersible tablet embodiment based on the guidance provided by Lattman and Patel. Appellants’ argument is therefore unpersuasive.

Finally, with respect to claim 1, Appellants argue that Lattman’s working example of a tablet formulation is ineffective because the drug disperses very slowly. (Appeal Br. 27.) However, Lattman’s Example A is disclosed as simply “Tablets,” not the dispersible tablets that are also suggested by Lattman. Appellants have not pointed to evidence showing either that the example would be understood to disclose dispersible tablets, or that modifying it to produce dispersible tablets would have required undue experimentation. Appellants’ argument is therefore unpersuasive.

Appellants also include claims 2–15 under separate headings. (Appeal Br. 28–36.) With respect to each claim, however, Appellants

simply repeat its limitations and state that the further limitations are not shown in the cited prior art. (*Id.*)

These statements do not comply with the requirements of 37 C.F.R. § 41.37(c)(1)(iv) for arguing claims separately. *See In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (“[T]he Board [has] reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art.”) Claims 2–15 therefore fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

In addition to the arguments addressed above, Appellants in the Reply Brief for the first time raised arguments based on secondary considerations. (Reply Br. 7–17.) Appellants argue that they have good cause for raising new arguments in the Reply Brief, because they cite cases that were decided after the filing of the Appeal Brief. (*Id.* at 2.⁴)

The importance of considering secondary considerations in determining obviousness, however, was well-established before Appellants filed their Appeal Brief. *See, e.g., In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998):

The secondary considerations are also essential components of the obviousness determination. This objective evidence of nonobviousness includes copying, long felt but unsolved need, failure of others, commercial success, unexpected results created by the claimed invention, unexpected properties of the claimed invention, licenses showing industry respect for the invention,

⁴ Appellants also argue that the issue of secondary considerations was previously raised in the Appeal Brief. (Reply Br. 2.) It was not.

and skepticism of skilled artisans before the invention. The Board must consider all of the applicant's evidence. (Citations omitted.) The fact that secondary considerations were also addressed in cases decided after the Appeal Brief was filed is not good cause for failing to raise the issue in the Appeal Brief.

In any event, although Appellants cite to certain research papers (Reply Br. 13–14), they do not point to where those papers have been admitted into the record so they could be considered by the Examiner. In fact, with regard to most of the facts asserted, Appellants cite to no evidence in the record to support the asserted secondary considerations. “In a section 103 obviousness determination, *objective evidence* of nonobviousness must be considered if present. Such evidence includes the commercial success of the patented invention, whether the invention addresses ‘long felt but unsolved needs,’ and the failure of others to produce alternatives.” *In re GPAC, Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995) (emphasis added). “Attorneys’ argument is no substitute for evidence.” *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1581 (Fed. Cir. 1989).

SUMMARY

We affirm the rejection on appeal.

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED