

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WOLFGANG MEIER, THOMAS HIRT
and CORINNE NARDIN

Appeal No. 2005-0151
Application No. 09/615,305

ON BRIEF

Before, ELLIS, GRIMES and GREEN, Administrative Patent Judges.

ELLIS, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1, 3-6, 9-14, 16-20 and 27-30, all the claims pending in the application. Claims 2, 7, 8, 15 and 21-26 have been canceled.

Claim 1 is representative of the subject matter on appeal and reads as follows:

1. Hollow vesicles comprising membranes formed from amphiphilic copolymers having hydrophobic and hydrophilic segments, wherein the copolymers are ABA copolymers, and wherein one of A and B is hydrophobic and the other is hydrophilic.

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The references relied upon by the examiner are:

Martin et al. (Martin)	5,891,468	Apr. 6, 1999
Pluyter et al. (Pluyter)	6,008,184	Dec. 28, 1999
Wooley et al. (Wooley)	WO 97/49387	Dec. 31, 1997

The claims stand rejected as follows:

- I. Claims 1, 10, 12, 17 and 19 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Pluyter.
- II. Claims 1, 10, 12, 17 and 19 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Martin.
- III. Claims 1, 3-6, 9-14, 16-20 and 27-30 stand rejected under 35 U.S.C. § 103 as being unpatentable over Wooley alone, or in combination with Martin.

We have carefully considered the respective positions of both the examiner and the appellants and find ourselves in substantial agreement with that of the appellants. Accordingly, we reverse.

Discussion

I. 35 U.S.C. § 102(e)

The examiner argues that claims 1, 10, 12, 17 and 19 are anticipated by Pluyter's disclosure of vesicles containing triblock polymers A-B-A wherein "A" is a water soluble polymer and "B" is a water insoluble polymer. Answer, p. 3. We find the examiner's position unsustainable.

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It is well established that anticipation requires that each and every limitation set forth in a claim be present, either expressly or inherently, in a single prior art reference. In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999); Celeritas Techs. Ltd v. Rockwell Int'l Corp., 150 F.3d 1354, 1360, 47 USPQ2d 1516, 1522 (Fed. Cir. 1998); Verdegaal Bros., Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Co., 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

We agree with the examiner that the use of the term “comprising” in the claims “opens” the language to include vesicles whose membranes have additional components other than the ABA copolymers recited therein. However, the claims are nevertheless limited by the requirement that the membranes be “formed from” amphiphilic copolymers wherein said copolymers are the ABA copolymers. Thus, we construe the claims to be directed to vesicles wherein the membranes must be “formed from” the hydrophobic and hydrophilic ABA copolymers, but additional components can also be present.

To that end, we find that Ployter teaches fabric softener compositions which are dispersions of positively-charged lamellar vesicles containing the softener “active.” Ployter, col. 1, lines 17-19. Ployter further teaches that “a block copolymer comprising a hydrophobic backbone with one or more hydrophilic side chains” can be added to said compositions. Ployter, col. 2, lines 3-9. Ployter still further teaches that when di-

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and tri-block copolymers are added to the surface of the lamellar vesicles in ranges from 0.1-10%, the viscosity of concentrated dispersions of cationic softener actives therein is reduced, and the stabilizing properties of the fabric softening compositions are improved. Id., col. 2, lines 9-13 and lines 25-35; col. 3, lines 57-59. Thus, we find that the vesicles taught by Pluyter are not formed from tri-block co-polymers of the ABA type as required by the claims, but are simply positively-charged bilayers to which no more than 10% of a block tripolymer has been added.

Accordingly, the rejection is reversed.

II. 35 U.S.C. § 102(a)

The examiner argues that claims 1, 10, 12, 17 and 19 are anticipated by the teachings of Martin with respect to liposomes made from triblock polymers. Answer, p. 5. The examiner relies on the teachings of the abstract, the figures, the examples, and the claims, for support. We find the examiner's arguments unpersuasive.

This rejection fails for the same reason as above. That is, the examiner has construed the claim too broadly and has applied a reference which teaches vesicles wherein block tripolymers have been attached. As discussed above, the vesicles set forth in the claims require that the membrane of the vesicles be "formed from" the block tripolymers. Accordingly, we agree with the appellants that the liposomes disclosed by Martin have a lipid bilayer membrane [Pluyter, col. 5, lines 10-15]. Brief, p. 4. The

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block copolymers are merely a coating of chemically-releasable hydrophilic polymer chains and hydrophobic polymers wherein the hydrophobic chains are shielded by the hydrophilic chains and then exposed for fusion with the target cell membrane. Thus, the liposomes taught by Martin do not anticipate the claimed invention.

Accordingly, the rejection is reversed.

III. 35 U.S.C. § 103

The examiner argues that claims 1, 3-6, 9-14, 16-20 and 27-30 would have been obvious to one of ordinary skill in the art in view of the teachings of Wooley with respect to nanoparticles containing amphiphilic copolymers. Answer, p. 5. The examiner acknowledges that Wooley does not specifically prepare nanoparticles containing pharmaceutical agents, or block tripolymers, but argues that the patent would have suggested to one of ordinary skill in the art the encapsulation of such agents in the core domain and the preparation of nanoparticles from block tripolymers. Id., p. 6. The examiner contends that the teachings of Martin would have further motivated such persons to use block tripolymers in the preparation of said nanoparticles. Id. We find these arguments unpersuasive.

It is well established that the examiner has the initial burden under 35 U.S.C. § 103 to establish a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443,

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1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). It is the examiner's responsibility to show that some objective teaching or suggestion in the applied prior art, or knowledge generally available in the art, would have led one of ordinary skill in the art to combine the references to arrive at the claimed invention. Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1629 (Fed. Cir. 1996).

Here, we find that the examiner acknowledges that Wooley does not teach vesicles having membranes "formed from" block tripolymers as required by the claims. Although the examiner argues that Wooley provides guidance for the preparation of such particles, he does not point to any teachings to support his position. The examiner is cautioned that a prima facie case of obviousness must be based on fact, not unsupported generalities. In re Freed, 425 F.2d 785, 787, 165 USPQ 570, 571 (CCPA 1970); In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967).

As to the examiner's contention that the teachings of Martin also would have motivated one skilled in the art to use block tripolymers in the construction of the nanoparticles taught by Wooley, we find no basis in the reference, and none has been pointed out by the examiner, to support this conclusion. (See our discussion of Martin, above). To the contrary, the only mention we find of vesicles comprising membranes formed from block tripolymers is in the appellants' specification. Thus, we agree with the appellants that the examiner has engaged in impermissible hindsight to arrive at the

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conclusion that the claimed invention would have been obvious over Wooley and Martin. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992); Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985); W.L. Gore & Assocs. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983)(“To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher”).

Accordingly, the decision of the examiner is reversed.

REVERSED

Joan Ellis)	
Administrative Patent Judge)	
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Eric Grimes)	
Administrative Patent Judge)	APPEALS AND
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)	INTERFERENCES
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Lora Green)	
Administrative Patent Judge)	

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