Paper No. 36

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THIERRY HERCEND, FREDERIC TRIEGEL,
SERGIO ROMAN-ROMAN and LAURENT FERRADINI

Appeal No. 2000-0296
Application 08/442,001

HEARD: November 8, 2001

Before WINTERS, MILLS and GRIMES, Administrative Patent Judges.

MILLS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. §134 from the examiner's final

Claim 67 is illustrative of the claims on appeal and reads as follows:

67. An isolated antibody that specifically binds a peptide coded by a nucleotide sequence coding for a variable region of α chain of an human T lymphocyte receptor, said nucleotide sequence having a nucleotide sequence chosen from any of:

V α segments having any one of the sequences of SEQ ID Nos. 1 to 11 or
J α segments having one of the SEQ IS [sic, ID] Nos. 13 or 15 to 19.

The prior art references relied upon by the examiner are:

Skibbens 5,223,426 June 29, 1993

Wilson et al. (Wilson), "Structural Organization and Polymorphism of Murine and Human T-Cell Receptor α and β Chain Gene Families," Imm. Rev., No. 101, pp. 149-172 (1988)

Grounds of Rejection

Claims 67 and 69-73 stand rejected under 35 U.S.C. § 103 over Skibbens in view of Wilson.

DISCUSSION

In reaching our decision in this appeal, we have given consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner.

Rather than reiterate the conflicting viewpoints advanced by the examiner and

31) for the appellants' arguments thereagainst. As a consequence of our review, we make the determinations which follow.

35 U.S.C. § 103

Claims 67 and 69-73 stand rejected under 35 U.S.C. § 103 over Skibbens in view of Wilson.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. In re Bell, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993). An obviousness analysis requires that the prior art both suggest the claimed subject matter and reveal a reasonable expectation of success to one reasonably skilled in the art. In re Vaeck, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991). With this as background, we analyze the prior art applied by the examiner in the rejection of the claims on appeal.

The examiner relies on Skibbens for the disclosure of antibodies against T-cell

Skibbens et al. teach hybridomas producing said antibodies (see column 13). Skibbens et al. teach that monoclonal antibodies can be made by immunizing with purified TCR protein or cell lines that express a desired TCR. Skibbens et al teach that antibodies against a desired TCR V region can be made by immunizing with cells that express a desired receptor (see column 11, first paragraph). Skibbens et al. teach fragments and derivatives of said monoclonal antibodies (see column 12, last paragraph and columns 13-14). Skibbens et al. teach radiolabelled antiTCR antibodies and cytotoxic immunoconjugates containing antiTCR antibodies (columns 13, 18 and 19). Skibbens et al. teach compositions containing said antiTCR antibodies or derivatives thereof (see column 17 and 18). Skibbens et al. do not teach the specific claimed species of antibodies recited in claims 67 and 19. Wilson et al. teach the amino acid sequence of a variety of known human Vα genes (see Figure 6). Wilson et al. teach the Vα 2 gene AF110 (see Figure 6). The Vα 2 gene AF110 taught by Wilson differs from SEQ. ID. no. 7 in that it lacks the first 26 amino acids. A routineer would have used the Vα 2 gene AF110 to identify T cells expressing said Vα 2 gene on the cell surface. Said Vα 2 positive cells would have been used in the method taught by Skibbens et al. to produce antiTCR Vα 2 antibodies. In view of the fact that said cells would express the entire intact Vα 2 TCR on the cell surface, antibodies would have been produced against any immunogenic determinants on said molecule (eg. even those not disclosed on the Vα 2 gene AF110 taught by Wilson et al.). Similarly, Wilson et al teach the Vα 16 gene AG21, which contains the nucleotide sequence recited in claim 67 and would have been used to produce the claimed antibody using the same methods as per used to produce antiTCR Vα 2 antibodies. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have created the claimed invention because Skibbens et al teach antiTCR Vα antibodies and methods to make said antibodies, while Wilson et al. teach the necessary information to isolate T cells expressing the particular antigenic specificity which would have been used to produce the claimed antibodies according to the methods taught by Skibbens et al.

Appellants further argue (Brief, Paper No. 31, page 5)

> With respect to the combination of Wilson et al and Skibbens et al, one skilled im [sic] the art would not combine the same to routinely utilize AF110 for the isolation of T cells expressing TCR Vα ... over the surface and to use the obtained cells as immunogens to produce the antibodies against the antigenic determinant of the molecule and against the part not described by Wilson et al (even though it is non-disclosed on the Vα2 gene AF110 taught by Wilson et al). The same reasoning is applicable to the Vα 16 AG21 gene described by Wilson.

Therefore, appellants argue that Wilson's Vα2 gene AF110 does not describe the first 26 amino acids of SEQ ID NO: 7, as claimed. While, appellants have admitted on the record that Wilson describes the Vα16 AG21 gene containing the sequence of claim 68, claim 68 has been cancelled from the application. Id. The examiner counters that, "claim 67 still recites a SEQ. ID. encompassing said sequence (eg. SEQ. ID. no. 11)." Answer, page 5. Appellants appear to argue that while Wilson may describe SEQ ID NO:11, and claim 67 encompasses the sequence described by Wilson, it is not exactly the same as the sequence described by Wilson.

In view of the above, we agree with appellants that the examiner has not established a prima facie case of obviousness. The motivation to combine references was discussed in Ecolochem Inc. v. Southern California Edison, 227, F.3d 1361, 1375, 56 USPQ2d 1065, 1075 (Fed. Cir. 2000). Ecolochem stated that the:

> with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed." … "[A] rejection cannot be predicated on the mere identification … of individual components of claimed limitations.

[Citations omitted]. Further, as set forth in In re Kotzab, 217 F.3d 1365, 1369-70, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000):

> A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. [] Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher." []
>
> Most if not all inventions arise from a combination of old elements. [] Thus, every element of a claimed invention may often be found in the prior art. [] However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. [] Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. [citations omitted]

In other words, "there still must be evidence that 'a skilled artisan, . . . with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.'" Ecolochem Inc. v. Southern

What is missing from the examiner's analysis is a suitable explanation as to why one of ordinary skill in the art would have been motivated to select either the Vα2 gene AF110 taught by Wilson or the Vα16 AG21 gene described by Wilson from the multiple Vα and Vβ gene sequences described therein, to prepare an antibody, as claimed. Moreover, the examiner has failed to account for differences pointed out by appellants between antibodies having the claimed sequences and the Vα2 gene AF110 or the Vα16 AG21 gene described by Wilson.

We find the examiner has failed to present a prima facie case of obviousness. The rejection of the claims 67 and 69-73 for obviousness of the claimed invention is reversed.

CONCLUSION

The rejection of Claims 67 and 69-73 stand rejected under 35 U.S.C. § 103 over Skibbens in view of Wilson is reversed.

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

REVERSED

Sherman W. Winters Administrative Patent Judge	)
Demetra J. Millls Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
Eric Grimes Administrative Patent Judge	)

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