THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENDRICK A. UYEDA
and GREGORY A. BRADFISCH

Appeal No. 1996-2010
Application 07/941,650[1]

HEARD: March 23, 2000

Before WINTERS, GRON, and LORIN, Administrative Patent Judges.

GRON, Administrative Patent Judge.

DECISION ON APPEAL UNDER 35 U.S.C. § 134

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[1] Application for patent filed September 8, 1992. According to applicants, this application is a continuation-in-part of Application 07/758,020, filed September 12, 1991, now U.S. Patent 5,286,485; which is a continuation-in-part of Application 07/642,112, filed January 16, 1991, now U.S. Patent 5,277,905, and Application 07/658,935, filed February 21, 1991, now abandoned.

This is an appeal under 35 U.S.C. § 134 from an examiner's final rejection of Claims 15 and 17-20. The final rejection of Claims 15-20 under 35 U.S.C. § 112, first paragraph, has been withdrawn (Examiner's Answer (Ans.), p. 2, final paragraph). The examiner objects to Claim 16 (Ans., p. 1, para. 1), presumably only because it depends upon finally rejected Claim 15. Still pending "Claims 1-14 have been withdrawn from consideration as directed to non-elected inventions" (Appellants' Brief (Br.), p. 1, first para.).

Introduction

Claims 15 and 17-20 stand finally rejected under 35 U.S.C. § 103 in view of the combined teachings of Payne et al. (Payne), U.S. Patent 5,126,133, issued June 30, 1992, from Application 07/371,955, filed June 27, 1989; Sick et al. (Sick), U.S. Patent 4,996,155, issued February 26, 1991, from Application 07/164,044, filed March 4, 1988; and Soares et al. (Soares), U.S. Patent 4,849,217, issued July 18, 1989, from Application 07/123,023, filed November 19, 1987. All claims

stand or fall together (Br., p. 2, last full para.) with representative Claim 15 below.

> 15. A method for controlling lepidopteran insects which comprises administering to said insects or to the environment of said insects a microorganism transformed to express a Bacillus thuringiensis [(Bt)] toxin active against lepidopteran pests encoded by DNA selected from the group consisting of SEQ ID NO. 1, SEQ ID NO. 3, SEQ ID NO. 5, and any fragments of those sequences sufficient to encode a lepidopteran-active toxin.

Discussion

We have considered all the evidence and arguments of record, including the claims on appeal, the supporting specification, the prior art relied upon by the examiner, the Declaration of Dr. Frank H. Gaertner dated April 27, 1993, Appellants' Brief, and the Examiner's Answer. The PTO has the burden under 35 U.S.C. § 103 to establish a prima facie case of obviousness. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). "The consistent criterion for determination of obviousness is whether the prior art would have suggested to

one of ordinary skill in the art that . . . [the claimed] process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art." In re Dow Chem. Co., 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed Cir. 1988).

Payne describes novel Bt genes encoding toxins which are active against lepidopteran insects. The examiner does not allege that Payne's novel Bt genes include appellants' DNA SEQ ID NO. 1, SEQ ID NO. 3, SEQ ID NO. 5, any fragments of those sequences which encode lepidopteran-active toxins, or obvious modifications thereof. Nor does the examiner argue that appellants' DNA sequences encode the same or substantially the same toxins which Payne's Bt genes encode. Rather, the examiner relies (Ans., p. 5) on Payne's introductory statement that (Payne, col. 1, l. 8-15):

> [t]he most widely used microbial pesticides are derived from the bacterium Bacillus thuringiensis. This bacterial agent is used to control a wide range of leaf-eating caterpillars and beetles, as well as mosquitos.

The examiner reasonably finds, "Therefore, the reference teaches that lepidopteran insects are potential targets of any

particular B. thuringiensis strain" (Ans., p. 5). The examiner also finds that Sick and Soares describe DNA sequences which encode Bt toxins which are active against coleopteran insects and are the same or substantially the same as DNA selected from the group consisting of appellants' DNA SEQ ID NO. 3, SEQ ID NO. 5, and fragments of those sequences (Ans., p. 4, first full para.).

Based on no more than the above findings, the examiner leaped to the conclusion that "one of ordinary skill in the art would have had a reasonable expectation that the strains recited in the rejected claims would be effective against lepidopteran pests in addition to coleopteran pests" (Ans., p. 5). While the examiner acknowledged Dr. Gaertner's testimony that dual activity is rare amongst B. thuringiensis toxins (Ans., p. 5), the examiner critically erred when applying a "not wholly unexpected"
standard for obviousness and not the "reasonable likelihood of success" standard which has been consistently applied. In re Dow Chem. Co., supra.

We find no basis in the cited prior art for persons having ordinary skill in the art to reasonably expect that Bt

toxins encoded by DNA known to encode toxins active against coleopteran insects also would be active against lepidopteran insects. To the contrary, Dr. Gaertner declares that dual toxins are rare or unusual. Accordingly, we reverse the examiner's rejection of the patentability of the method appellants claim over the cited prior art.

Conclusion

We reverse the examiner's rejection of Claims 15 and 17-20 under 35 U.S.C. § 103 in view of the combined teachings of Payne, Sick and Soares.

REVERSED

Sherman D. Winters Administrative Patent Judge	)
Teddy S. Gron Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
Hubert C. Lorin Administrative Patent Judge	)

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