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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JINGWU Z. ZANG[1]

Appeal 2016-004457
Application 12/777,487
Technology Center 1600

Before DEBORAH KATZ, ULRIKE W. JENKS, and DAVID COTTA, *Administrative Patent Judges*.

KATZ, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant seeks our review, under 35 U.S.C. § 134(a), of the Examiner's decision to reject claims 19, 23, and 24. (Appeal Brief ("App. Br.") 5–7.) We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

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[1] The real party-in-interest is reported to be Baylor College of Medicine and Opexa Therapeutics, Inc. (App. Br. 1.)

The Examiner rejected claims 19, 23, and 24 under pre-AIA 35 U.S.C. § 101. Appellant does not argue for the separate patentability of the claims that depend on claim 19. Accordingly, these claims stand or fall with claim 19, which is our focus. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Claim 19 recites:

> A vaccine capable of inducing an anti-idiotypic immune response against autoreactive T cells comprising a peptide, said peptide comprising a sequence of SEQ ID NO: 5 and a pharmaceutically acceptable carrier.

(App. Br. 8.) Appellant's Specification explains that T-cell receptors ("TCRs") comprising the peptide SEQ ID NO: 5 may be present in normal individuals and patients suffering from autoimmune diseases. (*See* Spec. ¶ 72.)

Under the Examiner's reasoning and the holding of *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013), we affirm the Examiner's rejection because claim 19 is drawn to a naturally occurring fragment of a T cell receptor. (*See* Ans. 2.)

Appellant argues that the peptide of the instantly claimed vaccine has markedly different characteristics than its naturally occurring counterpart in its natural state. (*See* App. Br. 6.) According to Appellant, fragments of T cell receptor do not occur naturally because T cell receptors are transmembrane heterodimers composed of two chains connected by a disulfide bond in the membrane of the T cell, but the claimed peptide does not associate with another peptide chain. (*See* App. Br. 6.)

We are not persuaded by Appellant's argument. In *Myriad*, the claimed DNA was a fragment thousands of nucleotides long and "isolated"

from a chromosome many millions of nucleotides long. *See Myriad*, 569 U.S. at 583. Nevertheless, the Court held that reciting only an isolated portion of a naturally occurring molecule would not make the molecule patentable. *See id.* at 593. According to the Court, Myriad did not create or alter any of the genetic information encoded in the recited genetic sequences and so they were naturally occurring. *See id.*at 590.

Similarly, even though SEQ ID NO: 5 recited in Appellant's claims is only a portion of the full T cell receptor, the recited sequence has not been altered from the naturally occurring sequence. Furthermore, as the Examiner notes, Appellant's claim 19 is not limited to the fragment of SEQ ID NO: 5 because the transitional term "comprising" does not exclude the full, naturally occurring protein. Accordingly, under the holding in *Myriad*, the claimed peptide is not patentable subject matter.

Appellant argues further that the claimed vaccine differs functionally from the naturally occurring T cell receptor because it induces an anti-idiotypic immune response. (*See* App. Br. 6–7.) Appellant notes that SEQ ID NO: 5 occurs in 50% of patients with multiple sclerosis, but in only 6.7% of control patients, suggesting to Appellant that the naturally occurring "counterpart" to SEQ ID NO: 5 is not capable of inducing an anti-idiotypic immune response.[2] (*See* App. Br. 6–7, citing Spec. 24, Table 2.)

We are not persuaded by this argument because Appellant does not direct us to evidence in support of the assertion that the difference in the occurrence of SEQ ID NO: 5 necessarily indicates a difference in the way

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[2] We note that Appellants' argument is an admission that SEQ ID NO: 5 occurs naturally in multiple sclerosis patients.

the claimed peptide functions in these populations. Argument of counsel does not persuade us that the immune response to the claimed peptide is different from the response to its naturally occurring counterpart. *See In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974) ("Attorney's argument in a brief cannot take the place of evidence."). Appellant has not directed us to such specific evidence.

Conclusion

Upon consideration of the record and for the reasons given, the rejection of claims 19, 23, and 24 under 35 U.S.C. § 101 is sustained.

Therefore, we affirm the decision of the Examiner.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED