

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENJI NISHIOKA, JOHN S. McMURRAY
B. MONTGOMERY PETTITT and FAHAD AL-OBEIDI

Appeal No. 1995-4623
Application No. 07/918,588¹

ON BRIEF

Before WINTERS and WILLIAM F. SMITH, Administrative Patent Judges, and
McKELVEY, Senior Administrative Patent Judge.

WINTERS, Administrative Patent Judge.

DECISION ON APPEAL

This appeal was taken from the examiner's decision rejecting claims 1 through 6,
which are all of the claims in the application.

¹ Application for patent filed July 22, 1992.

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Claim 1 is representative:

1. A peptide selected from the group consisting of:

cyclo[Thr-Lys-Pro-Arg-Gly] (SEQ ID NO. 1) and pharmaceutically acceptable salts thereof; and

cyclo[Thr-Lys-Pro-Arg-Asp] (SEQ ID NO. 2) and pharmaceutically acceptable salts thereof.

The references relied on by the examiner are:

Chipens et al. (Chipens II) 4,434,095 Feb. 28, 1984

Hahn 4,816,449 Mar. 28, 1989

Stabinsky, Y., et al. (Stabinsky), "THE PHAGOCYTOSIS STIMULATING PEPTIDE TUFTSIN: FURTHER LOOK INTO STRUCTURE-FUNCTION RELATIONSHIPS", *Molecular & Cellular Biochemistry*, Vol. 30, No. 3, pp. 165-170 (1980).

Chipens, G.I. (Chipens I), "ELONGATED AND CYCLIC ANALOGUES OF TUFTSIN AND RIGIN", *Peptides, Proceedings of European Peptides Symposium, 16th*, pp. 445-450 (1981).

Siemion, I.Z., et al. (Siemion), "Tuftsin analogs and their biological activity", *Molecular and Cellular Biochemistry* Vol. 41, pp. 99-111 (1981).

Nikiforovich, G.V., "Biologically active conformation of tuftsin", *International Journal of Peptide Protein Research*, Vol. 23, pp. 271-275 (1984).

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O'Connor, S.D., et al.² (O'Connor) "Quenched Molecular Dynamics Simulations of Tuftsin and Proposed Cyclic Analogues", *Journal of Medicinal Chemistry*, Vol. 35, No. 15, pp. 2870-2881 (1992).

The appealed claims stand rejected as follows: (1) Claims 1, 2, 4 and 5 under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Chipens (I) and Nikiforovich; (2) claims 1, 3, 4 and 6 under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Chipens (I) and Hahn; (3) claims 1, 2, 4 and 5 under 35 U.S.C. § 103 as unpatentable over Siemion or Stabinsky, either of those "primary references" in view of Chipens (II); and (4) claims 1 through 3 under 35 U.S.C. § 102(f) because applicants themselves did not invent the subject matter sought to be patented.

On consideration of the record, we shall not sustain these rejections.

SECTION 103

Having reviewed the Appeal Brief, Reply Brief, and Examiner's Answer, we conclude that the examiner's rejections under 35 U.S.C. § 103 are untenable. Each appealed claim recites the pentapeptide *cyclo*[Thr-Lys-Pro-Arg-Gly] or *cyclo*[Thr-Lys-Pro-Arg-Asp] fully cyclized in a "head-to-tail" manner, i.e., by coupling the alpha-amino group of the Thr to the carboxyl group of Gly or Asp. In our judgment,

² O'Connor does not constitute a "prior art" reference because it was published two days after the filing date of application no. 07/918,588, the application on appeal.

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the only reason, suggestion, or motivation to arrive at those cyclized pentapeptides stems from appellants' specification and not from the cited prior art. It follows, in our judgment, that the rejections under 35 U.S.C. § 103 are based on the impermissible use of hindsight and cannot stand. The rejections under 35 U.S.C. § 103 are reversed.

SECTION 102(f)

Claims 1 through 3 stand rejected because, according to the examiner, applicants themselves did not invent the subject matter sought to be patented. 35 U.S.C. § 102(f). In setting forth this rejection, the examiner (1) cites the O'Connor publication entitled "Quenched Molecular Dynamics Simulations of Tuftsin and Proposed Cyclic Analogues"; and (2) refers to O'Connor's description of ctuf₂ (*cyclo*[Thr-Lys-Pro-Arg-Gly]) at page 2878 second column and ctuf₄ (*cyclo*[Thr-Lys-Pro-Arg-Asp]) at page 2879 second column. According to the examiner, the peptides recited in claims 1 through 3 are identically described in the O'Connor publication which is co-authored by two of the present inventors (Fahad Al-Obeidi and Montgomery Pettitt) and two others. The examiner argues that this set of facts "raises a question of inventorship" and that, in the absence of a satisfactory showing, it is unclear whether "the inventorship of the application has been properly

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designated". See the Examiner's Answer, page 4. We disagree.

On this record, the examiner has not established that another inventive entity conceived the invention of claims 1 through 3 and communicated that invention to applicants before July 22, 1992, the filing date of the instant application. Nor has the examiner established that the original oath accompanying this application is incorrect.

In the office action mailed June 1, 1993 (paper no. 8), page 3, the examiner invites attention to In re Katz, 687 F.2d 450, 215 USPQ 14 (CCPA 1982). The question arises whether we have an ambiguity respecting inventorship created by the O'Connor publication, similar to the ambiguity found to exist in Katz, and, if so, whether this ambiguity shifts the burden of persuasion to applicants to provide a satisfactory showing which would lead to a reasonable conclusion that applicants are the joint inventors of the peptides recited in claims 1 through 3. See In re Katz, 687 F.2d at 455, 215 USPQ at 18, where the court required a showing above and beyond the original oath accompanying the Katz patent application. We answer these questions in the negative.

In Katz, the Chiorazzi et al. article was published before applicant's effective filing date and the examiner's rejection was predicated on 35 U.S.C. § 102(a). Here, the O'Connor article was published after applicants' filing date and the rejection is predicated on 35 U.S.C. § 102(f). We shall not pass on the question whether the analysis set forth in Katz in the context of a rejection under 35 U.S.C. § 102(a) applies

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to a fact situation arising under 35 U.S.C. § 102(f). Assuming arguendo, without deciding, that the Katz analysis is here applicable, nevertheless, this case is distinguishable on its facts.

As correctly pointed out by applicants (Appeal Brief, page 4), O'Connor does not disclose how to prepare the peptides ctuf₂ or ctuf₄. Nor does O'Connor disclose any experimental data respecting the biological activity of those peptides. Compare the instant specification, pages 4 through 12, describing the preparation of *cyclo*[Thr-Lys-Pro-Arg-Gly] and *cyclo*[Thr-Lys-Pro-Arg-Asp] and further describing the details of a Phagocytosis Assay, a Thymidine Incorporation Assay, and a Tumor cell Cytotoxicity Assay and the results of those assays using tuftsin and *cyclo*[Thr-Lys-Pro-Arg-Gly]. It can be seen that the content of the O'Connor publication with respect to the details of preparing and testing these two peptides is not coextensive with the content of the instant application.

On these facts, which differ from those in Katz,³ we hold that co-authorship of the O'Connor publication by two of the present inventors, (Fahad Al-Obeidi and Montgomery Pettitt) and two others is not inconsistent with the named inventors in the

³ In Katz, 687 F.2d at 453, 215 USPQ at 16, the court quoted from the Board opinion under review and did not disturb the Board's finding that "[t]he Chiorazzi et al. article, as pointed out by the examiner and as acknowledged by appellant, fully describes the presently claimed therapeutic immunosuppressive agent and the method of preparing same."

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instant application. Co-authorship does not raise a presumption of inventorship with respect to the peptides ctuf₂ and ctuf₄ disclosed in the publication. Nor does co-authorship here create an ambiguity which would shift the burden of persuasion to applicants to reaver inventorship in the face of a rejection under 35 U.S.C. § 102(f).

The rejection of claims 1 through 3 under 35 U.S.C. § 102(f) is reversed.

CONCLUSION

In conclusion, for the reasons set forth in the body of this opinion, the examiner's decision rejecting claims 1 through 6 is reversed.

REVERSED

SHERMAN D. WINTERS)	
Administrative Patent Judge)	
)	
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)	BOARD OF PATENT
WILLIAM F. SMITH)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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)	
FRED E. McKELVEY)	
Senior Administrative Patent Judge)	

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