UNITED STATES PATENT AND TRADEMARK OFFICE				
BEFORE THE PATENT TRIAL AND APPEAL BOARD				
RIMFROST AS				

v.

Petitioner

## AKER BIOMARINE ANTARCTIC AS

Patent Owner

Case No.: IPR2018-01730

U.S. Patent 9,072,752

Issue Date: July 7, 2015

Title: Bioeffective Krill Oil Compositions

PETITIONER'S OPPOSITION TO PATENT OWNER'S MOTION TO AMEND THE CLAIMS



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### I. INTRODUCTION

Patent Owner requests that the Board substitute claims 21-29 in place of original claims 1-4, 11-14 and 20 of U.S. Patent No. 9,072,752 ("the '752 patent"), if these original claims are found unpatentable. However, substitute claims 21-29, as is true of challenged claims 1-20, simply recite krill oil having ranges of phospholipids, astaxanthin esters and triglycerides that Patent Owner's expert, Dr. Hoem, acknowledged are naturally present in krill. Hoem Presentation, Exhibit 1080, pp. 0007-0010. Merely adding upper limits to the ranges of ether phospholipids (*i.e.*, from 6-10%) and astaxanthin esters (*i.e.*, 100-700 mg/kg) does not alter this fact or render substitute claims 21-29 patentable. Krill oil having the ranges of ether phospholipids and astaxanthin esters recited in the substitute claims is disclosed and taught in the prior art of record and are not patentable.

Accordingly, Patent Owner's Motion to Amend ("MTA") should be denied.

#### II. SUBSTITUTE CLAIMS 21-29 ARE NOT PATENTABLE

Patent Owner's MTA is contingent upon finding claims 1-4, 11-14 and 20 unpatentable in view of the teachings of Catchpole (Exhibit 1009), Sampalis II (Exhibit 1013), Enzymotec (Exhibit 1048), Randolph (Exhibit 1011) and Grynbaum (Exhibit 1039). *See* Petition (Paper 2), 27-86. The Board is very familiar with Catchpole as its disclosure and teachings formed at least one of the bases for finding all claims of U.S. Patent Nos. 9,320,765 ("the '765 patent"),



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9,028,877 ("the '877 patent") and 9,078,905 ("the '905 patent") unpatentable: IPR2018-00295, Final Written Decision (Paper 35) ("-295 FWD") (Exhibit 1129); IPR2017-00746, Final Written Decision (Paper 23) ("-746 FWD") (Exhibit 1104); IPR2017-00745, Final Written Decision (Paper 24) ("-745 FWD") (Exhibit 1103).

Since "the Board determines whether substitute claims are unpatentable by a preponderance of the evidence based on the entirety of the record, including any opposition made by petitioner," *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15, p. 4 (Feb. 25, 2019), Petitioner only addresses the amended ether phospholipids and astaxanthin ester upper limits Patent Owner seeks to add. All remaining claim limitations were addressed in the Petition. Petition, 27-86; *see, e.g.*, Tallon Decl. (Exhibit 1006), ¶¶ 421-500, Appendix A.

In an attempt to support the patentability of the substitute claims, Patent

Owner offers three unpersuasive arguments, two of which were previously

litigated, fully considered and expressly rejected by the Board in IPR2018-00295.

First, ignoring Catchpole's disclosure and the Board's prior findings in IPR2018-00295, Patent Owner again erroneously maintains that Catchpole does not describe or teach krill oil having 6-10% ether phospholipids. MTA, 12-16.

<sup>&</sup>lt;sup>1</sup> The '752, '765, '877 and '905 patents are in the same family, share the same specification and priority date.



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Second, Patent Owner again argues that the prior art fails to disclose krill oil having 100-700 mg/kg astaxanthin esters. MTA, 17-18. However, the Board rejected this same argument in IPR2018-00295 when Patent Owner tried to add the identical astaxanthin esters limitation to claims of the '765 patent, finding instead that Randolph teaches krill oil compositions with levels of astaxanthin esters satisfying the proposed 100-700 mg/kg limitation. -295 FWD, 67-68.

*Third*, Patent Owner again urges that alleged Platelet Activating Factor ("PAF") concerns teach away from krill oil with enhanced levels of ether phospholipids. MTA, 19-20. The Board, however, rejected this same argument on three prior occasions. -295 FWD, 39-47; -746 FWD, 53-61; -745 FWD, 29-38.

## A. The Prior Art Describes, Discloses And Teaches Krill Oil Having "From 6% To 10%" Ether Phospholipids

Patent Owner seeks to dismiss the import of Catchpole's disclosure of extracts having greater than 5% and 10% ether phospholipids by proffering three unavailing arguments: a POSITA (1) would not have understood that Catchpole's disclosure of extracts having greater than 5% or 10% acylalkyphospholipids "apply to krill oil;" (2) could not increase the percentage of ether phospholipids in Extract 2 beyond 4.8% because all neutral lipids were purportedly removed during the initial extraction of Example 18; and (3) would not use Catchpole to ascertain the ether phospholipids content of Enzymotec's Grade B krill extract. *See* MTA, 13-16. Each of these arguments not only ignore the scope of Catchpole's disclosure,



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