

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RIMFROST AS.,
Petitioner,

v.

AKER BIOMARINE ANTARCTIC AS,
Patent Owner.

Case No. IPR2018-01730
Patent 9,072,752 B2

Before TINA E. HULSE, JACQUELINE T. HARLOW,
and JOHN E. SCHNEIDER, *Administrative Patent Judges*.

SCHNEIDER, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

I. INTRODUCTION

A. Background

Rimfrost AS. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–20 of U.S. Patent No. 9,072,752 (“the ’752 patent”). Paper 1, (“Pet.”). Aker Biomarine Antarctic AS (“Patent Owner”) did not file a Preliminary Response.

We have authority to determine whether to institute *inter partes* review under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted unless the information presented in the Petition “shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Having considered the arguments and the evidence presented, for the reasons described below, we determine that Petitioner has demonstrated that there is a reasonable likelihood that it would prevail with respect to at least one of the claims challenged by the Petition. Accordingly, we institute an *inter partes* review of all claims and all grounds asserted in the Petition.

B. Additional Proceedings

Petitioner represents that two related patents, U.S. Patent No. 9,078,905 (“’905 patent”) and U.S. Patent No. 9,028,877 (“’877 patent”) are at issue in *Aker Biomarine v. Olympic Holding AS*, Case No 1:16-CV-00035 LPS-CJB (D.Del.) and in *In re Certain Krill Products and Krill Meal for Production of Krill Oil Products*, Investigation No. 337-TA-1019. Pet. 2. Petitioner represents that the ITC proceeding has terminated. *Id.* at 3. Petitioner also represents that petitions for *inter partes* review have been filed challenging the ’905 patent, which are now IPR2017-00745 and IPR2017-00747. *Id.* Petitioner represents that petitions for *inter partes* review have been filed challenging the ’877 patent, now IPR2017-00746 and

IPR2017-00748. *Id.* The district court action has been stayed pending resolution of the IPRs. *Id.* The Board has issued Final Written Decisions addressing challenges to claims of the '877 patent (IPR2017-00746, Paper 23, claims 1–19 shown to be unpatentable; IPR2017-00748, Paper 23, claims 1–19 not shown to be unpatentable), and challenges to claims of the '905 patent (IPR2017-00745, Paper 24, claims 1–20 shown to be unpatentable; IPR2017-00747, Paper 24, claims 1–20 not shown to be unpatentable).

Petitioner represents that a petition for *inter partes* review was filed challenging U.S. Patent No. 9,320,752 now IPR2018-00295. *Id.* at 4. The Board instituted *inter partes* review on June 14, 2018. IPR2018-00295, Paper 7.

Petitioner represents that a request for Post Grant Review was filed challenging U.S. Patent No. 9,644,170 now PGR 2018-00033. *Id.* The Board determined that the '170 patent was not eligible for post grant review. *Id.*

Petitioner represents that petitions for *inter partes* review were filed challenging U.S. Patent 9,375,453 now IPR-2018-01178 and IPR2018-01179. *Id.* The board instituted *inter partes* review in both cases on January 14, 2019. IPR2018-01178, Paper 7; IPR2018-01179, Paper 7.

C. The '752 Patent (Ex. 1001)

The '752 patent, titled “Bioeffective Krill Oil Compositions” issued on July 7, 2015, from U.S. Patent Application No. 14/620,784 filed on February 12, 2015. Ex. 1001, at [54], [45], [21], [22]. The '752 patent is a continuation of U.S. Patent Application No. 12/057,775, filed on March 28, 2008. The '752 patent claims priority to U.S. Provisional Application No. 60/920,483 filed on March 28, 2007; U.S. Provisional Application No. 60/975,058 filed on September 25, 2007; U.S. Provisional Application

60/983,446, filed on October 29, 2007; and U.S. Provisional Application No. 61/024,072, filed on January 28, 2008. *Id.* [60].

The '752 patent teaches krill oil compositions characterized by having “high amounts of phospholipids, astaxanthin esters and omega-3 contents.” Ex. 1001, Abstract. According to the specification, the compositions disclosed in the '752 patent are effective “in a number of areas such as anti-inflammation, antioxidant effects, improving insulin resistances and improving blood lipid profile.” *Id.*

The '752 patent acknowledges that krill oil compositions, including compositions having up to 60% w/w phospholipid content and as much as 35% w/w EPA/DHA content, were known in the art at the time of the invention. *Id.* at col. 1, ll. 52-57. In addition, the '752 patent recognizes that a myriad of health benefits have been attributed to krill oil in the prior art. For example, the '752 patent states that “[k]rill oil compositions have been described as being effective for decreasing cholesterol, inhibiting platelet adhesion, inhibiting artery plaque formation, preventing hypertension, controlling arthritis symptoms, preventing skin cancer, enhancing transdermal transport, reducing the symptoms of premenstrual symptoms or controlling blood glucose levels in a patient.” *Id.* at col. 1, ll. 46-52.

D. Illustrative Claims

Of the challenged claims, claims 1 and 14 are independent. Claims 2-13 depend from claim 1 and claims 15-20 depend from claim 14. Claim 1 reads as follows:

1. A polar krill oil comprising greater than about 40% phosphatidylcholine w/w of said krill oil and greater than about 5% ether phospholipids w/w of said krill oil.

Ex. 1001, col. 34, ll. 65-67 5.

Ex. 1001, col. 36, ll. 1–11.

Claim 14 reads as follows:

14. A *Euphausia superba* krill oil comprising greater than about 45% phosphatidylcholine w/w of said krill oil, greater than about 5% ether phospholipids w/w of said krill oil, less than about 25% triglycerides w/w of said krill oil, at least 36% omega-3 fatty acids w/w of said krill oil, and astaxanthin.

E. The Asserted Grounds of Unpatentability

Petitioner contends that the challenged claims are unpatentable on the following grounds. Pet. 7.

References	Basis	Claims Challenged
Catchpole ¹	§ 102(e)	1, 5, 6, and 11
Catchpole and Sampalis ²	§ 103(a)	4, 7, 12, and 13.
Catchpole, Grynbaum ³ and Randolph ⁴	§ 103(a)	8–10
Catchpole and Enzymotec ⁵	§ 103(a)	1–3, 5, 6, and 11
Catchpole, Enzymotec and Sampalis	§ 103(a)	14–16, and 20
Catchpole, Enzymotec, Sampalis, Grynbaum and Randolph	§ 103(a)	17–19

¹ Catchpole and Tallon, WO 2007/123424 A1, published Nov. 1, 2007 (“Catchpole”) (Ex. 1009).

² F. Sampalis, WO 03/011873 A2, published Feb. 13, 2003 (“Sampalis”) (Ex. 1013).

³ Grynbaum et al., *Unambiguous detection of astaxanthin and astaxanthin fatty acid esters in krill (Euphausia superba Dana)*, 28 J. SEP. SCI. 1685 (2005) (“Grynbaum”) (Ex. 1039)

⁴ Randolph et al., US 2005/0058728 A1, published Mar. 17, 2005 (“Randolph”) (Ex. 1011).

⁵ Enzymotec, GRAS Notice No. GRN 000226 for “Krill-based Lecithin in Food” and “Krill-derived lecithin” <https://www.fda.gov/downloads/Food/IngredientsPackagingLabeling/GRAS/NoticeInventory/ucm263930.pdf>, dated May 26, 2007 and filed by the FDA May 31, 2007 (“Enzymotec”) (Ex. 1048).

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