

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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RIMFROST AS  
Petitioner,

v.

AKER BIOMARINE ANTARTIC AS.,  
Patent Owner.

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Case No. PGR2018-00033  
Patent 9,644,170 B2

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

SCHNEIDER, *Administrative Patent Judge*.

DECISION  
Denying Institution of Post Grant Review  
35 U.S.C. § 324(a)

## I. INTRODUCTION

### A. Background

Rimfrost AS (“Petitioner”) filed a Petition for post grant review of claims 1–20 of U.S. Patent No. 9,644,170 B2 (Ex. 1001, “the ’170 Patent”). Paper 2 (“Pet”). Aker Biomarine Antarctic AS (“Patent Owner”) filed a timely Preliminary Response. Paper 7 (“Prelim. Resp.”). Based on the information presented in the Petition and Preliminary Response, we hold that Petitioner has not demonstrated adequately that the ’170 patent is eligible for post grant review.

Accordingly, we deny the petition.

### B. Related 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.). Pet. 2. Petitioner indicates that the ’905 patent and ’877 were also at issue in *In the matter of Certain Krill Products and Krill Meal for Production of Krill Oil Products*, Investigation No. 337-TA-1019, which Petitioner states has been terminated. *Id.* at 2–3. In addition, Petitioner indicates that the ’905 patent was challenged in IPR2017-0745 and IPR2017-0747, and that the ’877 patent was challenged in IPR2017-0746 and IPR2017-0748. *Id.* On August 10, 2018, the Board issued final written decisions in those matters, finding that the claims of the ’905 patent have been shown to be unpatentable in IPR2017-0745, but not IPR2017-0747, and that the claims of the ’877 patent have been shown to be unpatentable in IPR2017-0746, but not IPR2017-0748. IPR2017-0745, Paper 24; IPR2017-0746, Paper 23; IPR2017-0747, Paper 24; IPR2017-

0748, Paper 23. Petitioner states that the district court action has been stayed pending resolution of the above identified IPRs. *Id.* Petitioner additionally represents that a petition for *inter partes* review was filed challenging related U.S. Patent No. 9,320,765, now IPR2018-00295. Pet. 3.  
*C. The '170 Patent (Ex. 1001)*

The '170 patent, titled “Bioeffective Krill Oil Compositions” issued on May 9, 2017, from U.S. Patent Application No. 15/180,439 ('439 application”), filed on June 13, 2016. *See* Ex. 1001, [54], [45], [21], [22]. The '170 patent is a continuation of U.S. Patent Application No. 14/020,162, filed September 6, 2013, which is a continuation of U.S. Patent Application No. 12/057,775, filed on March 28, 2008. The '170 patent claims priority to U.S. Provisional Patent 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.* at [60]. This history is important because this case turns on whether Petitioner shows sufficiently that at least one claim has an effective filing date after March 16, 2013 — a showing necessary to demonstrate that the '170 patent is eligible for post grant review. Pet. 19–44.

The '170 patent purports to disclose krill oil compositions characterized by having “high amounts of phospholipids, astaxanthin esters [and] omega-3 contents.” Ex. 1001, Abstract. The compositions disclosed in the '170 patent purport to be effective “in a number of areas such as anti-inflammation, antioxidant effects, improving insulin resistances and improving blood lipid profile.” *Id.*

The '170 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 '170 patent recognizes that myriad health benefits have been attributed to krill oil in the prior art. For example, the '170 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. 48–54.

*D. Illustrative Claim*

Of the challenged claims, claims 1 and 11 are independent. Claims 2–10 depend from claim 1 and claims 12–20 depend from claim 11. Claim 1 is illustrative of the claimed subject matter and reads as follows:

1. A krill oil composition comprising a capsule containing *Euphausia superba* krill oil suitable for oral administration, said krill oil comprising from 3% to 15% ether phospholipids w/w of said krill oil and astaxanthin esters in amount of greater than about 100 mg/kg of said krill oil.

Ex. 1001, col. 35, ll. 49–53. The other independent claim, claim 11, is similar to claim 1 and adds the requirement that the capsule be a softgel capsule. *Id.* at col. 36, ll. 31–34.

*E. The Alleged Grounds of Unpatentability*

Petitioner contends that the challenged claims of the '170 patent are unpatentable on the following grounds.<sup>1</sup>

Applicable References	Basis	Claims Challenged
No references cited for this ground	§ 112(a) Lack of enablement and lack of written description	1–20
No references cited for this ground	§ 101 Product of Nature	1–20
No references cited for this ground	§ 101 Inventorship	1–20
'388 Application <sup>2</sup>	§ 102(a)	1–20
Bruheim <sup>3</sup> and Neptune's GRAS. <sup>4</sup>	§ 103(a)	1, 3-5, 7, 9-11, 13-16, 18, 20

<sup>1</sup> Petitioner supports its challenge with the Declaration of Stephen J. Tallon (“Ex. 1006”).

<sup>2</sup> Bruheim et al., US 2008/0274203 A1, published Nov. 6, 2008. This later matured into US 9,034,388 (“’388 Application”) (Ex. 1043).

<sup>3</sup> Bruheim et al., US 2012/0149867 A1, published June 14, 2012 (“Bruheim”) (Ex. 1085).

<sup>4</sup> Robert S. McQuate, *GRAS Assessment for Neptune Technologies & Bioresources*, GRAS Notification – High Phospholipid Krill Oil, Food and Drug Administration, Center for Food Safety & Applied Nutrition, Neptune Biosciences, 1–96, (2008).

<https://www.fda.gov/downloads/Food/IngredientsPackageLabeling/GRAS/NoticeInventory/ucm269133.pdf>, last visited Aug. 2018 (“Neptune GRAS”) (Ex. 1075).

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