

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

RIMFROST AS
Petitioner

v.

AKER BIOMARINE ANTARCTIC AS
Patent Owner

CASE IPR: IPR2020-01533

U.S. Patent No. 9,816,046 B2

Declaration of Dr. Snorre Tilseth

I, Dr. Snorre Tilseth, do declare as follows:

1. I have personal knowledge of the matters set forth herein, and if I am called upon to testify, I could testify competently thereto.

2. I am one of three joint inventors of the subject matter described in U.S. Patent Application 15/589,572, filed May 8, 2017 and which issued on Nov. 14, 2017 as U.S. Patent No. 9,816,046 (the “ ‘046 Patent’ ”). The ‘046 Patent is a continuation of U.S. Pat. No. 9,644,169, which is a continuation of U.S. Pat. No. 9,375,453, which is a continuation of U.S. Pat. No. 9,034,388, all of which the claim the benefit of the following U.S. Provisional Applications: 60/920,483 filed March 28, 2007; 60/975,058 filed September 25, 2007; 60/983,446 filed October 29, 2007; and 61/024,072 filed January 28, 2008. The remaining inventors, Inge Bruheim and Daniele Mancinelli are no longer employed by Aker Biomarine Antarctic AS or any Aker subsidiary.

3. I started working with Aker Seafoods on October 1, 2005. I am currently employed by Aker BioMarine as a Senior advisor and have worked for Aker BioMarine since its formation in 2006. I am not being compensated separately for this Declaration.

4. I understand that *inter partes* review of Claims 1-19 of the ‘046 patent has been instituted in IPR2020-01533. I understand that the Grounds for invalidity which are being considered are as follows:

Ground 1: Claims 1-10 are alleged to be obvious under 35 U.S.C. 103(a) over the combination of Breivik II, Yoshitomi, Budzinski, Fricke, Bottino II and Sampalis I;

Ground 2: Claims 11 and 12 are alleged to be obvious under 35 U.S.C. 103(a) over the combination of Breivik II, Yoshitomi, Budzinski, Fricke, Bottino II, and Randolph;

Ground 3: Claims 13-19 are alleged to be obvious under 35 U.S.C. 103(a) over the combination of Breivik II, Budzinski, Yoshitomi, Fricke, Bottino II, Randolph and Sampalis I.

5. In early 2006, I was employed by Aker Seafood Antarctic AS. As part of Aker Seafood Antarctic AS, I started the process to develop a method of making krill oil from krill meal. This work eventually led to the formation of Aker BioMarine AS in late 2006 to commercialize krill oil production. The other two inventors, Inge Bruheim and Daniele Mancinelli were employed by a different company, Natural ASA, which was acquired by the Aker group for its experience in nutraceutical products. I began interacting with the other inventors and

individuals at Natural ASA prior to the acquisition on aspects related to krill oil extraction processes and specifications that are reflected in the claims.

6. In 2004, Aker Seafoods obtained a trial license from CCAMLR (Commission for the Conservation of Antarctic Marine Living Resources) for harvesting *Euphausia superba* in Antarctica with the F/T Atlantic Navigator. Operation of the Atlantic Navigator in Antarctica for the 2004 and 2005 is described in Ex. 2002 which is a report by scientific observers that were on board the Atlantic Navigator for part of the fishing season. The krill meal used for the extractions described below was produced on May 6, 2005, shortly after the time periods on which the observers were on the ship. The predominant krill species caught in these area is *Euphausia superba*, which is consistent with the size of the krill described in Ex. 2002.

7. In 2005, I initially presented the idea of ethanol extraction of krill oil from krill meal to Kjell Inge Rokke, the owner of Aker Seafood. As part of this project, analysis of materials such as krill meal and krill oil were contracted to Fiskeriforskning (the Norwegian Institute of Fisheries and Aquaculture Research). The krill meal used for extraction of krill oil is described in Ex. 2003, “F/T Atlantic Navigator 2004-2005” which is a report prepared by Fiskeriforskning and which bears the date of December 23, 2005. Ex. 2004 is a screenshot of the internal metadata for the report provided as Ex. 2003. This metadata indicates that

the report provided as Ex. 2003 was created and last modified on January 27, 2006. The author of Ex. 2003 is Eyolf Langmyhr of Fiskeriforskning. I stored a copy of this file as a corporate record on the hard drive of my computer and the copy provided is true and correct copy of the report. The dates of the report are consistent with my memory of the events.

8. Sections 6.1 and 6.2 of Ex. 2003 (p. 0022-23) describe production and sampling of the krill meal during different production steps. The Atlantic Navigator was equipped with a standard compact fish meal factory. The krill meal was produced by a standard meal process where fresh krill is brought on board the ship, cooked, pressed and decanted, and then dried to provide the krill meal. The krill meal had a reduced particle size as compared to the fresh krill and was a powder as discussed below. Heating of the krill material sufficient to denature lipases and phospholipases occurs at the cooking stage prior to decanting/pressing. This meal is the same meal described in Example 1 of the '046 Patent (Ex. 1001 at pp. 0034-35) and Example 1 of the priority document U.S. Prov. Appl. 60/920,483 filed March 28, 2007 (Ex. 1005 at pp. 0023-26).

9. In the spring of 2006, I contacted the company Fresenius Kabi to discuss extracting krill containing phospholipids. I chose Fresenius Kabi as a potential partner due to their expertise in extracting phospholipids from egg yolk. During the project and my interaction with Fresenius Kabi, I produced and saved

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