

**IN THE MATTER OF AN APPLICATION FOR REVOCATION UNDER  
SECTION 80 OF THE PATENTS ACT (CAP. 221)**

**BETWEEN**

**CARGILL INTERNATIONAL TRADING PTE LTD  
(Applicant for Revocation of the Patent P-No. 49307, the “Applicant”)**

**AND**

**MARTEK BIOSCIENCES CORPORATION  
(Proprietor of the Patent, the “Patentee”)**

*Before Deputy Registrar of Patents Chiam Lu Lin  
and Principal Assistant Registrar of Patents Simon Seow  
16 – 18 February 2009*

**Patents** – Application for revocation – whether invention is patentable – novelty and inventive step – Section 14(1), 14(2), 15, 80(1)(a) of the Patents Act (Cap 221, 2005 Rev Ed)

**Patents** – Insufficiency – not just lack of clarity – impossible for skilled addressee to work invention – Section 80(1)(c) of the Patents Act (Cap 221, 2005 Rev Ed)

**Patents** – Allowability of amendments – pre-grant – post-grant – disclose additional matter – extend scope of protection – Section 83(1), 83(2), 83(3), 83(4), 84(2), 84(3) of the Patents Act (Cap 221, 2005 Rev Ed)

**Patents** – Foreign corresponding decisions – extent of reliance

**Patents** – role of expert witnesses – explaining words or terms of science or art appearing in documents – matters within exclusive domain of court on questions of fact or law or interpretation of a document

**Patents** – independence of expert witnesses – current or former employees of Patentee – not precluded from giving evidence – evidence to be scrutinised with greater care – consideration limited to technical and scientific aspects of invention

**Words and Phrases** – “novelty” – “inventive step” – Patentability – Section 14(1), 14(2), 15, 80(1)(a) of the Patents Act (Cap 221, 2005 Rev Ed)

**Facts**

The Applicant applied to revoke Patent P-No. 49307 entitled “Microbial Oil Mixtures and Use Thereof” with the filing date of 24 January 1991 on the following grounds:

1. the invention was not patentable;
2. there was insufficiency as the patent specification did not disclose the invention clearly and completely for it to be performed by a person skilled in the art; and
3. there was additional matter disclosed in the specification of the patent undisclosed in the patent application as filed, pursuant to sections 80(1)(a), 80(1)(c) and 80(1)(d)(i) of the Patents Act respectively.

The Patent states that the present invention relates to compositions including blends of microbial oils, and methods of using such compositions particularly as infant formula supplements and of increasing the amount of long chain polyunsaturated fatty acids (lcPUFAs) in infant formula. The Patentee stated that their aim is to provide a simple and safe infant formula which is as effective as human breast milk (HBM).

The Patentee’s position is that there are two distinct inventions in the Patent. The first invention concerns an infant formula supplement comprised of arachidonic acid- (ARA) and docosahexaenoic acid- (DHA) containing microbial oils. The Patentee submitted that the current state of the art then was infant formula supplements, which when added to infant formula, would result in a supplemented formula that matched HBM as closely as possible in both the types and the amount of the lcPUFAs present. The Patentee submitted that contrary to this, their first invention related to supplementation with a simple blend of only two lcPUFAs, namely ARA and DHA, which

was all that was needed to produce an infant formula with the beneficial effects of an infant formula having all the lcpUFAs found in HBM. The Applicant contended that the Patent specification is inconsistent with the Patentee's above submissions as the claims could include lcpUFAs other than ARA and DHA.

The second invention concerns a blend of fish oil (containing eicosapentaenoic acid (EPA)) and an ARA-containing microbial oil to produce an lcpUFA-containing infant formula supplement. The Patentee views the then current state of the art as including the knowledge that supplementing infant formula with fish oil slowed down infant weight gain, with the exact cause unknown. The Patentee claimed that they realised that an excess of EPA caused the rate of weight gain problem, and submitted that the inventive concept was the discovery that this low weight gain associated with fish oil-supplemented infant formula could be overcome by the addition of ARA in the form of microbial oil to the formula. The Applicant contended that the second invention is obvious since the knowledge that EPA inhibited ARA production was also already part of the then state of the art.

The Applicant submitted that there was a lack of sufficiency due to lack of clarity in the claims and that such unclear claim features with indeterminate scope could not be relied on for novelty.

The Applicant objected to the 1999 pre-grant amendments in their grounds for revocation, on the basis that the amendments constituted additional matter under section 80(1)(d). The Applicant contended that certain claims in the 1999 amendments had disclosed additional matters extending beyond the application as filed, and that certain claims in the proposed 2006 and proposed 2008 post-grant amendments had disclosed additional matter and extended the scope of protection conferred by the Patent.

Both the Applicant and the Patentee relied on expert witnesses during the Hearing. The Applicant planned for two witnesses, Nga and Puah, to take the stand. Nga admitted that he lacked both specific expertise in microbial oils and broad knowledge of general nutrition and that his evidence and conclusion were made on hindsight after reading the Patent. At the Hearing, the Applicant withdrew Puah from taking the stand but not his Statutory Declaration (SD). The Patentee called two expert witnesses, Lien and Kyle. Lien is a consultant to the Patentee and expert in the areas of dietary fatty acids and proteins and infant formula research. Kyle is the sole inventor named in this Patent and a former employee of the Patentee.

To support their case, the Applicant submitted decisions from foreign patent offices. The Patentee contended that acceptance of these decisions would be against the principle of territoriality and pointed out that the European Patent Office's decision was non-final and should not be relied on.

### **Held, allowing the Applicant's request to revoke the Patent**

1. The Applicant succeeded in its application to revoke the Patent under section 80(1)(a) and 80(1)(d) of the Patents Act. The claims read with the description shows that the specification provides sufficient guidance to allow a person skilled in the art to work the invention, pursuant to section 80(1)(c) of the Act. All claims in the proposed 2006 and 2008 amendments and in the 1999 amendments were found to be not patentable. Some of the proposed 2006 and 2008 amendments and one of the 1999 amendments constituted additional subject matter and were not allowed as they failed to meet the requirements of section 84: *at [1] – [2], [246] – [247], [276] – [279]*.
2. The allowability of amendments was considered in respect of each set of amended claims i.e. 2006 (proposed post-grant) and 2008 (proposed post-grant), and 1999 (pre-grant). Certain proposed 2006 amendments and proposed 2008 amendments were disallowed pursuant to section 84(3)(b) of the Act as they were found to have extended the scope of protection of the Patent. All of the 1999 amendments, except for claim 30, were found not to have disclosed matter that extended beyond that disclosed in the application as filed either implicitly or explicitly, pursuant to section 84(2) of the Act: *at [58], [64] – [114]*.
3. The proposed 2006 and 2008 amendments were found to be lacking in inventive step despite some findings of novelty for certain claims. Although the set of claims in the proposed 2006 amendments were proposed to entirely replace the set of claims in the 1999 amendments, in the event that all the claims in the proposed 2006 amendments were to be found not allowable, the set of claims in the 1999 amendments were considered. They were found to be sufficient, but lacking inventive step notwithstanding some findings of novelty in some of the claims.: *at [128] – [272]*.
4. It is a matter for the court to read the language of the agreement or document, analyse the facts and apply the law to the facts. An expert cannot interpret a document for the court. Thus, the expert can provide expert assistance by, *inter alia*, explaining words or terms of science or art appearing in the documents which have to be construed: *Glaverbel SA v British Coal Corp. and Another* [1994] RPC 443; *Armchair Passenger Transport Limited v Helical Bar PLC et anor.* [2003] EWHC 367 (QB): *at [37] – [40]*.

5. For the Applicant's expert witness, Nga, there is a need for caution in relying on his evidence due to his lack of specific expertise in microbial oils and his admittance that his evidence and conclusion were made on hindsight after reading the Patent. As the Applicant's other witness, Puah, was withdrawn leaving his evidence untested, very little weight was accorded to his evidence: *at [46] – [49]*.
6. Consideration of the evidence of the Patentee's expert witnesses, Lien and Kyle, were limited to the technical and scientific aspects of the invention. Lien's evidence was given due weight as it remained unchallenged by the Applicant at the Hearing. However, the testimonies of both these witnesses were also considered with greater care due to the increased likelihood of bias, since they were associated with the Patentee and thus were not independent witnesses. On this issue, reliance was placed on the legal principles in *Armchair Passenger Transport Limited v Helical Bar PLC et anor.* [2003] EWHC 367 (QB) at 65; *Main-Line Corporate Holdings v United Overseas Bank Ltd and another* [2006] SGHC 233 at 86: *at [50] – [55]*.
7. Care needs to be exercised in relying on decisions from other jurisdictions while recognising their usefulness. The guidelines in *First Currency Choice Pte Ltd v Main-Line Corporate Holdings and Another Appeal* [2007] SGCA 50 at [2] were applied. An adjudication on patent rights is predicated upon not only the applicable regulatory framework and practice, but also on the evidence presented as well as the submissions made to the tribunal concerned: *at [273] – [275]*.
8. The Patentee was ordered to pay the Applicant's costs to be taxed or agreed save for the cost relating to Dr Puah's evidence due to the Applicant withdrawing him from taking the stand at the Hearing: *at [280]*.

#### **Provisions of Legislation discussed:**

- Patents Act (Cap 221, 2005 Rev Ed), ss 14(1), 14(2), 15, 80(1)(a), 80(1)(c), 80(1)(d), 83, 84(2), 84(3)(a), 84(3)(b).

#### **Cases referred to:**

- Adhesive Dry Mounting Co Ltd v Trapp and Co., 27 RPC 341
- Armchair Passenger Transport Limited v Helical Bar PLC et anor. [2003] EWHC 367 (QB)
- Bonzel (T.) and Anr. V Interventio Limited and Anr. (No. 3) [1991] RPC 553
- Cargill International Trading Pte Ltd v Martek Biosciences Corporation [2009] SGIPOS 12
- Electric & Musical Industries Ltd v Lissen Ltd [1339] 56 RPC 23
- FE Global Electronics Pte Ltd and others v Trek Technology (Singapore) Pte Ltd and another appeal [2005] SGCA 55
- First Currency Choice Pte Ltd v Main-Line Corporate Holdings Ltd and another Appeal [2007] SCGA 50
- First Currency Choice Pte Ltd v Main-Line Corporate Holdings Ltd [2008] 1 SLR 335
- Glaverbel SA v British Coal Corp. and Another [1994] ROC 443
- Genelabs Diagnostics Pte Ltd v Institut Pasteur [2001] 1 SLR 121
- Interlego AG v Toltoys Pty Ltd [1973] 130 CLR 461
- Main-Line Corporate Holdings Ltd v United Overseas Bank Ltd and Another [2007] 1 SLR 1021; 2006 SGHC 233
- Merck & Co Inc v Pharmaforte Singapore Pte Ltd [2000] 3 SLR 717
- Muhlbauer AG v Manufacturing Integration Technology Ltd [2009] SGHC 45
- Pozzoli SPA v BDMO SA et anor. [2007] EWCA Civ 588
- Siegfried Demel v Jefferson [1999] F.S.R. 204
- Technograph Printed Circuits Limited v Mills & Rockley (Electronic) Limited [1972] RPC 346
- Trek Technology (Singapore) Pte Ltd v FE Global Electronics Pte Ltd (No. 2) [2005] 3 SLR 389
- Windsurfing International Inc v Tabur Marine (Great Britain) Ltd [1985] RPC 59

#### **Representation:**

- Mr. Kristian Robinson, Mr. Soh Kah Liang, Dr Soo Ee Lin (Ella Cheong Spruson and Ferguson (Singapore) Pte Ltd) for the Applicant
- Dr Stanley Lai, Mr Vignesh Vaerhn, Ms Eunice Lim (Allen & Gledhill LLP) for the Patentee