

**IN THE HIGH COURT OF  
MIMOSA CITY**

**DAF** .....Applicant

**Vs**

**FLO** .....Defendant

**2000**

**ON SUBMISSION**

**TO THE HIGH COURT OF MIMOSA CITY**

**Memorial for the Defendant**

## **TABLE OF CONTENTS**

LIST OF ABBREVIATIONS	I
INDEX OF AUTHORITIES	II
JURISDICTION	IV
STATEMENT OF FACTS	V
STATEMENT OF ISSUES	VI
SUMMARY OF PLEADINGS	VII

### **PLEADINGS**

<b>1. <u>DAF without a patent has no remedy and therefore the action fails</u></b>	<b>1</b>
<b>2. <u>The grant of patent to DAF is not inevitable</u></b>	<b>2</b>
2.1 DAF Ltd. will not achieve exclusively in his molecular manipulative technology	2
2.2 The patent will not be granted on ethical or social grounds	4
2.2.1 The potential of Genetic Engineering for Disrupting as well as Restoring the Natural Ecosystems of the Biosphere.	4
2.2.2 More basic ethical issue of granting a monopoly to a single individual, a technology which will dictate the pace of evaluation.	5
2.3 The patent is really one for biological substances	5
<b>3. <u>There has been copying by FLO of the technology</u></b>	<b>6</b>
3.1 Reverse engineering by FLO does not violate intellectual property protection.	6
3.2 Reverse engineering is a necessary and common business practice for technological improvement	7
<b>4. <u>FLO's actions do not go against the principles of fair competition</u></b>	<b>9</b>
PRAYER	10

## **LIST OF ABBREVIATIONS**

- |     |        |   |  |
|-----|--------|---|--|
| 1.  | PCT    | - | PATENT CO-OPERATION TREATY.                    |
| 2.  | CPC    | - | COMMUNITY PATENT CONVENTION.                   |
| 3.  | EPO    | - | EUROPEAN PATENT OFFICE.                        |
| 4.  | EPC    | - | EUROPEAN PATENT CONVENTION.                    |
| 5.  | TRIP'S | - | TRADE RELATED INTELLECTUAL<br>PROPERTY RIGHTS. |
| 6.  | GATT   | - | GENERAL AGREEMENT ON TRADE AND<br>TARIFFS.     |
| 7.  | VCLT   | - | VIENNA CONVENTION ON THE LAW OF<br>TREATIES.   |
| 8.  | WIPO   | - | WORLD INTELLECTUAL PROPERTY<br>ORGANIZATION.   |
| 9.  | WTO    | - | WORLD TRADE ORGANIZATION.                      |
| 10. | CBD    | - | CONVENTION ON BIOLOGICAL<br>DIVERSITY.         |

# **INDEX OF AUTHORITIES**

## **TREATIES AND CONVENTIONS**

1. Patent Co-operation Treaty done at Washington on June 19, 1970, amended on October 2, 1979 and modified on February 3, 1984.
2. General Agreement on Trade and Tariffs, 1994
3. Trade Related Intellectual Property Rights, GATT.
4. PARIS CONVENTION FOR THE PROTECTION OF INDUSTRIAL PROPERTY OF MARCH 20, 1883, AS REVISED AT BRUSSELS ON DECEMBER 14, 1900, AT WASHINGTON ON JUNE 2, 1911, AT THE HAGUE ON NOVEMBER 6, 1925, AT LONDON ON JUNE 2, 1934, AT LISBON ON OCTOBER 31, 1958, AND AT STOCKHOLM ON JULY 14, 1967.
5. 1997 General Assembly Report - Ethical Concerns about Patenting in relation to Living Organisms from the Society, Religion and Technology Project, Board of National Mission
6. Convention on Biological Diversity, 5<sup>th</sup> June 1992.
7. Berne Convention 1971.

## **BOOKS**

- 1.) Bhagwathi and Robert C. Hadock, Fair Trade and Harmonization (1.ed) (1998)
- 2.) Burk K. Zimmerman, Bio Future, Confronting the Genetic Era, (1.ed) (1984)
- 3.) David B. Yoffic, Beyond Free trade, (1. ed) (1993)
- 4.) Gould, An Introduction of Intellectual Property Law, (7.ed) (1989)
- 5.) H. Jackson Knight, Patent Strategy, (1.ed) (1997)
- 6.) J.Starke, Introduction to International Law, (8.ed) (1998)
- 7.) Jeremy Phillips & Abson Firth, Introduction to Intellectual Property Law (3.ed) (1995)
- 8.) Noel Byrne, The Scope of Intellectual Property Law (3.ed) (1995)
- 9.) Pictro S. Nivola, Regulating Unfair Trade, (1.ed) (1993)
- 10.) Robert M. Sherwood, Intellectual Property and Economic Development, (1. ed) (1990)
- 11.) Roger Brownswood, Law and Human Genetics, (1. ed) (1990)
- 12.) W.R. Cornish, Intellectual Property Law, (2. ed) (1993)

## **BOOKS**

- 1.) Diamond V. Chakrabarty, 447 U.S. 303 (1980)
- 2.) Formento V. Mentmore (1956) R.P.C. 87 (C.A.)
- 3.) Lubrizol Genetics Inc 1988 T320/87, noted at OJEPO 7/1989
- 4.) Miller V. Taylor (1769) 4 Burr 2303
- 5.) Official Journal of Patents, Trade Marks and Designs, October 21, 1976
- 6.) Perry V. Truefitt (1842) 6 Beav 66
- 7.) Shell's Patent (1960) R.P.C. 61 (H.L.)
- 8.) Technograph V. Mills & Rockley (1972) R.P.C. 346
- 9.) The "Rote Taube" Case, Federal Supreme Court, I II C 136 (1970)
- 10.) The Rank Hovis Mcdougall Case, High Court (1978) FRS 588

### **STATEMENT OF JURISDICTION**

The parties have chosen the forum of dispute to be the High Court of Mimosa City, which has ordinary original jurisdiction to entertain such suits. The laws of Mimosa would be applicable to the dispute.

## **STATEMENT OF FACTS**

The Island of Pollen was known for its Exotic Flowers sustained by a divine climate. Mr. Anther, a scientist and a national of the Island of Pollen invents a molecular manipulative technology by which designer plants can be created.

Since, the Technology gets warm response, he applies for a patent both in Pollen and other countries through the Patent Cooperation Treaty. Subsequently, Anther sets up a company as Design-a-Flower Limited (“DAF”).

The Technology enables a customers to order a desired design on any flower, for example, a striped, spotted and checked rose or a cartoon character even on a tulip, etc. With the advent of this technology of designer flowers, the natural flowers that were once cherished were now ignored.

Stigma, a national of “Mimosa” discovers that under the laws of Pollen, it takes four years for a patent application to be published and six years on average for a patent to be granted. Further, the laws of Mimosa do not enable filing of an infringement action before the patent is granted though damages can be claimed retrospectively from the date of publication of the contents and the specifications in the official gazette.

Therefore, using a series of designer plants, Stigma “REVERSE ENGINEERS” the technology after discovering that he can use the technology before it is published for a period of three and a half years.

He announces a rival venture called Floral Mania Ltd. (“FLO”) with a wider range of products and since he comes out with a wider range of products, his business in Mimosa picks up significantly.

## **STATEMENT OF ISSUES**

- 1. DAF without a patent has no remedy and therefore the action fails.**
- 2. The grant of patent to DAF is not inevitable.**
- 3. There has been no copying by FLO of the technology.**
- 4. FLO's actions do not go against the principles of fair competition.**



## **SUMMARY OF PLEADINGS**

The laws of Mimosa prevent the filing of an infringement action before the patent is granted. The earliest point of time at which an infringement can occur is the date of publishing an application, normally four years from the priority date. Further, proceedings for the period between then and the grant can be brought only after the grant of the actual patent. In the instant case not only has Mr. Anther's patent not been granted the application has not even been published. Therefore without a grant of patent or even a publication date there is no remedy and the action fails.

The grant of patent to DAF is not inevitable due to the enormous prior art existing in the field of biotechnology. Modern Biotechnology has reached the stage where one is able to even clone higher life form such as sheep. Anther's claimed area of protection will surely transgress upon existing prior art in the field. Therefore the extent of Mr. Anther's rights (i.e.) how broad his patent protection will be, if at all is unknown. Which is precisely why there is the legal position of "no patent, no remedy." Further the patent may be not be granted on ethical and social grounds because of the potential of Genetic engineering for disrupting as well as restoring the natural ecosystems of the biosphere. This technology in time will be able to alter the traits of higher life forms as well. To leave a technology which can dictate the pace of evolution in the hands of one person spells disaster.

There has also been no copying of the technology by FLO since the facts of the case make it explicitly clear that they only reverse engineer the technology. Reverse engineering is a neutral activity that does not violate intellectual property law. Moreover reverse engineering is a necessary and common business practice for technological improvement. Therefore FLO's actions in reverse engineering DAF's flowers and coming out with a new and improved technology (as evident from the fact which states it can be applied to a wide range of products) does not amount to an unfair business practice.

## ARGUMENTS ADVANCED

### **I.) DAF without a patent has no remedy and therefore the action fails.**

The product supposedly "invented" by Anther has 3 and a half years to be published and a further minimum 2 year period for the patent to be granted.<sup>1</sup> The Laws of Mimosa explicitly prevent the filing of an infringement action before the patent is granted. The earliest point in time at which infringement can occur is the date of publishing an application --- normally four years from the priority date.<sup>2</sup> Further, proceedings for the period between then and the grant can be brought only *after the grant of the actual patent*. The defendant's act must infringe, not only the claims finally included but those included in the published application as well. As a potential infringer may have no idea whether the application will ever pass examination so as to leave claims that he will infringe.<sup>3</sup>

In the instant case not only has Mr. Anther's patent not been granted the application has not even been published.<sup>4</sup> The earliest date in which Mr. Anther can claim infringement is only from the date of publication. Further his suit can be filed only after the grant of patent. Therefore without a grant of patent or even a publication date there is no remedy and the action fails.

---

1 See Problem for the Annual Raj Anand Moot Court Competition on Intellectual Property Law (August, 2000), (hereinafter referred to as the Facts of the case) p.2, para 2.

2 W.R. Cornish, Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights, 170 (2.ed) (1980).

3 Id.

4 See Facts of the Case, p. 1, para 3.

## **2.) The grant of patent to DAF is not inevitable.**

### **2.1) DAF Ltd. will not achieve exclusivity in his molecular manipulative technology.**

Exclusivity in a technology area can be achieved by one or more 'broad' patents. A 'broad patent' is a subjective descriptor of a patent which typically has claim language which excludes others from a large chunk of technology area<sup>5</sup>. Since broad patent excludes a chunk of technology (in this case molecular manipulative technology), a single broad patent can provide exclusivity in a technology area similar to a fence around a technological area.<sup>6</sup> However, broad patents by their nature tend to extend coverage to all embodiments, which is, in a practical sense, difficult to do. Referring back to the fence analogy, this means that the fence may have some holes caused by the applicant (DAF) trying to extend the coverage to the patents too broadly due to the existence of prior art 7 (Le) existing patents in the field.<sup>7</sup>

The burst of activity energized by modern biotechnology is a truly international phenomenon. No one country or group of countries dominates this field.<sup>8</sup> Modern biotechnology has provided the ability to isolate, recover and even create the simplest life forms, and more recently even to genetically engineer characteristics in higher life forms.<sup>9</sup>

---

5 Richard Seltzer, Intellectual Property Rights, March 14, 1994, pp 6-7.

6 See Annexure 1.

7 See Annexure 2.

8 See for eg. In Brazil, Biology -related science represents over half of the total research activity and engaged personnel in the country.

9 Robert M. Sherwood, Intellectual Property and Economic Development, 47, (1.ed) (1990)

New biotech companies are being formed and are already changing the course of the traditional bio tech companies.<sup>10</sup> For example if one were to search the existing databases on biotechnological patents they would run into many hundreds.<sup>11</sup> The existence of different types of molecular manipulative technology is also evident from the facts of the case

---

<sup>10</sup> Burke K. Zimmerman, *Biofuture, confronting the Genetic Era*, 97 (1.ed) (1984).

<sup>11</sup> See for e.g 1999 Agricultural Biotechnology Patents:-

1. Expression Yedors and methods for intracellular protein production in bacillus
2. DNA, Yedors and transformed hosts encoding *Trichoderma reesei*.
3. Process for production of amide compounds using *agrobacterium radiobacter*
4. CDNA encoding a polypeptide including a herein sequence
5. Coccidiosis vaccines
6. Acetic acid assimilating gene and a method for preventing accumulation of acetic acid in culture medium
7. Prolonged release of biologically active somatotropin
8. Leukaemia inhibitory factor from livestock species and use thereof to enhance implantation and development of embryonic cells
9. Detection of *Xanthomonas campestris* py. cirri by hybridization and polymerase chain reaction assays
10. Recombinant h-ansglutaminase
11. Method for production of petroselinic acid and ONEGA12 hexadecanoic acid in U-ansgenic plants
12. Cloning and expression of phytase from *aspergius*
13. Method to identify genetic markers that are linked to agronomically important genes
14. High pigment, reduced blossom end scar size, disease resistant varieties
15. Monoclonal antibodies that specifically bind somatotropin binding proteins but not to corresponding somatotropin receptors and methods of use in immunoassays
16. Gene encoding nematode-active toxin PS63B cloned from *Bacillus thuringiensis* isolate
17. Method to increase the trehalose content of organisms by transforming them with the structural genes for the short and long chains of yeast trehalose synthase
18. Synthetic insecticidal crystal protein gene
19. Nematocidal *Bacillus thuringiensis* biopesticide
20. Promoter for transgeffic plants
21. *Bacillus thuringiensis* cryIIIC, (b) protein toxic to coleopteran insects
22. Systernin, an inducer of plant defense proteins, and methods of use
23. Gene encoding cytahesin protein of *mycoplasma gauisepticum* and its use
24. Gene encoding for endochitinase
25. Nucleic acid fragment encoding herbicide resistant plant acetolactate synthase
26. *Bacillus thuringiensis* protein toxic to coleopteran insects
27. Cell-free Marek's disease virus vaccine (1 of 2 separate patents)
28. Cell-free Marek's disease virus vaccine (2 of 2 separate patents)
29. Method for obtaining deodorant extract from tissue culture of plants in family oleaceae
30. Expression vectors and methods for intracellular protein production in bacillus.

which states that Anther invented "a" molecular manipulative technology and not molecular manipulative technology itself Anther's claimed area of protection will surely transgress upon existing prior art in the field. Therefore the extent of Mr. Anther's rights (i.e.) how broad his patent protection will be, if it all, is unknown. Which is precisely why there is the legal position of "no patent, no remedy."<sup>12</sup>

## **2.2) The patent will not be granted on ethical or social grounds**

Even once the patent applicant (Anther) <sup>13</sup> has climbed the small mountain of proof that what he has conceived is an invention, and has then scaled the rather higher mountain of showing that his invention is patentable, he must still prove that his invention will not be rejected on ethical and social grounds.

### **2.2.1) The Potential of Genetic Engineering for Disrupting as well as Restoring the Natural Ecosystems of the Biosphere**

At a time when an estimated 50,000 species are already expected to become extinct every year, <sup>14</sup> any further interference with the natural balance of ecosystems could cause havoc. Genetically engineered organisms, with their completely new and unnatural combinations of genes, have a unique power to disrupt our environment. Since they are living, they are capable of reproducing, mutating and moving within

---

<sup>12</sup> G. Dworkin and R.D. Taylor, Copyright Designs and Patents Act, 43 (1.ed) (1988); See for e.g, Williams V. Nye (1890) 7 RPC 62.

<sup>13</sup> See Facts of the case p. 1, para 2.

<sup>14</sup> "The End of the World as we Know It: The Environmental Costs of Genetic Engineering" <<http://www.greenpeace.org/~comms/cbio/brief2.html>>.

the environment.<sup>15</sup> However at the same time the technology can also restore the world's natural ecosystems back to its pristine state. Therefore to grant a patent to a technology of such magnitude will offend the ethical and social aspects of Mimosan patent law.<sup>16</sup>

### **2.2.2) More basic ethical issue of granting a monopoly to a single individual, a technology which will dictate the pace of evolution**

If the patent applied for by Mr. Anther is, as he contends, for molecular manipulative technology,<sup>17</sup> there will be no limits for its abuse. He will in time be able to genetically alter the traits of much higher life forms as well. To leave a technology which can dictate the pace of evolution in the hands of one person spells disaster.<sup>18</sup>

### **2.3) The patent is really one for biological substances**

In Mimosan it is well settled law that there can be no patent for living things.<sup>19</sup> There can also be no patent for verifying previous predictions. Likewise in genetic engineering: where the substance to be made is known through its occurrence in the human body, and the relevant procedure of

---

15 George Wald. "The Case Against Genetic Engineering." *The Recombinant DNA Debate*. Jackson and Stich, eds. (Englewood Cliffs, N.J.: Prentice-Hall, 1979) : 128 (Reprinted from *The Sciences*, Sept./Oct. issue, 1976).

16 See also European Patent Convention Art 53 (a) (b); United Kingdom's Patent Act 1977, S 1(3).

17 See Facts of the Case, p. 1, para 2

18 Ted Howard and Jeremy Rifkin, *Who Should Play God?*, 69 (1. ed) (1977)

19 See Facts of the Case. P.2, para 5.

recombinant DNA technology are also known, there is nothing inventive in working then, through even though this involves considerable labor by specialists in a new field, and specific knowledge is procured in the course of the Work.<sup>20</sup> The person or team which first produces a successful result has only won a race down an established track to a known goal.<sup>21</sup> The product marketed by W. Anther are flowers. The alleged infringement is with regard to reverse engineering the flowers. The Two companies deal in the manufacture of flowers (Designer Flower Ltd. and Floralmania Ltd.). Therefore the patent is really one for biological substances and not for molecular manipulative technology and under the existing laws of the country, Patents cannot be granted on live forms or biological materials.

### **3.) There has been no copying by FLO of the technology**

Assuming even for arguments sake that DAF Ltd. had a legal right (i.e.) patent protection, there would still be no violation of those rights by FLO Ltd. The facts of the case make it explicitly clear that FLO Ltd. did not copy the technology but only reversed engineered it.<sup>22</sup>

#### **3.1) Reverse engineering by FLO does not violate intellectual property protection.**

Reverse engineering is occasionally spoken of as though it were an activity which violates intellectual property protection. It is useful to clarify the

---

<sup>20</sup> Gentech V Wellcome Foundation (1989) R.P.C. 147.

<sup>21</sup> W.R. Cornish, Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights, 135 (2.ed) (1980).

<sup>22</sup> See Facts of the Case p.1, para 3.

concept. Reverse engineering is a neutral activity with respect to intellectual property protection.<sup>23</sup> It neither violates or conforms to the norms of protection.<sup>24</sup> What is done with the results of reverse engineering may violate the intellectual property of another, but the activity of reverse engineering itself is not reprehensible.<sup>25</sup> In fact, it is one of the important means by which technological information spreads and the practice is Widespread. Therefore the reverse engineering by FLO Ltd. does not violate intellectual property law.

### **3.2) Reverse engineering is a necessary and common business practice for technological improvement.**

Competitors commonly purchase each others products, then take them apart or analyse them to learn what they can. One cannot stop another party 'stripping down' or reverse engineering his creation and thus effectively using it as the base for his own creation. This extends to semiconductor chips,<sup>26</sup> *as well as new plant and seed varieties*.<sup>27</sup> The justification for reverse engineering is that it enables the serious, painstaking competitor to build upon the creator's efforts in the knowledge that his scientific advances too can be utilized in turn by the creator.<sup>28</sup>

---

23 Robert M. Sherwood, *Intellectual Property and Economic Development*, 59, (1. ed) (1990).

24 Id.

25 See for e.g Bowman Lisa, *Connectix bests Sony in Legal dispute*, ZDNet News, 10 February 2000; See also *Sony Computer Entertainment, Inc V Connectix Corporation*, US Court of Appeals (2000).

26 See for e.g Copyright, Designs and Patents Act 1988, S 226 (IA) (b), as provided for in the Design right (Semiconductor Topographies) Regulations 1989 (SI 1989 No 1100) reg 8.

27 See for e.g The limited definition of infringement in Sec (4) of the UK Plant Varieties and Seeds Act 1964.

28 Jeremy Phillips & Alison Firth, *Introduction to Intellectual Property Law*, 14 (3.ed) (1995)



the knowledge that his scientific advances too can be utilized in turn by the creator.<sup>28</sup>

For example if Toyota's latest models have a new transmission mechanism the other automobile companies act quickly to inspect it. As they do, several things may happen. Although they may have reviewed all relevant Toyota patent application for the gear shift, they will gain added insight into the embodiment of the invention in practice. The small touches which make the mechanism work well may be evident. Some of these touches may well be incremental advances in the technology which were not in themselves patentable.<sup>29</sup> On the other hand, they may be able to learn that some manufacturing technique not known in their own factories has been used, but not be able to determine exactly what the technique is or how it works. The information that a new technique is being used can set the other companies in search of their own new and better technique.<sup>30</sup>

This is precisely what has happened in the case of FLO Ltd. FLO merely does not reverse engineer the product but also improves upon the product to such an extent that it applies to a wider range of products<sup>31</sup> thereby creating their own new and better process of molecular manipulative technology.

#### **4.) FLO's actions do not go against the principles of fair competition .**

Most nations unfair competition law<sup>32</sup> deal with issues such as boycotts, discriminatory treatment, price discrimination, sales below cost of production, sales with excessive premiums, false and misleading advertisement, exclusive dealing, tie - in sales, resale price maintenance, vertical territorial, passing off, trade liable, slander of title, customer allocations and abuse of dominant position.<sup>33</sup>

There is nothing remotely stated in the facts of the case by which one can arrive at the conclusion that there has been unfair trade practice by FLO ltd. and the allegation of unfair trade practice has to be summarily rejected.

---

<sup>29</sup> Robert M. Sherwood, Intellectual Property and Economic Development , 60, (1.ed) (199)

<sup>30</sup> Id. At p. 61

<sup>31</sup> See Facts of the Case p. 2, para 4.

<sup>32</sup> Jagdish N. Bhagwati and Robert E. Heudec, Fair Trade and Harmonization, 312, (1.ed) (1997)

<sup>33</sup> David B. Yoffie, Beyond Free Trade, 11, (1. ed) (1995).

## **PRAYER**

Wherefore, it is prayed that this Hon'ble Court be pleased to hold that:-

- (1) Without a patent there is no remedy and the action fails.
- (2) The Patent may or may not be granted on ethical and social considerations
- (3) That FLO has not in anyway infringed on any of the alleged right of the plaintiff DAF and that the suit be dismissed.