

IN THE SUPREME MOOT COURT FOR INTELLECTUAL PROPERTY APPEALS

BETWEEN:

FILTER KING LABS, INC.

Appellant

– and –

ASTERIXOBELIX PHARMA INC.

Respondent

FACTUM OF THE RESPONDENT

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PART I – OVERVIEW

1. This case is about stopping a patentee from stifling innovation with a patent that covers a law of nature, discloses no invention, and yet demands from the public a monopoly. The *Patent Act* (the “*Act*”) gives a reward for “inventions” which constitute proper patentable subject matter, and requires full public disclosure from an inventor in exchange for a monopoly on an invention. In this case, the patentee failed to uphold its end of the bargain.

Patent Act, RSC 1985, c P-4.

2. The Appellant, Filter King Labs Inc. (“Filter King”), discovered a connection between the presence of the bacterium *Treponema pepsicola* (“*pepsicola*”) in human saliva and early stage chronic kidney disease (“CKD”). While Filter King received Patent No. 5,234,111 (the “111 Patent”) on the process of “filtering human saliva to isolate [*pepsicola*] and thereby diagnose early stage [CKD]”, in reality this is an unlawful patent on a scientific discovery.

Filter King Labs Inc v AsterixObelix Pharma Inc, 2013 FCIP 99 at para 8 [*Trial*].

3. The 111 Patent fails because the invention is not patentable subject matter. The only inventive concept disclosed is the natural relationship between *pepsicola* and CKD. For a “process” to be patentable, it must cause a physical change in the subject of the invention, which Filter King’s invention does not do. The discovery of a law of nature, no matter how ingenious, cannot be patented. Nor does it become patentable by dressing it up with extraneous elements – in this case, an uninventive filtering process. Filter King’s invention is not an invention at all.

4. The 111 Patent also fails for insufficient disclosure. The patent document points to an external article, “Advanced Bacterial Filtering” (the “Article”), which describes numerous filtration techniques. To the extent the invention is a process of filtration, the reader is forced to guess at the true invention. The 111 Patent does not enable the skilled reader to practise the invention without undue experimentation involving different filtration techniques.

Trial, supra para 2 at para 16.

5. Additionally, the 111 Patent is devoid of disclosure because the information purported to be disclosed by the Article is only incorporated in the patent by reference to an internet address or “URL”. This is contrary to the *Patent Rules* and places on the public the risk that the URL may not reliably function in the future. It does not satisfy the disclosure requirement.

Patent Rules, SOR/96-423.

6. The Court of Appeal was correct in ruling that the 111 Patent lacks patentable subject matter and fails for insufficient disclosure. This appeal should be dismissed.

PART II – STATEMENT OF FACTS

7. **Appellant’s Discovery.** The study of biomarkers in human saliva has been ongoing for many years. The Filter King researchers were engaged in this work at the Peterborough Kidney Research Institute (“PKRI”) prior to creating Filter King. It was at PKRI that the researchers first became confident in the potential connection between bacteria and CKD. While Filter King established the important underlying connection between the presence of *pepsicola* in human saliva and CKD, this scientific discovery is just that. And, much like a mathematical principle, theorem or law of nature, it is not patentable.

Trial, supra para 2 at paras 5-8.

8. **111 Patent.** Filter King applied for and obtained the 111 Patent with one method claim: “The steps of filtering human saliva to isolate the biomarker [*pepsicola*] so as to diagnose early stage [CKD].” The patent document, which elaborates on the correlation between *pepsicola* and CKD, has only one paragraph referring to the filtering system. In it, the patentee fails to describe which particular techniques and combinations can be used to exploit this correlation, insisting that the filtering techniques necessary to isolate *pepsicola* are “known to one skilled in the art.”

By contrast, at trial, Filter King's expert testified that the particular filtering system used to isolate *pepsicola* was not part of common general knowledge.

Trial, supra para 2 at paras 8, 14, 16.

9. Rather than describe the techniques, for reasons known only to the patentee, the patentee supplied the URL for the Article on Filter King's company website. The Article describes several filtering systems. The reader is left to guess (or experiment to determine) which one could be used to isolate *pepsicola*. The Article was published two and a half years before the 111 Patent was filed, and no more current information was furnished. Filter King's specific technique is nowhere disclosed. The Trial Court has already found, and it is uncontested, that the use of the equipment described in the Article to isolate *pepsicola* is not inventive.

Trial, supra para 2 at paras 15-16.

10. **SpIT Kit.** After the 111 Patent was granted, Filter King began to market the "Special Investigative Tester kit", or SpIT kit. The SpIT kit is a filter that allows doctors to diagnose patients with early stage CKD based on the mere presence of *pepsicola* in their saliva. The filtering system that reveals this result is not inventive. The kit uses a series of ceramic micro-filters – one of the systems described (although not specifically identified) in the online Article – to isolate *pepsicola* from a patient's saliva.

Trial, supra para 2 at paras 10, 15.

11. **Respondent's Product.** The Respondent, AsterixObelix Pharma Inc. ("Asterix"), introduced its own diagnostic product, based on the same uninventive filtering system as the SpIT Kit. Asterix was able to develop this product despite the fact that the online Article did not direct readers to the specific equipment used by Filter King to isolate *pepsicola*. Both parties agree that a skilled reader, such as Asterix, was required to perform "further work" to determine which of the described filters could be used to isolate *pepsicola*.

Trial, supra para 2 at paras 10-11, 15.

12. **Action and Trial Decision.** In an effort to defend its market monopoly over the use of *pepsicola* to diagnose early stage CKD, Filter King launched a patent infringement lawsuit against Asterix. At trial, Asterix argued that the patent lacks valid disclosure and that the invention claimed is not patentable subject matter since it is merely the discovery of a law of nature. Stohne J. held that the invention was adequately disclosed and that it was a patentable “art”. Stohne J. focused predominantly on the fact that Asterix’s scientists were ultimately able to make use of Filter King’s technology, an error that was fixed by the Court of Appeal.

Trial, supra para 2 at paras 1, 3, 10-11, 17-18, 20.

AsterixObelix Pharma Inc v Filter King Labs Inc, 2013 FCA 450 at para 5 [*Appeal*].

13. **Appeal Decision.** Reanall J.A. held that Filter King failed to “fully [describe] the invention in the patent document” and that the only inventive element of the patent is “merely the *recognition* that a particular bio-marker is connected to kidney disease.” The Court of Appeal held the 111 Patent to be invalid on both sufficiency of disclosure and patentable subject matter grounds.

Appeal, supra para 12 at paras 6, 12.

PART III – POINTS IN ISSUE

14. Two issues are raised in this appeal:

1. Did the Court of Appeal err in finding that the invention is not patentable subject matter?
2. Did the Court of Appeal err in further finding that the disclosure of the invention in the patent specification was insufficient?

PART IV – ARGUMENTS IN BRIEF

ISSUE 1: THE APPELLANT’S INVENTION IS NOT PATENTABLE SUBJECT MATTER

A. **Purposive construction: the invention is not patentable subject matter**

15. A purposive construction of the 111 Patent claim reveals that the only invention is a “mere scientific principle or abstract theorem”, which is not patentable under section 27(8) of the *Act*. The 111 Patent only contains an explanation of the relationship between *pepsicola* and CKD – a law of nature – along with a passing reference to an uninventive filtering technique, which is not disclosed. This natural relationship is the only inventive concept described in the 111 Patent. Thus, as Asterix submits in Issue 2, even if the Court accepts the Appellant’s submission that the invention necessarily includes a novel filtering process to isolate *pepsicola*, such an invention is not sufficiently disclosed within the patent document.

Appellant 2A Factum, at para 20.

i. ***Purposive construction of the claim: what was actually invented***

16. To construe a patent claim, the court considers the purpose of the invention and the problem it sought to address. While *Free World* discredited attempts to construe a claim by pursuing the “spirit of the invention”, the Federal Court of Appeal in *Amazon* clarified that it is proper to “ask or determine what the inventor has actually invented, or what the inventor claims to have invented.... [T]hese are relevant and necessary questions in a number of contexts, including...patentable subject matter.”

Wenzel Downhole Tools Ltd v National-Oilwell Canada Ltd, 2011 FC 1323 at para 61, 98 CPR (4th) 155 (FCTD).

Free World Trust v Électro Santé Inc, 2000 SCC 66 at para 43, [2000] SCR 124 [*Free World*].

Canada (Attorney General) v Amazon.com Inc, 2011 FCA 328 at para 42, 97 CPR (4th) [*Amazon*].

ii. ***The inventive concept is the discovery of an underlying natural relationship***

17. Throughout their time at PKRI and Filter King, the researchers were not developing filtering equipment and techniques. They were focused on the specific scientific problem of

diagnosing early stage CKD. In finding that *pepsicola* correlated to early stage CKD, the researchers discovered a scientific solution to this problem – a law of nature or “mere scientific principle or abstract theorem”, falling squarely within the proscription of s. 27(8) of the *Act*. Section 27(8) has been interpreted to preclude the patentability of laws of nature, such as the relationship at issue. As such, the invention is not patentable.

Trial, supra para 2 at paras 5, 7.

Patent Act, supra para 1, s 27(8).

Monsanto Canada Inc v Schmeiser, 2004 SCC 34 at para 133, [2004] 1 SCR 902.

18. A purposive construction of the 111 Patent claim reveals that the “invention” is a law of nature and not the unique and specific use of a filtering process. If the patentee intended the latter, which would amount to patenting known but undescribed techniques, it certainly did not disclose it. Reading claim 1 in the context of paragraph 57 and the rest of the 111 Patent, one key assumption is made explicit: that the “filtering techniques necessary to isolate [*pepsicola*] from human saliva are known to one skilled in the art.” Because the inventors assumed that one skilled in the art would have already been well-aware of the known filtering techniques, the invention cannot be construed as addressing the problem of how to isolate bacteria. Rather, the inventive concept which Filter King attempts to monopolize is the correlation – the law of nature.

Trial, supra para 2 at para 16.

19. If the inventors had considered the use of a specific filtering system to be an inventive breakthrough, they would have and should have said more. One obscure and undetailed paragraph devoted to filtration is not enough. Even assuming the reader had access to the information contained within the online Article, the Article makes no reference to any specific system as the means of isolating *pepsicola*. This does more than create sufficiency issues; it strongly suggests that the filtering system is not the invention which the patent attempts to claim.

Trial, supra para 2 at para 15.

20. Since a purposive construction demands the identification of “what the inventor considered to be the ‘essential’ elements of his invention”, this analysis necessarily excludes the use of a known filtering system to isolate *pepsicola*. Reviewing the whole patent specification reveals the inventors’ belief that their inventive concept is limited to the discovery of this underlying natural relationship, which is not patentable subject matter under s. 27(8).

Whirlpool Corp v Camco, 2000 SCC 67 at para 45, [2000] 2 SCR 1067 [*Whirlpool*].

iii. Adding filters to the natural correlation does not render the invention patentable

21. By construing the 111 Patent to include “[t]he steps of filtering human saliva”, the Appellant adds an element to its claim, perhaps in an attempt to turn a mere “scientific principle” into a patentable “art” or “process.” Adding this process element cannot save the claim. Either the process element was “essential,” in which case it is not disclosed, or it is “non-essential,” having no impact on the way the invention works. As previously stated, the particular filtering specifications and arrangement used to isolate *pepsicola* is not new “in the patent law sense”, and “[i]t was not inventive, in itself, to use the equipment described in the article to isolate this particular bacteria.” One cannot add an uninventive bell or a whistle to unpatentable subject matter in an effort to create a patentable invention.

Trial, *supra* para 2 at paras 8, 14-15.

22. The key inventive concept is the correlation between the biomarker and the disease. This is not patentable and it is no more patentable to combine a known filtering process with the law of nature to determine when the law of nature exists in a particular case. It is precisely this situation that the Federal Court of Appeal feared in *Amazon* when it warned that “a patent claim may be expressed in language that is deliberately or inadvertently deceptive” such that “what appears on its face to be a claim for an ‘art’ or ‘process’ may, on a proper construction... not [be] patentable subject matter.”

Amazon, supra para 16 at para 44.

23. This is not to say that a law of nature “plus something more” cannot be patentable. *Calgon* confirmed the patentability of an invention comprising the use of an existing technique for a new purpose. In that case, there was a discovery that ultraviolet light, administered at certain levels, actively prevented crypto oocysts from replicating. That is, the new technique effected a change. It prevented something from occurring; it was a human manipulation using a technology. Here, the invention uses an existing technique to merely identify whether a correlate exists or not. The only new purpose in this situation is the acknowledgement of whether a natural process is taking place. There is no change to anything, which is required in order to rise to the level of a patentable invention.

Calgon Carbon Corporation v North Bay (City), 2005 FCA 410 at paras 5, 17, 45 CPR (4th) 241 [*Calgon*].

24. The situation at hand is analogous to *Schlumberger*, which saw an unsuccessful attempt to patent a method of collecting, recording and analyzing seismic data using a computer programmed according to a mathematical formula. While the use of the computer constituted a practical application and the resulting data was useful, the patent application failed because the only novel aspect of the invention was the mathematical formula, which is a “mere scientific principle or abstract theorem” and unpatentable under the *Act*.

Schlumberger Canada Ltd v Canada (Patent Commissioner), [1982] 1 FC 845 at para 5, 56 CPR (2d) 204 (FCA) [*Schlumberger*].

25. Like the use of computers in *Schlumberger*, the Appellant itself admits that there is nothing new in using these filtering techniques to isolate bacteria. Therefore, while the diagnostic information is undoubtedly useful, the only invention *per se* is the discovery of the underlying connection between the presence of *pepsicola* in human saliva and CKD.

Trial, supra para 2 at paras 14, 16.

B. For an “art” or “process” to constitute patentable subject matter, there must be a discernible *change* to the character or condition of a physical thing

26. The 111 Patent does not contain a patentable “art” or “process” for the purposes of section 2 of the *Act*, because the claimed procedure does not cause a change in the character or condition of a physical object. While “art” and “process” are distinct heads of inventions, this distinction is without effect. “Art” is the broader of these two categories and is generally considered to include “processes.”

Patent Act, supra para 1, s 2.

Amazon, supra para 16 at para 50, quoting from *Amazon.com v Canada (Attorney General)*, 2010 FC 1011 at para 48, 86 CPR (4th) 321 (FCTD).

27. In *Progressive Games*, the term “art” is explained to be “a process that: (i) is not a disembodied idea but has a method of practical application; (ii) is a new and innovative method of applying skill or knowledge; and (iii) has a result or effect that is commercially useful.” Importantly, the Federal Court of Appeal has further qualified that a “practical application” requires “something that manifests a discernible effect or change.”

Progressive Games, Inc v Canada (Commissioner of Patents) (1999), 177 FTR 241 at para 16, 3 CPR (4th) 517 (FCTD) [emphasis added], *aff’d* (2000), 9 CPR (4th) 479 (FCA).
Amazon, supra para 16 at para 66.

28. This requirement of physicality is not new. It was first described in *Lawson* as “an act or series of acts performed by some physical agent upon some physical object and producing in such object some change either of character or of condition.” In *Amazon*, the Federal Court of Appeal applied *Lawson* with the “practical application” requirement of *Shell Oil*: “patentable subject matter must be something with physical existence, or something that manifests a discernible effect or change.” The Court rejected the suggestion that the necessary “physicality requirement” could be met “merely by the fact that the claimed invention has a practical application....” Clearly, something more is needed but is lacking in this case.

Lawson v Canada (Commissioner of Patents) (1970), 62 CPR 101 at para 30, [1970] Ex CJ No 13 (Ex Ct).
Shell Oil Co v Canada (Patent Commissioner), [1982] 2 SCR 536 at 549-554, 67 CPR (2d) 1, [Shell Oil].
Amazon, *supra* para 16 at para 66.

29. In the context of applying existing techniques to newly discovered laws of nature, there must be a discernable change or effect on physical matter. As explained above, in *Calgon*, UV rays were applied to actively prevent the development of protozoa in drinking water; in *Shell Oil*, natural compounds were used to regulate the physical growth of plants; and in *Continental Soya*, the Supreme Court of Canada held that while the discovery and isolation of a new vegetable enzyme was unpatentable, a patent may be granted over the use of that enzyme to effect change – in that case, to bleach flour for baking bread. Each of the valid patents covered an “art” or “process” that produced a physical change.

Calgon, *supra* para 23.
Shell Oil, *supra* para 28.
Continental Soya Co Ltd v JR Short Milling Co (Canada) Ltd, [1942] SCR 187, 1942 CanLII 45.

30. By contrast, the 111 Patent does not describe a process by which the *pepsicola* bacterium is changed or is used to facilitate a change within another physical object. All of the 111 Patent’s inventive value is drawn from the underlying connection between the presence of *pepsicola* in human saliva and the early stages of CKD. The fact that the 111 Patent uses a physical tool (filters) does not change the fact that no physical change was enacted. This same predicament arose in *Schlumberger* where the claim was not saved by the use of a physical tool (a computer) to give an inventive mathematical formula the requisite physical manifestation. Both situations fall short of the physicality requirement that is inherent to the definition of a patentable “art.”

C. The subject matter is a mere “discovery” not an “art” or “process”

31. The Court of Appeal’s finding that “what is new [in the 111 Patent] is merely the *recognition* that a particular bio-marker is connected to kidney disease”, correctly classifies the invention of the 111 Patent as a mere “discovery” – not an “art” or “process.”

Appeal, supra para 12 at para 12.

32. The classic distinction between a discovery and a patentable invention is found in *Reynolds*, where Buckley J. explained that a “[d]iscovery adds to the amount of human knowledge, but it does so only by lifting the veil and disclosing something which before had been unseen or dimly seen” whereas an “[i]nvention necessarily involves also the suggestion of an act to be done, and it must be an act which results in a new product, or a new result, or a new process, or a new combination for producing an old product or an old result.”

Reynolds v Herbert Smith & Co, Ld (1903), 20 RPC 123 at 126 (Ch D) [emphasis added].

33. Applying this test to the present case, there is nothing inventive in the 111 Patent outside of the discovery of the underlying natural relationship between the presence of *pepsicola* and early stage CKD. There is nothing new in the nature of the invention because there is no new product, no new result, and no any new act being done. The Appellant used an old technique to perform the same filtering function that it did before the discovery of this natural relationship. But this discovery is not a patentable invention in itself.

34. The 111 Patent bluntly applies a scientific observation in a 1-to-1 manner, essentially saying “if *pepsicola* is found in human saliva, that person has early stage CKD.” In the absence of further detail regarding a novel application of this natural law, the Appellant’s claim can be nothing more than an attempt to patent a mere discovery instead of a valid invention.

ISSUE 2: THE PATENT FAILS FOR LACK OF SUFFICIENCY

35. The patent document's lack of specificity as to the identity of the claimed invention is emblematic of its failure to identify what the invention is and how it works. Asterix submits that the purported invention is the underlying natural relationship and is therefore not patentable. However, in the alternative that the invention is the filtering process, the patent document failed to sufficiently disclose the invention.

36. Sufficient disclosure is crucial to the validity of a patent. If the skilled reader would not be able to practise the invention based on the patent document, the patent is invalid regardless of the patentee's good or bad intentions. The 111 Patent document and accompanying Article do not enable the reader to practise the relevant filtering arrangement without undue experimentation. Moreover, the Article should not be considered part of the patent because of its inclusion via URL.

A. The Court must invalidate a patent if the skilled reader would be unable to practice the invention

37. A patent is invalid if it does not sufficiently disclose the invention and how it is practiced. The Court must be neutral towards the patentee, being "neither benevolent nor harsh" in its evaluation of whether the patentee has fulfilled the disclosure requirement. While the Appellant is correct to note that the *Act* establishes a presumption of validity, this presumption does not alter the usual balance of probabilities standard for evaluating the validity of the patent.

Consolboard v MacMillan Bloedel (Sask) Ltd, [1981] 1 SCR 504 at 520, 56 CPR (2d) 145 [*Consolboard*].
Appellant 2A Factum, *supra* para 15 at para 20.
Diversified Products Corp v Tye-Sil (1991), 35 CPR (3d) 350 at paras 13-17, 41 FTR 78 (FCA).

i. Sufficient disclosure is an essential part of the patent bargain

38. Section 27(3) of the *Act* requires that a patent sufficiently disclose the invention and how it is practised. This is more than a mere technical requirement. Rather, it "lies at the heart of the whole patent system" because it ensures that, in exchange for being granted a monopoly for 20

years, a patentee pays the “hard coinage” of giving society the means to understand and practise the invention. When this bargain is not enforced, the underdelivering patentee gains at society’s expense. The patent system must avoid this outcome.

Patent Act, supra para 1, s 27(3).

Consolboard, supra para 37 at 517.

Apotex v Wellcome Foundation Ltd, 2002 SCC 77 at para 37, [2002] 4 SCR 153.

Teva Canada Ltd v Pfizer Canada, 2012 SCC 60 at paras 32, 80, [2012] 3 SCR 625 [*Teva*].

ii. Examination of sufficiency focuses on the reader’s ability to practise the invention rather than the patentee’s intention when writing the patent document

39. The Court must invalidate a patent when the skilled reader of the patent would be unable to practise the invention, regardless of whether the patentee intended to obscure the invention. The issue is whether both sides of the patent bargain have been upheld, and the patentee’s side of the bargain requires that the document be “free from avoidable obscurity.” This bargain is analogous to a contract; a party that fails to uphold its side of the deal is in breach regardless of why it breaches.¹ While courts are right to be especially critical of patentees whose insufficient disclosure was a deliberate attempt to “game the system”, such bad intent is not necessary for the patent to be invalidated for insufficiency.

Minerals Separation North American Corp v Noranda Mines, [1947] Ex CR 306 at 309, 12 CPR 99 [*Minerals Separation*].

Teva, supra para 38 at para 80.

40. Filter King admits that more information than is in the patent document is needed to inform the skilled reader as to which filter arrangements work. There is no reason on record why Filter King could not include the relevant contents of the Article in the patent document, rather than referencing a two and a half year old publication. This was also an opportunity to include

¹ The disclosure requirement under section 27(3) may be contrasted with sections 47(1) and 48(1), which (in certain circumstances that do not arise here) do grant rights to a patentee to correct mistakes if she make those mistakes in good faith, and section 53(1) which requires a wilful intent to mislead in order for a misrepresentation in any part of the patent to invalidate an entire patent.

any refinements in the art that had emerged since the Article's publication. As was the case in *Teva*, Filter King cannot claim that these deficiencies were unavoidable.

Trial, *supra* para 2 at paras 14, 16.

Teva, *supra* para 38 at paras 76, 80.

41. Focusing on the reader rather than the patentee's intention is crucial to enforcing the patent bargain. The patentee that fails to uphold its end of the bargain benefits at society's expense regardless of whether the insufficiency was deliberate or a good faith mistake. Focusing on the patentee's intentions instead the reader would reward patentees who become adept at concealing their bad faith.

B. The patent document and referenced Article do not disclose the invention

42. To meet the disclosure requirement, a patent must disclose the invention and enable the skilled reader to practise the invention. In *Consolboard*, Dickson J. explained that this requires the patentee to explain both what the invention is, and how it works. The 111 Patent, even taken in conjunction with the Article to which it refers, fails on both elements.

Patent Act, *supra* para 1, s 27(3)(b).

Consolboard, *supra* para 37 at 520.

i. The patent document and Article must disclose which filter arrangements work

43. The patent document must identify which filtering arrangements actually work for the purpose of isolating *pepsicola*. Not all of the filtering techniques described in the Article do in fact work. The purported invention cannot include all filtering techniques; it must be limited to only the ones that work for the relevant purpose. If a patent document fails to distinguish functional processes from non-functional processes, it does not identify the invention, let alone enable the reader to practise it.

Trial, *supra* para 2 at para 15.

Teva, *supra* para 38 at para 72.

ii. The patent document and Article do not disclose which filter arrangements work

44. The Article does not distinguish between the filtering arrangements that work for isolating *pepsicola* and the arrangements that do not. “Some further work” was required by the reader before she could identify the filter arrangements that would actually perform the task at hand. Knowing which filter arrangements work is necessary in order to practise the invention. The skilled reader would need to perform further research and experimentation in order to determine which arrangements work at all.

Trial, supra para 2 at para 15.

45. The Article assuredly does not identify the filter arrangement marketed by Filter King. The expert evidence at trial revealed that while the skilled reader would have “arrived” at the marketed filter arrangement, she would not have been uniquely directed to it. In other words, while the reader would have been averted to its existence, she would not have been told that it is the arrangement that one ought to employ. Filter King could have easily enabled the skilled reader to practise the invention by identifying the filter arrangement that it knew to work, and yet it chose not to.

Appeal, supra para 12 at para 7.

iii. The experimentation required in order to practise the invention was undue

46. A patent does not enable the skilled reader to practice the invention if the further experimentation it requires is undue. Only routine experimentation is permissible. Cases before *Teva* described undue experimentation as “inventive.” While *Teva* did not use the “inventive” language, the substance of what constitutes undue experimentation has remained the same.

Apotex Inc v Sanofi-Synthelabo Canada Inc, 2008 SCC 61 at paras 37, 89, [2008] 3 SCR 265 [Synthelabo].

Mobil Oil v Hercules Canada, 98 FTR 319 at paras 25-29, 63 CPR (3d) 473 (FCA) [*Mobil Oil*].

Cabot Corp v 318602 Ontario Ltd (1988), 17 FTR 54 at para 115, 20 CPR (3d) 132 (FCTD).

Aventis Pharma v Apotex, 2005 FC 1283 at para 207, 278 FTR 1 (FCTD).

47. Experimentation is undue if it involves deciding which invention to employ rather than how to practise a specified invention. In *Teva*, the skilled reader of the patent was required to experiment to decide which of two claimed molecules was useful. Even this “minor research project” was considered undue. By contrast, experiments that have been found to be routine were typically experiments figuring out numerical measurements, with the identity of the invention already given in the patent document. For instance, determining the “amount and location” in which slip agent was to be applied in *Mobil Oil* was found to be routine. Moreover, in *Mobil Oil* the patent provided the reader with instructions as to how to carry out the remaining testing.

Synthelabo, *supra* para 46 at para 89.

Teva, *supra* para 38 at paras 74-75.

Merck v Apotex (1994), 88 FTR 260 at para 122, 59 CPR (3d) 133 (FCTD).

Mobil Oil, *supra* para 46 at paras 25, 27-28.

48. It is permissible to tell the reader that she must experiment to apply an invention; it is not permissible to tell her to do an experiment to decide which invention to practise in the first place. The further experimentation required in the present case was undue because it called upon the experimenter to decide which invention to use. The experimenter would have to try out multiple different filter arrangements in order to figure out which ones worked at all.

49. While Filter King may suggest otherwise, this case is directly on point with *Teva*. In both cases the disclosure included techniques that worked and techniques that did not, and forced the reader to conduct an experiment to distinguish between them. As was the case in *Teva*, it is certainly possible (and indeed did transpire) that the skilled reader could look at the multiple different techniques suggested and, after trying each of them, figure out which worked. But in placing that burden on the reader, Filter King tasked the reader with undue experimentation. If the process claimed by Filter King were inventive, it would need to be re-invented by each new reader, who must perform an experiment in order to decide which filter system to use.

Appellant 2A Factum, supra para 15 at para 52.
Teva, supra para 38 at paras 74-75.

C. The Article should not be considered to be part of the patent document because it was referenced by a URL

50. Even if the Article does sufficiently disclose the filtering technique, the Article cannot be counted as part of the disclosure. This omission is fatal to the validity of the 111 Patent, because without the Article no information is given as to which filtering techniques are effective at isolating *pepsicola*. This issue is not about privileging form over substance. It is rather about ensuring that the public does not have to bear the risk that essential information about the nature of the invention and how it works may be unavailable due to the patentee's avoidable mistakes.

Trial, supra para 2 at paras 14-15.

i. Incorporation by reference is a defect in a patent document

51. Canadian law does not allow patentees to incorporate extrinsic material into a patent document by reference; it is explicitly prohibited by s. 81(1) of the *Patent Rules*. The Canadian Intellectual Property Office views incorporation by reference as a reason to deny a patent.

Patent Rules, supra para 5, s 81(1).

See Canadian Intellectual Property Office, *Report on the PPH Pilot Program between CIPO and the USPTO for the trial period of January 28, 2008, to January 28, 2009* (Ottawa-Gatineau, Canadian Intellectual Property Office, 2009) at 4.

52. There is good reason to discourage incorporation by reference. Incorporation by reference significantly decreases the chances that the relevant material will actually be conveyed to the reader if there is a chance that the referenced material will not be successfully accessed. Additionally, a reader who is performing an electronic search of the patent database will not find relevant patents if the content that would have otherwise generated a search result is in the referenced document rather than the patent document. Finally, the cost to the patentee of properly incorporating the material into the document is extremely low. It is an easy task to incorporate a relevant short section into the patent itself, or include a document as an appendix.

Pfizer Canada v Canada (Minister of Health), 2007 FC 898 at paras 150-156, 328 FTR 41 (FCTD).

53. Any treatment of a secondary document as included in a primary document is an incorporation by reference. The Appellant submits that the Court should employ the everyday use of the words “reference” and (implicitly) “incorporation”. The Respondent, by contrast, urges the Court to employ the definition of “incorporation by reference” given in Black’s Law Dictionary: “A method of making a secondary document part of a primary document by including in the primary document a statement that the secondary document should be treated as if it were in the primary one.” While the Supreme Court of Canada has never defined “incorporation by reference”, its numerous uses of the term are consistent with this definition, and include situations where the secondary document was publically available legislation. Thus, regardless of how “direct” the citation is to the referenced document, or how certain the reader’s chance of accessing it, a patent cannot succeed in integrating a referenced document.

Appellant 2A Factum, *supra* para 15 at paras 37-39.

Black’s Law Dictionary, 9th Ed, sub verbo “incorporation by reference”.

See *Little Sisters Book and Art Emporium v Canada (Minister of Justice)*, 2000 SCC 69 at paras 45-46, [2000] 2 SCR 1120.

See *CUPE v Ontario (Ministry of Labour)*, 2003 SCC 29 at para 67, [2003] 1 SCR 539.

54. In using the URL of the Article to substitute for actually including its contents in the patent document, the 111 Patent attempted to incorporate the Article by reference. It likely failed to achieve this, because it did not contain a statement to that effect. If it does constitute an incorporation by reference, however, the incorporation nonetheless fails because it is explicitly prohibited by the *Patent Rules*. In either case, the result is that the Article cannot be included when the Court considers the disclosure.

ii. Disclosing by URL creates an unacceptable risk that initially-sufficient disclosure will become insufficient by the end of the monopoly period

55. The Court should consider material not to be included in the disclosure if there is a significant chance that it will be inaccessible later. While the relevant date for assessing

sufficiency is the date of publication, the Court must also be satisfied that “*after the period of monopoly has expired* the public will be able, with only the specification, to put the invention to the same successful use as the inventor himself could do.” Therefore, even if disclosure is initially sufficient, if there is a risk that it will become insufficient later, the Court should invalidate the patent.

Free World, *supra* para 16 at para 54.

Whirlpool, *supra* para 20 at para 55.

Consolboard, *supra* para 37 at 524 [emphasis added], citing *Minerals Separation*, *supra* para 39 at 317-318.

56. To put no requirement that the disclosure remain sufficient would allow the disclosure requirement to be defeated. It would allow a patentee to disclose an essential part of her invention by linking to a URL, and then deactivate the URL the day after the publication date, and still retain her patent. This would be contrary to the spirit and purpose of the disclosure requirement. To prevent situations like this from arising, either by the patentee’s design or by accident, the Court should invalidate patents that rely on URLs to disclose the invention.

57. The URL – an address on Filter King’s commercial website – used to provide the Article may cease to be functional by the time the monopoly period expires. For example Filter King’s website could go offline due to an accident, hacking, or the dissolution or acquisition of the company. At the very least, the use of this URL places the reader at the mercy of any decision by Filter King to alter or take down the Article, making the URL non-functional for disclosure purposes. Commercial URLs constitute an extremely volatile means of disclosing information. In light of these concerns, even the United States Patent Office, which permits incorporation by reference, prohibits incorporation by reference via URLs – “especially commercial site URLs.”

Patents, Trademarks, and Copyrights 37 CFR §1.57(d) (2013).

US, Patent and Trademark Office, *Manual of Patent Examining Procedure*, 8th Ed 9th Rev (Arlington, VA: United States Patent and Trademark Office, 2012) at c 608.01 § VII.

58. Contrary the Appellant's submissions, refusing to allow patentees to incorporate documents via commercial URLs does not mean eschewing the benefits that modern technology may provide to the patent system. The situation would be different if an electronic document were stored at a web address where its permanently availability would be more certain. However, the particular form that the Appellant chose – a privately owned website which could shut down without notice – is riddled with avoidable risks.

Appellant 2A Factum, supra para 15 at para 40.
Canadian Intellectual Property Office, *Manual of Patent Office Practice* (Ottawa-Gatineau, Canadian Intellectual Property Office, 2013) at c 9.07.04.

59. The cost of these risks must be borne by Filter King, not by the public. Filter King chose to put an essential part of the disclosure – the identity of the purported invention – in a place where the skilled reader has no guarantee of its ongoing availability. To uphold the 111 Patent would run contrary to the purpose of section 27(3) of the *Act*: to guarantee the reader's ability to practise the invention and discourage avoidable obscurity.

PART V – ORDER REQUESTED

60. The Respondent respectfully requests an order dismissing the appeal.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

Signed this 28th day of January, 2014.

Team No. 6R

Counsel for the Respondent

PART VI – TABLE OF AUTHORITIES

AUTHORITY	Pinpoint
LEGISLATION	
<i>Patent Act</i> , RSC 1985, c P-4.	2, 27(3), 27(8), 47(1), 48(1), 53(1)
<i>Patent Rules</i> , SOR/96-423.	81(1)
<i>Patents, Trademarks, and Copyrights</i> 37 CFR (2013).	§1.57(d)
FACTUM	
Appellant 2A Factum, <i>AsterixObelix Pharma Inc v Filter King Labs Inc</i> , Supreme Moot Court for Intellectual Property Appeals.	20, 37-40, 52
JURISPRUDENCE	
<i>Amazon.com v Canada (Attorney General)</i> , 2010 FC 1011, [2010] 4 RCF 541 (FCTD).	48
<i>Apotex Inc v Sanofi-Synthelabo Canada Inc</i> , 2008 SCC 61, [2008] 3 SCR 265.	37, 89
<i>Apotex v Wellcome Foundation Ltd</i> , 2002 SCC 77, [2002] 4 SCR 153.	37
<i>AsterixObelix Pharma Inc v Filter King Labs Inc</i> , 2013 FCA 450.	5-7, 12
<i>Aventis Pharma v Apotex</i> , 2005 FC 1283, 278 FTR 1 (FCTD).	207
<i>Cabot Corp v 318602 Ontario Ltd</i> (1988), 17 FTR 54, 20 CPR (3d) 132 (FCTD).	115
<i>Calgon Carbon Corporation v North Bay (City)</i> , 2005 FCA 410, 45 CPR (4th) 241 (FCA).	5, 17
<i>Canada (Attorney General) v Amazon.com Inc</i> , 2011 FCA 328, 97 CPR (4th) 171 (FCA).	42, 44, 50, 66
<i>Consolboard Inc v MacMillan Bloedel (Sask) Ltd</i> , [1981] 1 SCR 504, 56 CPR (2d) 145.	pp 517, 520, 524
<i>Continental Soya Co Ltd v JR Short Milling Co (Canada) Ltd</i> , [1942] SCR 187, 1942 CanLII 45.	
<i>CUPE v Ontario (Ministry of Labour)</i> , 2003 SCC 29, [2003] 1 SCR 539.	67
<i>Diversified Products Corp v Tye-Sil</i> (1991), 35 CPR (3d) 350, 41 FTR 78 (FCA).	13-17

<i>Filter King Labs Inc v AsterixObelix Pharma Inc</i> , 2013 FCIP 99.	1, 3, 5-8, 10-11, 14-18, 20
<i>Free World Trust v Électro Santé Inc</i> , 2000 SCC 66, [2000] 2 SCR 1024.	43, 54
<i>Harvard College v Canada (Commissioner of Patents)</i> , 2002 SCC 76, [2002] 4 SCR 45.	
<i>Little Sisters Book and Art Emporium v Canada (Minister of Justice)</i> , 2000 SCC 69 [2000], 2 SCR 1120.	45-46
<i>Lawson v Canada (Commissioner of Patents)</i> (1970), 62 CPR 101, [1970] Ex CJ No 13, (Ex Ct).	30
<i>Merck v Apotex</i> (1994), 88 FTR 260, 59 CPR (3d) 133 (FCTD).	122
<i>Minerals Separation North American Corp v Noranda Mines</i> , [1947] Ex CR 306, 12 CPR 99.	pp 309, 317-318
<i>Mobil Oil v Hercules Canada</i> , 98 FTR 319, 63 CPR (3d) 473 (FCA).	25-29
<i>Monsanto Canada Inc v Schmeiser</i> , 2004 SCC 34, [2004] 1 SCR 902.	133
<i>Pfizer Canada Inc v Canada (Minister of Health)</i> , 2007 FC 898, 328 FTR 41 (FCTD).	150-156
<i>Progressive Games, Inc v Canada (Commissioner of Patents)</i> (1999), 3 CPR (4th) 517, 177 FTR 241 (FCTD).	16
<i>Reynolds v Herbert Smith & Co, Ltd</i> (1903), 20 RPC 123 (Ch D).	p 123
<i>Schlumberger Canada Ltd v Canada (Patent Commissioner)</i> , [1982] 1 FC 845, 56 CPR (2d) 204.	5
<i>Shell Oil Co v Commissioner of Patents</i> , [1982] 2 SCR 536, 67 CPR (2d) 1.	pp 549-554
<i>Teva Canada Ltd v Pfizer Canada</i> , 2012 SCC 60, [2012] 3 SCR 625.	32, 72, 74, 76, 80
<i>Wenzel Downhole Tools Ltd v National-Oilwell Canada Ltd</i> , 2011 FC 1323, 98 CPR (4th) 155.	61
<i>Whirlpool Corp v Camco Inc</i> , 2000 SCC 67, [2000] 2 SCR 1067.	45, 55

SECONDARY MATERIALS: DICTIONARIES	
<i>Black's Law Dictionary</i> , 9th Ed.	“incorporation by reference”

SECONDARY MATERIALS: GOVERNMENT DOCUMENTS	
Canadian Intellectual Property Office. <i>Manual of Patent Office Practice</i> (Ottawa-Gatineau, Canadian Intellectual Property Office, 2013).	c 9.07.04

<p>Canadian Intellectual Property Office. <i>Report on the PPH Pilot Program between CIPO and the USPTO for the trial period of January 28, 2008, to January 28, 2009</i> (Ottawa-Gatineau, Canadian Intellectual Property Office, 2009).</p>	<p>p 4</p>
<p>US, Patent and Trademark Office. <i>Manual of Patent Examining Procedure</i>, 8th Ed 9th Rev (Arlington, VA: United States Patent and Trademark Office, 2012).</p>	<p>c 608.01 § VII</p>