Federal Court of Appeal | Cour d'appel fédérale

Date: 20170918

Docket: A-106-17

Citation: 2017 FCA 190

CORAM: **WEBB J.A.**
NEAR J.A.
GLEASON J.A.

BETWEEN:

BRISTOL-MYERS SQUIBB CANADA CO. and BRISTOL-MYERS SQUIBB HOLDINGS IRELAND

Appellants

and

APOTEX INC. and THE MINISTER OF HEALTH

Respondents

Heard at Ottawa, Ontario, on June 9, 2017.

Judgment delivered at Ottawa, Ontario, on September 18, 2017.

REASONS FOR JUDGMENT BY: GLEASON J.A.

CONCURRED IN BY: WEBB J.A.
NEAR J.A.

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REASONS FOR JUDGMENT

GLEASON J.A.

[1] The appellants, Bristol-Myers Squibb Canada Co. and Bristol-Myers Squibb Holdings Ireland (which I call collectively simply BMS), developed a compound called dasatinib, a new drug used in the treatment of a form of leukemia known as chronic myelogenous leukemia or CML. BMS markets its pharmaceutical preparation of dasatinib as SPRYCEL®.

[2] On August 25, 2009, BMS obtained a patent, Canadian Patent No. 2,366,932 (the 932 patent) that contains, as claim 27, a claim to the compound dasatinib. On July 10, 2012, BMS obtained a subsequent patent, Canadian Patent No. 2,519,898 (the 898 patent) that, among other things, claims the oral administration of dasatinib to humans to treat both CML generally and to treat cases of CML where the patients have become resistant to imatinib, another drug that is also used to treat CML.

[3] The respondent, Apotex Inc., developed a generic version of dasatinib and filed an abbreviated new drug submission (ANDS) with the respondent Minister of Health, seeking a Notice of Compliance (NOC) for authorization to sell its generic version of the drug in Canada. In its ANDS, Apotex named SPRYCEL® as the reference product. As the 932 and 898 patents are listed against SPRYCEL® in the patent register maintained under the *Patented Medicines (Notice of Compliance) Regulations*, SOR/93-133 (the *PMNOC Regulations*), Apotex could not obtain an NOC, authorizing the sale of its APO-Dasatinib product before the expiry of the 932 and 898 patents, unless it claimed it did not infringe them or challenged their validity and its position was either not contested by BMS or was found to be justified by the Federal Court.

[4] Apotex filed Notices of Allegation that, among other things, challenged the validity of the 932 and 898 patents on May 22, 2015. In response, BMS filed a Notice of Application with the Federal Court on July 2, 2015 for an order prohibiting the issuance of the NOC pursuant to subsection 6(1) of the *PMNOC Regulations*. In a judgment dated March 21, 2017 in *Bristol-Myers Squibb Canada and Bristol-Myers Squibb Holding Ireland v. Apotex Inc. and the Minister*

of Health, 2017 FC 296, the Federal Court (per Manson, J.) dismissed BMS' prohibition application in respect of both patents, finding some of Apotex' allegations to be justified.

[5] More specifically, by the time the matter was argued, infringement had been admitted and the claims in issue narrowed to claim 27 in the 932 patent and to claims 1 and 3 in the 898 patent. The Federal Court determined that even though claim 27 in the 932 patent was a bare composition claim for dasatinib, it nonetheless promised that this compound would be useful in treating a range of ailments and also in inhibiting enzymes from two different families of protein tyrosine kinases or PTKs. The Federal Court further held that Apotex' allegations regarding the invalidity of the 932 patent were justified as BMS failed to establish that all of these promised utilities for claim 27 were demonstrated or soundly predicted as of the relevant date. As concerns the 898 patent, the Federal Court held that Apotex' allegations regarding invalidity were justified since BMS had failed to establish that the two claims in issue were not obvious and not invalid due to double patenting.

[6] BMS has appealed the Federal Court's judgment to this Court, and in its appeal challenges the foregoing findings. As of the date of this judgment, the Minister of Health has still not made a determination on Apotex' application for an NOC for its APO-Dasatinib product so the issues raised in this appeal remain live ones.

[7] Following the argument of this appeal, the Supreme Court of Canada issued its decision in *AstraZeneca Canada Inc. v. Apotex Inc.*, 2017 SCC 36, 147 C.P.R. (4th) 79 [*Esomeprazole*], which fundamentally recasts the principles applicable to assessing whether patents meet the

utility requirement in section 2 of the *Patent Act*, R.S.C. 1985, c. P-4. That section requires in part that patentable inventions be "useful". The parties were afforded the opportunity to make post-hearing submissions as to the impact of the Supreme Court's decision in *Esomeprazole* on the present appeal.

[8] For the reasons set out below and in light of the Supreme Court of Canada's decision in *Esomeprazole*, I believe that the Federal Court's determination regarding the lack of utility of claim 27 in the 932 patent cannot stand and that, accordingly, this appeal must be granted in respect of the 932 patent. As concerns the 898 patent, on the other hand, I do not believe that the Federal Court made a reviewable error in concluding that claims 1 and 3 of that patent were obvious. This finding is sufficient to uphold the Federal Court's dismissal of the prohibition application in respect of the 898 patent and, as BMS concedes, it is unnecessary to examine the ground of appeal relating to double patenting.

[9] It follows that I would allow this appeal in part, set aside the judgment of the Federal Court in respect of the 932 patent and, making the decision it ought to have made, would issue an order of prohibition against the Minister of Health, prohibiting the issuance of an NOC to Apotex for its APO-Dasatinib product until the 932 patent expires. As success is divided, I would order that each party bear its own costs before this Court and the Federal Court.

I. Background

[10] It is useful to commence by reviewing some of the scientific background that was before the Federal Court to put the two patents in issue into context.

[11] Dasatinib and the other compounds claimed in the two patents are inhibitors of PTKs, which are enzymes that are involved in the activation or deactivation of various functions within a cell. PTKs can be divided into two categories: receptor and non-receptor PTKs. The difference between the two has to do with where in the cell the pertinent biochemical reaction takes place. Two examples of receptor PTKs are enzymes called HER1 and HER2. Non-receptor PTKs include kinases of the Src-family and the BCR-ABL kinase, which is linked to leukemia.

[12] Tyrosine kinases (i.e. the "TK" in "PTK") are a subset of protein kinase enzymes that act as cellular regulators. Tyrosine kinases phosphorylate (or attach a phosphate group to) different proteins and peptides within a cell. This phosphorylation is essentially a cellular signalling mechanism. When functioning normally, these kinases provide phosphate "signals" that trigger cellular activity such as cell division. When functioning abnormally, the kinases' regulating role in the cell is compromised and this can lead to the over-development or uncontrolled division of cells, which can develop into cancers or other disorders.

[13] PTK inhibitors act to prevent abnormal phosphorylation, or more simply, to regulate communication within the cell by targeting certain enzymes so as to prevent abnormal cellular activity that can lead to various disorders and diseases in humans, including cancers like leukemia.

[14] CML, like all types of leukemia, is a form of cancer affecting the blood. CML constitutes about 15-20% of adult leukemias and, if left untreated, will lead to death. CML is believed to be caused by a genetic mutation that results in the development of an abnormal combined PTK

called BCR-ABL. This tyrosine kinase initially triggers the overproduction of abnormal myeloid white blood cells in the bone marrow. Over time, these excess abnormal myeloid cells crowd out healthy cells in the marrow and blood.

[15] Prior to the discovery of dasatinib, there were three common treatments for CML: bone marrow transplants, immunotherapy using interferon and, more recently, treatment with the BCR-ABL inhibitor, imatinib. There are side-effects associated with bone marrow transplants and interferon. So the discovery of imatinib represented an important advance in the treatment of CML. By 1999-2000, however, it became apparent that a significant proportion of CML patients suffered from forms of the disease that either became or were always resistant to treatment with imatinib. Dasatinib treats CML and is effective in patients who have imatinib-resistant CML. Thus, it is an important new drug in the battle against CML.

II. The 932 Patent

[16] The 932 patent was filed on April 12, 2000, published on October 26, 2000 and issued on August 25, 2009. It has a priority date of April 15, 1999. The title of the patent is "Cyclic Protein Tyrosine Kinase Inhibitors". The Field of the Invention section in the 932 patent provides:

> The present invention relates to the cyclic compounds and salts thereof, to methods of using such compounds in treating [PTK]-associated disorders such as immunologic and oncologic disorders, and to pharmaceutical compositions containing such compounds.

[17] The patent contains a section devoted to setting out the background of the invention. I summarize here only those portions of this section that are relevant to this appeal. In this regard, in this section the inventors set out the various types of PTKs, which are said to include:

> […] receptor tyrosine kinases (RTKs), including members of the epidermal growth factor kinase family (e.g., HER1 and HER2), platelet derived growth factor (PDGF), and kinases that play a role in angiogenesis (Tie-2 and KDR); and, in addition, non-receptor tyrosine kinases, including members of the Syk, JAK and Src (e.g. Src, Fyn, Lyn, Lck and Blk) families [...].

[18] The next section of the patent is entitled "Summary of the Invention". The opening words of this section state that "[t]he present invention provides cyclic compounds of the following formula I and salts thereof, for use as [PTK] inhibitors", which is followed by a lengthy chemical formula. It is undisputed that this formula includes millions of compounds.

[19] The next two sections in the 932 patent set out the preferred compounds and methods for preparing them. Thereafter, the 932 patent contains a section entitled "Utility". It commences as follows:

> The compounds of the present invention inhibit [PTKs], especially Src-family kinases such as [followed by a list of several such PTKs], and are thus useful in the treatment, including prevention and therapy, of [PTK]-associated disorders such as immunologic and oncologic disorders. The compounds inhibit also receptor tyrosine kinases including HER1 and HER2 and are therefore useful in the treatment of proliferative disorders such as psoriasis and cancer. The ability of these compounds to inhibit HER1 and other receptor kinases will also permit their use as anti-angiogenic agents to treat disorders such as cancer and diabetic retinopathy.

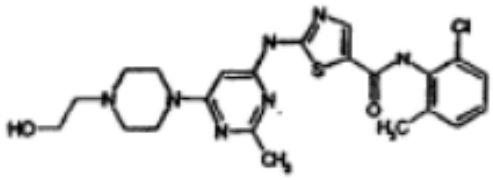
[20] The section on utility continues by defining PTK-associated disorders and then moves on to state that "[t]he present invention thus provides methods for the treatment of [PTK]-associated disorders, comprising the step of administering […] at least one compound of the formula I in an amount effective therefor". The section then provides some examples of possible uses of the compounds to treat various disorders, noting that the "compounds of the present invention can also be used for the treatment of proliferative diseases, including psoriasis and cancer". A

subsequent paragraph in the section contains descriptions for possible pharmaceutical formulations and details of the assay tests conducted. Five hundred and eighty (580) compounds are disclosed, which were said to have been assayed and shown to have been effective to inhibit some PTKs in the Src-family. One of the compounds disclosed and assayed – example 455 – is dasatinib. The utility section of the 932 patent also states that "[t]he compounds of the formula I may be administered by any suitable means, for example, orally […]".

[21] The section of the 932 patent following the section entitled "Utility" sets out the claims. Claim 1 is for the chemical formula for formula I, which comprises the millions of claimed compounds. Claims 2 to 7 set out cascading claims to various compounds coming within claim 1. Claim 8 claims the use of "at least one compound" conforming to the generic formula that differs in one respect from the formula in claim 1 for the "treatment of a [PTK]-associated disorder". Claims 9 to 19 claim various uses of claim 8 for the inhibition of different PTKs and treatment of different PTK-associated disorders. Claims 10 to 17 claim the use of claim 8 for the inhibition of specific Src-family PTKs. Claims 18 and 19 claim the use of claim 8 for the inhibition of HER1 and HER2 PTKs respectively. Claims 20 to 22 claim specific pharmaceutical uses of claim 8.

[22] Thereafter, the patent makes claims to specific compounds and their uses. Claim 27 – the only claim at issue in this case – is a bare composition claim for dasatinib. It provides:

> 27. The compound



or a salt thereof.

[23] The patent then makes several claims that are dependent on claim 27:

- Claim 28 claims dasatinib for the treatment of cancer;
- Claim 29 claims the use of dasatinib in a medication for the treatment of cancer;
- Claim 30 claims a pharmaceutical composition containing dasatinib and a "pharmaceutically acceptable vehicle or carrier thereof";
- Claim 31 claims dasatinib as a treatment of "a [PTK]-associated disorder";
- Claim 32 claims the use of dasatinib in a medication for the treatment of a [PTK]-associated disorder;
- Claims 35 and 36 repeat claims 28 and 29, replacing the reference to "a compound of claim 27" with a picture of the molecule itself (as in claim 27); and
- Claims 37 to 43 claim the use of claims 35 or 36 in relation to specific types of cancer. CML is not included as one of these cancers.

III. The 898 Patent

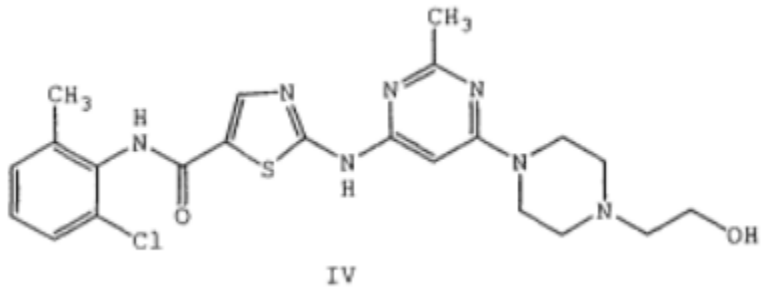
[24] The 898 patent was filed on March 23, 2004, published on October 7, 2004 and was issued on July 10, 2012. It has a priority date of March 24, 2003. The title of the patent is "Oral

Administration of Cyclic [PTK] Inhibitors". The specification in the 898 patent is virtually identical to that in the 932 patent, the only difference being that a few extra paragraphs appear in the 898 patent on preferred dosages for oral and intravenous administration.

[25] BMS conducted clinical trials of dasatinib subsequent to filing the 932 patent. It says that the results of those trials led it to file the 898 patent, which claims specific oral therapeutic uses for dasatinib. At issue in this appeal are claims 1 and 3.

[26] Claim 1 claims:

> 1. Oral use for treating cancer of a compound of formula IV or a salt thereof:



IV

> where the cancer is [CML].

The chemical compound identified in claim 1 is dasatinib.

[27] Claim 3 claims:

> 3. The use of claim 1 […] wherein the [CML] is resistant to STI-571.

STI-571 is imatinib.

[28] Thus, claim 1 of the 898 patent claims the oral use of dasatinib to treat CML, and claim 3 claims the oral use of dasatinib to treat imatinib-resistant CML.

IV. Did the Federal Court Err in Finding that Apotex' Allegation Regarding the Inutility of the 932 Patent was Justified?

[29] With this background in mind, I turn now to consider the 932 patent and commence by reviewing the findings of the Federal Court on the utility of claim 27.

A. *The Reasons of the Federal Court*

[30] As the Federal Court decided the case prior to the release of the decision of the Supreme Court in *Esomeprazole*, the Federal Court applied the analytical framework that had previously been applied by this Court and the Federal Court for many years. Under that framework, in assessing whether a patent met the utility requirement in section 2 of the *Patent Act*, a court was required to first determine whether the patent in issue contained a promise and, if so, what the scope of such promise was. Following this determination, the court was then called upon to assess whether such promise was either demonstrated or soundly predicted as of the relevant date. Sometimes, courts held that no promise was made in the claim(s) in issue, in which event a mere scintilla of utility would have been sufficient to meet the requirement that an invention be useful.

[31] Applying the foregoing framework, the Federal Court first construed the promise that frames claim 27 and determined that the 932 patent made the following promise of utility across all of the claims, including claim 27 (Reasons at paras. 97, 110):

> […] the promise is that the compounds will inhibit both a Src-family PTK and HER1/HER2, and be therapeutically useful in treating a PTK-associated disorder or useful as anti-angiogenic agents.

[32] After construing this to be the promise relevant to claim 27 of the 932 patent, the Federal Court then moved on to consider whether this promise had been demonstrated or soundly predicted as of the relevant date. It erroneously selected the priority date of the 932 patent of April 15, 1999 as being the relevant date for assessing utility when the correct date for the assessment of utility ought to have been the Canadian filing date of April 12, 2000 (see *Aventis Pharma Inc. v. Apotex Inc.*, 2006 FCA 64 at para. 30, 46 C.P.R. (4th) 401). Nothing of relevance to this appeal turns on this error as to the date in respect of which utility is to be assessed.

[33] In its assessment of utility, the Federal Court made three findings. First, as was indeed conceded by Apotex, the Court noted that the ability of dasatinib to inhibit some Src-family PTKs was demonstrated as of the relevant date. However, the Court went on to determine that the ability of dasatinib to also inhibit HER1 or HER2 was neither demonstrated nor soundly predicted as of that date. Finally, as was conceded by BMS, the Court held that the ability of dasatinib to treat PTK-associated disorders or to act as an anti-angiogenic agent was neither demonstrated nor soundly predicted as of the relevant date.

[34] The Federal Court thus held that BMS had failed to establish that the various promises applicable to claim 27 of the 932 patent were demonstrated or soundly predicted by the relevant

date. It therefore concluded that Apotex' allegation of inutility in respect of claim 27 in the 932 patent was justified.

B. *Analysis - the Impact of the Supreme Court's Decision in Esomeprazole*

[35] In *Esomeprazole*, in a unanimous decision, the Supreme Court abolished the promise doctrine, holding that the doctrine is inconsistent with the words and scheme of the *Patent Act*. Thus, in assessing whether a patent meets the utility requirement set out in section 2 of the *Patent Act*, courts are no longer to ascertain whether a patent fulfils the promise(s) it makes. Rather, according to the Supreme Court, the requisite utility is to be measured with respect to the subject-matter of the invention and involves the following (*Esomeprazole* at paras. 54 and 55):

> 54. […] First, courts must identify the subject-matter of the invention claimed in the patent. Second, courts must ask whether that subject-matter is useful – is it capable of a practical purpose (i.e. an actual result)?
>
> 55. The Act does not prescribe the degree or quantum of usefulness required, or that every potential use be realized – a scintilla of utility will do. A single use related to the nature of the subject-matter is sufficient, and the utility must be established by either demonstration or sound prediction as of the filing date.

[36] Applying the foregoing test for utility to claim 27 of the 932 patent therefore involves two steps: first, determining the subject-matter of the claim and, second, determining whether this subject-matter was shown to be useful either by demonstration or sound prediction as of the filing date.

[37] Insofar as concerns the first point, contrary to what Apotex asserts in its supplemental written submissions, the subject-matter of claim 27 of the 932 patent is not the potential therapeutic uses for dasatinib. Rather, the subject-matter of claim 27 is merely the compound,

dasatinib, itself. This is all that claim 27 claims, and it is erroneous to expand the subject-matter of the claim beyond what it says. In *Esomeprazole*, the Supreme Court found the subject-matter of a similar compound claim to be simply the compound itself (*Esomeprazole* at para. 61). Thus, contrary to what Apotex says, the relevant subject-matter in issue is merely the compound, dasatinib.

[38] The second step of the requisite analysis involves determining whether BMS has demonstrated or soundly predicted as of the relevant date that dasatinib had at least a scintilla of utility. In my view, BMS has so demonstrated as it is conceded that as of the filing date it demonstrated that dasatinib acted to inhibit Src-family PTKs. Such demonstration is referred to in the specification of the 932 patent, itself (the 932 patent at pp. 50-51), and confirmed in the evidence of the inventors that BMS filed.

[39] While conceding that BMS did demonstrate as of the relevant date that dasatinib acted to inhibit Src-family PTKs, Apotex nonetheless asserts that such demonstration does not establish a scintilla of utility as it says that showing "the binding of dasatinib to certain isolated enzymes in a test tube […] cannot satisfy the utility requirement" (supplemental written submissions of Apotex at para. 5).

[40] I disagree. Establishing that a compound has the ability to inhibit a biological target implicated in disease is doubtlessly a useful discovery. Here, it was known as of the relevant date that enhanced activity of PTK was involved in many diseases, as stated in the specification and confirmed in the evidence of several of the experts. Thus, discovery of a substance that acted to

inhibit certain PTKs represented an important advance and certainly meets the minimal utility requirements that are now applicable following the decision of the Supreme Court in *Esomeprazole*.

[41] I parenthetically note that a similar sort of discovery was found to satisfy the utility requirement in *Esomeprazole* and *Teva Canada Limited v. Novartis AG*, 2013 FC 141, 109 C.P.R. 4th 1, which dealt with the patent for imatinib. In the latter case, Snider, J., writing for the Federal Court, held that the discovery that imatinib was a PTK-inhibitor was useful.

[42] Thus, BMS has established that it met the requirements for utility as they have been reframed by the Supreme Court in *Esomeprazole* as it demonstrated that dasatinib acted as a PTK-inhibitor as of the relevant date. It therefore follows that the Federal Court's decision in respect of the inutility of claim 27 of the 932 patent cannot stand.

[43] Despite this, Apotex says that BMS' appeal should be dismissed as it asserts that the 932 patent fails to comply with the requirements of subsection 27(3) of the *Patent Act*. However, the Federal Court found against Apotex on this issue and Apotex did not challenge this finding on appeal. It cannot now seek to raise this issue in its supplemental written submissions, in which it was granted leave to only make submissions with respect to the implications of the decision in *Esomeprazole* on the issues in dispute.

[44] I would accordingly grant BMS' appeal in respect of the 932 patent.

V. Did the Federal Court Err in Finding that Apotex' Allegation Regarding Obviousness of the 898 Patent was Justified?

[45] I turn next to the issues concerning the 898 patent and commence by reviewing the findings of the Federal Court on obviousness that are relevant to this appeal.

A. *The Reasons of the Federal Court*

[46] The Federal Court commenced its analysis by making findings as to the common general knowledge as of the priority date of the 898 patent (March 24, 2003) of the person skilled in the art to whom the 898 patent is directed. The Court held that this common general knowledge included several pieces of prior art.

[47] First among them was PCT Application No. WO/2000/062778 (the 778 Application), the PCT application that led to the 932 patent. Secondly, the Federal Court determined that the common general knowledge of the person skilled in the art as of the relevant date included PCT Application No. WO 03/013540 (the 540 Application). The Federal Court noted that the 540 Application disclosed that compounds (like dasatinib) that inhibited Src-family kinases were effective in treating leukemia, including CML, and could be used in treating imatinib-resistant CML, when used either alone or in combination with imatinib (Reasons at para. 157). Finally, the Federal Court found that the relevant prior art include several articles, which disclosed, among other things, that Src-family kinases are involved in BCR-ABL cell proliferation and that compounds that inhibited Src-family kinases (like dasatinib) can be used to mediate imatinib resistance (Reasons at paras. 160-164).

[48] The Federal Court then set out the test applicable for the assessment of obviousness, as follows:

> 165. Justice Rothstein set out the four-part test for obviousness in *Sanofi-Synthelabo Canada Inc. v. Apotex Inc.*, 2008 SCC 61 at paragraph 67 [*Sanofi-Synthelabo*]:
>
> 1) Identify the notional person skilled in the art and identify the relevant common general knowledge of that person.
>
> 2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it.
>
> 3) Identify what, if any, differences exist between the matter cited as forming part of the "state of the art" and the inventive concept of the claim or the claim as construed.
>
> 4) Viewed without any knowledge of the alleged invention as claimed, ask whether those differences constitute steps which would have been obvious to the person skilled in the art, or do they require any degree of invention.
>
> 166. In areas where advances are often found through experimentation, the fourth part of the obviousness tests may be reframed as asking whether the experiments were "obvious to try", using the following, non-exhaustive, factors (*Sanofi-Synthelabo*, above, at para. 69):
>
> 1) Is it more or less self-evident that what is being tried ought to work, and/or are there a finite number of identified predictable solutions that would be known to persons skilled in the art?
>
> 2) What is the extent, nature, and amount of effort required to achieve the invention (i.e., is the experimentation prolonged and arduous, or are the trials routine)?
>
> 3) Is there a motive provided in the prior art to find the solution that the patent addresses?
>
> 167. The reference for the test of obviousness is a technician, who is skilled in the art but possesses no scintilla of inventiveness or imagination (*Beloit Canada Ltd v. Valmet OY* (1986), 8 CPR (3d) 289 at 294). Obviousness is a difficult test to meet, because it is necessary to show that the skilled person would have come directly and without difficulty to the invention (*Sanofi-Synthelabo* at paras. 71 and 85). However, the existence of multiple obvious routes to an invention does not necessarily render the route taken to be non-obvious (*Shire Biochem Inc. v. Canada*, 2008 FC 538 at para. 80).

> 168. Finally, the Court must assess obviousness keeping in mind that experts in the field may unknowingly be biased by hindsight (*Bridgeview Manufacturing Inc. v. 931409 Alberta Ltd (cob Central Alberta Hay Centre)*, 2010 FCA 188 at para. 50).

[49] The Court next considered whether claims 1 and 3 of the 898 patent were obvious. It noted that the parties had agreed that the inventive concept of claims 1 and 3 of the 898 patent were "the oral use of dasatinib for the treatment of CML and oral use of dasatinib for the treatment of imatinib-resistant CML, respectively" (Reasons at para. 169). It then moved on to assess whether it was obvious to try using dasatinib orally to treat CML and imatinib-resistant CML.

[50] With respect to claim 1, the Court made the following findings:

- The 778 Application discloses that the claimed compounds – including dasatinib – inhibit Src-family kinases (Reasons at para. 175);
- The 778 Application teaches that the compounds may be administered by any suitable means, including orally (Reasons at para. 175); and
- The 540 Application teaches the treatment of CML in humans using a compound that inhibits specific Src-family kinases (Reasons at para. 175).

[51] Based on the foregoing, the Federal Court determined that the oral administration of dasatinib (as an Src-inhibitor) to treat CML was obvious to try. In reaching this conclusion, the Federal Court preferred Apotex' expert evidence over that of BMS and noted the lack of any evidence establishing that the BMS inventors had engaged in difficult and arduous

experimentation to arrive at the invention claimed in claim 1 of the 898 patent (Reasons at para. 185).

[52] The Federal Court came to a similar conclusion with respect to claim 3. Again, the Federal Court accepted Apotex' expert evidence, which it concluded established that although different compounds for targeting imatinib-resistant leukemia were being pursued, the prior art also established that the Src-family pathway was involved in imatinib-resistant CML and that dasatinib was therefore obvious to try because it targeted the Src-family pathway (Reasons at paras. 189-190, 192, 196, 198). The Federal Court again noted that the evidence did not reveal that the BMS scientists required any particularly inventive experimentation to pursue their invention (Reasons at paras. 193-194).

[53] The Court therefore determined that both claims 1 and 3 of the 898 patent were obvious and hence dismissed BMS' prohibition application in respect of the 898 patent.

B. *Analysis*

[54] BMS makes four challenges to the Federal Court's reasoning on obviousness, alleging that it committed three legal errors and made a palpable and overriding factual error, any one of which it says is sufficient to overturn the Federal Court's dismissal of the prohibition application in respect of the 898 patent.

[55] More specifically, in terms of the alleged legal errors, BMS first submits that the Federal Court made a legal error by applying the obvious to try test after noting that both parties had

agreed that the invention was not obvious. It points in this regard to paragraph 173 of the reasons, where the Federal Court stated:

> Both parties agree that it was not obvious at the relevant date that dasatinib would be an effective oral treatment for CML and/or imatinib-resistant CML. However, the Respondent contends that it would have been obvious for the clinician/scientist to try to improve on existing CML-therapies by administering a Src-family PTK inhibitor. Further, the Respondent argues that, because dasatinib was identified in the '778 Application as a PTK inhibitor that could be used for PTK-associated diseases, particularly cancer, dasatinib would have been an obvious candidate to try.

[56] BMS says that it is incorrect to think of the test for obviousness and the obvious to try test as distinct and to proceed on the basis that only the latter needs to be met to invalidate a claim. BMS supports this point by citing this Court's recent statement in *Bristol-Myers Squibb Canada Co. v. Teva Canada Limited*, 2017 FCA 76 at para. 60, 146 C.P.R. (4th) 216 [*Atazanavir* FCA] to the effect that "the 'obvious to try' test has not displaced all other inquiries into obviousness".

[57] I disagree with BMS' submission. In the first place, as it conceded, the entire inquiry before the Federal Court focussed on whether claims 1 and 3 in the 898 patent were obvious, and Apotex did not ever admit that they were not. This is evident from the Federal Court's reasons, which analyze whether the claims 1 and 3 were obvious from the point of view of being obvious to try. Secondly, I do not read the passage from *Atazanavir* FCA as suggesting that the obvious to try test cannot be applied as a means of inquiring into obviousness. In *Sanofi-Synthelabo*, the Supreme Court indicated that an obvious to try test may well be appropriate "[i]n areas of endeavour where advances are often won by experimentation" (at para. 68). It was therefore open to the Federal Court to apply the obvious to try test, and, when one reads its reasons fairly

in their entirety, this is precisely the analysis that the Federal Court undertook. Thus, while it is difficult to understand what the Federal Court meant in the first sentence of paragraph 73, it did not commit the first error that BMS alleges of making inconsistent findings on the issue of obviousness.

[58] In terms of the second alleged legal error, BMS says that the Federal Court erred by incorrectly treating the obvious to try test as a reframed inquiry into whether the necessary experiments were obvious to try. It more specifically asserts that the Federal Court misdirected itself by considering whether the experiments to establish that dasatinib was effective to treat CML and imatinib-resistant CML were obvious to try as opposed to considering whether it was more or less self-evident that such experiments would establish the efficacy of dasatinib. In support of this assertion, BMS relies on the opening portion of the first sentence of paragraph 166 of the Federal Court's reasons, where the Court stated "[i]n areas where advances are often found through experimentation, the fourth part of the obviousness tests may be reframed as asking whether the experiments were 'obvious to try'".

[59] Once again, I disagree with BMS as it has taken this sentence in the Federal Court's reasons out of context. In paragraphs 165 to 168, the Federal Court correctly sets out the test for assessing obviousness from *Sanofi-Synthelabo*. Moreover, the Court's reasoning shows that it asked itself the right question, namely whether it was more or less self-evident that routine experiments would establish that dasatinib was effective to treat CML, including imatinib-resistant CML.

[60] Third, BMS alleges that the Federal Court erred by applying the wrong standard for assessing obviousness by equating it to the test for sound prediction, when they are different concepts that ought not be conflated. BMS says that this error was made in paragraph 181 of the reasons, where the Federal Court wrote:

> Although I agree [with BMS's expert] that the effectiveness of oral administration could not be predicted prior to performing clinical tests, I do not consider this to be dispositive of whether an invention was obvious to try. The first question of the obvious try [*sic*] analysis asks if it is more or less self-evident that an approach ought to work, which is a question that is very similar to the question of sound prediction in the utility analysis. Many patents, including the '898 Patent, have been granted in the absence of clinical data at the claim date. If the utility of an invention can be predicted based upon the pre-clinical data, the logical corollary is that a POSITA, having only pre-clinical information, could find the invention obvious to try, and in this case, given the common general knowledge, would have found that oral use of dasatinib to treat CML was obvious to try.

[61] While I agree with BMS that the tests for assessing obviousness and sound prediction are different, I do not believe that the Federal Court committed a reviewable error as the foregoing paragraph is not central to its reasoning, and the balance of the reasons show that the Federal Court applied the correct test for obviousness from *Sanofi-Synthelabo*.

[62] Finally, BMS says that the Federal Court made a palpable and overriding factual error by misapprehending the evidence and ignoring what BMS says were key admissions it obtained during the cross-examination of Apotex' experts. It relies in support of this assertion on passages in the cross-examination where it says the experts conceded that, as at the appropriate time, the person skilled in the art would have concluded that there was no more than a possibility that dasatinib would be effective to treat CML. Having reviewed these passages, I disagree that any such admission was made and, in any event, note that the passages relied on by BMS are

contradicted by other evidence, including large portions of the testimony of Apotex' experts. It was the province of the Federal Court to weigh and assess such evidence. I do not see that it committed any palpable and overriding error in so doing as there was more than ample evidence to support the conclusions that the Federal Court reached.

[63] I would accordingly dismiss BMS' appeal with respect to the 898 patent.

VI. Proposed Disposition

[64] In light of the foregoing, I would allow this appeal in part, set aside the judgment of the Federal Court in respect of the 932 patent and, making the decision the Federal Court ought to have made, would issue an order of prohibition against the Minister of Health, prohibiting the issuance of an NOC to Apotex for its APO-Dasatinib product until the 932 patent expires. As success is divided, I would order that each party bear its own costs before this Court and the Federal Court.

"Mary J.L. Gleason"
J.A.

"I agree.
Wyman W. Webb J.A."

"I agree.
D. G. Near J.A."

FEDERAL COURT OF APPEAL

NAMES OF COUNSEL AND SOLICITORS OF RECORD

DOCKET:	A-106-17
STYLE OF CAUSE:	BRISTOL-MYERS SQUIBB CANADA CO. and BRISTOL-MYERS SQUIBB HOLDINGS IRELAND v. APOTEX INC. and THE MINISTER OF HEALTH
PLACE OF HEARING:	OTTAWA, ONTARIO
DATE OF HEARING:	JUNE 9, 2017
REASONS FOR JUDGMENT BY:	GLEASON J.A.
CONCURRED IN BY:	WEBB J.A. NEAR J.A.
DATED:	SEPTEMBER 18, 2017

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