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Mr Brenton Holmes
Secretary
Senate Select Committee on the Free Trade Agreement between Australia and the United States of America
Suite S1.30.1
The Senate
Parliament House
CANBERRA ACT 2600

Dear Mr Holmes

The Generic Medicines Industry Association (GMiA) is pleased to have this opportunity to comment on the Free Trade Agreement (FTA) between Australia and the United States of America.

For Senators' information, the members of the GMiA are Alphapharm, Arrow Pharmaceuticals, Douglas Pharmaceuticals Australia Ltd, Hexal Australia, Mayne and Sandoz Pty Ltd. Members employ around 3000 people, invest in research and development in the top tier of pharmaceutical companies in this country and export prescription medicines to about 50 countries.

The GMiA regards the proposed FTA as beneficial to the national economy with a range of benefits accruing over time.

However, in line with the comments by a number of sectors likely to be affected in some measure, the GMiA has some reservations about aspects of the proposed changes to intellectual property laws as they relate to the pharmaceutical industry.

Please note that we have made these reservations clear to Government and have been assured that there will be no delay to the entry of generics as a result of the FTA.

Our main focus is in relation to Article 17.10.5 . The essence of this paragraph is:

- The prevention responsibility – 17.10.5(a) and
- The notification requirement – 17.10.5(b)

The advent of the generic equivalents of branded pharmaceuticals has reduced the costs to both consumers and governments by introducing competition in a field where the large pharmaceutical companies rely on their patents to maintain their market share and prices of their products.

Article 17.10.5, if not implemented carefully, would enable these companies to further protect and in some cases extend patent life by various legal stratagems. As it is, Australian consumers and the PBS are disadvantaged by the extension of up to five years of existing 20 year patents.

Implementation of this Article, we understand, will be by way of amendment to the *Therapeutic Goods Administration Act 1989.*

Article 17.10.5(a)

The current wording of this paragraph requires that marketing of a generic equivalent must be prevented where the product or use is "claimed" in a patent.

As it stands today the courts decide if the patent is valid or infringed.

The GMiA perceives a number of practical problems with the proposed changes. First and foremost, it is not clear whether the Therapeutic Goods Administration (TGA) or other relevant authority, by this provision, is supposed to determine whether a product or use is *claimed* in a patent. Whether a product or use is claimed in a patent is not always clear from the terms of the patent itself and it is certainly not possible to identify in every case, whether such a claim is made. Currently a relevant court has been the body to determine whether a product, or its use, is in fact claimed in a patent. The Association's view is that a court should remain the body that determines matters of patent law.

Secondly, courts have sometimes overturned patents on the basis that they are wholly or partially invalid. Pharmaceutical patent disputes invariably involve questions of both infringement and validity and more often than not, the issue of validity (or lack thereof) determines the dispute. Therefore, the GMiA believes that to refuse the marketing of a product, simply because something is "claimed" in a patent, imposes a presumption of validity which is beyond anything found in the *Patents Act 1990* or applied by the courts.

Therefore, if generic manufacturers are forced to wait for otherwise invalid patents to lapse or are compelled to challenge for invalidity first, it is likely to delay rapid generic entry on to the PBS and drive up its cost to the taxpayers.

A literal interpretation of Article 17.10.5(a)(ii) would suggest that abuse of the system through the "evergreening" of patents will be further encouraged. Evergreening is the name that has been given to the process whereby patent holders, in order to extend their monopoly, are waiting until near the end of the life of the basic composition patent to progressively file a series of use patents.

Under this paragraph, if the product is claimed in a use patent, then marketing of a generic equivalent is prevented. This could lead to long delays or generic equivalents not reaching the market. It is vital that the current presumption allowing the marketing of generics is preserved because if it is not, it will undoubtedly lead to abuse of the system by the branded companies, as is the case in Canada.

I attach for your information a submission made by the Canadian Generic Pharmaceutical Association (CGPA) to the Canadian House of Commons Standing Committee on Industry, Science and Technology in June 2003 which was looking into the effect of the *Patented Medicines (Notice of Compliance) Regulations* in that country. As the CGPA states in the Executive Summary to its submission, "it is becoming virtually impossible to bring out a generic version of a drug in Canada, because recent case law in Canada has removed all effective limits on evergreening...Innovation is being replaced by litigation...".

Currently in Australia, once a Certificate of Registration has been issued by the TGA, it takes a minimum of ten weeks for a generic equivalent to be listed on the PBS - quite different from what could be if the FTA is not implemented carefully.

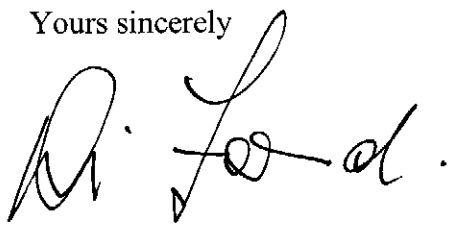
Article 17.10.5(b)

This paragraph provides for notification to the patent owner of the request for marketing approval. The GMiA is uncertain about this provision especially when should the patent owner be notified and by whom? Furthermore, we are unclear as to the rationale of the notification procedure, given that the marketing of a product during the patent term is not allowed unless the patent owner has consented or acquiesced to the approval.

In conclusion, the GMiA members fully respect the laws governing intellectual property however, they are concerned to ensure that "unfair" obstacles are not introduced into the current regulatory regime that will result in outcomes that will have an adverse effect on the PBS and the generic sector in Australia.

The GMiA believes that it is in the national interest for this Senate Select Committee, when reporting to the Parliament, to recommend that Article 17.10.5 is implemented in such a way that does not impact on the sustainability of the PBS or the viability of the generic pharmaceutical industry in Australia.

Yours sincerely



Di Ford
Executive Director

The *Patented Medicines (Notice of Compliance) Regulations*

A Submission to the
House of Commons Standing Committee on Industry, Science and Technology

By the

CGPA ACMG

Canadian Generic Pharmaceutical Association

June 3, 2003

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Executive Summary

Since the passage of Bill C-91 in 1993 Canada has 20-year patent terms for pharmaceutical products, which is the international standard. However, in addition to what is required by Canada's international trade agreements, Canada also has the *Patented Medicines (Notice of Compliance) Regulations.*

The *Patented Medicines (Notice of Compliance) Regulations* allow a drug patentee to commence an application in the Federal Court of Canada on an allegation of infringement, triggering an automatic 24-month injunction that prevents Health Canada from issuing an approval of a lower-cost, generic competitor.

This automatic injunction is not available to patentees in any other industry and is in addition to a pharmaceutical patent holders' right to seek remedy under the *Patent Act* against infringement.

Pharmaceutical patentees should not be treated more preferentially than patentees in other industries: the *Regulations* should be repealed. Drug patentees should litigate disputes using the normal court procedure.

The automatic injunction leads to abuses known as "evergreening."

Evergreening describes a variety of strategies, all involving abuse of the automatic injunction, to limit competition. Patentees use the automatic injunction to extend their monopoly after the expiry of their basic 20-year patent on a drug.

A common strategy involves listing and litigating additional patents after the main patent on the active ingredient has expired, in order to start additional automatic injunctions, and prolong the patentee's monopoly.

As a result, lower-cost, non-infringing generic products are kept off the market. This raises drug costs, the most rapidly rising component of health care expenditure in Canada, by forcing governments, employers and consumers to pay for the higher-priced brand versions for extended periods of time.

The CGPA estimates that delays caused by evergreening strategies involving the automatic 24-month injunction of the *Regulations* have cost Canadians more than $1 billion since their implementation in 1993.

It has also become clear that most of the many court cases, although each triggers an automatic injunction, are without merit. The brands win only about a quarter of the cases when they finally reach a hearing but lower-cost generic competitors are still kept off the market, often for years.

It is becoming virtually impossible to bring out a generic version of a drug in Canada, because recent case law in Canada has removed all effective limits on evergreening.

The United States is the only other country with an automatic injunction for patent disputes in the pharmaceutical industry. In fact, the *Patented Medicines (Notice of Compliance) Regulations* are modeled after the *Hatch-Waxman Act* of 1984.

As in Canada, brand companies have employed evergreening strategies to trigger multiple automatic injunctions in order to stifle competition. But unlike Canada, these anti-competitive activities have resulted in action by government to stop this costly abuse.

The United States Federal Trade Commission (FTC) launched an investigation into evergreening strategies by brand companies, which found such tactics to be anti-competitive, and bad public policy.

The FTC issued a strongly worded report, *Generic Drug Entry Prior to Patent Expiration: An FTC Study*, FTC, July 2002, which contributed to President George W. Bush's October 22, 2002 announcement that he is taking action to prevent multiple injunction strategies that delayed the entry of lower-cost generic medicines.

President Bush's solution is to allow only one automatic injunction per generic submission.

At the 10th Anniversary of the *Patented Medicines (Notice of Compliance) Regulations*, the time has come for Parliamentarians and, in fact, all Canadians to look at the outcomes of this regulatory regime that has been described by the Supreme Court of Canada as "draconian."

What public good has been served by these *Regulations*?

- According to data from IMS HEALTH, at 14%, Canadians have the fastest rising drug costs in the world
- In December 2002, the Patented Medicine Prices Review Board published a report comparing pharmaceutical R&D in Canada with other countries that showed that very little pharmaceutical research is conducted in Canada compared to brand industry's sales in this country
- According to Statistics Canada, Canada's trade deficit in pharmaceuticals has more than doubled in the past five years from $2.6 billion in 1998 to $5.5 billion in 2002

It is clear that the *Regulations* are not serving the interests of Canadians.

Innovation is being replaced by litigation, and this litigation is unfairly delaying generic competition and adding hundreds of millions of dollars in unwarranted costs to Canada's already cash-starved health-care system.

For Canada's pharmaceutical policy to best serve the interests of Canadians, the brand-name and generic companies should be encouraged to do what they are intended to do.

Instead of being given special patent rules that invite sophisticated legal maneuvering to prolong monopolies, brand companies should be encouraged to direct their considerable resources to developing new medicines that make a real difference to the health of Canadians.

After 20-year patents expire, generic companies should be allowed to produce less-expensive equivalents in order to control health-care costs, help keep drug plans viable, and ensure more people can afford to benefit from these discoveries.

The Canadian Generic Pharmaceutical Association (CGPA) cautions Members of the Standing Committee on Industry, Science and Technology that minor tinkering cannot stop the abuses of the *Regulations.* Minor tinkering was the result of the 1998 review of the *Regulations* but only resulted in more confusion, more litigation, and has not stopped sophisticated evergreening strategies.

To end this abuse of our drug patent laws, the *Regulations* must be eliminated.

If the *Regulations* are eliminated:

- Brand companies will still have 20-year patent terms
- They will still be able to seek multiple patents on the same medicines if they make improvements to it
- They will still have full legal recourse to defend their patents under the provisions of the *Patent Act* used by every other industry in Canada
- And Canada will be in full compliance with its international trade agreements

The only thing the brand companies will no longer have is the automatic injunction.

Recommendation:
The House of Commons Standing Committee on Industry, Science and Technology should recommend that the *Patented Medicines (Notice of Compliance) Regulations* be immediately eliminated.

Canada's Generic Pharmaceutical Industry

The Canadian Generic Pharmaceutical Association (CGPA) represents manufacturers and distributors of finished generic pharmaceutical products, manufacturers and distributors of active pharmaceutical chemicals, and suppliers of other goods and services to the generic pharmaceutical industry.

The CGPA's 21 members represents more than 90% of Canada's generic pharmaceutical industry, an industry that in 2002 filled more than 133 million, or 40.3% of prescriptions in Canada.

A list of CGPA member companies is included in Appendix F

Employment

Canada's generic industry employs more than 7,500 people in well-paid, highly skilled jobs in laboratories, production facilities and other operations.

Innovation

The generic industry fuels the Canadian economy through direct capital expenditures and spending on research and development. In 2002, CGPA member companies spent approximately $250 million on R&D in Canada. CGPA member companies invest more than 15% of sales in research and development in Canada, with more than 100 products currently in development. R&D expenditures have increased more than seven-fold since 1990 and CGPA member companies have targeted more than $1 billion for R&D over the next 4 years.

Highly successful exporting industry

Canada's generic drug industry has built a successful international business, generating 20% of its sales volume from exporting high quality, made-in-Canada pharmaceuticals to 120 countries. The majority of the industry's revenues stay in Canada, helping preserve and create jobs for Canadians.

The generic industry has an important contribution to make to a strong and innovative Canadian economy. With the support of the federal government, the generic pharmaceutical industry can grow, increasing job creation and investment, while helping control health-care costs by providing high-quality, low-cost medicines to Canadians.

Savings to Canada's health-care system

No other industry has made, or continues to make, a greater contribution to affordable health care in Canada than the generic pharmaceutical industry. Last year alone, the use of generic pharmaceuticals saved Canada's health-care system more than $1.4 billion.

The *Patented Medicines (Notice of Compliance) Regulations*, and "Evergreening"

Since the passage of Bill C-91 in 1993 Canada has 20-year patent terms for pharmaceutical products, which is the international standard. However, in addition to what is required by Canada's international trade agreements, Canada also has the *Patented Medicines (Notice of Compliance) Regulations*.

The *Patented Medicines (Notice of Compliance) Regulations* (the "*Regulations*") first became law in 1993.[1] They are roughly modeled on the U.S. Hatch-Waxman amendments of 1984.[2] They were amended in 1998,[3] and again in 1999.[4]

The *Regulations* give drug patentees powerful remedies in a patent dispute, in addition to the usual remedies provided under the *Patent Act*. Patentees in no other industry in Canada have access to the extra remedies provided by the *Regulations*.

The procedure under the *Regulations*, in short, allows a brand-name drug company to keep a generic competitor out of the market automatically by merely *asserting* that its patent, or several patents, would be infringed by the generic drug. This is described as an *automatic injunction*.

The *Regulations* have been described as a "draconian regime" in their effect on generic manufacturers by the Supreme Court of Canada.[5]

What is evergreening?

"Evergreening" describes a variety of strategies, all involving abuse of the automatic injunction, to limit competition. Patentees use the automatic injunction to extend their monopoly after the expiry of their basic 20-year patent on a drug. A common strategy involves listing and litigating additional patents after the main patent on the active ingredient has expired, in order to start additional automatic injunctions, and prolong the patentee's market monopoly.

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[1] SOR/93-133

[2] *Drug Price Competition and Patent Term Restoration Act, 1984*, Public Law 98-417 [S.1538]; September 24, 1984, known as the Hatch-Waxman Act after the sponsors of the bill, Representative Henry Waxman, and Senator Orrin Hatch.

[3] SOR/98-166. The amendments included the following: the 30 month stay became 24 months, the damages section was amended (section 8), the right to serve a notice of allegation of non-infringement prior to filing the ANDS was removed, the Minister was given discretion to decide whether or not to remove improperly listed patents, an early dismissal section was added (6(5)), disclosure of relevant portions of generic submission was made compulsory (6(7)), and section 4 was amended, possibly with the intent of limiting to some extent the patents that can be listed on the register.

[4] SOR/DORS/99-379. These amendments were added s. 5(1.1), which broadened the Regulations so that the automatic stay may apply even to a non-abbreviated submission based on clinical trials: *Bristol-Myers v. Biolyse*, 2003 FCA 180.

[5] *Merck Frosst v. Canada (Minister of National Health and Welfare)*, (1998), 80 C.P.R. (3d) 368 (S.C.C.) at 384, paragraph 32, 33

In particular, multiple patents on inactive ingredients, coatings, uses, or other small variants can be listed for a single drug in order to start additional automatic injunctions.

How the *Regulations* work

Patent register: The patentee drug company (called a "first person") can list patents on a "patent register" administered by Health Canada for approved drugs (*Regulations,* s. 3, 4).

Allegation: When a generic manufacturer (called a "second person") makes a submission to Health Canada for health and safety approval of a generic drug, the generic must either (a) wait until all of the patents listed for the brand product expire, or, (b) if it believes any listed patents are invalid or that its drug would not infringe the patents, serve a "notice of allegation" (NOA) on the brand company (s. 5).

The generic must serve a new allegation for every patent listed on the register at any time before the generic drug receives approval (s. (5(2)).

Forced notice to competitors unfair to generics

The "notice of allegation" provisions (s. 5) of the *Regulations* are extremely unfair to generic drug makers and represent another major departure in the treatment of the generic pharmaceutical industry under Canadian law versus other sectors. In no other industry is a company forced to reveal to its competitors in advance which products it intends to bring to market.

By forcing a generic company to serve a notice of allegation, the *Regulations* provide a brand company with ample opportunity to fully develop evergreening strategies using the automatic stay, to seek out licensing agreements, to switch the market to "new and improved" products through aggressive marketing to physicians, and to take other actions that greatly hinder the ability of generic manufacturers to recoup the significant investment they have made in bringing a generic product to market.

It also forces generic companies to inform other generic competitors about their product development plans.

Automatic injunction: If served with a notice of allegation, a patentee may start a judicial review application (a court case in the Federal Court of Canada) within 45 days. By merely starting such a case, it obtains an *automatic injunction*, preventing Health Canada from granting health and safety approval to the generic drug (a Notice of Compliance or NOC), for 24 months or until the application is decided or expiry of the patent (s. 6, 7). That means the generic cannot sell its product.

The 24-month automatic injunction can be started repeatedly, as new patents are listed for a product, because the generic has to address each one.

Hearing: At the hearing, which may be two years later, the Court decides if the generic's allegation is "justified," a preliminary assessment of the patent issues. If the Court finds the allegation is not justified, the brand wins, and the court grants an "order of prohibition" preventing the issuance of the NOC to the generic until the patents expire. If the Court finds the allegation is justified, the generic wins. The Court dismisses the court case. Health Canada can then issue the NOC to the generic product once the health and safety approval process is complete (s. 6)

Litigation over a generic drug often takes much longer than Health Canada's approval process. The brand's monopoly injunctions remains in place during the litigation.

The assumption behind the automatic injunction was that brand-name companies would generally turn out to be right in their court cases on the patent issue. That assumption was wrong. Brand companies win only about *a quarter* of the cases that have reached a hearing on the patent issues, both in Canada and the US.[6]

Litigation does not determine patent issue: The litigation started by the brand after receiving an allegation is not an action for patent infringement, but a judicial review proceeding.[7] Therefore, either party can also sue the other using the ordinary court procedure on the same patent.

The odd result is that a generic company might lose the court proceedings under the *Regulations*, and be prohibited from entering the market, yet later establish at a full trial under the *Patent Act* that the patent is both not infringed and invalid.[8]

Damages: A damages section in the *Regulations* permits the generic to sue for damages if its product is delayed, but although there have been many such delays, no generic manufacturer has yet been awarded damages for delays it suffered (s. 8).

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[6] Generic drug companies have won about 75% of the court cases commenced since the 1998 amendments that have reached a hearing on the patent issues. The Federal Trade Commission also investigated this issue in the US, and found the same: "The data in the study suggests that the generic applicants have brought appropriate patent challenges: generic applicants prevailed in nearly 75% of the patent litigation ultimately resolved by a court decision." (FTC Report, July, 2002, p. viii).

[7] *Eli Lilly & Co. et al. v. Apotex Inc. et al.* (1997), 76 C.P.R. (3d) 1 (F.C.A.) at 5 - 6.

[8] See, for example, *Hoffman La Roche Limited v. Apotex* Inc. File no. T-1898-93, April 30, 1999.

Brand manufacturers fight damages claims in the courts for years, and have attacked the damages section in the courts as unconstitutional.

The *Regulations* do not provide at all for damages to provincial governments, private insurers, nor the public, even if they pay monopoly prices when they should not have.

(By contrast, the brands have had to pay large damages awards in the United States, the only other country with an automatic injunction for patent disputes in the pharmaceutical industry. In a recent case involving Bristol-Myers Squibb case referred to below, 29 U.S. states launched a lawsuit against BMS for listing late patents on the drug BuSpar. Since the late-listed patent was found to be invalid, they wanted compensation for the extra money they were forced to pay while the less-expensive generic version was kept off the market. Bristol-Myers Squibb settled this suit in January 2002, along with a similar suit over the cancer drug Taxol, and paid $670 million in damages.)

Questions about the *Regulations* by policy makers in Canada
Policy makers have questioned why the *Regulations* are needed. Why an automatic injunction? Why a different system for drug patents alone?

For example, in its Observations on Bill S-17 (the most recent amendment to the *Patent Act.* See Appendix G), released April 5, 2001, the Senate Banking Committee called for a full parliamentary review of the *Regulations* on the grounds they "may not be working in the manner that Parliament originally anticipated."

(It should be noted that "Parliament" may not be the appropriate word since these are regulations and thus were never put to a vote in the House of Commons but rushed through by Cabinet in 1993.)

The Committee was concerned about the *Regulations* and commented that: "the court's are fully capable of determining appropriate procedures [in patent disputes], which should not differ substantially from one industry to another."

More recently, the Final Report of the Commission on the Future of Health Care in Canada, or Romanow Report, recommended that the *Regulations* be reviewed:

Recommendation 41:
The Federal government should immediately review the pharmaceutical industry practices related to patent protection, specifically, the practices of *evergreening* and the notice of compliance regulations. The review should ensure that there is an appropriate balance between the protection of intellectual property and the need to contain costs and provide Canadians with improved access to non-patented prescription drugs. (Italics in original)[9]

[9] Romanow Commission: "Building on Values; the Future of Health Care in Canada," p. 208.

The reference to "evergreening" in the recommendation is elaborated as follows:

> "A particular concern with current pharmaceutical industry practice is the process of "evergreening," where manufacturers of brand name drugs make variations to existing drugs in order to extend their patent coverage. This delays the ability of generic manufacturers to develop cheaper products for the marketplace and is a questionable outcome of Canada's patent law."

The Report comments specifically on the *Regulations* as follows:

> "Furthermore, regulations under the patent law require generic drug manufacturers to demonstrate that their product is not infringing on a patent held by another drug manufacturer rather than putting the onus of the patent drug manufacturer to show that their patent has been infringed - what is referred to as the notice of compliance regulations. Suggestions have been made that this leads to "pre-emptory" lawsuits from patented drug manufacturers as a way of delaying the approval of generic drugs. Clearly, if this is the case, the practice is not in the public interest. The federal government should review this issue, determine what constitutes a legitimate extension of patent protection, and also consider ways of streamlining approval of generic drugs..."[10]

Why not use the ordinary patent litigation system for drugs?
Why a special system for litigation patents in one industry only?

The arguments usually put forward as to why the *Regulations* are needed are:

(a) patent litigation over drugs is lengthy,
(b) interlocutory injunctions are difficult to get,
(c) pharmaceuticals spend many years in the regulatory process before they can get on the market, and
(d) generic companies have the benefit of the "early working" exception in section 55.2(1) of the *Patent Act*.

These arguments are without basis.

There is no reason to treat pharmaceutical patentees differently from other patentees: Litigants in all industries may face court delays. The proper response is to devote resources to increasing the number of judges and court rooms - so that all such litigation can be resolved quicker, whether about drugs or not. Patent cases about drugs can and have been brought to trial in less than two years.

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[10] Romanow Report, p. 208 - 209.

Without the Regulations, drug patentees can sue for infringement just like any other patentee: The usual remedies available to any patentee are adequate, whether the patent is about a drug or any other invention: Any patentee that establishes that its patent is valid and infringed at trial is entitled to relief under section 57 of the *Patent Act*, which "gives the trial judge in an action for infringement of a patent a wide discretion to make such order as the judge sees fit."[11]

Such an order will typically grant the plaintiff damages, or an accounting of the defendant's profits, as the patentee may elect, delivery up of any infringing goods, a permanent injunction until patent expiry, and court costs. Punitive damages may be available in an appropriate case.[12]

Interlocutory injunctions are extraordinary remedies, rarely granted in <u>any</u> litigation. The *Regulations* effectively eliminate the discretion of the court over the granting of relief before trial – in this industry only. They impose an automatic injunction, without any of the normal safeguards used in all other litigation to ensure fairness.

The three part test that must normally be satisfied before an interlocutory injunction is granted in litigation of any kind is well-known: the moving party must establish:

(1) a *prima facie* case,
(2) that it will suffer irreparable harm if the injunction is not granted, and
(3) that the balance of convenience favours the granting of the interlocutory injunction. The moving party must give an undertaking as to damages.[13]

This test balances the interest of the both sides of the dispute. Only the brand drug industry claims this well-established test is unfair, and has used its lobbying power to get automatic injunctions.

The answer to regulatory delays is to reduce the delays, not add new ones: The remedy for regulatory delays is to devote resources to accelerate the drug approval process.

As set out below, brand-name drugs receive longer actual periods of market exclusivity in Canada after they complete the regulatory process than do brand drugs in the U.S.

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[11] *Bayer AG et al. v. Apotex Inc.* (2002), 16 C.P.R. (4th) 417 (Ont. C.A.) at paragraph 11.
[12] *Lubrizol Corp.* v. *Imperial Oil Ltd.* (1996) 67 C.P.R. (3d) 1 (FCA). *Apotex v. Merck* (2002), 19 C.P.R. (4th) 460.
[13] *RJR-Macdonald Inc. v. Canada*, [1994] 1 S.C. R. 311.

The "early working" exception existed long before the Regulations. *In any event whether the exception applies in any given case can be litigated in ordinary litigation process*: The "early working" provision in the *Patent Act* creates an exception available to any patentee, in any industry. The exception provides:

> **55.2 (1) Exception** - It is not an infringement of a patent for any person to make, construct, use or sell the patented invention solely for uses reasonably related to the development and submission of information required under any law of Canada, a province or a country other than Canada that regulates the manufacture, construction, use or sale of any product.

The subsection of the *Patent Act* that authorizes the *PM (NOC) Regulations* makes reference to the early working provision:

> **(4) Regulations** - The Governor in Council may make such regulations as the Governor in Council considers necessary for preventing the infringement of a patent by any person who makes, constructs, uses or sells a patented invention in accordance with subsection (1)...

The *Regulations* are not needed to determine whether the exception applies in any particular case, nor to impose remedies if not. The usual remedies for infringement can be pursued against a defendant in any patent action who raises the early working exception as a defence, and the court can determine at trial if the defence applies.

The "early working" exception has been upheld by a dispute panel of the World Trade Organization (WTO) as a reasonable "limited exception" under Article 20 of the TRIPS agreement on its own merits.[14]

The "early working" exception existed at common law years before the passing of s. 55.2(1) or (4).[15]

The cost of the *Regulations*

The automatic injunctions imposed by the *Regulations* have an obvious downside: non-infringing products are kept off the market. Not only does this harm generic drug makers who have no certainty when they can start to recoup their investments, but it also forces those who pay for prescription drugs in Canada to pay monopoly prices for longer than they should.

The CGPA estimates that delays caused by evergreening strategies involving the automatic 24-month injunction of the *Regulations* have cost Canadians more than $1 billion since their implementation in 1993.

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[14] *Canada - Patent Protection of Pharmaceutical Products*, WT/DS/114 (March 17, 2000)
[15] *Micro Chemicals Ltd. v. Smith Kline & French Inter-m. Corp.* [1972] S.C.R. 506, 520.

It also creates an economic disincentive to challenge potentially invalid patents, although such challenges benefit the public at large, and are indeed essential if the patent system is to function as intended.

The *Regulations* create an incentive to litigate weak patent claims, and to engage in evergreening strategies to start additional injunctions and extend the monopoly indefinitely.

As well, the issue between the parties (is the patent valid and infringed?) is not, and cannot be, finally determined under the *Regulations*, defeating the normal purpose of the courts: to resolve civil disputes.

The sheer volume of court cases under the *Regulations* has led to long delays in getting trial dates for non-pharmaceutical cases.

Multiple patents – triggering additional injunctions

It is important that the Committee understand what "evergreening" is, and why it keeps non-infringing products off the market, to the detriment generic drug manufacturers and, indeed, of all Canadians.

As mentioned above, "evergreening" describes a variety of strategies, all involving abuse of the *Regulations* to limit competition. A common strategy involves listing and litigating additional patents after the main patent on the active ingredient has expired, in order to trigger additional automatic injunctions, and prolong the patentee's market monopoly.

Listing new patents means another automatic injunction is started. If the generic manufacturer is already in litigation under the *Regulations* on one patent in connection with a particular drug product, it has to address any new patents that appear on the register for that product.[16]

If the generic does so by serving a notice of allegation, the brand can commence another application, and another 24-month automatic injunction is initiated. This may happen several times for a single product.

This can cause years of delay in the approval of the generic, due to the effect of multiple patents, as can be shown from the following chronology in respect of Apo-paroxetine, an anti-depressant (a diagram is found at Appendix A):

- The basic patent ('390) on paroxetine and its salts expired on September 5, 1995

[16] *PM(NOC) Regulations*, s. 5(2).

- Apotex filed a generic submission for Apo-paroxetine on August 29, 1997. It served Notices of Allegation (NOAs) to the listed patents, saying its product would not infringe.

- SmithKline Beecham commenced litigation in response (T-2660-96 and T-2230-97), triggering the automatic injunction.

- While that litigation was going on, SmithKline listed a further patent (the '637 patent), on February 17, 1998.

- Apotex won the court case on April 20, 1999[17]; the court said the patent at issue was not infringed, but Apotex was unable to obtain its NOC because the '637 patent had meanwhile been listed.

- Apotex's completed the health and safety approval process on October 9, 1999 (i.e. entered "patent hold" status, since litigation under the *Regulations* was still going on.)

- Apotex served an allegation saying the '637 patent was invalid. SmithKline started a new court case (T-677-99), starting the automatic injunction again.

- Apotex won this case as well on July 6, 2001[18]; the Court found Apotex's allegation of invalidity was justified.

- Although it had now won two patent cases on paroxetine, Apotex still could not get an NOC. SmithKline added *further* patents to the register, relating to various tablet formulations, preventing the issuance of an NOC to Apotex.

- Apotex had to serve allegations to those patents. SmithKline started another court case (T-1059-01) on June 15, 2001, triggering the injunction again, and another case (T-876-02) on June 6, 2002.

Note that the delay in market entry for this drug alone has been more than three years after the health and safety approval process was complete. Apotex has won all the patent cases so far. Yet it cannot get an NOC, due to the multiple patent evergreening strategy.

Eligibility: what patents can be listed?

The problem is that many patents can be listed under the *Regulations* for a given drug. The rules governing the eligibility of patents for listing on the register do not prevent this.

Section 4 of the *Regulations* governs the listing of patents. Broadly speaking the restrictions, such as they are, can be divided into two categories: subject matter restrictions and timing restrictions.

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[17] *SmithKline Beecham v. Apotex* (1999) 1 C.P.R. (4th) 99, affirmed (2001) 10 C.P.R. (4th) 338 (F.C.A).

[18] *SmithKline Beecham v. Apotex* (2001) 14 C.P.R. (4th) 76, affirmed (2002) 21 C.P.R. (4th) 129 (F.C.A.)

Subject matter restrictions

- Under section 4(2)(b), the patent list must set out claims containing a claim for the medicine itself or a claim for the use of the medicine.

- Process claims are not claims for the medicine itself, nor are claims to intermediates i.e. substances used in the manufacturing process.[19]

- Claims to metabolites are not claims for the medicine itself.[20]

- Claims to compositions, also known as formulations, i.e. where the invention is alleged to be the old active ingredient with certain fillers or coatings, or made a certain way, have been held to be claims to the medicine itself.[21] There can be many such patents for a single drug.

- Claims to medical devices are not claims to the medicine.[22]

- The Federal Court of Appeal in the recent *Eli Lilly* case, in a split 2 to 1 decision, held that patents on formulations *that the brand is not itself approved by Health Canada to sell* can be listed.[23]

The *Eli Lilly* case

In the Eli Lilly case, Eli Lilly listed a patent on a non-approved formulation of ceftazidime. On examination, Health Canada removed the patent because the patent was not on a formulation approved by Health Canada. Eli Lilly challenged the ruling in court and on January 22, 2003, the Federal Court of Appeal overturned earlier lower court decisions and quashed Health Canada's decision to remove the patent from the register.

The *Lilly* case effectively can make it impossible to bring out a generic drug in Canada.

The case turned on the unclear wording of the *Regulations.* As a result of the Eli Lilly decision, there is no real limit on the number of formulation patents that can be listed for a given drug.

A formulation patent claims the old (i.e. non-patentable) active ingredient combined, or 'formulated" with inactive ingredients such as fillers or a coating, or made a certain way.

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[19] *Deprenyl v. Apotex* (1995), 60 C.P.R. (3d) 501(F.C.A.), *Eli Lilly v. Apotex* (1996) 68 C.P.R. (3d) 126 (F.C.A.)
[20] *Merck v. Minister of Health* (2001), 12 C.P.R. (4th) 383.
[21] *Hoffman-La Roche Ltd. v. Canada (Minister of National Health and Welfare)*(1995), 62 C.P.R. (3d) 58 at 72, aff'd (1995), 67 C.P.R. (3d) 25, leave to appeal to SCC dismissed, [1996] 3 S.C.R. xi
[22] *Glaxo Group Ltd. v. Novopharm Ltd.* (1999), 87 C.P.R. (3d) 525 (F.C.A.), *Novartis v. Minister of Health* (T-193-01), October 7, 2002.
[23] *Eli Lilly v. Minister of Health*, 2003 FCA 24

Formulation patents typically expire years after the basic patent on the active ingredient. A generic version can usually be made that will not infringe such a patent.

The *Eli Lilly* case makes evergreening extremely easy to do, because a brand company will have, or can get, many patents on potential or experimental formulations of its drug that it is not actually using. If it can list such patents, it can repeatedly trigger automatic injunctions under the *Regulations*, and extend its monopoly indefinitely.

This is particularly so, since the timing restrictions have been interpreted to be largely meaningless in practice.

Timing restrictions

- Section 4(3) provides a patent list must be submitted at the time the brand files its initial new drug submission of health and safety approval.

- s. 4(4) creates an exception to the above: a patent may be listed if the "filing date" of the patent was prior to the brand's health and safety "submission", and the brand submits the patent to Health Canada within 30 days after the patent issues.

- There has been much litigation over what the relevant terms "filing date" and "submission" mean. Neither is defined in the *Regulations.*

- The term "filing date" does not include a priority date, the date on which the equivalent patent was filed in another country.[24]

- Section 4(4) has been interpreted in such a way as to render the time limit meaningless: a supplemental submission (SNDS) [25] has been held to be a "submission".[26] The Federal Court of Appeal said that a supplement to a submission may not be used to list a patent if the submission does not "change the drug".[27]

- At present, the practice of the Minister appears to be that patents can be listed with a supplemental submission except an SNDS for a mere product name change[28] or company name change.[29]

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[24] *Pfizer, Schering v. Canada* 2002 FCT 706, affirmed 2003 FCA 138.
[25] *Food and Drug Regulations.* C.08.003.
[26] *Apotex v. Minister of Health* (1999), 87 C.P.R. (3d) 271, affirmed (2001) 11 C.P.R. (4th) 538. See also *Ferring v. Canada* [2003] FCT 293.
[27] *Bristol Myers Squibb v. Canada* (2001) 10 C.P.R. (4th) 318, affirmed (2002) 16 C.P.R. (4th) 425.
[28] *Bristol Myers v. Canada*,
[29] *Toba Pharma Inc. v. Canada*, (2002) 21 C.P.R. (4th) 232

- This means the time limit is meaningless, because SNDS are filed on an on-going basis by any drug company, to update the information on file with Health Canada for any significant drug. Therefore, if the brand misses the time limit to list a patent with one submission, it can simply list the patent with a later supplemental submission. The patent need not be relevant to the submission.

- Uncertain about the case law, the Minister of Health commenced a "Reference by Federal Tribunal" to the Courts for Guidance in early 2002. The Minister asked the Court for guidance as to whether patents can be listed with a supplemental submission, if the patent claims do not claim the subject matter in the supplement. The Reference was struck out on the ground the facts put to the court by the Minister were in dispute.[30]

- The Minister of Health then circulated a question for comment on November 9, 2002, and held a "meeting" or informal hearing on the issue on December 2, 2002. So far, there has been no decision in response.

In short the brands sue the Minister whenever possible to force patents to be listed. The wording of the *Regulations* is unclear, and the case law is contradictory. The Minister seems unsure what patents can be listed and which cannot, thus is listing almost everything.

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[30] *Patented Medicines (Notice of Compliance) Regulations (Reference)*, (2003), 22 C.P.R. (4th) 62.

Examples of evergreening strategies under the *Regulations*

Varieties of evergreening

Evergreening strategies under the *Regulations* fall under seven somewhat interrelated categories:

1) Multiple injunctions
2) The *Eli Lilly* case - non-approved formulations
3) Late listing of patents after generic submission filed
4) Listing of inappropriate patents
5) Use patents
6) Abuse of the litigation process solely to trigger the automatic injunction
7) *Biolyse* case - use of the Regulations to stop non-generic products

The following are examples.

1. Multiple injunctions: Generic wins in court, but can't get on the market because new patents are listed

Paroxetine and omeprazole: Diagrams at Appendices A & B summarize the multi-patent strategy being used for two best-selling drugs, paroxetine (sold under the brand name PAXIL), an anti-depressant with $224 million in annual sales in Canada (also discussed below), and omeprazole capsules (brand name: LOSEC). Omeprazole is an antacid that is the number two selling drug in Canada with annual sales of $428 million.

In both cases, the basic patent has expired. For both, multiple other patents have been listed, leading to more court cases started to trigger new 24-month injunctions.

Both drugs are blockbusters. The lost savings to Canadians due to the unavailability of generic versions of these two drugs alone is $200 million per year.

Similar multi-injunction strategies are being used in the U.S. for these drugs. The FTC Report used paroxetine as a key example of abuse (see pages 48, 49 of FTC Report, Appendix H).

Both in Canada and the U.S., such multiple patent strategies have emerged since 1998 (see FTC Report p. 36). They are used particularly for major blockbusters whose basic patents have expired. Such strategies will be used for other blockbusters drugs in the future as their basic patents expire, unless the laws are changed (see Pfizer Inc. Power Point presentation in Appendix "D" which shows examples of the increase in the types of patents now listed.)

2. The *Eli Lilly* case: Patents on non-approved formulations

Multiple patent strategies recently became much easier to carry out, to the point that it may become impossible to bring out *any new generic products*.

In the *Eli Lilly case*, referred to above, the Federal Court of Appeal decided by a 2 to 1 margin that patents on non-approved formulations can be listed on the patent register (the decision is somewhat unclear). No generic party was allowed to be represented before the Court. Previous case law[31] had upheld the Minister in refusing to list such patents; a patent could only be listed if it claimed the version of the drug the patentee had approval from Health Canada to sell in Canada.

A formulation patent is a patent on the active ingredient on its own *in combination with* fillers, or coatings, or formulated into a tablet a certain way. Such patents are usually granted long after the active ingredient is known, and no longer patentable on its own. There is no limit to the number of potential formulations of any drug, each involving different fillers, coatings or other ingredients, that might be patented. If any patent on any potential formulation of the drug can be listed on the register, regardless of whether it is the formulation the brand is actually selling, then many such patents may be listed for any product. New automatic injunctions can then be continually started.

3. Late listing of patents: Patent listed *after* generic files its regulatory submission

The FTC Report also noted that a brand drug company will list "later issued" patents *after* the first generic submission has been submitted. (see pages 37, 45-46 of FTC Report and Appendix C to that Report). This also occurs in Canada. For example, in the case of clarithromycin (sold under the brand name BIAXIN BID), an antibiotic with annual sales in Canada of $63 million, Abbott Laboratories recently listed a patent (the '732 patent). The patent application was filed in July 1997. No other patent was on the register for clarithromycin at the time this patent was listed. Yet Abbott's product had been on the market since 1992.

A number of generic submissions for clarithromycin had already been submitted to Health Canada by different manufacturers *before* the patent was listed. Business decisions were made based on the fact no patent was listed.

Generic manufacturers are comparing their drug *with what Abbott has been selling since 1992* i.e. with technology that existed before the '732 patent was filed and which the patent cannot possibly cover and be valid.

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[31] Such as *Warner-Lambert v. Minister of Health* 2001 FCT 514

For this drug, the lost savings to Canadians caused by delays under the *Regulations* total $11 million.

4. Listing of inappropriate patents through supplemental submissions, etc.

Brands continually litigate and lobby to list as many patents as possible. The 1998 amendments, and the efforts of Health Canada to police the register, do not prevent new patents from being continually listed, as is shown by the paroxetine and omeprazole examples, above. Other examples include:

Patents filed with a supplemental submission, but not relevant to the supplemental submission: Brands now list patents where the patent is out of time to list against the brand's original submission for approval of its drug,[32] by listing the patent with a supplemental submission (a submission filed after the initial new drug submission (NDS) in order to update or change the information already filed).

Yet such patents are often not relevant to the supplemental submission. The submission, for example, may be for a new use, but the patent may be for a coating. The Minister of Health has listed such patents. A partial list of such patents now on the register is provided in Appendix C.

Patents listed with a supplemental submission for a product monograph revision: Brand companies now list patents with a supplemental submission for minor revisions in the product monograph (a document approved by Health Canada describing the drug's characteristics).

Examples:

- Patent '732 (referred to above) was listed in August 2001, in connection with a supplementary submission for a housekeeping three-line change in the product monograph for clarithromycin (sold under the brand name BIAXIN BID with annual sales of $63 million).

- Patent 1,318,602, for levodopa/carbidopa (sold under the brand name SINEMET with annual sales of $26 million) controlled release tablets, claiming certain inactive ingredients, was listed in connection with an unrelated minor product monograph revision in August 2000.

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[32] Under s. 4(4) of the *Regulations*, the filing date of the patent must be prior to the brand's health and safety submission.

Product Name Change: Ferring recently listed Patent No. 2,166,296 for desmopressin acetate. The patent was out of time to be listed. Ferring listed it anyway, through the simple expedient of filing a supplemental submission for a change in the product name. The filing of the supplemental submission re-started the time limit, said the court. The case is under appeal.[33]

Manufacturer Name Change: Patent '436 was submitted for sevoflurane (sold under the brand name SEVORANE AF with annual sales of $12 million), in connection with a supplemental change seeking a change in the manufacturer's name (the Minister was successful in refusing to list this patent.)[34]

Patents for non-approved formulations: As noted above, the Eli Lilly case permits patents claiming drug formulations other than the brand's own approved formulation to be listed.[35] This greatly enlarges the number of patents that can potentially be listed for any product.

Priority date v. "filing date": In order to be eligible for listing, the filing date of the patent must be prior to the submission date. Brands have gone to court seeking an order that "filing date," means the international priority date, which is usually approximately a year earlier, which would greatly expand the class of listable patents. (Courts have upheld the Minister in not listing such patents.)[36]

Listing patents for non-marketed products: Brands commonly remove products from the market as their patent expiry draws near, and replace them with slightly different dosage forms, against which more patents can be listed.

For example, omeprazole capsules were removed from the market, and replaced with omeprazole tablets in 1996. The change did not benefit patients in any way; its sole purpose appears to be to delay generic competition. In early 2002, the brand nevertheless listed an additional patent, 2,133,762, against the capsules, despite the fact they were no longer on the market. There are now eight patents for most dosage forms of omeprazole, although the basic patent on the drug expired in 1999, and generic versions are on the market in the US.

These examples show that, as long as there is an automatic injunction permitted under Canadian law, every effort will be made to list multiple patents in order to start as many automatic injunctions as possible.

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[33] *Ferring v. AG Canada, Apotex 2003 FCT 293*
[34] *Toba Pharma Inc. v. A.G. Canada*, 2002 FCT 927
[35] *Eli Lilly v. Minister of Health* 2003 FCA 24
[36] *Pfizer v. AG. Canada* (2003 FCA 138)

5. Use patents

Brand companies can sometimes extend their monopoly long after the expiry of the basic patent by obtaining patents on different methods of using the drug in treatment.

Even if the generic states that it will not seek approval for the patented use, the brand may be able to use the *Regulations* to prevent the generic manufacturer from receiving approval for its drug at all, even for non-patented uses, and even if patents on the drug itself have expired. There are now what appear to be conflicting court decisions on this point.[37]

Use patents can also cause other problems under the Regulations.

Sertraline: In a recent case involving sertraline (ZOLOFT), an anti-depressant with annual sales in Canada of $113 million before generic versions made it to market, U.S.-based pharmaceutical giant Pfizer listed a patent claiming two secondary uses (obsessive compulsive disorder and panic disorder). Because of the injunction in the *Regulations*, Pfizer was able to restrict approval of generic sertraline for only certain uses, leading to a restricted listing in the Ontario formulary, reduced generic sales, disruption for patients and pharmacists throughout Ontario, and millions of dollars in additional costs for Ontario taxpayers.[38] Yet the Federal Court recently found the patent to be invalid.[39]

In short, Pfizer was able to use the *Regulations* to cause disruption and reduced sales of generics through listing an invalid patent.

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[37] *P&G v. Genpharm* (2002 FCA 290), *AB Hassle v. Rhoxalpharma* (2002 FCT 780) are cases were the generic drug was prohibited because of a method of use patent, although the generic did not seek approval for the patented use. On the other hand, the court declined to order prohibition against a generic manufacturer that did not seek approval for a patented use in *AB Hassle v. Apotex* 2002 FCA 421, aff'd A-716-01, November 1, 2002.

[38] See *Apotex v. Minister of Health*, Ontario Court of Appeal, Docket C36098, February 13, 2002.

[39] *Pfizer v. Apotex* 2002 FCT 1138.

6. Delays/Abuses of litigation process solely to trigger the automatic injunction

Brands frequently start cases under the *Regulations* even when there is clearly no real patent issue, solely in order to obtain the injunction. Some examples:

Cefuroxime: In the case of cefuroxime axetil (sold under the brand name CEFTIN with annual sales of $11 million), an antibiotic, Glaxo lost a court case under the *Regulations*[40]. Apotex then made a minor variation to its submission, and had to file a new notice of allegation. Although all the patent issues had been litigated in the previous proceeding, Glaxo still commenced a s. 6 proceeding, raising the same issues. It is clear that it did so solely to trigger the automatic injunction and block the generic from coming to market. Glaxo's second case was eventually struck out as an abuse of process.[41]

Lovastatin (sold under the brand name MEVACOR with $98 million in annual sales before the first generic came on the market in 1997): Generic versions of this blockbuster cholesterol drug were kept off the market for many years by litigation under the *Regulations*. The proceedings were eventually dismissed long after Health Canada's health and safety approval process for the generic products was complete. For example, one section 6 prohibition case kept Apotex's generic product off the market for years but Merck never even asserted in that proceeding that its patent was in fact infringed. The additional cost to Canadians for lovastatin during the delay was $12 million.

Other delayed drugs: Other major generic drugs that have been long delayed by court cases under the *Regulations*, although the proceedings were eventually dismissed, include the following blockbuster products:

Generic Name	Brand Name	Annual Sales Prior to First Generic
nizatidine	AXID	$16 million
norfloxacin	NOROXIN	$17 million
naproxen SR	NAPROSYN SR	$2 million
acyclovir	ZOVIRAX	$31 million
fluconazole	DIFLUCAN	$14 million

Apotex has commenced proceedings seeking damages for these drugs. The brands vigourously opposing any award of damages, and claim the damages section itself is unconstitutional.

It is clear that the people of Canada will never receive compensation or damages for these delays, although they paid more for drugs due to the improper monopoly during the delay.

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[40] *Glaxo v. Apotex* T-415-98, aff'd 2001 FCA 96
[41] *Glaxo v. Apotex* 2001 FCT 16

Brands often make procedural arguments in order to delay cases under the *Regulations*, and never even assert that the patent is infringed. For example:

Simvastatin (sold under the brand name ZOCOR with annual sales of $267 million): Merck obtained a injunction by commencing litigation under the *Regulations* on this cholesterol drug, but never argued that the patent was in fact infringed. Apotex served its allegation of non-infringement prior to serving its submission, as it was permitted to do under the pre-1998 Regulations. When the case got to a hearing more than two years later, Merck did not argue that the patent was infringed, but that Apotex's allegation was "premature" and not allowed under the post-1998 amendments[42]. Apotex served a new notice of allegation. Merck started new prohibition proceedings, but again did not even argue its patent was infringed. Merck's second case was eventually dismissed as well.[43] The automatic injunction was in place throughout all this pointless litigation.

7. *Biolyse* case: Use of *Regulations* to prevent market entry of non-generic products.

The Regulations were recently used to close down Biolyse, a small St. Catherines company that had approval to sell a low-cost version of paclitaxel, a cancer drug.

Biolyse did not file an abbreviated submission for Health Canada approval. That is, it did not seek approval on the basis of a comparison with the existing product, BMS' PAXIL, as a generic submission usually does. Instead, its paclitaxel product was approved on the basis its own clinical trial establishing safety and effectiveness. Health Canada took the view that Biolyse was not caught by the Regulations, and issued an NOC. However BMS sued Health Canada and Biolyse saying the NOC should not have issued because of the Regulations, basing its argument on a poorly worded amendment (s. 5(1.1)), passed quickly in 1999, at the request of the brands.

Based on the wording of s. 5(1.1), the Court found the Minister was wrong: Biolyse should have served a notice of allegation on BMS. The Court ordered the NOC revoked.[44]

Biolyse cannot afford to go through two years or more of complex litigation under the Regulations, with no revenue, and with the possibility that more patents could be added to the register to prolong the monopoly. Paclitaxel was its only product, so the company has essentially been forced to the brink of extinction.

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[42] *Merck v. Apotex*, T-418-98, May 3, 2000.
[43] *Merck v. Apotex,* 2002 FCT 1195.
[44] *BMS v. Biolyse Pharma and A.G. Canada* 2003 FCA 180

Canada's Prescription Drug Expenditures

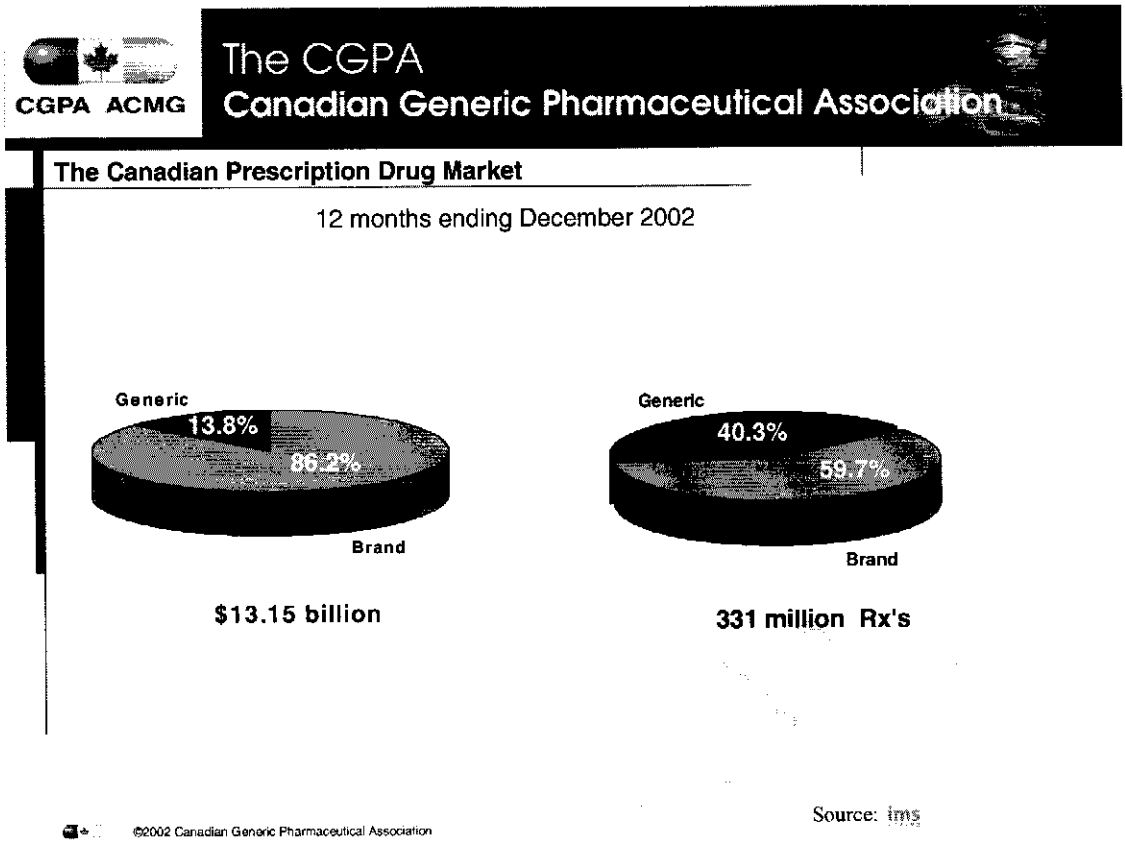
Drug costs are the fastest rising expenditure in Canadian health care.

According to the Canadian Institute for Health Information (CIHI), in 1980, $1.3 billion was spent on prescription drugs in Canada, which represented 5.8% of total health care expenditures. By 2001, the percentage had doubled to 12% and the total amount of money spent on prescription drugs had climbed dramatically to $12.3 billion. Data from IMS HEALTH shows that for the 12 months ending December 2002, Canadians spent $13.15 billion on prescription drugs.

Chapter Nine of the Final Report on the Future of Health Care in Canada points out that more than 300 million prescriptions are filled in Canada, amounting to approximately 10 prescriptions for each man, woman and child in Canada. The Report also states that a Canadian family spends an average of $1,210 a year on prescription drugs.

Savings provided by generic drugs

While generic drugs fill more than 40% of all prescriptions in Canada, generics account for only 13.8% of Canada's $13 billion annual prescription drug expenditure.



Based on these data, it is impossible to dispute that generic pharmaceuticals provide substantial savings to the health-care system. It is equally impossible to dispute that the increased use of generics, and the introduction of generic medicines more quickly will result in even greater savings to governments, employers and consumers.

As the chart above illustrates, despite the indisputable savings to be achieved from generics, brand-name medicines continue their stranglehold on the market. As a result, Canada's prescription drug bill continues to show double-digit annual increases.

Provincial/Territorial prescription drug expenditures
According to the CIHI, from 1982/83 to 2002/03, drug expenditures have experienced the most significant gain in share of total provincial/territorial health-care expenditure, reaching 7.8%, 4.9 percentage points above the 2.9 percent of total expenditure that it was in 1982/1983.

Provincial/Territorial Drug Expenditures

Year	$ (billions)	Annual Percentage Increase
2000/01	4.7	17.3
2001/02 (forecast)	5.4	14.6

Source: CIHI (*Preliminary Provincial and Territorial Government Health Expenditure Estimates 1974/1975 to 2002/2003*, November 2002)

Drug costs rising faster in Canada than rest of World
IMS HEALTH data for the 12 months ending September 2002 shows that Canada's drug costs are increasing faster than any country in the world. Canada's expenditures were up 16%, while costs were up 13% in the U.S., 12% in the U.K., 10% in Spain, 9% in Germany, 5% in Italy and 3% in France.

The price of pharmaceuticals: Brand vs. Generic
A price comparison based on data from IMS HEALTH comparing brand name and generic prices of virtually every multi-source product on the Canadian market shows that the average price differential between generic and brand products is 45%.

According to data from IMS HEALTH, the average cost of a brand-name prescription has increased by 76% from $31.52 in 1992 to $55.56 in 2002. During the same period of time, the average cost of a generic prescription increased from $16.35 to $21.57, or 32%.

Price per prescription	1992	2002	% Increase
Brand	$31.52	$55.56	76%
Generic	$16.35	$21.57	32%

To further highlight this point, the report *Health Care in Canada: 2002* released May 29, 2002 by the Canadian Institute for Health Information (CIHI) notes that *"[b]y 1998/1999, provincial drug plans in Ontario, Saskatchewan, Alberta, and British Columbia were paying more, in total, for drugs introduced after 1991/1992 ("newer" drugs) than for older ("existing") drugs. Between 1993/1994 and 1998/1999, total drug expenditures climbed, while spending on existing drugs decreased."*

The CIHI Report goes on to say that: *"The average cost of new drugs, however, has increased steadily over time, in excess of what would be expected on the basis of inflation alone, New drugs introduced between 1998 and 2000, for example, cost, on average, $114.41 per prescription in 2000."*

The price of generic pharmaceuticals: Canada vs. United States
Over the past several months, data from a number of sources has been used to make a variety of claims about the price of generic pharmaceuticals in Canada versus the United States.

In order to obtain an independent, accurate picture of the price of generics in Canada and the United Sates, the CGPA examined sales data from IMS HEALTH Global Services for the 28 top-selling generic drugs common to both countries for the twelve months ending September 2002.

To ensure a valid comparison, the data from IMS HEALTH Global Services are prices into drug stores based on wholesaler and manufacturer invoices in both the United States and Canada. The prices represent the average price per unit (i.e. capsule, tablet). Dispensing fees and any wholesaler markup are not included.

All the prices provided from IMS HEALTH Global services were in U.S. funds. The CGPA converted the prices to Canadian funds using IMS's conversion factor of 1.561147.

The data shows that the 28 top-selling generic drugs common to both countries are priced, on average, 28% less in Canada.

Please see chart on following page

Canadian vs. US Generic Prices							
				Price per tablet (CDNS)		Bottle of 100	
Generic Name	Canadian Brand Name(s)	Strength	Main Indication	Canada	US	Canada	US
acebutolol	Monitan/Sectral	200mg	Heart	0.20	0.54	20.14	54.17
amiodarone	Cordarone	200mg	Heart	1.11	0.94	111.31	93.82
amoxicillin	Amoxil	500mg	Anti-infective	0.16	0.15	16.39	15.14
atenolol	Tenormin	50mg	Blood Pressure	0.32	0.03	31.54	3.12
cephalexin	Keflex	500mg	Anti-infective	0.26	0.33	26.23	33.25
clindamycin	Dalacin C	300mg	Anti-infective	0.93	3.51	92.89	351.26
clonazepam	Rivotril	0.5mg	Seizure Treatment	0.10	0.10	10.30	9.52
cyclobenzaprine	Flexeril	10mg	Muscle Relaxant	0.30	0.24	30.13	23.57
diclofenac	Voltaren	50mg	Arthritis/Pain Reliever	0.32	0.38	31.85	37.78
diltiazem hcl	Cardizem CD	240mg	Heart	1.27	1.45	127.08	145.50
famotidine	Pepcid	40mg	Ulcer	0.86	0.74	85.55	73.53
fenofibrate	Lipidil Micro	200mg	Anti-Cholesterol	0.98	2.80	97.73	279.76
fluoxetine	Prozac	20mg	Anti-depressant	0.79	1.38	79.46	138.32
fluvoxamine	Luvox	100mg	Anti-depressant	0.74	1.20	74.15	120.05
glyburide	Diabeta	5mg	Diabetes	0.06	0.14	5.78	13.74
lisinopril	Prinivil/Zestril	20mg	Blood Pressure	0.79	0.54	78.84	53.86
lorazepam	Ativan	1mg	Anti-anxiety	0.04	0.13	3.90	13.11
lovastatin	Mevacor	20mg	Anti-Cholesterol	0.97	0.92	97.26	91.80
metformin	Glucophage	500mg	Diabetes	0.10	0.29	10.46	29.35
metoprolol	Lopresor/Betaloc	50mg	Blood Pressure	0.10	0.12	9.99	11.86
minocycline	Minocin	100mg	Anti-infective	0.86	0.74	86.49	73.53
naproxen	Naprosyn	500mg	Arthritis/Pain Reliever	0.17	0.14	17.02	13.58
ranitidine	Zantac	150mg	Ulcer	0.32	0.14	31.54	14.05
sotalol	Sotacor	80mg	Blood Pressure	0.49	0.38	49.18	37.62
terazosin	Hytrin	5mg	Prostate	0.51	0.71	50.58	70.72
trazodone	Desyrel	50mg	Anti-depressant	0.18	0.53	18.42	53.08
verapamil	Isoptin	120mg	Heart	0.76	0.38	75.56	38.33
warfarin	Coumadin	1mg	Blood Thinner	0.18	0.33	17.64	33.25
Total of 28 products				$ 13.87	$ 19.27	$ 1,387.39	$ 1,926.69
Price Difference Canada vs. US (Based on bottles of 100, 28 products)							$ 539.30
Percentage Difference Canada vs. US							-28.0%

Source: Prices into drugstores based on wholesaler and manufacturer invoices-IMS HEALTH Global Services, 12 months ending September 2002

Prices=average price per unit, derived by dividing sales by units sold

Note: Dispensing fees not included in prices

Exchange rate IMS HEALTH Global as of Qtr3/2002=1.561147

Products in study =leading strength of top generic oral solids(IMS Canada prescription sales) with equivalent product in the US

U.S. Moves to End Abuse of Drug Patent Laws

The United States is the only other country in the world with an automatic injunction for patent disputes in the pharmaceutical industry. As in Canada, the brand companies have discovered ways of manipulating the system to prolong market monopolies. But unlike Canada, the federal government and state governments have taken action to stop it in order to stop anti-competitive behaviour and help control prescription drug costs.

> *"There have been some legalistic ways of extending patent life, which I don't think are legitimate. One has to accept that patents have an end."*
> **Daniel Vasella, chairman and CEO of Novartis, USA Today June 6, 2002**

Federal Trade Commission (FTC) investigation

In July 2002, the United States Federal Trade Commission published findings of its investigation of brand-name drug companies' abuse of the automatic injunction under U.S. patent law. The FTC's first recommendation was to permit only one automatic injunction per drug.

> Recommendation 1: Permit only one automatic 30-month stay per drug product per ANDA to resolve infringement disputes over patents listed in the Orange Book prior to the filing date of the generic applicant's ANDA.
> **Generic Drug Entry Prior to Patent Expiration: An FTC Study, July 2002**

Bristol-Myers Squibb settles lawsuits over BuSpar and Taxol

The use of the automatic injunction has also been the subject of anti-trust lawsuits filed by 29 state governments against Bristol-Myers Squibb over the cancer drug Taxol and the anxiety medication BuSpar. In January 2003, Bristol-Myers Squibb announced it would pay $670 million to settle the litigation.

The states' BuSpar lawsuit, filed in December 2001, was sparked by the company's 11th-hour attempt to extend the patent that was due to expire in November 2000 by seeking a further patent on the drug's metabolite, or the way the body breaks down the drug.

On Friday, March 7, 2003, The U.S. Federal Trade Commission (FTC) announced Bristol-Myers Squibb agreed to settle antitrust charges that it illegally kept cheaper versions of three drugs off the market.

> *"This case, and others we have brought and will bring, stands for an important proposition: competition must be on the merits, not through misusing the government to stifle your competition."*
> **Timothy J. Muris, Chairman of the Federal Trade Commission, FTC news release, March 7, 2003 (Appendix I)**

The FTC had accused Bristol-Myers of a series of anti-competitive acts over the past decade to obstruct generic competition to its anti-anxiety drug BuSpar, and cancer drugs Taxol and Platinol.

The settlement, lasting 10 years, eliminates Bristol-Myer Squibb's ability to fend off generic competitors for 30 months at a time by filing additional patents for a particular drug.

> *"Bristol's illegal conduct protected nearly $2 billion in yearly sales from the three monopolies, forcing cancer patients and others to overpay by hundreds of millions of dollars for important and often life-saving medications."* **FTC Chairman Timothy J. Muris, March 7, 2003 FTC news conference**

Bristol-Myers Squibb said in its March 7, 2003 press statement that *"[t]he restrictions should not significantly impact the protection of the company's patent and other intellectual property rights, nor adversely impact the company's financial position."*

This statement from Bristol-Myers Squibb directed at investors begs an obvious question: If this is true, then why does the brand industry continue to argue that it needs automatic injunctions?

Business for Affordable Medicines
Major U.S. corporations such as General Motors, Wal-Mart, Motorola, Kellogg and Weyerhaeuser have joined forces with state governors and the AFL-CIO to form BAM, Business for Affordable Medicines, to lobby for changes to drug patent rules that are costing them billions of dollars by needlessly delaying generic competition.

McCain-Schumer Bill
On January 7, 2003, US Senators Charles E. Schumer and John McCain re-introduced legislation along with US Senators John Edwards, Susan Collins and 15 others to ban the automatic 30-month injunction under U.S. patent law.

Waxman says automatic injunction not needed
The architect of the 1984 U.S. federal drug patent legislation known as the Hatch-Waxman Act, Representative Henry Waxman, says he will introduce a generic drug reform bill this session that would eliminate brand companies' ability to obtain even one 30-month delay while patent lawsuits are in play.

> *"There no longer is good justification" for the 30-month stay. In the mid-1980's, "we were told the generic industry was a fly-by-night industry, and if the brand name companies got a judgment, they would never be able to collect. No one can make the argument today."*
> **Representative Henry Waxman, January 28, 2003**
> **Generic Pharmaceutical Association annual conference**
> **Rio Grande, Puerto Rico**

U.S. President George Bush takes aim at drug patent law abuse
On October 21, 2002, U.S. President George W. Bush announced he is taking action to close loopholes in U.S. drug patent laws that brand-name drug manufacturers have manipulated to unfairly delay the approval of competing generic drugs. President Bush's proposal calls for a limit of one automatic injunction per drug.

> *"When a drug patent is about to expire, one method some companies use is to file a brand new patent based on a minor feature, such as the color of the pill bottle or a specific combination of ingredients unrelated to the drug's effectiveness. In this way, the brand name company buys time through repeated delays, called automatic stays, that freeze the status quo as the legal complexities are sorted out. In the meantime, the lower-cost generic drug is shut out of the market."*
> **U.S. President George W. Bush, October 21, 2002 (Appendix J)**

Bush Proposals to Stop Abuse of Drug Patent Laws

USA Proposals	What Big Pharma Says About Canada	The Truth
Limiting the types of patents that can be listed. Patents that claim packaging or intermediaries of a drug cannot be listed	Canada already has these rules	Multiple patents are listed for many drugs, leading to multiple automatic injunctions
Permitting the listing of patents that claim the active ingredient, a composition or formulation, methods of using the drug. Product by process claims can also be listed	These rules already apply in Canada	Multiple patents are listed for many drugs, leading to multiple automatic injunctions
Requiring the innovator to submit more detailed information for the patents submitted, including identifying the claims that relate to the drug substance, drug product or method of use	Health Canada currently reviews each patent submitted to determine whether the claims relate to the medicine itself or the use of the medicine	When Health Canada attempts to remove brand patents, the brand companies sue them. As a result many improperly listed patents are still listed
Allowing only one 30-month injunction per generic application (ANDA) per drug to address the FDA's inability to audit the patent list	This is not necessary in Canada. The Minster of Health monitors, and audits, the list in order to ensure that only eligible patents are on the Patent Register	In Canada, while court cases are ongoing and generics are subject to 24-month injunction, brand companies continue to list additional patents in order to trigger additional injunctions and restart the process over and over again. The *Regulations* must be eliminated.

Overall Differences Between Patent System in the USA and Canada

Provision **What Big Pharma Says** **The Truth**

	Canada	USA	
20 Year Patent Term	Yes	Yes	**CORRECT**
Practical Availability of Interlocutory Injunctions *(Legal mechanism to prevent market entry due to suspected infringement)*	No	Yes	**FALSE.** As is the case in patent disputes in every other industry in Canada, if the innovator makes a sound legal argument, the courts may order an interlocutory injunction
Linkage Regulations *(a system to ensure that a generic drug does not infringe the patent of the drug it seeks to copy before market entry)*	Yes	Yes	**CORRECT.** Canada and the U.S. are the only two countries in the world that provide an automatic block against generic drug approvals without requiring brand companies to provide any proof of patent infringement
Effective data protection *(the ability to protect a patentee's clinical data for a drug from being copied)*	No	Yes	**FALSE.** The Federal Court of Appeal has ruled that Canada's data protection is consistent with NAFTA provisions, which were negotiated with the U.S.
Patent Term Restoration *(the ability to add time to the end of a patent if the development time and government's approval time is excessive)*	No	Yes	**MOOT.** In his October 21 announcement, President Bush said brand drugs are on the market in the U.S. for an average of 11 years before generic versions are available. In Canada, review of data from IMS Health shows that brand drugs are on the market for an average of 13.7 years before generic versions are available
Government's Ability to monitor and audit Patent Register	Yes	No	**FALSE.** When Health Canada attempts to remove patents from the list, brand companies sue them. Health Canada often leaves improperly listed patents on the register
Damages available to generics if they are delayed by patentee	Yes	No	**MISLEADING.** There has never been a damage award to a generic in Canada even after a brand patent(s) has been found invalid or the generic not to infringe. Furthermore, brand companies have attacked Canada's damage provisions as unconstitutional
Tendency for generics to initiate multiple court cases to attempt to bypass patents	Yes	No	**HIGHLY MISLEADING.** Brand companies list multiple patents on drugs to initiate multiple injunctions. Generics have no choice but to challenge each patent in order to come to market.

Canada's current drug patent regime is failing Canadians

The federal government's stated goal for enacting the *Patented Medicines (Notice of Compliance) Regulations* was to encourage innovation and research and development in Canada. After 10 years under this regime, it is now evident that the *Regulations* have been a failure.

- Canadians have the fastest rising prescription drug costs in the world
- Compared with other countries, little pharmaceutical research is conducted in Canada
- Canada's trade deficit in pharmaceuticals has nearly tripled in the past five years

Generic industry supports patent protection

Canada's generic pharmaceutical industry supports patent rights, intellectual property protection, and the right of any pharmaceutical company, brand or generic, to recoup its investment and make a reasonable profit.

However, the key word is "reasonable." Legislators should not be drawn into the false argument that it is necessary for the pharmaceutical industry to consistently and significantly top every other industry in ever every measure of profit in order to be able to afford necessary and desirable investment to discover and develop new medicines.

Most Profitable Industries
Fortune April 14, 2003

Rank	Industry	2002 Profits as % of Revenues	Rank	Industry	2002 Profits as % of Assets	Rank	Industry	2002 Profits as % of Equity
1	**Pharmaceuticals**	17.0	1	**Pharmaceuticals**	14.1	1	Household and personal products	30.7
2	Commercial Banks	16.9	2	Household and personal products	10.7	2	**Pharmaceuticals**	**27.6**
3	Medical Products and Equipment	11.9	3	Medical Products and Equipment	9.5	3	Food Consumer Products	23.2
4	Household and personal products	10.8	4	Food Services	9.4	4	Medical Products and Equipment	23.1
5	Diversified Financials	10.6	5	Publishing, Printing	8.2	5	Homebuilders	21.3
	The 500 Median	3.1		**The 500 Median**	2.3		**The 500 Median**	10.2

Families USA is a nonprofit, non-partisan organization dedicated to the achievement of high-quality, affordable health and long-term care for all Americans. In July 2002 Families USA published a report titled *Profiting from Pain: Where Prescription Drug Dollars Go.*

The Report examined the annual financial statements reports that the nine U.S. drug companies that market the top 50 drugs prescribed to seniors submitted to the U.S. Securities and Exchange Commission (SEC) covering operations in 2001.

The key findings of the Families USA study include the following:

- Eight of the nine companies spent more than twice as much on marketing, advertising and administration as they did on R&D
- The remaining company, Eli-Lilly, spent more than one-and-one half times as much on marketing, advertising and administration as it did on R&D
- On average, the nine companies spent 11% of revenue on R&D and 27% of revenue on marketing, advertising and administration
- No company spent as much as 20% of revenue on R&D but every company except Merck spent more than 20% of revenue on marketing, advertising and administration

Source: *Profiting from Pain: Where Prescription Dollars Go, A Report by Families USA*, July 2002, page 5

2001 Financials for U.S. Corporations Marketing the Top 50 Drugs for Seniors
Source: *Profiting from Pain: Where Prescription Dollars Go, A Report by Families USA*, July 2002, page 3

Company	Revenue (Net Sales in Millions of US dollars)	% of Revenue allocated to Marketing/ Advertising/ Administration	% of Revenue Allocated to R&D	%of Revenue Allocated to Profit
Merck	$47,716	13%	5%	15%
Pfizer	$32,259	35%	15%	24%
Bristol-Myers Squibb	$19,423	27%	12%	27%
Abbott	$16,285	23%	10%	10%
Wyeth	$14,129	37%	13%	16%
Pharmacia	$13,837	44%	16%	11%
Eli Lilly	$11,543	30%	19%	24%
Shering-Plough	$9,802	36%	13%	20%
Allergan	$1,685	42%	15%	13%
Total (Dollars in US millions)	**$166,678**	**27%** $45,413	**11%** $19,076	**18%** $30,599

Unreasonable market exclusivity stifles competition, thereby removing the incentive for true innovation. The dangers of monopolies are recognized in virtually every other area of our economy and it is time for the federal government to recognize the damage that abuse of our drug patent laws is inflicting on our nation's health-care system.

Periods of market exclusivity in Canada
In defence of the *Regulations*, representatives of brand-name drug manufacturers claim that generic pharmaceuticals in Canada come to market more quickly than is the case in the United States. This is false.

In his October 21, 2002 remarks regarding his initiatives to end abuse of U.S. drug patent law U.S. President George W. Bush's October 21, 2002 said, *"New drugs, on average, are sold for 11 years under patent protection, then generic versions become available."*

The CGPA examined Canadian sales figures from IMS Health between January 1997 and October 2002 listing when a brand product launched and the length of time before a generic version was introduced. To determine the length of market exclusivity for brand-name products, the CGPA took the date of the first sales of the brand product, and the first sales of the first generic equivalent, then simply subtracted.

These data show the average period of market exclusivity for the brand companies was 13.7 years in Canada. This figure compares closely to a 1997 study conducted by Professor Malcolm Anderson of Queen's University who found the average period of market exclusivity in Canada was 12 to 14 years.

Questionable figures on R&D expenditures
The mantra of the brand-name pharmaceutical industry is that without high-priced drugs and extraordinary rules like the *Patented Medicines (Notice of Compliance) Regulations* there will not be enough profit to recoup investments in research and development.

In fact, the lobby group for the brand-name industry in Canada claims that the average cost to develop a new medicine is $1.3 billion. This figure is a conversion to Canadian dollars from the US$800 million figure used by the brands in the United States.

One of the most commonly cited sources for this figure is a November 2001 report from the Tufts Center for the Study of Drug Development, which receives 65% of its funding from drug companies. *(Comparing Facts. Innovative Medicines vs. Generic Copy,* Rx&D website www.canadapharma.org*)*

In a February 18, 2003 article in *The Guardian* newspaper, Graham Dukes, professor of pharmacotherapy at the University of Oslo in Norway, says these figures are grossly exaggerated.

Dukes said, *"The figures vary so widely that most of them must be wrong."*

He says many of them include the costs of advertising, marketing and sales, and half the Tufts figure is "opportunity costs of capital" or what the money would have earned if it had been invested in something else instead.

Dukes says a reasonable figure would be somewhere be between US$100 million and US$200 million per new drug.

These figures correspond with a 2002 report from Public Citizen, a US-based non-profit research group, which found brand companies spend an average of US$240 million on each new drug. (*America's Other Drug Problem: A Briefing Book on the Rx Drug Debate,* Page 47)

One thing is clear, even though the $1.3 billion figure is used by the brand companies in Canada to argue for the maintenance of the *Regulations*, they spend only one-tenth of that amount per drug in Canada.

According to the 2001 Annual Report of the Patented Medicine Prices Review Board (PMPRB), R&D expenditures for all patentees in 2001 were $1.06 billion. In that same year, there were 82 new, patented drug products for human use. This translates to an expenditure of approximately $13 million per new drug in Canada.

Falling investment in research and development

The latest Annual Report of the Patented Medicine Prices Review Board states *"[t]he ratio of R&D expenditures to sales revenue for the patented pharmaceutical industry was 9.9% in 2001, down from 10.1% in 2000."* (Page 27 of PMPRB 2001 Annual Report)

What is worse, the report goes on to say, *"the R&D–to–sales ratios for all patentees and Rx&D companies were lower in 2001 than in any year since 1992."* (Page 27 of PMPRB 2001 Annual Report)

Spending on basic research
An even more telling figure provided by the PMPRB is on basic research.

> *"Expenditures on basis research increased by 2.5% in 2001, but its share of total R&D continued to decline from 17.8% in 2000 to 16.1% in 2001. This is the lowest proportion of total R&D spending on basic research ever reported by patentees since the Board began reporting such information in 1988."*
> **PMPRB 2001 Annual Report, Page 28 (Appendix K)**

Canada's pharmaceutical R&D spending well behind other countries
The PMPRB's December 2002 report *A Comparison of Pharmaceutical Research and Development Spending in Canada and Selected Countries*, reported the following:

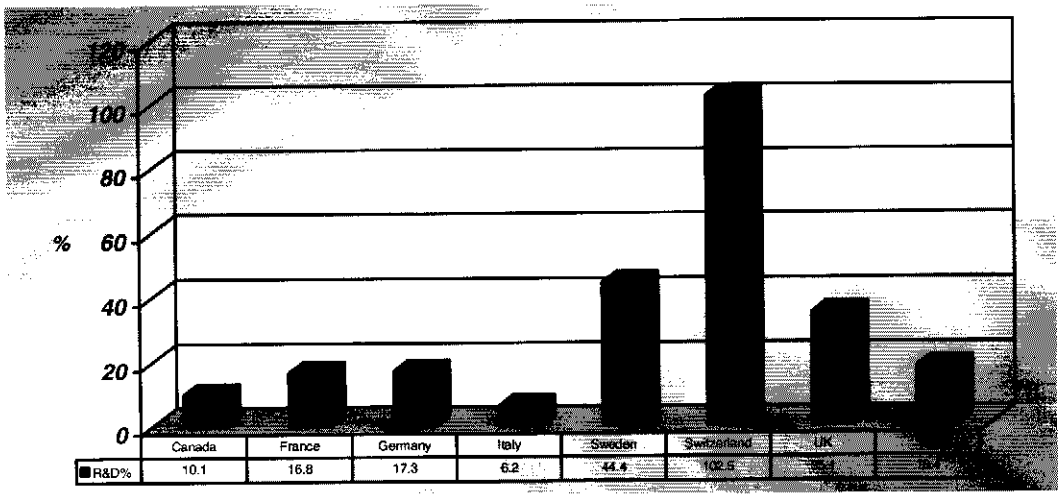
- Despite growth in R&D spending, Canada ranked behind other major industrialized countries in R&D spending by several measures.

- The ratio of R&D to domestic sales in Canada remains well below values in the United States and Europe. In 2000, the Canadian ratio was 10.1% while the aggregate ratio for the seven countries used for the PMPRB's comparison was nearly double that at 19%. Only Italy had a lower ratio than Canada.

- Among major industrialized countries, Canada accounts for a share total R&D that is roughly one-half of its share of total pharmaceutical sales.

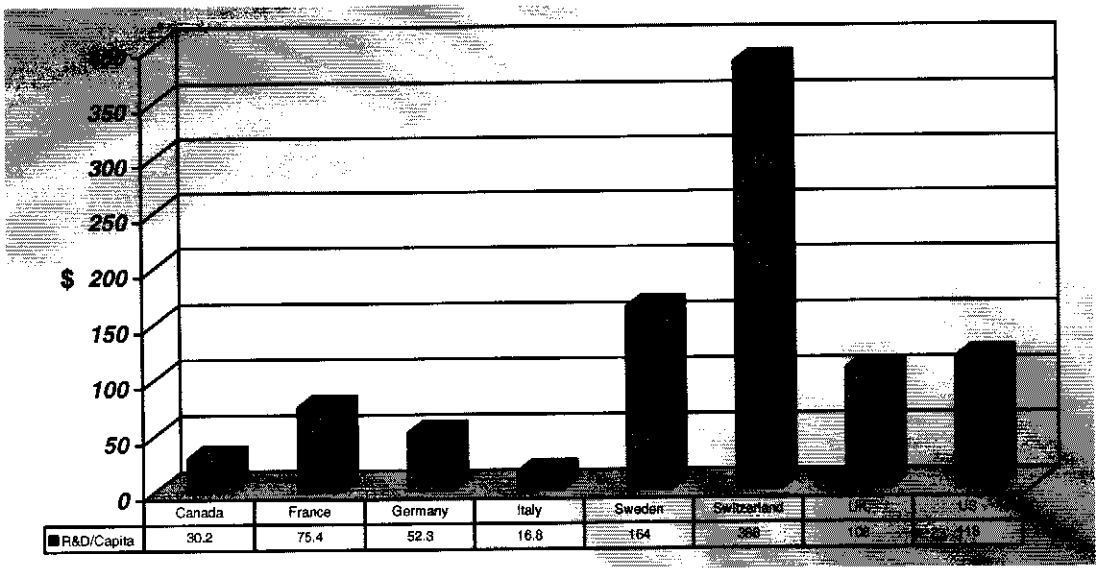
Source: *A Comparison of Pharmaceutical Research and Development Spending in Canada and Selected Countries*, Page 4

R&D-to-domestic-sales ratio, Canada and selected countries, 2002
Source: *A Comparison of Pharmaceutical Research and Development Spending in Canada and Selected Countries*



The PMPRB report also shows that, in 2000, R&D spending in Canada was $30.2 per person, well below the aggregate value of $90 for the other countries. Once again, Canada surpassed only Italy in R&D spending per capita.

Pharmaceutical R&D spending per capita, 2002
Source: *A Comparison of Pharmaceutical Research and Development Spending in Canada and Selected Countries*



Shares of world pharmaceutical sales and R&D spending
As another way of assessing Canada's R&D performance, the PMPRB report also compared world shares of R&D spending and sales.

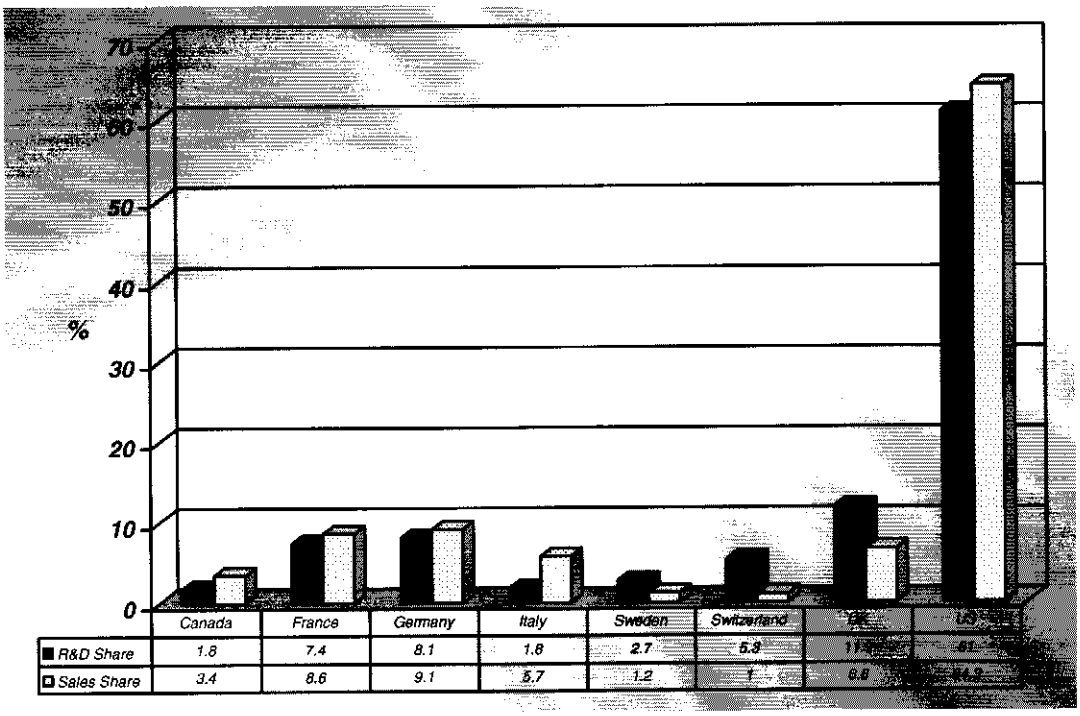
As the report stated: *"To the extent sales revenue earned in a particular country governs the pharmaceutical industry's ability to conduct research in that country, one might expect a rough equality between the world shares of research investment and sales."*

This is not what the PMPRB found in Canada.

In 2002, sales in Canada accounted for 3.4% of the total sales ($275 billion) of the eight countries, while research and development spending accounted for only 1.8% of total R&D.

Sweden, Switzerland and the UK all had R&D shares substantially higher than their sales shares. In France, Germany and the US, R&D and sales shares were about equal.

Distribution of pharmaceutical R&D spending and sales, 2002
Source: *A Comparison of Pharmaceutical Research and Development Spending in Canada and Selected Countries*



	Canada	France	Germany	Italy	Sweden	Switzerland		
R&D Share	1.8	7.4	8.1	1.8	2.7	5.3	11	61
Sales Share	3.4	8.6	9.1	5.7	1.2	1	6.6	44.2

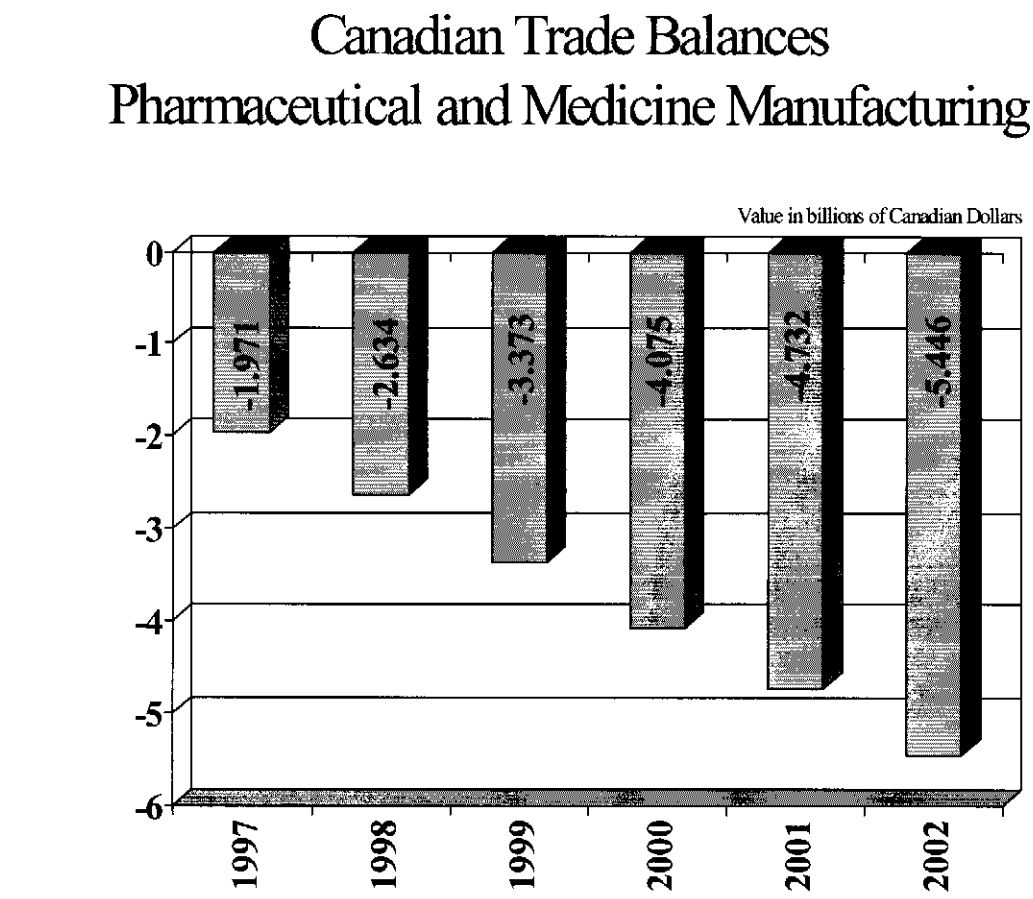
Obviously, the multinational pharmaceutical companies are developing their new drugs in their home countries, not here in Canada. The vast majority of spending on R&D they do in Canada is for things like clinical trials in order to get government approval to sell their drugs.

Majority of new drugs products not innovative
In its 2000 Annual Report, the PMPRB reported that of the 81 new drug products introduced in Canada in 2000 only three could be categorized as *"breakthroughs"* while more than half, 42, provided *"little, moderate, or no improvement over existing medicines."*

This data is supported in a May 2002 research report by The National Institute for Health Care Management Research and Education Foundation titled *Changing Patterns of Pharmaceutical Innovation*, which found that two-thirds of prescription drugs approved by the U.S. Food and Drug Administration (FDA) during the 1990s were modified versions of existing medicines, or identical to products already on the market. Only a third were new molecular entities. The report also said that the recent increase in U.S. spending on pharmaceuticals was for products that the FDA had determined did not provide significant benefits over those already on the market.

Canada's trade deficit in pharmaceuticals
Data from Statistics Canada shows that Canada's trade deficit in pharmaceuticals has grown from $2 billion in 1997 to $5.5 billion in 2001.

Canada is not getting its fair share of R&D spending from the brand-name pharmaceutical industry and this same industry has shut down its manufacturing capacity, thus leading to the flood of imports and only limited exports.



Source: Statistics Canada

***Regulations* contributing to skyrocketing prescription drug costs**
Other than the brand-name drug companies and their armies of lawyers, the *Regulations* are not serving Canadians. Innovation is being replaced by litigation, and this litigation is unfairly delaying generic competition and adding hundreds of millions of dollars in unwarranted costs to Canada's already cash-starved health-care system.

In its submission to the Commission on the Future of Health Care in Canada, Green Shield Canada, the company that runs the Ontario government's $2-billion drug-benefits plan, as well as plans for private sector industrial employees including the Big Three automobile manufacturers, urged the federal government to repeal these regulations. To make its point, Green Shield cited the ulcer medication omeprazole, sold under the brand name Losec.

Losec, has annual sales in Canada of $430 million. A patient taking a tablet every day to control heartburn will pay more than $800 a year once dispensing fees are factored in.

Despite the fact that the original patent on Losec expired in 1999, there are still no generic versions on the market in Canada, even though generics are available in the United States and Europe. Generic versions have been blocked by several overlapping automatic 24-month injunctions under the *Regulations*.

The Patent Register on Health Canada's website shows that AstraZeneca has listed at least 10 additional patents on this one drug, the latest of which does not expire until 2018, even though the original patent expired in 1999.

Losec (omeprazole)

Patent number	Expiry Date
1292693	December 3, 2008
1302891	June 9, 2008
2025668	February 2, 2010
2133762	April 20, 2013
1338377	June 11, 2013
2284470	November 10, 2018

Losec (omeprazole magnesium)

Patent Number	Expiry Date
1264751	January 23, 2007
2166483	July 8, 2014
2166794	July 8, 2014

Losec MUPS (omeprazole magnesium)

Patent Number	Expiry Date
2170647	June 7, 2015

Each new patent provides AstraZeneca another way to allege patent infringement and start additional two-year injunctions against any generic drug maker trying to produce and sell omeprazole. By carefully timing the filing of patents and injunctions, AstraZenenca has successfully blocked generic competitors for years. In the case of omeprazole, AstraZeneca earns well over $1 million in sales for each day generic versions are kept off pharmacy shelves.

It is hard to imagine that the people who drafted the *Regulations* would have fully anticipated the creative ways in which the patent challenge process could be manipulated to prevent competition.

An incentive to litigate instead of innovate
One of the most unfortunate results of Canada's current pharmaceutical patent regime is that instead of encouraging brand-name companies to develop new, innovative products that make a significant improvement to the health of Canadians, the *Regulations* have encouraged brand companies to devise complicated, legal strategies to delay competition from generic products.

Furthermore, in order to take full advantage of the extraordinary legal tools provided under the *Regulations*, the brand companies have also been encouraged to make minor changes to existing medicines in order to file for new patents and further delay competition.

Bad business
Increasingly, there are voices saying that using these delay tactics may not be in the best long-term business interest for the brand companies.

In an interview with U.S. publication *Generic Line*, Merlin Biomed Group analyst Sergio Traversa said that, while brand companies may have benefited from litigation in the short term, it might be doing irreparable harm to the industry in the long haul.

He says fighting to block inexpensive generic alternatives for consumers is a losing public relations battle for Big Pharma.

Canada's international trade obligations
Repealing the *Regulations* would leave Canada in full compliance with our international trade obligations, and the brand-name industry would still have full legal recourse to protect their patents. *(Please see attached legal brief prepared by Goodman, Philips and Vineberg,* Appendix L*)*

In fact, when former Industry Minister John Manley appeared before the Industry Committee on February 17, 1997, he said: *"Since the inception of Bill C-91, Canada already has a stronger system than that required by the GATT treaty."*

Minister Manley went on to say: *"Therefore, it is possible to abolish regulations. It is not an international commitment."*

The brand industry lobbyists argue that the *Regulations* represent the only effective enforcement mechanism by which Canada meets its international obligations. This is false.

If the *Regulations* were repealed, patent holders would still be entitled to sue generic companies but, like all other industries, they would have to obtain a preliminary injunction from the court to stop generic drug approvals. In fact, eliminating the 24-month injunction would infuse legal discipline and accountability into the system.

The Quebec myth

The brand-name pharmaceutical industry has been effective in framing the debate about what constitutes an appropriate legislative, regulatory and tax regime for pharmaceutical companies in Canada as a Quebec versus Ontario issue.

Brand company lobbyists have had significant success in convincing both federal and provincial politicians from Quebec that any attempt to provide balance to Canada's pharmaceutical patent regime is tantamount to an attack on a Quebec-based industry.

Many long-time industry and political observers believe that the failure of the federal government to address the inequities of the *Patented Medicines (Notice of Compliance) Regulations* even in an era when funding public health care is one of the most pressing political issues is due in large part to a fear of offending interests in Quebec.

However the accepted wisdom that the brand-name industry is based in Quebec is not supported by fact. According the membership list of the brand companies' industry association 31 of its 61 member companies are headquartered in Ontario while 29 are based in Quebec.

In fact, in its November 20, 2002 presentation to the Ontario Liberal Caucus at Queen's Park, representatives of Canada's Research-Based Pharmaceutical Companies (Rx&D) point out that the brands have a "Larger presence than in Quebec." (see Appendix E)

Conclusion

The House of Commons Standing Committee on Industry, Science and Technology should recommend that the *Patented Medicines (Notice of Compliance) Regulations* be eliminated in order to save our health-care system hundreds of millions of dollars, encourage investment by generic pharmaceutical manufacturers, and encourage true innovation by brand-name drug makers.

The Committee should recommend that the normal litigation process be used to resolve patent disputes in the pharmaceutical industry, as in all other industries. Accordingly the *Regulations* should be eliminated.

The courts can then determine what interlocutory relief or other procedural measures are appropriate in any given case, and determine the patent issues at trial.

If the *Regulations* are eliminated:

- Brand companies will still have 20-year patent terms
- They will still be able to seek multiple patents on the same medicine if they make improvements to it
- They will still have full legal recourse to defend their patents under the provisions of the *Patent Act* used by every other industry in Canada
- And Canada will be in full compliance with its international trade agreements

The only thing the brand companies will no longer have is the automatic injunction.

CGPA ACMG

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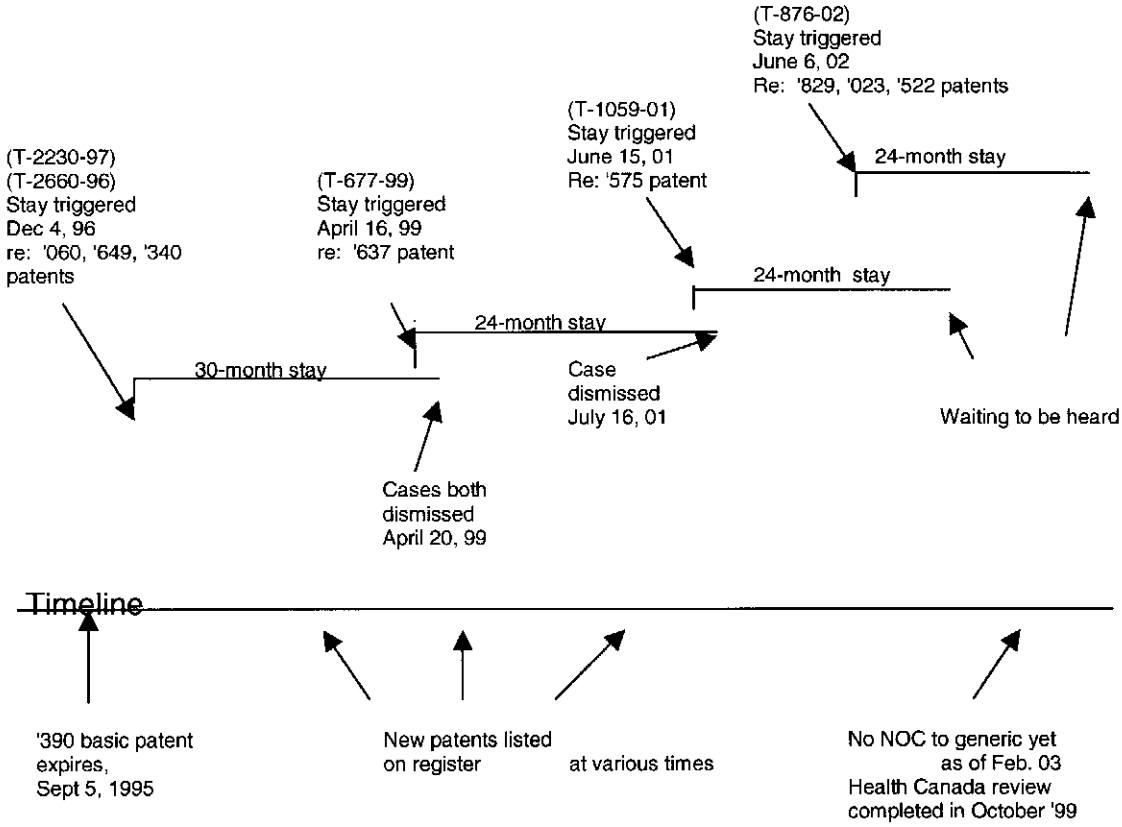
Appendix A

Paroxetine (PAXIL): repeated use of automatic stay under *PM (NOC) Regulations* to keep generic off market

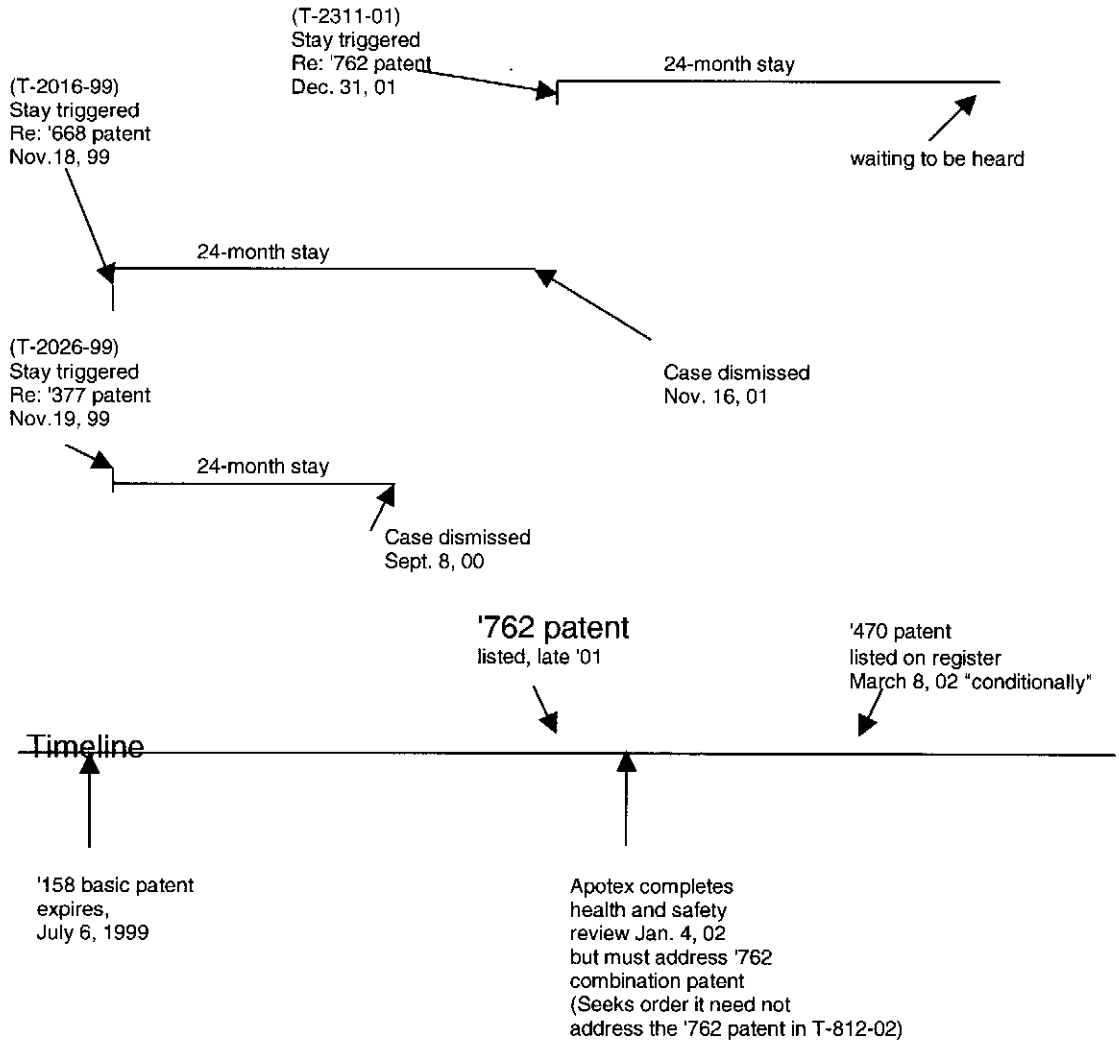


Patents listed for paroxetine include:

1,038,390 ("'390" patent): paroxetine and its salts - expired
1,287,060 ("'060 patent"): crystalline paroxetine hemihydrate
2,178,637 ("'637 patent"): formulation in which water is absent
2,214,575("'575 patent"): dry compression formulation
2,168,829 ("'829" patent): crystalline form
2,210,023 (" '023" patent): crystalline form
2,211,522 (" '522" patent): crystalline form

Appendix B

Omeprazole (LOSEC): repeated use of automatic stay under *PM (NOC) Regulations* to keep generic capsules off market



Patents listed for omeprazole capsules include or have included:

Six patents listed in 1993, including
basic product-by-process patent 1,127,158 ("158 patent")

2,025,668 ("'668 patent"): use of omeprazole to treat *campylobacter* (*H. Pylori*).
1,338,377 ("'377 patent") composition containing stabilizing agent
2,133,762 ("'762 patent"): omeprazole in combination with antibiotic
2,284,470 ("'470 patent"): crystalline form

Note: Astra changed from capsules to tablets in September 1996, in order to foil generic competition. It has listed eight patents so far for the tablets. 24-month stays have been repeatedly re-started to stop generic tablets as well.

Appendix C

Patents now listed on the register, in connection with a supplemental submission, but not relevant to the supplemental submission

Drug	Brand	Annual Sales in Canada ($Millions)	Strength	DINs	Patent	NOC date of submission for which patent filed
alendronate sodium	FOSAMAX	87	5 mg 10 mg 40 mg	02233055 02201011 02201038	2221417	97/09/10 and various others
clarithromycin	BIAXIN BID	63	250 mg tablet 500 mg tablet	01984853 02126710	2261732	98/07/30
clarithromycin	BIAXIN	15	125/5ml gran 2505/ml gran	02146908 02244641	2261732	01/09/21
clarithromycin	BIAXIN XL	1	500 mg ext. release	02244756	2261732	01/09/21
clarithromycin	CLARICID	No sales data available (IMS, September 2002)	250 mg tablet 500 mg tablet	02245065 02245066	2261732	01/12/21
clarithromycin	CLARICID	No sales data available (IMS, September 2002)	125/5ml gran 2505/ml gran	02245063 02245064	2261732	01/12/21
didanosine	VIDEX	2	25 mg tablet 50 mg tablet 100 mg tablet 150 mg tablet	01940511 01940538 01940546 01940554	2074215	00/07/07
levodopa/carbidopa	SINEMET CR	26	100mg/25 mg 200 mg/50 mg CR tablets	02028786 00870935	1318602	00/08/15 00/06/21
olanzapine	ZYPREXA	190	15mg tablet 20mg tablet	02238850 02238851	2214005	98/11/29
olanzapine	ZYPREXA ZYDIS	12	5 mg tablet 10 mg tablet 15 mg tablet 20 mg tablet	02243086 02243087 02243088 02243089	2214005	00/12/01
omeprazole	LOSEC	428	10 mg capsule 20 mg capsule	02119579 00846503	2284470	
orlistat	XENICAL	32	120 mg cap	02240325	2258095	02/02/08
paroxetine	PAXIL	224	10 mg 20 mg 30 mg 50 mg	02027887 0194001 01940473 02027895	2210023 2211522 2168829	02/04/19
rituximab	RITUXAN[1]	24	10 mg/ml intravenous solution		1218613 1336826	
triptorelin pamoate	TRELSTAR LA	No sales data available	11.25 microgranules	02243856	1326438 2021767	02/06/06

[1] Relevant NOC has not yet issued, but intervener materials of Hoffmann-LaRoche in the olanzapine reference indicate TPD wrote to Roche about this product, February 11, 02: "the patent lists will be added to the Register on a conditional basis only, after the [NOC] has issued, until the resolution of the … reference."

Appendix D

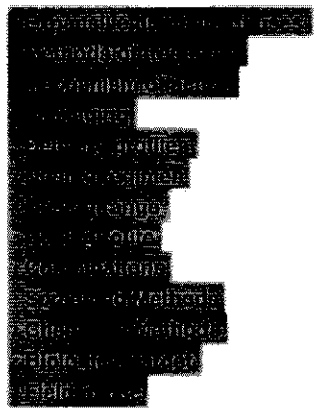
Pharmaceutical Patents - The Changing Landscape

Intellectual
Property
Strategic
Planning

1980's

- Primary uses
- Processes and intermediates
- Bulk forms
- Simple formulations
- Composition of matter

1990's



- Primary uses
- Processes and intermediates
- Bulk forms
- Simple formulations
- Composition of matter

STEPB020399

[Emphasis Added]