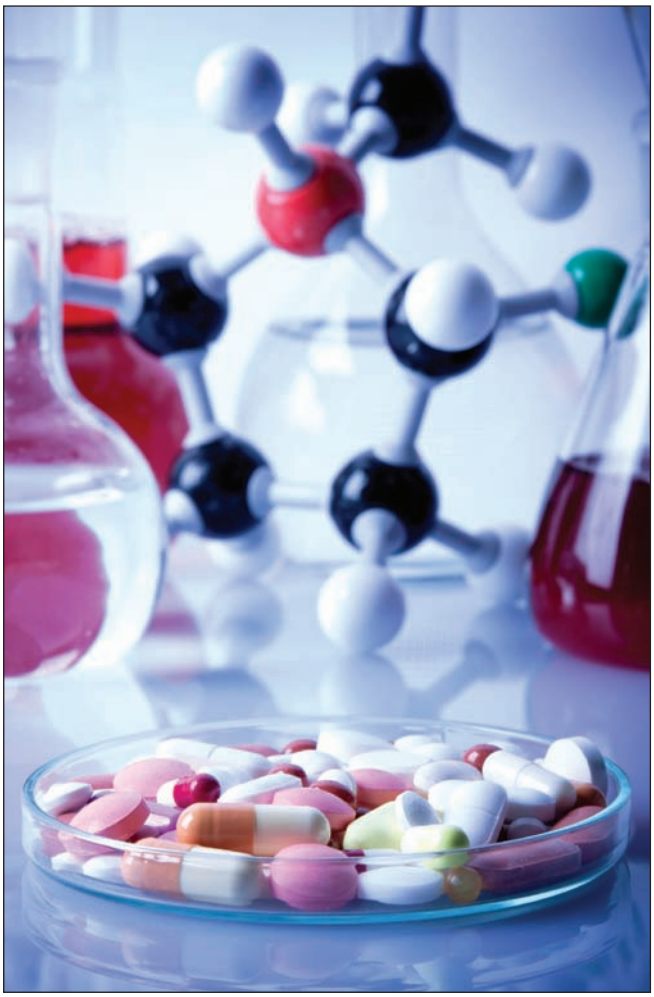
Drug patents: the evergreening problem

As any would-be inventor knows, coming up with something the world has never seen before can be tough. Tweaking something old and calling it new, on the other hand, is considerably easier.

In the pharmaceutical trade, when brand-name companies patent "new inventions" that are really just slight modifications of old drugs, it's called "evergreening." And it's a practice that, according to some who have looked into it, isn't doing a whole lot to improve people's health.

"Typically, when you evergreen something, you are not looking at any significant therapeutic advantage. You are looking at a company's economic advantage," says Dr. Joel Lexchin, a professor in the School of Health Policy and Management at York University in Toronto, Ontario.

"The response from the brand side is that they are trying to protect their markets so they can further invest in R&D [research and development]. And even if they make a modification to a drug, doctors are still quite able to prescribe the generic version of the older product. Having said that, the brand-name companies put an awful lot of money into marketing the newer version, and that marketing is designed to affect what doctors do."



Whether a new drug that merely modifies an existing patented molecule deserves its own patent depends on the therapeutic advantages it offers.

Evergreening has been a hot topic of late because of the recent ruling by India's Supreme Court to refuse to grant Swiss pharmaceutical company Novartis a patent for a new version of its cancer drug Gleevec (imatinib mesylate), or Glivec, as it's known in some countries. Novartis claims the drug is more easily absorbed into the blood and, considering it is used to fight leukemia, that is enough of an improvement to warrant patent protection.

But India's trade and industry minister, Anand Sharma, has defended the decision, and was quoted by *Agence France-Presse* as saying it was "absolutely justified under the law" and that India's patent law "does not accept evergreening."

In the case of Gleevec, though, this makes no sense, according to Paul Herrling, chair of the board of the Novartis Institute for Tropical Diseases in Singapore. "There can be no evergreening in India because there have never been any patents for Gleevec there," he says.

Furthermore, argues Herrling, India's concept of evergreening is somewhat overreaching. According to its patent law, a new version of an old drug must demonstrate improved efficacy to merit a patent monopoly. But what if the new product improves patient safety? Or reduces adverse effects? Or increases adherence?

"I agree that if it doesn't provide the slightest advantage to patients, it does not deserve protection. You can't merely take a molecule and paint it a different colour," says Herrling. "But anything you do to a molecule, as small as it could be, if it results in a clear medical advantage for patients, then it should be protected."

The problem is, these modified drugs don't offer enough of an advantage over generic versions of the original molecules, says Jim Keon, president of the Canadian Generic Pharmaceutical Association. So the sophisticated lifecycle plans brand-name companies have for their products — rolling out new versions when patents near expiry — are created primarily to help bottom lines rather than patients. And the argument that this is necessary to earn enough money to reinvest in new R&D doesn't hold much weight, suggests Keon, if that research only results in more "me-too" drugs.

"They have to recoup R&D costs, yes, but the question is: Is it useful R&D? If the R&D is just to tweak a product to get more monopoly protection without really providing an improved medication, then maybe it doesn't deserve a patent," says Keon.

"Generic drugs are equivalent to brand-name drugs. They have the same medicinal ingredients. A me-too drug, in some ways, is just a sophisticated generic drug. It is just tweaked a bit to claim it as a new invention. Should they get patents?"

Well, if that tweak advances medical science in any way, then the answer to that question is "yes," according to Patrick Kierans, the global head of pharmaceuticals and life sciences for Norton Rose, an international law firm with offices worldwide and expertise in pharmaceutical IP (but not involved in the India legal battle). Bringing a new drug to market carries Vegas-like odds, he suggests, and putting up barriers to protecting intellectual property will only discourage innovators from taking those risks.

"A week doesn't go by when you don't open up a newspaper and see that some company's drug got wiped out in a phase-3 clinical trial, and by that time they had already sunk 800 to 900 million bucks into that drug," he says.

"You are talking about extremely high risk to develop new therapies and compounds. Some are going to be revolutionary. Some are going to be incremental," adds Kierans. "The patent system, all the way back to the Statute of Monopolies [a British act passed in 1624], recognizes that it is good for the economy to encourage people to take these risks and to bring new things forward." — Roger Collier, *CMAJ*

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Editor's note: This is the second of a three-part series on patents. Go to cmaj.ca to read the first article: "Drug patents: innovation v. accessibility."