

# INFORMATION SHEET

## Patenting "higher life forms" in Canada

On December 5, 2002, in the case of *Commissioner of Patents v. President and Fellows of Harvard College*, the Supreme Court of Canada overturned the decision of the Federal Court of Appeal of Canada and held that a genetically modified mouse was a "higher life form," and was not patentable subject matter under the Canadian definition of "invention." In particular, the Court held that the genetically modified mouse was not a "manufacture" or "composition of matter."

The nine-member Court was split 5:4. However, although there was a strong dissent, the reasons of the majority represent the law of Canada unless and until changed by legislation. The majority made it clear that, in its opinion, all plants and animals are higher life forms and inherently unpatentable. However, the majority accepted that more primitive life forms that had been accepted by the Patent Office as patentable continue to be patentable. According to the Canadian Manual of Patent Office Practice, this includes life forms "which are essentially unicellular in composition (e.g. bacteria, many fungi (including yeasts), cells in culture, transformed cell lines and hybridomas)." The reasons of the majority do not indicate where the line is to be drawn between higher and lower life forms. Strictly speaking, the reasons of the majority are binding only in relation to the express subject matter before the Court, namely mammals, and at least in theory leave it open to argue that other categories of living matter, such as plants, are not properly characterized as "higher" life forms and are therefore patentable. Nevertheless, the Canadian Patent Office will continue to apply its existing standards, and will refuse to patent all life forms other than those characterized by it as lower life forms. Somewhat surprisingly, this latter category of patentable subject matter continues to include cultures of cells, including cultures of cells derived from higher life forms such as mammals.

Although the Commissioner of Patents has refused, and will continue to refuse, claims directed to genetically modified higher life forms, the Commissioner has in the past granted patents

directed to genetically modified genes and cells of higher life forms. On May 21, 2004, in the case of *Schmeiser et al. v. Monsanto Canada Inc. et al.*, the Supreme Court of Canada rendered judgment in a case involving such a patent. Monsanto had sued a farmer, Percy Schmeiser, for infringement of a Monsanto patent directed to chimeric plant genes and glyphosate-resistant plant cells comprising such genes. The modification made the plant resistant to a herbicide, glyphosate. Schmeiser had acquired Monsanto's seed and used it to plant a crop of genetically modified canola. In a 5:4 decision, the Court upheld the validity of the patent, and found that it had been infringed by the planting, cultivation and growth of canola plants in Schmeiser's fields.

The decision of the majority affirms that, by growing canola plants in his field, Schmeiser was "using" the claimed subject matter, namely the genetically modified genes and cells. The majority also held that nothing in the *Harvard* decision reflected adversely on the patentability of genetically modified genes and cells; on the contrary, this subject matter was within the scope of the subject matter that the majority in *Harvard* had held to be patentable.

In the result, it now appears that the Commissioner must grant patents to new and useful genes and cells of any and all types of life forms, and that claims to such subject matter are effective to control the unauthorized reproduction of the life forms themselves.

As a corollary to the decision, a practice introduced by the Canadian Patent Office subsequent to the *Harvard* decision will now be curtailed. In particular, the Patent Office had begun to require applicants to claim cells only in an "isolated" form. In the Monsanto patent, the cells comprising the chimeric plant gene were not claimed in an isolated form, and were found by the Supreme Court to be valid. The Patent Office has confirmed that it has discontinued this practice.

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