Chapter 71
Biotechnological Patents and Morality:
A Critical View from a Developing Country

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ABSTRACT

The chapter deals with ethical aspects of patent law and how the global patent regime helps or hinders the development of a developing country such as Thailand. More specifically, it discusses Article 27.3 of the World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which states that countries may exclude methods of medical treatment, plants and animals (but not micro-organisms) from patent protection. It also provides legal analysis on the issue of whether developing countries can maximize benefits from the TRIPS morality exception (Article 27.2) in dealing with biotechnological patenting.

INTRODUCTION

Biotechnology has now become an important factor for the increasing rate of scientific and technological development, particularly in the fields of medicine and agriculture. A great deal of modern pharmaceuticals have been directly and indirectly developed from biotech inventions. For example, it is estimated that nearly 30 per cent of the present world drug market is accounted for by biotechnological products such as antibiotics, steroids, vitamins, and vaccines. The significance of biotechnology may stem from the fact that some modern drugs developed from biotechnology are able to target traditional diseases more precisely than conventional drugs, and biotech medicines provide more precise cures with fewer side effects (Business Week, 1992, pp. 52-53). In agriculture, plant breeding was once restricted to sexually compatible plants, and generations of offspring were selectively bred to create unique varieties. Currently, genetically modified (GM)

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crops have the fastest adoption rate of any new technology in global agriculture simply because of their claimed benefits from higher yields and lowered production costs. It is estimated that over 9,000 permits have been issued to field-test GM crops by United States Animal and Plant Health Inspection Service (APHIS) since 1987 (Gewin, 2003, p. e8).

Because of the growth of inventions in this area, the concept of patent protection has been changed gradually, and has become the subject of controversial discussions among scholars as to whether or not living organisms could be protected under the patent system. Since living organisms possess special features different from other inventions, particularly their self-replicating feature, this raises many substantial problems in any attempt to protect biotech inventions under the existing patent system. In addition, there are moral concerns surrounding inventions in this area. Before modern biotechnology, morality played a very limited role in patent protection. Since the advent of genetic engineering in the 1970s, however, moral concerns regarding biotechnology patents have significantly arisen, particularly due to the vigorous opposition of patents in the European Patent Office (EPO) by various pressure groups (Schatz, 1998).

A core issue which deserves closer examination is the moral aspect of biotech patents and its role in patent law of developing countries. While this paper attempts to focus on a number of the moral issues in the patent system, it does not aim to provide a theological discussion of morality and patents. In fact it is a rather focused discussion of specific legal provisions, mainly Article 27.3(a) of the World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). Some comments will be given in respect of the issue of whether developing countries can maximize benefits from the TRIPS morality exception in dealing with biotechnological patenting.

PROBLEMS OF BIOTECH PATENTING

The World Intellectual Property Organization (WIPO) provision on the protection of biotechnological inventions of 1984, defines 'biotechnology' thus (WIPO, 1984, p. 4):

Biotechnology concerns the creation of new varieties of plant, new animal breeds and new microorganisms, either by traditional selection methods or by new methods..., genetic engineering.

Biotechnology involves the application of scientific and technological knowledge to the processing of materials by biological agents such as enzymes or cells, in order to provide goods and services for the benefit of mankind (Bull, Holt and Lilly, 1982, p. 21; Llewellyn, 1987). It may involve the production of plants, animals, and micro-organisms, or involve new methods of medical treatment. In creation of new varieties, modern biotechnology basically applies modern techniques such as embryo transfer, or genetic engineering, which is different from conventional methods of selective or cross breeding. The major difference between biotechnology and other inventions is that, the former concerns a modification of existing complexity in living organisms, while the latter involves the creation of complexity by shaping and altering the simple constituents of inanimate material into structures of increasing complexity (Bent, 1987, pp. 6-7; Cooper, 1985).

In the past, the concept of patentable invention was focused only in the field of inanimate matters, such as chemistry and physics. Although biological materials have been used in some industries for a long time, biotechnology was normally excluded from patentability by the Patent Offices and the courts (Beier et al., 1985, p. 25). In 1969, the German Supreme Court accepted in the *Red Dove* (International Review of Industrial Property and Copyright Law, 1970, p. 136) case that an