

## New Developments in Biotechnology: Patenting Life

Compiled by the Office of Technology Assessment, Congress of the United States, Marcel Dekker, New York, 1990, 208 pp., \$69.95.

This book is a primer on: 1. U.S. patent law; 2. biotechnology as it relates to manipulating living organisms to produce or alter animals and plants; and 3. the present state of affairs in the U.S., in which engineered, nonhuman, transgenic animals, if they otherwise meet the requirements of patentability, are not precluded from being patented under current law simply because they are alive.

The reader's attention is directed many times in the book to recently issued U.S. Patent 4,736,866, the first U.S. patent ever covering a genetically-engineered living mammal. (U.S. Patent 4,736,866 states: "Other embodiments are within the following claims. For example, any species of transgenic animal can be employed. In some circumstances, for instance, it may be desirable to use a species, e.g., a primate such as the rhesus monkey, which is evolutionarily closer to humans than mice.")

The book is well written and easy to understand, in a style that is not unlike a quality news magazine reporting on past events. Produced by the Office of Technology Assessment, Congress of the United States, the book is directed primarily to legislative policy makers in an effort to

help them anticipate and plan for the consequences of technological changes that have occurred in the field of property rights in human-engineered living things. The book should prove useful also to patent lawyers who plan to enter the biotechnology area in their practice and to biotechnologists unfamiliar with fundamental patent law.

Ethical considerations concerning consequences of allowing patents on living things are discussed, and many questions are presented with few answers provided.

The authors, who are not specifically acknowledged, conclude that human manipulation of animals will be essentially unchanged whether patents are permitted or not. Further, they predict that patenting *per se* will not redirect the way society uses or relates to animals. Unfortunately, these predictions appear to depreciate the importance of the patent system. Other than citing the basis for the patent system found in the U.S. Constitution, scant attention is given to the benefits to society which result from patents, in addition to rewarding creativity, through early disclosure and dissemination of new technology to the public. The exclusive rights retained by patent owners extend only for a relatively short, 17-year period, after which once-patented inventions become public property and anyone can then freely utilize them.

The introductory quotes leading to Chapter 4 are instructive. They include

Chief Justice Warren Burger's opinion in the case of *Chakrabarty vs. Diamond*: "The grant or denial of patents on micro-organisms is not likely to put an end to genetic research or its attendant risks. The large amount of research that has already occurred when no researcher had sure knowledge that patent protection would be available suggests that legislative or judicial fiat as to patentability will not deter the scientific mind from probing into the unknown any more than Canute could command the tides."

Also cited in the chapter is the opinion of William Duffey, patent lawyer of Monsanto: "Those companies in the private sector which are investing hundreds of millions of dollars in this new science do not accept the theory that patents are unimportant. Such a concept is particularly repugnant to patent-conscious, research-intensive pharmaceutical firms dealing in global markets with drugs which require staggering investments of time and money before ultimately yielding a commercial return. To them the patent shelter is paramount. It is quite literally their sole incentive for risk taking."

Except for several instances of unnecessary *verbatim* repetition and unexplained occasional bold type, the book provides interesting and thought-provoking reading.

E. Alan Uebler  
Mortenson & Uebler, P.A.  
Wilmington, DE 19808