The Dangers of Research Patents

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What's the Purpose of A Patent?

A *patent* is a legal title granting any person who "invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof," the right to exclude others from making, using (without permission) or selling the claimed invention or discovery.

The argument for such "patent protection" is that inventors should be given a period of exclusivity (20 years in the US), in which to reclaim their initial investment and to enjoy the fruits of their labor through direct sales and licensing without infringement.

There are three distinct criteria that have to be met before the US Patent Office will issue a patent—the invention or discovery must be novel, useful, and "*nonobvious*" (meaning that people in the creator's field would not find the invention obvious).

The Birth of Patent Trolls

Patent legislation was originally envisioned as a fair deal between inventors and society at large. Rather than keeping new technology a secret until someone else manages to reverse engineer it, inventors make the information freely available to the public in return for a twenty-year monopoly on any sales.

However, that deal can often go awry when the holder of the patent experiences financial problems. The patent has a market value as an asset, and companies will buy the patent and then enforce what remains of the monopoly on a perceived infringement. Unfortunately, the practice has become widespread and increasingly vindictive as holding companies (affectionately called "patent trolls") with no association with the original invention other than ownership of the patent send out patent infringement letters on increasingly broad and vague patents. They are, of course, in full knowledge that the alleged transgressors will probably settle rather than face the exorbitant costs of a patent litigation case.

The Myriad Genetics Case: Patenting Human Body!

Can you really patent your own body? Not yet anyway, but since 2013 there have been serious concerns over what you can do with human genes. A company named Myriad Genetics had succeeded in receiving patents on two genes that when mutated in the human body, were said to dramatically increase a woman's chances of developing breast or ovarian cancer.

In this case, Myriad held the patents and therefore had monopoly on any diagnostic tests needed to test for such mutations. Not surprisingly, they charged top dollar for them.

The Association for Molecular Pathology sued Myriad on the grounds that a patent for human genes failed to meet the three basic criteria. The case went all the way to The Supreme Court, and in June 2013, the Court ended the practice of granting patents on human genes that had begun thirty years earlier.

However, the Court did allow patents to be awarded on modified DNA, making the confusing distinction between isolating specific genes (which wasn't considered to meet the criterion of "new") and modifying existing DNA to become a newly titled "synthetic DNA" which could be considered "new."

From Protection to Prevention: Time to Rethink?

As the Myriad Genetics case demonstrated, scientific research appears to have lost its way when it comes to research patents. The twenty-year monopoly has always been designed as a reasonable period to earn a decent reward for the hard work in creating an invention. That reward would come from sales and licensing of the patent to others.

Complete exclusivity at an exorbitant price isn't the same thing. Locking a discovery away for twenty years can only serve to hold back further research, and it should come as no surprise that researchers have now become some of the most vocal critics of the US Patent Office.

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