

Chakrabarty Case

Label: Chakrabarty Case

Author: Daniel Gorman , York University

Date Entered: 2005-08-4

Description The Chakrabarty Case (1980) is an important milestone in the history of intellectual property and genetic engineering. It led to the world's first successful patent for an artificially created life form. The case centred on the creation of a genetically engineered micro-organism designed to break down crude oil, a product which could be used to help contain oil spills. The researcher, Ananda Chakrabarty, applied in 1972 for three separate patents, one for the production of the bacterium, one for the material carrying the bacterium, and finally, one for the bacterium itself. The patent officer granted patents for the first two applications, but not the third. Chakrabarty appealed to the United States Court of Customs and Patent Appeals, and won, thus achieving a patent for bacteria created through recombinant DNA technology, a global first. His patent was upheld by the US Supreme Court. It ruled that non-naturally occurring genetic materials could be patented, though it stressed that naturally-occurring organisms shall not be patentable. This narrow interpretation of US patent law has subsequently led to a boom in patent applications for genetically-produced material, including genetically engineered plants and animals, embryonic stem cells, and human genes.

These developments have raised many economic and ethical concerns. One is the practice of bioprospecting, where individuals or corporations from the industrialized world develop patented products from the genetic resources of developing countries. The Convention on Biological Diversity (1992) has set provisions allowing signatory countries to control their genetic resources, though potential abuses still exist. The CBD itself is controversial, reflecting a shift in recent decades from viewing genetic resources as the common heritage of humanity, available for use by all, to a proprietary conception which may disadvantage Indigenous groups by restricting their access to these resources.

Another question is whether individuals own their own biological and genetic makeup. Notable here is the case of John Moore, who unsuccessfully sued the doctors who removed his spleen and later developed from it a patented cell line. While the human body itself is not patentable, as its formation and development are a discovery, not an invention, isolated parts of the body, including gene sequences, can be patented as inventions. The controversy lies in where the line between discovery and invention exists. This debate, which began in earnest in the aftermath of the Chakrabarty case, has important global ramifications for future scientific research, human and environmental health, and our collective understanding of individuality.

- Suggested Reading: **Andrew, Lori and Dorothy Nelkin.** 2001. *Body bazaar: The market for human tissue in the biotechnology age*. New York: Crown.
- Merson, John.** 2001. Bio-prospecting and bio-piracy: Intellectual property rights and biodiversity in a colonial and post-colonial context. *Osiris* 15: 282-96.

This is a pre-print version of **Chakrabarty Case** by **Daniel Gorman** generated from the *Globalization and Autonomy Online Compendium*. The electronic original is available at http://www.globalautonomy.ca/global1/glossary_entry.jsp?id=EV.0023.