

# Gene Patenting

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## Gene Patenting background

After it was announced in June 2000 that the human genome was almost completely mapped, private and public entities unleashed a flood of patent requests for genes and small pieces of gene sequences. The total number of human genes is estimated to be about 30,000, and until recently, up to 20% of those genes were patented by private companies, the government and even individuals.

## Supreme Court decision

In June 2013, the U.S. Supreme Court unanimously ruled that naturally occurring genes and genetic sequences are not patentable. The case centered on patents on the genes *BRCA1* and *BRCA2*, which are normal genes found in all humans, but mutations in them increase the risk for breast cancer. By invalidating patents held on *BRCA1* and *BRCA2*, all other gene patents were also invalidated.

The AMA submitted an amicus curiae brief (PDF) in support invalidating gene patents, stating that:

- Gene patents interfere with diagnosis and treatment.
- Gene patents interfere with quality assurance.
- Gene patents interfere with access to health care.
- Gene patents interfere with scientific and medical innovation.

In the mid-1990s, the AMA amended its Code of Ethics to recommend that doctors not patent medical procedures because these patents compromise patient care. Since that time, the AMA (with other medical and scientific groups) has issued numerous statements regarding the need to avoid having gene patents interfere with appropriate medical care and the development of better medical treatments and technologies, and declaring unethical any limitations on the dissemination of medical knowledge.