

Clarity on Patenting Nature

By THE EDITORIAL BOARD

In a unanimous ruling on Thursday, the Supreme Court correctly resolved one of the most important and complex disputes in a generation involving the intersection of science, law and commerce. The justices held that human DNA isolated from a chromosome cannot be patented because it is a product of nature.

Justice Clarence Thomas, writing for the court, said “there would be considerable danger” in granting patents on natural phenomena because that approach would “inhibit future innovation” and “would be at odds with the very point of patents, which exist to promote creation.”

The court’s decision is a narrow one, recognizing the distinction the patent system must make between natural phenomena like DNA and the invention or discovery of “any new and useful ... composition of matter.” The court held that synthetic DNA that is created in a laboratory is new and distinct from DNA and therefore patentable.

Myriad Genetics, based in Utah, obtained broad patents on BRCA1 and BRCA2, genes linked to a significant increase in the risk of breast and ovarian cancers in women. The company extracted these genes from the human body, then claimed that, by doing so, it had invented an isolated DNA markedly different from the native DNA. The United States patent office agreed with the claim.

The petitioners in the case — doctors, scientific researchers and women’s health organizations — argued that the isolated genes were not materially different from the genes before extraction, and that granting Myriad a patent on the genes would amount to giving the company a patent on nature, a monopoly position that could restrict testing, research and medical innovation by others.

Justice Thomas’s opinion agreed: While the company had found “important and useful” genes through its inquiries, Myriad did not “create or alter any of the genetic information encoded” in the genes, nor did it “create or alter the genetic structure of DNA.”

As Justice Thomas noted, “isolation is necessary to conduct genetic testing.” It was just this kind of testing that told the actress Angelina Jolie that she was at risk of breast cancer from a faulty gene inherited from her mother and persuaded her to undergo a double mastectomy.

Among the petitioners was Dr. Harry Ostrer, a researcher who had sent DNA samples to a lab at the University of Pennsylvania for testing. Myriad asserted that the lab’s testing infringed the

company's patents and got the lab to stop, since the patents gave the company the exclusive right to isolate someone's BRCA1 and BRCA2 genes. Dr. Ostrer said after the court's ruling that the price of the tests would come down and that the decision would have "an immediate impact on people's health."

Justice Thomas also said it was "important to note what is not implicated by this decision." Not implicated are other, unchallenged Myriad patents on its screening and testing processes. The price of Myriad's stock went up 10 percent in early trading after the court's decision, an indication that Myriad is benefiting from its investment even as the court, properly, has safeguarded the ability of other researchers to work with the genes.
