GENETIC ENGINEERING

Religious Leaders Oppose Patenting Genes and Animals

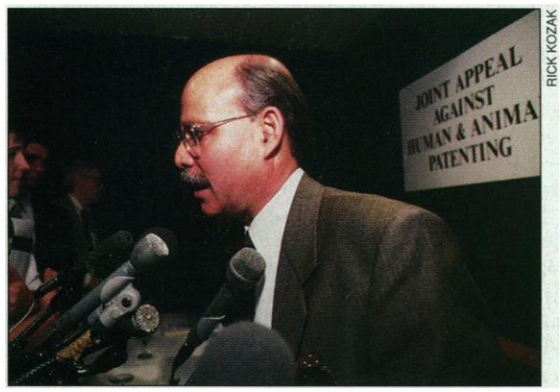
Fifteen years after the Supreme Court ruled that General Electric could patent a genetically engineered microbe, and 6 years after Harvard University was awarded the first patent on an animal—a genetically engineered mouse—a group of religious leaders has issued a statement opposing the patenting of life. Last week, representatives of more than 80 faiths and denominations, organized by longtime biotechnology foe Jeremy Rifkin and the United Methodist Church's (UMC's) General Board of Church and Society, held a press conference to declare their opposition to the patenting of genetically engineered animals and human genes, cells, and organs. "We believe that humans and animals are creations of God, not humans, and as such should not be patented as human inventions," the statement said.

Although this statement might seem harmless—coming 15 years too late—representatives of the biotech industry and some prominent geneticists are concerned that it could prompt Congress to take a fresh look at the patent laws related to genetic engineering, a move that they argue could inject religion into a legal matter. "Patenting is not a moral issue; it's a legal issue," says Francis Collins, director of the Human Genome Project at the National Institutes of Health. "As a serious Christian, I'm deeply troubled that Christian faith and all faiths may lose some credibility by taking this stand," he says.

It's not the first time Rifkin has joined religious leaders to mount a crusade against genetic engineering. In June 1983, he persuaded 50 religious leaders to sign a resolution opposed to "efforts to engineer specific genetic traits into the germline of the human species." Four years later, anticipating the Harvard mouse patent, Rifkin organized a religious coalition opposed to the patenting of genetically altered animals.

This time around, however, the impetus came not from Rifkin but from the Methodist Church. In 1992, a UMC genetics task force, which included geneticist Frank Seydel, a UMC minister and director of the prenatal screening lab at Georgetown University, and two molecular biologists, concluded that "exclusive ownership rights of genes as a means of making genetic technologies accessible raises serious theological concerns." Although the Methodist panel opposed patents on animals and individual genes, it supported "process" patents on recombinant DNA techniques. "The issue is not science versus religion," says UMC Bishop Kenneth Carder, who chaired the panel. "It's the commodification of life"—the reduction of life to its commercial value and marketability, he says.

The Methodist Church teamed up with Rifkin early in 1993, shortly after the Patent and Trademark Office (PTO) issued patents on two transgenic mice, ending a 5-year hiatus after the Harvard mouse patent during which the office had not issued patents on genetically engineered animals. Jaydee Hanson, a UMC official who is a geographer by training, says that when the church began to contact other denominations, it also put in a call to Rifkin's Foundation on Economic Trends. Rifkin says he was happy to help put together another coalition. "I saw that we had a historic debate unfolding," says Rifkin: "Is life God's creation?"



RICK KOZAK

Third time around. Statement organizer Jeremy Rifkin is an old hand at putting together religious coalitions.

That question evidently struck a chord with the coalition's religious leaders. Granting patents on genes or organisms "represents the usurpation of the ownership rights of the Sovereign of the universe," says Richard Land, executive director of the Southern Baptist Convention's Christian Life Commission.

Although the statement carefully avoids taking a stand on genetic engineering itself, and it doesn't oppose patents on the techniques of genetic manipulation, some of the religious leaders who spoke at the press conference last week were not so reticent. "The engineering of humans and human genes raises serious concerns for Muslims," says Abdurahman Alamoudi, executive director of the American Muslim Council. Says Rifkin, "Clearly there are differing views on the manipulation of genes." Rifkin, a Reform Jew, says he identifies with views expressed at the press conference by Rabbi David Saperstein of the Religious Action Center of Reform Judaism. Saperstein said: "Jewish tradition has always stressed a reconciliation of religion and science," but added that the biotech industry can survive "without the patenting process."

Biotech officials are trying to counter the statement by arguing that the survival of many companies depends on patents on genetic material. The industry can't live on process patents alone, says Lisa Raines, vice president for government affairs at Genzyme Corp. "There are certain characteristics that most, if not all, recombinant DNA processes have in common," she says. For instance, Raines notes that two bioengineered proteins on the market—Genentech's tissue plasminogen activator (t-PA) and Amgen's erythropoietin—are made by nearly identical processes; the only substantive difference between them is in the genes inserted into the host cells. If those genes can't be patented, Raines says, no company would invest in producing drugs from them. "I don't think anybody in this coalition has demonstrated an understanding of what patents are," she says.

Rifkin says the coalition will soon submit a petition to the PTO calling for a moratorium on the patenting of life. The coalition also intends to lobby Congress, whose Republican majority may have to choose between biotech's business interests and the interests of the religious leaders. So far, Congress isn't showing any desire to move quickly: Staff members of committees with oversight on patent issues say no hearings are planned on the coalition's call for a moratorium.

Nevertheless, a broad debate on the patenting of life looms down the road, warns New York University sociologist Dorothy Nelkin. University of Virginia bioethicist John Fletcher agrees. "You don't have to be religious to realize that there ought to be a debate about patenting," says Fletcher, a former Episcopal minister. The issue, he says, is that a handful of companies could reap huge profits from DNA—our "common human heritage."

In the meantime, geneticists should be careful in how they portray the pursuit of patents, says Strachan Donnelley, director of education at the Hastings Center in Briarcliff Manor in New York, which issued a report last year on the ethical challenges of animal biotechnology. "If the attitude that goes along with patenting is one that treats animals as mere machines, that's a real ethical concern," Donnelley says. "But if you can patent or commercialize in a way respectful to life, then I think the ethical objection is met."

–Richard Stone