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Biological Rights: How Much of Our Bodies Do We Really Own?

Genes and cellular lines are two of the most patented objects in the natural world. Genes, the building blocks of the human body, contain approximately 30,000 different sequences of genetic code, twenty percent of which is patented (*Gene Patenting*). Multi-billion companies like Microbiological Associates hold hundreds of cellular patents derived from human bodies (Skloot 101). Scientists, drug and research companies, and even genetic and cellular donors all want sole ownership over genes and cell lines that make them money, and will viciously fight in court when they believe their rights have been infringed. Sole ownership of cells and genes, while motivating the private sector to fund research, slows scientific progress by damaging collaboration, raising the question of whether it's ethical for business interests to dictate biological ownership. While many consider it ethical to better society by taking this ownership approach, evidence proves this method is flawed. Genetic and cellular patents detract from the beneficial nature of medicine and science, limiting the possibilities of progressive research.

The ownership of biological patents constricts the mutual nature of science. The court system, which has ruled on the side of biological ownership for decades, promotes lawsuits and court cases that cost extravagant amounts of time and money, eating up resources that would have previously been invested in research. In 1980, the Supreme Court ruled in favor of General Electric's ownership claim of oil-consuming cells that had been "altered ... using 'human ingenuity'" (Skloot 201). This first biological-rights case set the standard for hundreds to come, determining that sole ownership of genetic or cellular material can be bought, if one has the time and capital to do so. Later rulings like those on *Greenberg v. Miami Children's Hospital*

Research Institute, Inc. (Gitter 257-345) and ACLU and PPF v. Myriad Genetics and the University of Utah Research Foundation (“Compass”) solidified the law’s stance that ownership of biological materials is determined by who applied for the patent first. The lawsuits that result from these patents battles cost hundreds of thousands of dollars and correspondingly decrease research budgets. Collaboration is also affected, as sharing information is seen as dangerous and potentially costly. The competition and rush caused by the race to biological patents results in a slowing of scientific innovation, directly impeding the advancement of the human condition.

Many individuals also hinder scientific progress by controlling biological patents to make a profit. Ted Slavin, who discovered valuable anti-bodies in his blood in 1997, patented his genes and began selling his blood to researchers for ten dollars per milliliter (Skloot 202-203).

Although Slavin did give free, unlimited use of his blood to virologist Baruch Bloomberg, the high price Slavin charged other scientists slowed the research and cure of hepatitis B and liver cancer, and resulted in the death of those who could have been saved by a faster release of treatment. Patenting biological materials to make money leads science astray and prevents it from its key objective: to improve lives.

Often times it is scientists whose ownership of genetic and cellular patents detracts from the good of science and medicine. David Golde, a prominent cancer researcher at UCLA, discovered valuable cellular proteins in his patient John Moore and filed patents giving himself sole ownership of the proteins (Skloot 205). Golde, who had argued that “science should be unfettered with regard to what amounted to discarded tissue,” (Oransky 836) didn’t tell his patient about the money he was being given to research and develop his cells. When Moore discovered the amount money Golde was making to investigate his cells, a long and costly court case ensued. While Golde eventually retained rights to the proteins, the prolonged court battle

slowed any beneficial development resulting from Golde's research and resulted in time and money lost that could have otherwise been invested into valuable scientific investigation. Not only was Golde's research slowed by biological ownership problems, but the corresponding court case gave science a bad name and damaged public trust in doctors, who were stereotyped as promoting their own self interests. This squabbling over individual ownership of biological patents detracts from scientific research, decreasing the real-world benefits science offers.

Changing the law's view of biological ownership would help prevent long and expensive court fights. When tissue researcher William Catalona decided to change hospitals, he found that Washington University refused to let him transfer any of his research and samples. Without the ability to access his previous work, Catalona was threatened with losing years of important work. Suing the University, Catalona eventually lost rights to his own research because of the flawed definition of biological ownership, which dictates that right of possession is determined on a monetary basis. Because of this vague definition often times the court system is unable to effectively solve biological rights cases. As said by a Mondaq critiq:

The Supreme Court of the United States' decision to deny certiorari in Washington University v. William J. Catalona, et al. and thereby forego its opportunity to resolve the federal issues at stake is thus somewhat disappointing. ("Mondaq.com: Ownership of Biological Samples and Clinical Data II: U.S. Supreme Court Denies Certiorari in The Catalona Decision")

Catalona's ownership struggle with Washington University resulted in his inability to access his own work, preventing any positive effect his tissue research could produce. Because of the court system's inability to successfully resolve problems of genetic ownership, scientific research and

progresses often is halted. To prevent this from happening, laws should be changed to promote research that benefits society, while still encouraging private investment. Changing the legal definition of biological ownership and rights would prevent reoccurring court battles and encourage scientific development.

The problems caused by genetic and cellular patents could be solved with a policy of free sharing of natural tissues and genes. Giving free use of biological materials for research would greatly assist scientists conducting research in the field, eliminating one of the most restrictive factors of scientific research: money. Encouraging private investment in scientific research is still important, and patents should continue to be allowed for biological materials made in laboratories. A central 'open-source' non-profit biological bank that would give scientists and researchers free access to genetic material would be a crucial first step. Already some are attempting to build these bio-banks. The National Cancer Institute (NCI) plans to sample and bank a wide variety of cells for free use by scientists, with the goal of speeding cancer research (Park). Other organizations, like the Swedish National Bio-Bank, seek to compose a national bank of cells and genes for testing. The creation of central banks and the relaxing of patent rights on genetic and cellular material will speed scientific research, advancing the condition of the human race.

Human cell and gene lines will continue to be two of the most sought after natural resources in the known world. A multi-billion dollar industry, genetic and biological companies, scientists, and even individuals all vie for ownership of (and the corresponding profits from) human biological material. With over twenty percent of the human genome patented, restrictions stemming from biological ownership are threatening to constrict the progress of scientific research, resulting in the premature deaths of millions who could be saved with quicker and more

effective treatments. Changing the law to prevent long and costly court battles as well as redefining the meaning of biological ownership will encourage scientific collaboration and help save lives. While still a ways off, central cellular banks will help give scientists cheap access to tools they otherwise couldn't afford. Business interests may always hold sway when dictating biological ownership, but a future of collaboration and progress is on the horizon.

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