GlobalResearch
Center for Research on Globalization

Big-Pharma Seeks Monopoly Over Life-Changing "Gene Therapy"

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Global Research, November 12, 2015
LocalOrg 12 November 2015

Theme: Biotechnology and GMO, Science and Medicine

Gene therapy is a game changer. It is not a treatment for diseases. It is a cure.

It is a cure for cancer, genetic defects, blindness, deafness, diabetes, even potentially aging.

It has already proven effective in clinical trials, curing people of leukemia who were otherwise certain to die, giving people their sight back, and already, there is one therapy approved for use in the European Union with several others approved in China.

The most remarkable aspect of gene therapy is that it overwrites your DNA once, then your cells replicate that new DNA each time they divide. In essence, the cure becomes a permanent part of you. One shot, one cure, for life, or close to it.

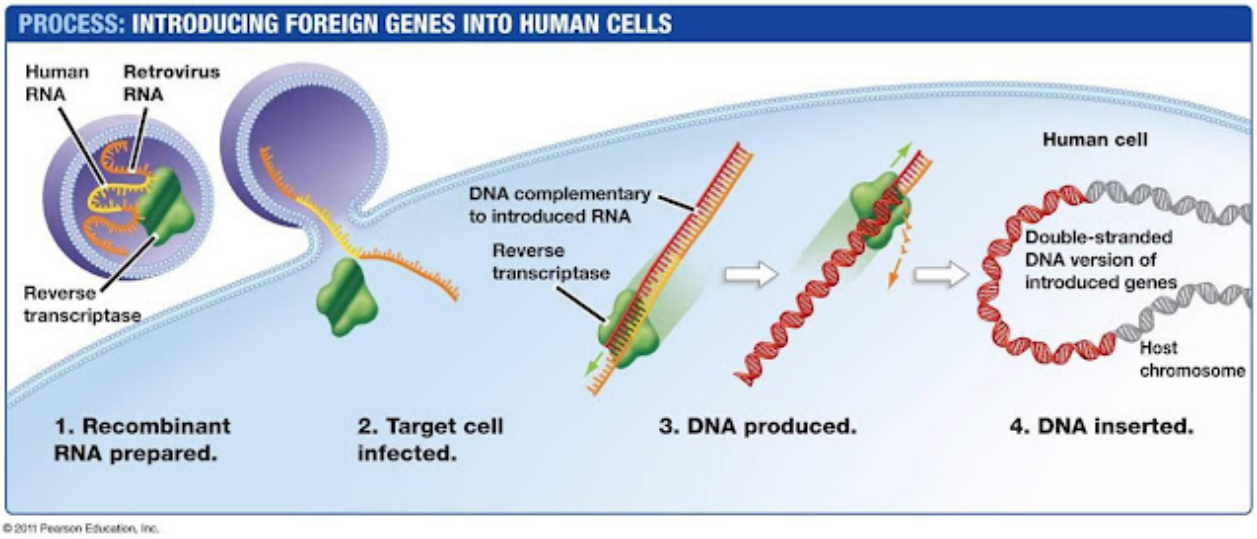

Image: Gene therapy works by reprogramming an ordinary virus to delivery modified genes to human cells. Once introduced, the modified genes are replicated by natural cell division. Missing or defective genes, over time, can be replaced by repaired genes, reprogramming the immune system to eradicate otherwise incurable diseases, or creating function in defective systems, curing blindness, deafness, diabetes, and even effects owed to aging.

Why Haven't We Heard More About This?

As remarkable and as promising as gene therapy is, it poses an immense threat to the established healthcare industry. A shot in clinical trials using experimental equipment that costs only 20,000 USD to produce that cures leukemia, if brought into mainstream medicine would be cheaper still, and undercut existing and ineffective"treatments" that can reach

costs in the hundreds of thousands of dollars.

Gene therapy, then, is essentially a disruptive technology that brings various healthcare rackets to an abrupt halt along with all the vast wealth and unwarranted power and influence big-pharma has enjoyed over the decades.

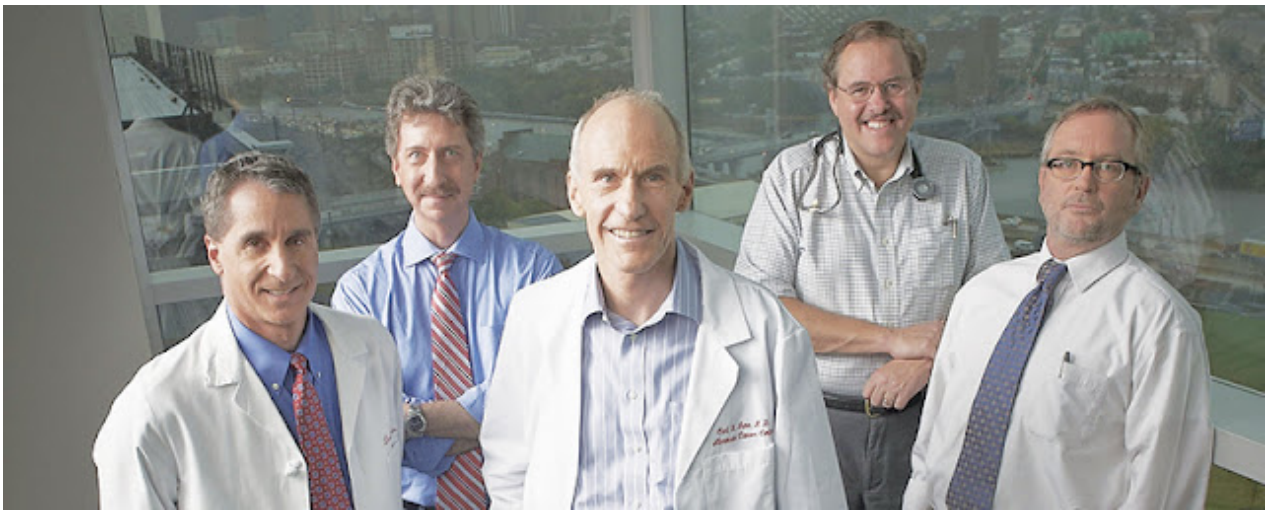

Image: Dr. Carl June (center) led a team that developed a breakthrough gene therapy that effectively reprograms the immune system to hunt and kill leukemia cancer cells. Most of the patients, otherwise sure to die from their cancer, have gone into permanent remission.

How can big-pharma continue on with its monopolies, wealth, and influence by curing everyone with one shot that costs almost nothing to make?

Their strategy is two-fold. First, they have intentionally dragged their feet for as long as possible until they can figure this problem out, letting people die of now curable diseases simply because they want to protect their existing business models and bottom lines.

Second, they have begun to mold public opinion through intense lobbying across the media and medical journals, ignoring the actual costs involved in producing the therapies, and instead cashing in on what they think it is worth to people, or in other words, dangling cures for crippling, deadly diseases over dying and/or desperate people's heads, and seeing how much they are willing to pay for them.

The Washington Post, in its article, "Gene therapies offer dramatic promise but shocking costs," writes (emphasis added):

> A gene therapy approved in Europe in 2012 costs close to $1 million, and prices are expected to follow suit in the United States. The therapies in the pipeline are mostly for rare genetic diseases: sickle cell, hemophilia or immune deficiency. Their likely high prices stem from the expected value; unlike drugs that a person takes regularly, gene therapies are designed to be given once and have lasting effects.

The Washington Post continues by reporting (emphasis added):

> But everyone involved anticipates the potential backlash against a seven-figure price tag, which is leading to radical proposals. Instead of paying for a treatment all at once, insurers and patients could make installment payments as long as the therapy works, similar to a mortgage on a house. Some

> researchers are adding up the cost of the traditional treatments that a patient will be able to avoid each year to determine a price that, although high, could lead to savings for the health-care system.
>
> To Corona [a young woman whose eyesight has been improved by gene therapy], the gift of vision is something approaching a miracle. But how much is that miracle worth in dollars?

Finally, the Washington Post concludes by saying:

> Corona, who excitedly woke up her family in the middle of the night when she read about the possibility of gene therapy years ago, didn't have to pay for her treatment, because she was part of a clinical trial.
>
> But she said her family would have found a way to get her the therapy if it had already been on the market, even if it meant battling an insurance company or taking out a loan. After all, she said, it's not only about seeing better. She now feels like a happier, more confident person. That part feels priceless.

There seems to be nothing worse than exploiting human suffering, and the Washington Post has described perhaps the most blatant case-study of just such exploitation. It does not cost millions of dollars to prepare one of these therapies. Research may be costly, but is generally funded by taxpayers' money through government grants to research laboratories. With the potential gene therapy offers it is likely the public could be convinced to invest even more public money into the development of such therapies.

Instead, what is happening, is public-funded research is then being handed over to corporations to commercialize these therapies. These corporations seek to minimize investments, and maximize profits and a complicit government is letting them do just that.

In the case of leukemia-beating therapies developed by Pennsylvania University, big-pharma giant Novartis swooped in only after clinical trials proved an astounding success. Likely the most pressing issue holding back this revolutionary cure from saving more lives in the immediate future is not medical or technical, but rather how best to cash in on a literal cure for cancer. A recent patent dispute has already delayed research that literally could make the difference between life and death.

An Alternative Reality

Imagine greater amounts of public funding going into the research and development of gene therapy. Imagine cures for diseases that cost hundreds or thousands of dollars instead of tens of thousands of dollars or a ridiculous sum of 1 million dollars. And imagine open source journals publishing the results and findings as the field of gene therapy expands so other institutions both in the United States, and around the world could benefit from this revolutionary breakthrough.

Images: Emily Whitehead today (left) after receiving revolutionary gene therapy developed by Pennsylvania University, and Emily Whitehead beforehand (right) at the end of failed conventional chemotherapy for her leukemia. Had she not received gene therapy as part of a clinical trial, she surely would not be alive today. Big-pharma believes only those willing to pay heavily for such "miracles" deserve to benefit from them.

Indeed, gene therapy can not only save public health programs money, they can transform them entirely. Imagine needing but a single shot to permanently cure your condition, instead of spending a lifetime seeing doctors, specialists, pharmacists, and insurance agents treating a persistent disease or condition. Image the burden that would be lifted off of local clinics, hospitals, and the public funds that could then be diverted elsewhere.

We stand at the precipice of conquering human health by mastering it at the genetic level. It would be a step of historic proportions not unlike the industrial revolution, the information age, or the discovery of DNA itself. Unfortunately, stakeholders who have made immense fortunes and who have built entire empires on exploiting human sickness and all the desperation associated with potentially losing one's life or the life of a loved one, stand in the way.

Not only are they standing in the way, they have begun to clearly draw a line publicly, defining just how this revolution will be harnessed to their benefit and at the expense of literally everyone else.

Fighting Back

Wielding the power of gene therapy requires an understanding of biotechnology, the ability to use the tools and techniques of biotechnology in a properly equipped laboratory, with competent technicians, doctors, and researchers. Until recently, all of this required huge sums of financial support and the backing of the state, institutions, and/or large, well-established corporations.

Today, however, the cost for much of the equipment used in biotechnology has come tumbling down. Open source tools and techniques are finding their way onto the Internet, and laboratories built by and for communities have begun springing up around the globe.

Called DIYbio labs or community labs, they have so far focused on simpler goals, such as genetically testing food, re-engineering bacteria, or simply developing better versions of existing open source lab equipment, software, and protocols.

Image: Liz Parrish has become the first of what is likely to be many, who has short-circuited big-pharma's attempted monopoly over gene therapy by developing and testing on herself two potential breakthroughs.

A smaller and lesser known sub-culture known as "grinders," focus on DIYbio applied to human health. Many of the experiments they conduct are conducted on they themselves. The most extreme and relevant example of this involved Elizabeth Parrish, a 44-year-old CEO of the biotech startup BioViva, who conducted tests with two different experimental gene therapies on herself.

Whether Parrish's experiments prove a success or not is irrelevant. According to MIT's Technology Review in an article titled, "A Tale of Do-It-Yourself Gene Therapy," the actual process of preparing a therapy is not particularly complicated and can be done in any properly outfitted lab.

MIT Technology Review states specifically (emphasis added):

> Another prominent science advisor listed by BioViva is Harvard Medical School genomics expert George Church, who includes BioViva in a list on his website of around 100 companies he collaborates with. Church said last week he was also trying to learn what exactly had occurred in Latin America. "I think it is real," he said in an interview. "There were some indications it might happen. Companies in stealth mode can do anything they want."
>
> Church says he didn't agree with dodging regulators and added that BioViva appears to be "a one-person show." But he says he found Parrish's claims plausible. A student in his lab, he says, could prepare a genetic treatment suitable for experiments in animals in a matter of days.

If that is so, Parrish is likely only the first of many soon to follow. Faced with either a lifetime

in debt to big-pharma, or even the prospect of dying from a curable condition big-pharma simply refuses to provide the cure for because of financial considerations, a growing number of people will turn to “labs” that could prepare genetic treatments at drastically reduced costs and with minimum or nonexistent barriers to accessibility.

Image: Increasingly common around the world are DIYbio labs, or community labs where enthusiasts have begun to harness the power of biotechnology for their community’s own benefit. The expansion of these local institutions stands to challenge the corrupt, inhuman monopolies erected by big-pharmaceuticals, and liberate humanity from what is for all intents and purposes a growing scientific and medical dictatorship.

Dangerous? Yes. But if you are dying from cancer, and as big-pharma itself has pointed out, you’re likely to do anything – whether it is putting yourself in debt to big-pharma for a million dollars, or rolling the dice with a treatment drummed up in an underground biopunk lab.

As the capabilities of DIYbio labs grow in general, it will become increasingly possible for dedicated teams of citizen scientists and activists to reverse engineer existing therapies, reproduce them, and put them online in a biological version of existing peer-to-peer file sharing networks. Independent research and development toward human health applications and even gene therapy itself will also become increasing possible.

Eventually, because of big-pharma’s shortsighted greed, it will be displaced entirely by this growing network of localized medicine, all because it decided to turn this historic corner as plunderers instead of as enlightened leaders.

For average people out there interested in getting involved, simply use your favorite Internet search engine, type in “DIYbio” and the city you live in or near, and start attending meetings, workshops, and participating in projects today. All great journeys initially start with single steps in more or less familiar surroundings, but collectively lead to something far more significant.

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