

# How Will DNA Be Collected For Future Healthcare?

A fierce battle is raging between DNA Technocrats as to the best way to collect DNA from the population: should it be the professional medical community or consumer services like 23andMe? Either way, your data can and will be weaponized against you. □ TN Editor

As millions of Americans sat down to Thanksgiving dinner, the biomedical researcher [James Hazel](#) sent out a stark warning about the [genetic-testing kits](#) that he surmised would be a hot topic of conversation.

Most of them are neither safe nor private.

Hazel reached this conclusion after reviewing the privacy policies and terms of service of nearly 100 genetic-testing companies that offer their services directly to people. Most people use these services either by [submitting a sample of saliva](#) or uploading their raw digital DNA

signature to a public database. Their lofty common draw is enabling people to learn more about their health, family history, and ultimately their identity.

Hazel, a researcher at Vanderbilt University, studied companies ranging from popular startups like 23andMe — which offers health and ancestry information — to under-the-radar outfits such as GEDmatch, which simply houses genetic information to help people build family trees. His [article](#), which was published on Thanksgiving Day in the journal *Science*, found that nearly half lacked even a basic privacy document that governed genetic data.

Privacy isn't the only concern that experts have with consumer genetic tests. In addition to collecting sensitive data on ancestry, companies like 23andMe claim to show how your DNA affects your health. But clinicians, medical professors, and genetic counselors told *Business Insider* that this information is misleading and could put people at risk of missing warning signs for diseases like cancer.

"It's very scary for us because patients think they've had a genetic test when they haven't," said [Theodora Ross](#), the director of the cancer-genetics program at the University of Texas Southwestern.

Still, comprehensive genetic workups — the kind that require a doctor's visit — remain expensive and time-consuming.

That's led millions of Americans to rely on at-home kits for most of their genetic knowledge. This holiday season, genetic-testing kits broke sales records. Ancestry announced after Thanksgiving that it had sold 14 million DNA kits worldwide. 23andMe has assembled genetic data on more than 5 million customers.

Experts agree it's time for a different model, something between a pricey doctor-ordered test and the limited spit kits available in drug stores. And though several companies are [trying new approaches](#), none has emerged as a leader. In the meantime, sensitive customer data is being uploaded and housed in large databases — sometimes forever.

For law-enforcement officials to arrest suspected [Golden State](#)

[Killer](#) Joseph DeAngelo on charges including four murders and dozens of rapes, they did not need him to participate in any genetic-testing services.

Instead, DeAngelo's arrest hinged on the participation of several of his distant family members. At some point, 24 people distantly related to him uploaded their genetic data to a public DNA database called GEDmatch.

After creating a fake GEDmatch profile using DNA they'd gathered at the scene of a 1980 crime, investigators were led to those people. By cross-checking the list against several other databases such as census data and cemetery records, they were able to close in on DeAngelo.

That's something Hazel and other researchers call "reidentification." He said it's a significant risk for people, even if they haven't ever personally taken a genetic test.

"The fact that law enforcement has access to this with just a subpoena, that was the impetus for my article," Hazel said. "I wanted to use it to highlight the deficiencies of the system."

Still, the process required a specialist and years of work, Curtis Rogers, the cofounder of GEDmatch, told Business Insider.

"It takes many people, each supplying little bits of information, to begin the complicated process of solving a cold case," Rogers said.

## **'Informed consent' is not always informed**

Most genetic-testing [companies](#) say they use something called "informed consent" to verify that people understand [what their genetic data may be used for](#). Most well-established companies like Ancestry or 23andMe ask for consent when a customer signs up or registers their kit; others put it in a 10- or 20-page terms-of-service document.

Informed consent is especially important because some companies [keep](#)

[genetic data](#) for a long time, sometimes [indefinitely](#). That means it can be used in different ways, including for purposes like solving a murder, that customers might not have anticipated.

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## **REJECT: Over 40 Percent Of Americans Refuse Flu Vaccinations**

Citizens are waking up to the dangers of vaccines, even in the face of the biggest propaganda push by Big Pharma in modern times. Technocrats invent stuff and expect everyone to use their inventions just because they say so. No more. □ TN Editor

Have you gotten your flu shot this year?

If the answer is no - and I'm not getting one! - you're not alone. A new study finds more than 40 percent of Americans have not been vaccinated and, in fact, don't plan on it either.

This is despite the warnings, potential dangers, and last year's record-number of flu deaths. The survey was done by the National Opinion Research Center at the University of Chicago

The top three reasons why they didn't want the shot were: bad side effects; thinking they'll get the flu from the shot; or thinking it doesn't work.

Some think the side effects are worse than the flu itself, but that's just a myth. Usually the only side effect is a sore arm.

It's also a myth that getting the vaccine gives you the flu. The flu vaccine is inactive and cannot cause the infection. If you do get sick after getting the vaccine, it's just a coincidence.

And while it is true that the vaccine doesn't work 100 percent of the time, the benefit is that it lessens the severity. If you do still get the flu you're 60 percent less likely to need treatment.

Last year's flu season, keep in mind, was particularly severe. More than 900,000 people were hospitalized and more than 80,000 people died. Many were adults older than 65, but also 180 children died from the flu.

[Read full story here...](#)

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## **Navy Looking Create New Marine GMOs To Detect Enemy Subs**

The Naval Research Laboratory has too many Technocrats with too much time on their hands. Still, this project points out that genetic modification is going on in every possible environment on the earth. What could go wrong? □ TN Editor

The Pentagon is also looking at living camouflage, self-healing paint, and a variety of other applications of engineered organisms, but the basic science remains a challenge.

How do you detect submarines in an expanse as large as the ocean? The U.S. military hopes that common marine microorganisms might be genetically engineered into living tripwires to signal the passage of enemy subs, underwater vessels, or even divers.

It's one of many potential military applications for so-called engineered organisms, a field that promises living camouflage that reacts to its surroundings to better avoid detection, new drugs and medicines to help deployed forces survive in harsh conditions, and more. But the research is in its very early stages, military officials said.

The Naval Research Laboratory, or NRL, is supporting the research.

Here's how it would work: You take an abundant sea organism, like [Marinobacter](#), and change its genetic makeup to react to certain substances left by enemy vessels, divers, or equipment. These could be metals, fuel exhaust, human DNA, or some molecule that's not found naturally in the ocean but is associated with, say, diesel-powered submarines. The reaction could take the form of electron loss, which could be detectable to friendly sub drones.

"In an engineered context, we might take the ability of the microbes to give up electrons, then use [those electrons] to talk to something like an autonomous vehicle. Then you can start imagining that you can create an electrical signal when the bacteria encounters some molecule in their environment," NRL researcher Sarah Glaven [said at a November event](#) put on by the Johns Hopkins University's Applied Physics Lab.

Glaven believes the research is about a year away from providing concrete evidence that she can engineer reactions in abundant marine life forms that could prove useful for the military. Sub-hunting, in particular, is "what we would like it to be applicable for," she said.

"The reason we think we can accomplish this is because we have this vast database of info we've collected from growing these natural systems. So after experiments where we look at switching gene potential, gene expression, regulatory networks, we are finding these sensors," said Glaven.

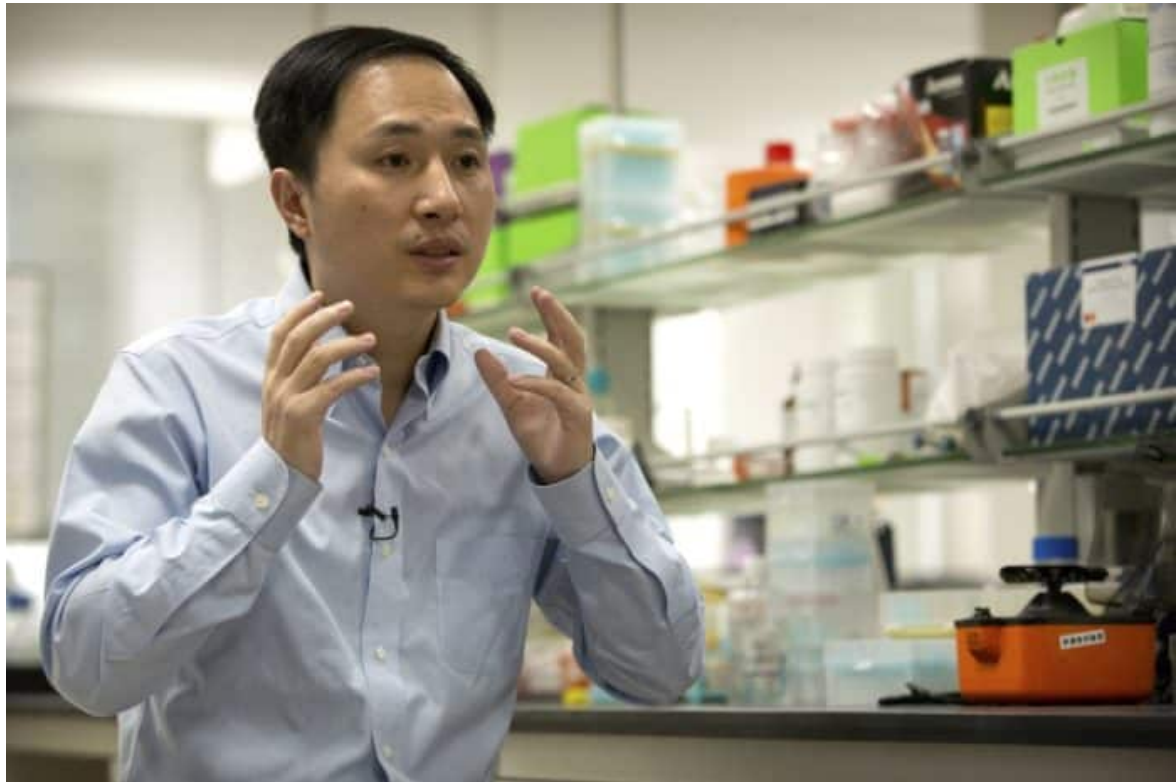
Geneticists have already shown that it's possible to manipulate the genes of *E. coli* bacteria to exhibit all sorts of properties that might be useful for sub sensing. But, in synthetic biology, *E. coli* are similar to lab mice in conventional medical research: they're abundant, cheap, and easy to work with, but their real-world relevance is limited. What works in *E. coli*, or in lab mice, doesn't always work in other organisms and you just don't find them in the sorts of places you would want to detect submarines.

There's currently a [\\$45 million effort across the Army, Navy and Air Force](#), dubbed the Applied Research for the Advancement of Science and Technology Priorities Program on Synthetic Biology for Military

Environments, aimed at giving researchers the tools they need to engineer genetic responses into organisms that would be useful for the military.

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## **Update: Chinese Baby Gene-Editing Scientist Goes Missing**

Apparently He Jiankui is out of favor with Chinese Technocrats, since he has abruptly gone missing with rumors of his arrest. China seldom openly reveals outright and purposeful disappearances. □ TN Editor

The whereabouts of Chinese scientist He Jiankui, who claims to have created the world's first gene-edited babies, remain unknown amid rumours that he has been arrested.

Reports claimed He was placed under effective house arrest in Shenzhen



after making an appearance at the Second International Summit on Human Genome Editing in Hong Kong last Wednesday.

However, claims of He's detention were dismissed by his former-employer, Southern University of Science and Technology, according to South China Morning Post. The university declined to elaborate further.

Chinese scientist He Jianjui speaks at the Second International Summit on Human Genome Editing at the University of Hong Kong on Wednesday. His whereabouts remain unknown after the summit, according to media reports

The scientist sparked global controversy last week when he announced in a YouTube video that he had successfully used a gene-editing tool to modify the DNA of two embryos.

[Apple Daily](#) on Sunday reported that the scientist had been brought back to Shenzhen by the university's president, Chen Shiyi. The two also had a six-hour meeting on He's controversial research.

Chen is currently under house arrest on campus, the report said, adding that there were security personnel standing guard on university grounds.

When asked about He's reported arrest, a spokeswoman for the Shenzhen-based university told [South China Morning Post](#): 'Right now nobody's information is accurate, only the official channels are.'

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# Mosquitos: How Robots And AI Are Used For Species Extinction

Nobody likes mosquitos but ordering their extinction gives Technocrat-minded scientists all kinds of ideas on how to best use technology on how to do it. Worse, Alaphabet, Inc. (owns Google) is leading the charge.  
□ TN Editor

Silicon Valley researchers are attacking flying bloodsuckers in California's Fresno County. It's the first salvo in an unlikely war for Google parent Alaphabet Inc.: eradicating mosquito-borne diseases around the world.

A white high-top Mercedes van winds its way through the suburban sprawl and strip malls as a swarm of male *Aedes aegypti* mosquitoes shoot out of a black plastic tube on the passenger-side window. These pests are tiny and, with a wingspan of just a few millimeters, all but invisible.

“You hear that little beating sound?” says Kathleen Parkes, a spokesperson for Verily Life Sciences, a unit of Alphabet. She’s trailing the van in her car, the windows down. “Like a duh-duh-duh? That’s the release of the mosquitoes.”

Jacob Crawford, a Verily senior scientist riding with Parkes, begins describing a mosquito-control technique with dazzling potential. These particular vermin, he explains, were bred in the ultra-high-tech surroundings of Verily’s automated mosquito rearing system, 200 miles away in South San Francisco. They were infected with Wolbachia, a common bacterium. When those 80,000 lab-bred Wolbachia-infected, male mosquitoes mate with their counterpart females in the wild, the result is stealth annihilation: the offspring never hatch.

Better make that 79,999. “One just hit the windshield,” says Crawford.

Mosquito-borne disease eradication is serious stuff for Alphabet, though it is just one of many of the company’s forays into health care and life sciences. Through Verily and other branches of the company, Alphabet is investigating smart contact lenses, artificial intelligence applications for health care, and the molecular mechanisms of aging. Just this month, Alphabet hired Geisinger Health CEO David Feinberg to oversee its many health-care initiatives.

Verily guards its technology closely. But it stands to reason that if it succeeds in making mosquito control easy and cheap enough, it could have a lucrative offering on its hands: Many governments and businesses around the globe might be glad to pay for a solution to their mosquito problems.

In the arid climate of California’s Central Valley, *A. aegypti* are detested for their vicious bite. But there, at least, they don’t typically transmit disease. Other places aren’t so lucky. The mosquito species is among the world’s deadliest, spreading diseases such as dengue fever and chikungunya in the tropics and subtropics. The diseases its bite carries kill tens of thousands of people every year and infects millions more. Releasing Wolbachia-infected mosquitoes into the wild may eventually wipe out entire populations of deadly mosquitoes and the diseases they

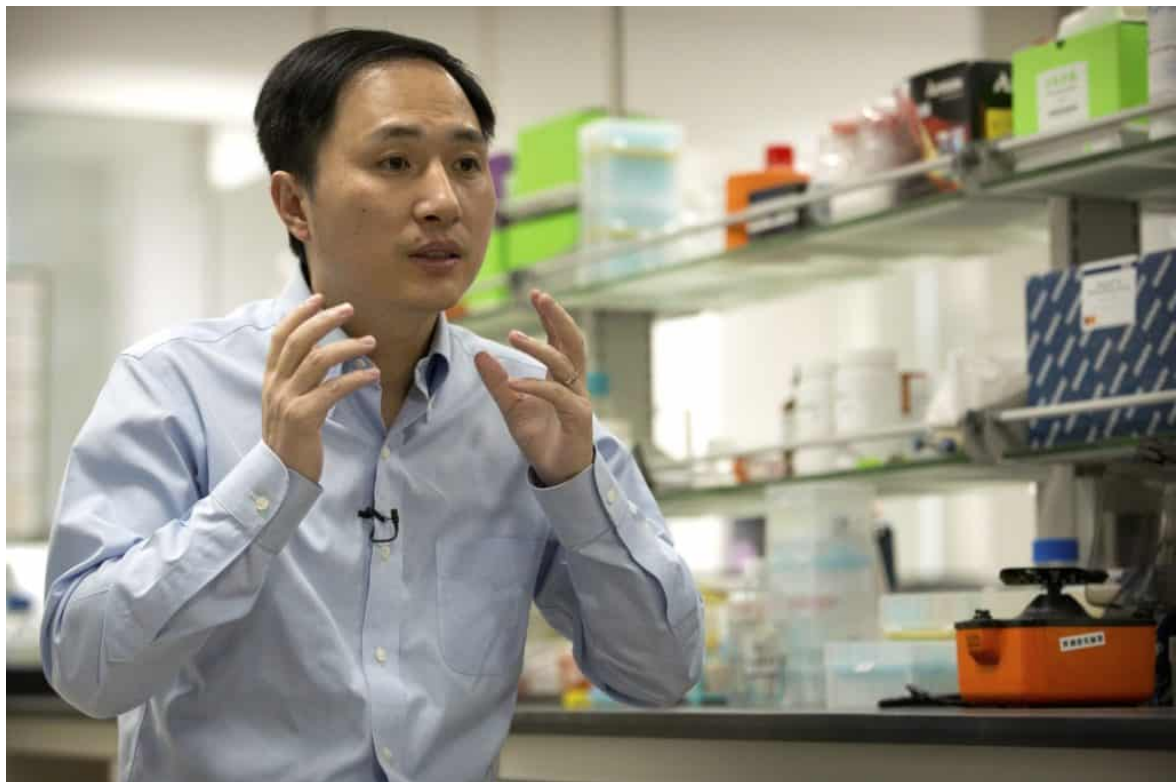
carry.

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At Verily's headquarters, the "factory" where the mosquitoes are bred incorporates even more automation. Once the eggs are laid, robots rear the mosquitoes to adulthood, packaging them in containers filled with water and air, feeding them, and keeping them warm. Still other robots sort them by sex, first by size (females are bigger) and then optically, using proprietary technology. Mosquitoes are all given a digital identifier that makes it possible to follow them from egg-state to the specific GPS coordinate where they're released.

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**Blowback: Chinese Scientist**

# Claims First Gene-Edited Babies

Proving that all scientists are not Technocrats, many have condemned He Jiankui for introducing gene modifications into the human germline, meaning his changes will perpetuate to succeeding generations. □ TN Editor

A Chinese researcher claims that he helped make the world's first genetically edited babies — twin girls born this month whose DNA he said he altered with a powerful new tool capable of rewriting the very blueprint of life.

If true, it would be a profound leap of science and ethics.

A U.S. scientist said he took part in the work in China, but this kind of gene editing is banned in the United States because the DNA changes can pass to future generations and it risks harming other genes.

Many mainstream scientists think it's too unsafe to try, and some denounced the Chinese report as human experimentation.

The researcher, He Jiankui of Shenzhen, said he altered embryos for seven couples during fertility treatments, with one pregnancy resulting thus far. He said his goal was not to cure or prevent an inherited disease, but to try to bestow a trait that few people naturally have — an ability to resist possible future infection with HIV, the AIDS virus.

He said the parents involved declined to be identified or interviewed, and he would not say where they live or where the work was done.

There is no independent confirmation of He's claim, and it has not been published in a journal, where it would be vetted by other experts. He revealed it Monday in Hong Kong to one of the organizers of an international conference on gene editing that is set to begin Tuesday, and earlier in exclusive interviews with The Associated Press.

"I feel a strong responsibility that it's not just to make a first, but also



make it an example,” He told the AP. “Society will decide what to do next” in terms of allowing or forbidding such science.

Some scientists were astounded to hear of the claim and strongly condemned it.

It’s “unconscionable ... an experiment on human beings that is not morally or ethically defensible,” said Dr. Kiran Musunuru, a University of Pennsylvania gene editing expert and editor of a genetics journal.

“This is far too premature,” said Dr. Eric Topol, who heads the Scripps Research Translational Institute in California. “We’re dealing with the operating instructions of a human being. It’s a big deal.”

However, one famed geneticist, Harvard University’s George Church, defended attempting gene editing for HIV, which he called “a major and growing public health threat.”

“I think this is justifiable,” Church said of that goal

In recent years scientists have discovered a relatively easy way to edit genes, the strands of DNA that govern the body. The tool, called CRISPR-cas9, makes it possible to operate on DNA to supply a needed gene or disable one that’s causing problems.

It’s only recently been tried in adults to treat deadly diseases, and the changes are confined to that person. Editing sperm, eggs or embryos is different — the changes can be inherited. In the U.S., it’s not allowed except for lab research. China outlaws human cloning but not specifically gene editing.

He Jiankui (HEH JEE'-an-qway), who goes by “JK,” studied at Rice and Stanford universities in the U.S. before returning to his homeland to open a lab at Southern University of Science and Technology of China in Shenzhen, where he also has two genetics companies. The university said He’s work “seriously violated academic ethics and standards” and planned to investigate. A spokesman for He confirmed that he has been on leave from teaching since early this year, but he remains on the faculty and has a lab at the school.

The U.S. scientist who worked with him on this project after He returned to China was physics and bioengineering professor Michael Deem, who was his adviser at Rice in Houston. Deem also holds what he called “a small stake” in — and is on the scientific advisory boards of — He’s two companies.

The Chinese researcher said he practiced editing mice, monkey and human embryos in the lab for several years and has applied for patents on his methods.

[Read full story here...](#)

## **First genetically edited BABIES created by ‘dangerous and irresponsible’ scientist**

From The Mirror (UK) □ TN Editor

A scientist from China claims to have created the world’s first [genetically](#) edited babies.

He Jianhui, a scientist at the Southern University of Science and Technology of China in Shenzhen, says he altered the DNA of twin girls to prevent them from future infection with HIV.

During his controversial study, Mr He claims he altered embryos for seven couples during IVF treatment, with one successful pregnancy.

However, his ‘research’ is yet to be independently confirmed by anyone else.

Speaking to the [Associated Press](#), Mr He said: “I feel a strong responsibility that it’s not just to make a first, but also make it an example.

“Society will decide what to do next.”

The twins' father had HIV, while their mother did not. To prevent the twins from infection, Mr He says that he disabled a gene called CCR5.

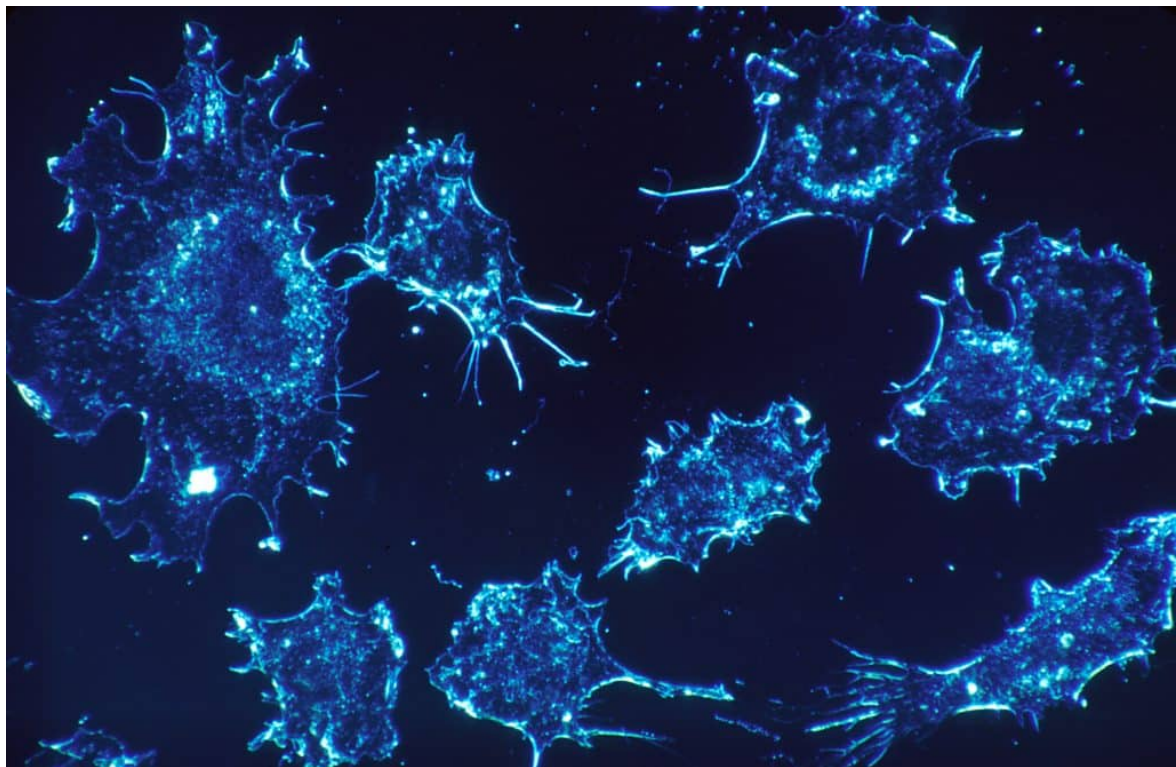
This gene forms a protein 'doorway', allowing HIV to enter cells and infect patients.

The controversial technique has been highly criticised by other experts.

Professor Joyce Harper, an expert in human embryology at UCL, said: "Today's report of genome editing human embryos for resistance to HIV is premature, dangerous and irresponsible.

[Read full story here...](#)

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## **Genetically Modified Virus Made To Kill Cancer Cells**

On the surface of it, this is a health breakthrough that could potentially

save hundreds of thousands of cancer victims. However, the technology has very dangerous applications in the wrong hands. □ TN Editor

A Genetically modified virus that kills cancer cells and destroys their hiding places has been developed by British scientists.

It targets both cancer cells and healthy cells that are tricked into protecting the cancer from the immune system.

Fibroblasts, the most common type of cell in connective tissues, are vital in the body's healing process, but they can get hijacked by cancer-associated fibroblasts or CAFs.

These then help tumours grow, spread and evade therapy.

The new treatment, a form of immunotherapy developed by Oxford University scientists, attacks carcinomas - the most common type of cancer.

Currently, any therapy that kills the "tricked" fibroblast cells may also kill healthy fibroblasts throughout the body - for example in the bone marrow and skin - causing illness during treatment.

Using a virus called enadenotucirev, already being used in clinical trials as a cancer treatment, experts were able to programme the virus to only attack cancerous cells.

The virus uses a protein to bind cancerous cells to immune cells to destroy the disease.

These immune cells normally can't find unhealthy, cancerous cells as they are hidden by CAFs.

Lead author Dr Kerry Fisher, from the Department of Oncology at the university, said: "Even when most of the cancer cells in a carcinoma are killed, fibroblasts can protect the residual cancer cells and help them to recover and flourish.

"Until now, there has not been any way to kill both cancer cells and the fibroblasts protecting them at the same time, without harming the rest of the body.

"Our new technique to simultaneously target the fibroblasts while killing

cancer cells with the virus could be an important step towards reducing immune system suppression within carcinomas and should kick-start the normal immune process.

“These viruses are already undergoing trials in people, so we hope our modified virus will be moving towards clinical trials as early as next year to find out if it is safe and effective in people with cancer.”

The virus was successfully tested on human tissue cells from cancer patients and prostate cancer tumours, without causing abnormal immune responses that usually make people sick during cancer treatments like chemotherapy.

The study, which was funded by the Medical Research Council (MRC) and Cancer Research UK, was published in the journal *Cancer Research*.

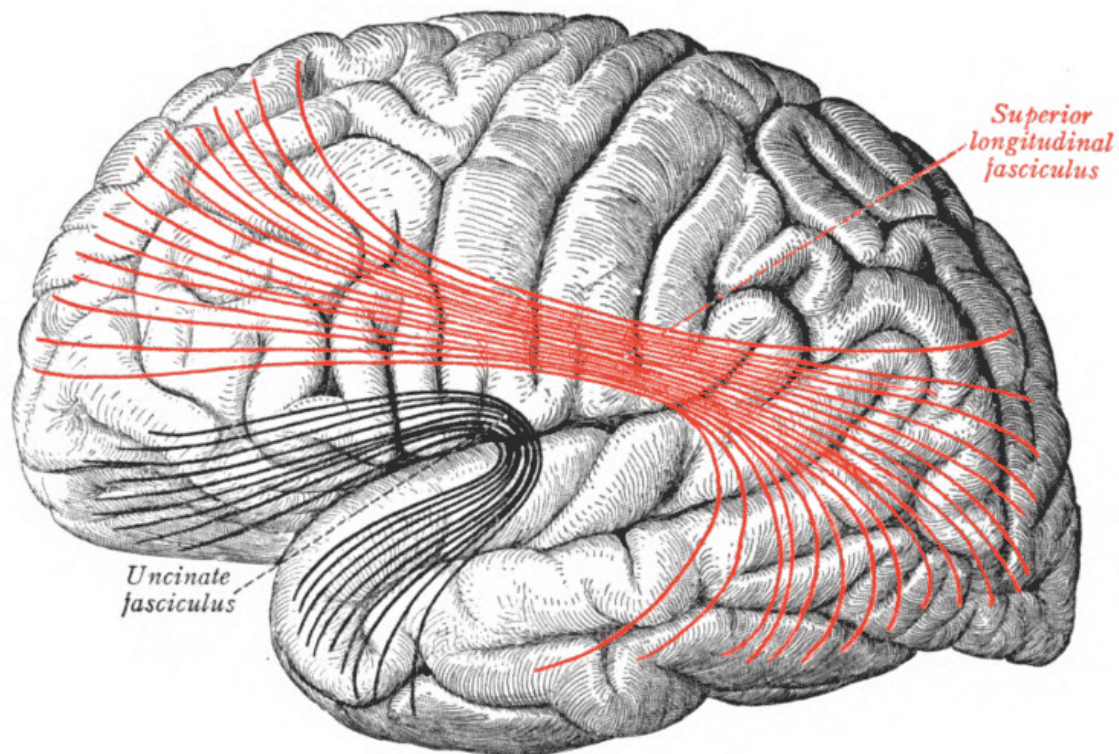
Dr Nathan Richardson, head of molecular and cellular medicine at the MRC said: “This innovative viral delivery system, which targets both the cancer and surrounding protective tissue, could improve outcomes for patients whose cancers are resistant to current treatments.

“Further clinical studies will be crucial to determine that the stimulation of the patient’s immune system does not produce unintended consequences.”

[Read full story here...](#)

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# NIH Greatly Expands Investment in BRAIN Initiative

Obama likened his BRAIN initiative to mapping the human genome. With DNA hacking taking place throughout the world's science labs, will mind hacking be next? Once the human mind and body can be controlled, will Technocrat scientists not rise up to do so? □ TN Editor

The National Institutes of Health announces funding of more than 200 new awards, totaling over \$220 million, through the [Brain Research through Advancing Innovative Neurotechnologies \(BRAIN\) Initiative](#), an exciting trans-agency effort to arm researchers with revolutionary tools to fundamentally understand the neural circuits that underlie the healthy and diseased brain. Supported by the Congress through both the regular appropriations process and the 21<sup>st</sup> Century Cures Act, this brings the total 2018 support for the program to more than \$400 million, which is 50 percent more than the amount spent last year. Many of the new awards explore the human brain directly. Furthermore, the NIH is trying to leverage some BRAIN Initiative advances to help tackle the pain and opioid crisis.

“Brain diseases are some of the greatest mysteries in modern medicine. These projects will provide new tools and knowledge needed to discover answers for some of the most difficult neurological and neuropsychiatric disorders,” said NIH Director Francis S. Collins, M.D., Ph.D.

Examples of these new awards include the creation of a [wireless optical tomography cap for scanning human brain activity](#); the development of a [noninvasive brain-computer interface system for improving the lives of paralysis patients](#); and the testing of noninvasive brain stimulation devices for treating [schizophrenia](#), [attention deficit disorders](#), and other brain diseases. All these awards can be found on the [new NIH BRAIN Initiative website](#).

Through this expanded program, more than [100 research institutions received awards](#) to support the projects of upwards of 500 investigators representing fields as diverse as engineering and psychology. Many of the awards fund the development of new tools and technologies to capture a dynamic view of brain circuits in action, including the development of [self-growing biological electrodes for recording brain activity](#) and the creation of an [indestructible hydrogel system to help map neural circuits](#).

“New tools to map the brain deepen our understanding of how circuit activity relates to behavior, said Joshua A. Gordon, M.D., Ph.D., director of NIH’s National Institute of Mental Health. “The BRAIN Initiative is laying the foundation for improved ways to target brain circuits disrupted in brain disorders.”

In response to the opioid crisis, NIH is trying [to take advantage of BRAIN Initiative-funded advances to help find new treatments for pain](#). This could include using innovative imaging and -omics neurotechnologies to search for new nonaddictive treatments for pain as part of the of NIH’s [HEAL \(Helping to End Addiction Long-term\) Initiative](#).

“Our country is in the midst of a serious public health challenge from drug use. We hope the advances made by BRAIN Initiative researchers will help us rapidly solve the problems we face in treating pain and

opioid addiction,” said Walter J. Koroshetz, M.D., director of NIH’s National Institute of Neurological Disorders and Stroke.

Launched in 2013, the BRAIN Initiative is a large-scale effort to accelerate neuroscience research by equipping researchers with the tools and insights necessary for treating a wide variety of brain disorders, including Alzheimer’s disease, schizophrenia, autism, epilepsy, and traumatic brain injury. Since then, BRAIN Initiative-funded researchers have [discovered a new type of human brain cell](#); mapped out the neural circuit activity that [controls thirst and drinking](#) and [reactions to threats](#); tested theories about how [a songbird brain uses feedback from sound while learning how to sing](#); [engineered a sensor to monitor the neurotransmitter dopamine in real time](#); [created a self-tuning deep brain stimulation device for treating Parkinson’s disease](#); [watched human brains make decisions](#); and [located the neurons in the brain that control the pitch of our speech](#). In addition, [researchers used a tool developed through the BRAIN Initiative, called Drop-seq, to investigate the effects of concussions on individual brain cells, which pointed to novel treatments](#). These are just a few of many examples of how the BRAIN Initiative is catalyzing rapid advances in neuroscience.

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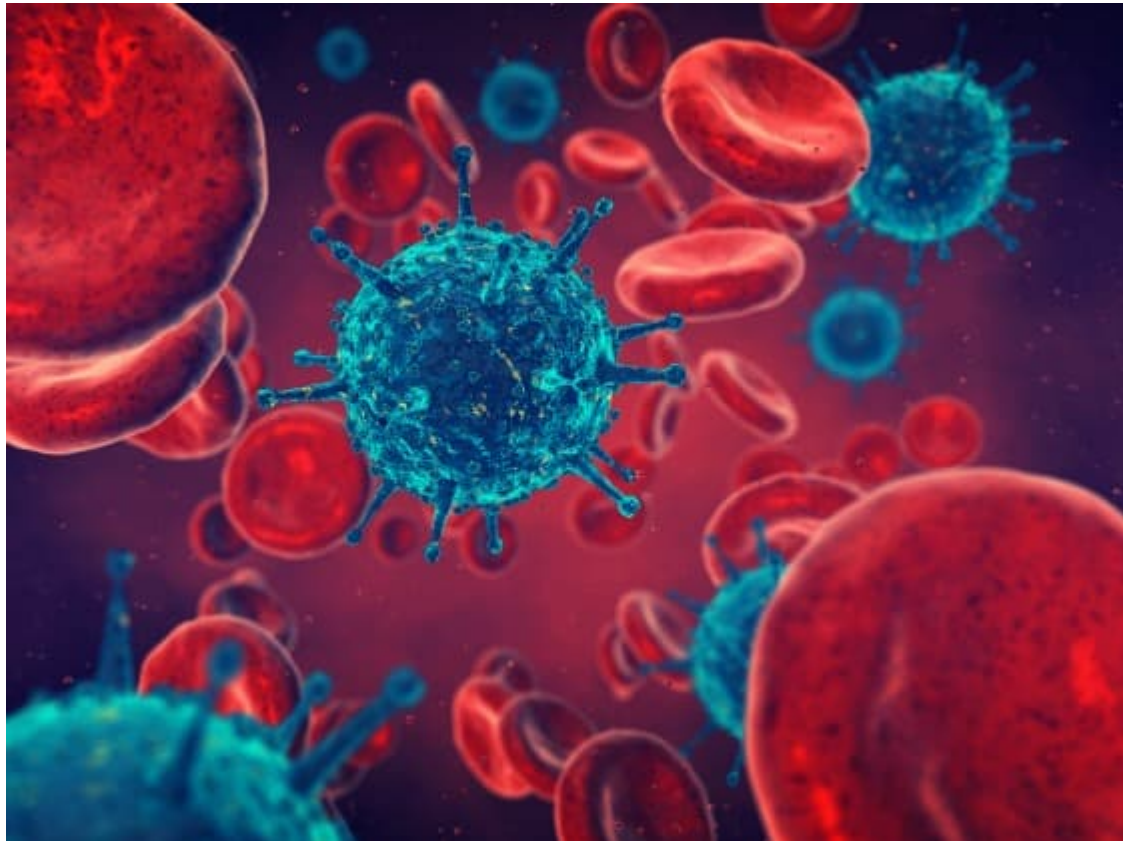
[The NIH BRAIN Initiative](#)® is managed by 10 institutes whose missions and current research portfolios complement the goals of the BRAIN Initiative: National Center for Complementary and Integrative Health, National Eye Institute, National Institute on Aging, National Institute on Alcohol Abuse and Alcoholism, National Institute of Biomedical Imaging and Bioengineering, *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, National Institute on Drug Abuse, National Institute on Deafness and other Communication Disorders, National Institute of Mental Health, and National Institute of Neurological Disorders and Stroke.

**About the National Institutes of Health (NIH):** NIH, the nation’s medical research agency, includes 27 Institutes and Centers and is a component of the U.S. Department of Health and Human Services. NIH is the primary federal agency conducting and supporting basic, clinical,

and translational medical research, and is investigating the causes, treatments, and cures for both common and rare diseases. For more information about NIH and its programs, visit [www.nih.gov](http://www.nih.gov).

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## **Genetically Engineered Viruses Are Next Generation Of Warfare**

Nation-states would hesitate to use GMO viruses because of the 'mutually assured destruction' doctrine. However, any number of small groups of radical terrorists would not hesitate to release a plague on mankind. Technocrats have myopic vision when it comes to GMO technology. □ TN Editor



Genetically engineered viruses could very well become the next generation of warfare. Deadly viruses modified in labs could be released eliminating entire communities of people as they infect making them a valuable asset to militaries worldwide.

As dystopian as that sounds, the Defense Advanced Research Projects Agency (DARPA) is already working on a project called [Insect Allies](#) which will use [insects to infect crops with genetically modified viruses](#) that edit the crops' genetic profile to make them more resilient against disease, as well as natural and manufactured threats to the food supply.

*[Joe Joseph of The Daily Sheeple](#) said a quick Google search would give you enough information to let you know how horrific this kind of technology can be. "...and you'll find it fascinating just at how unbelievable a weapon this could be, how **unintentionally mistakes can be made that can cause irreversible damage...irreparable damage...to the human race. And I mean, FAST!**" Joseph said. "A gene drive...if let's just say there's a mistake, **you could feasibly wipe out the human race in a very very short period of time. It's an unbelievable tool at the disposal of madmen.**"*  
*-[SHTFPlan](#)*

DARPA attempted to squash rising fears about their Insect Allies project and issue reassurances after German and French scientists voiced questions and concerns about the program's efficacy earlier this month. Those scientists [also suggested that it could](#) be "widely perceived as an effort to develop biological agents for hostile purposes and their means of delivery, which—if true—would constitute a breach of the Biological Weapons Convention."

If the know-how and means exist to transmit genetic viruses that supposedly create beneficial crop mutations, the opposite will also be possible. DARPA will be able to use insects to deliver gene editing viruses that destroy crops, ruin harvests and adversely affect the wider ecosystem, [RT accurately pointed out](#). This means that those who fear this program are not far off at all for doing so.

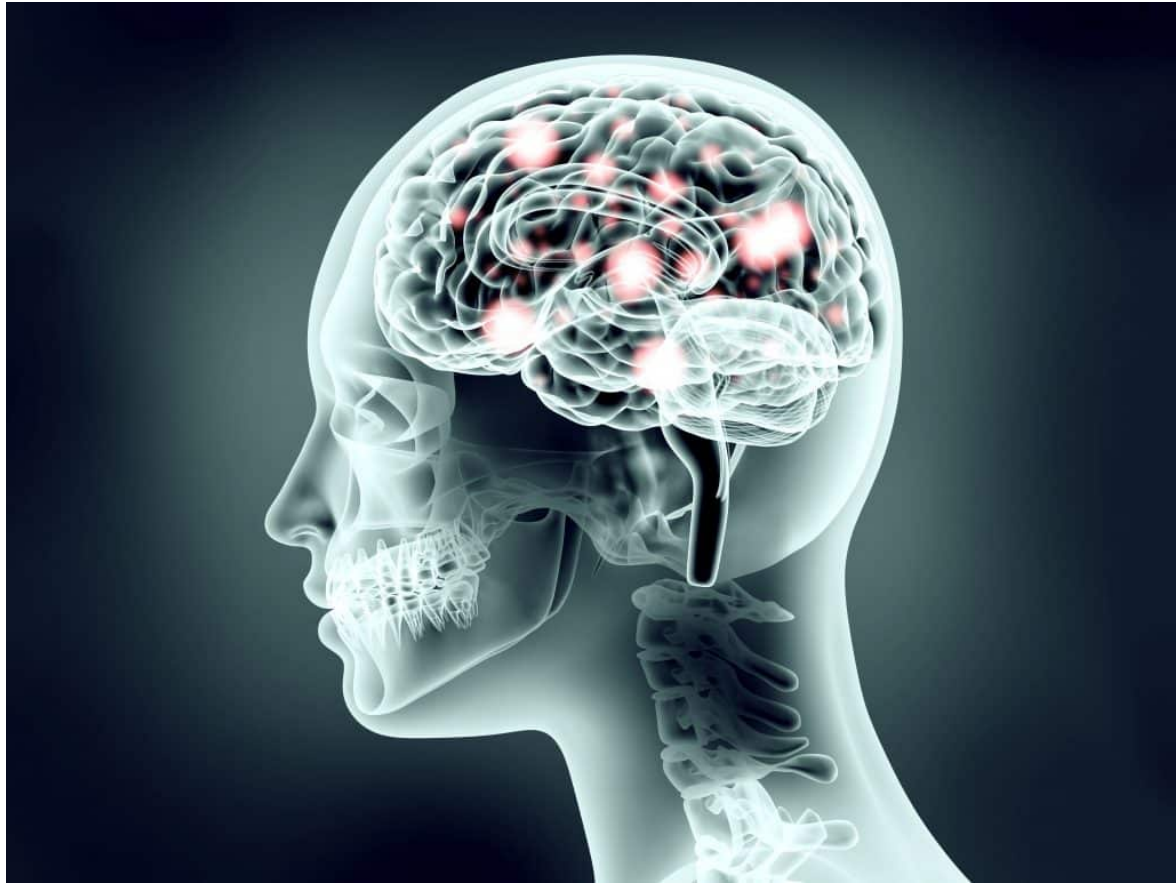


[Another project receiving DARPA funding](#) involves releasing genetically modified mosquitoes in the Florida Keys area to transmit a sterilizing genetic virus to their malaria-carrying counterparts. Apart from the unknown effects upon the wider ecosystem, the knowledge gleaned from such research could one day make it possible for a state, a non-state actor, or a non-state **actor working on behalf of a state to accidentally or deliberately use insect vectors to unleash a variety of biological agents and genetic viruses upon an unsuspecting population.**

Russian president Vladimir Putin expressed his concerns over the potential for a human killing genetically engineered virus just last year. Whilst chairing a meeting of Russia's Human Rights Council, [Putin stated](#): "... do you know that biological material is being collected all over the country, from different ethnic groups and people living in different geographical regions of the Russian Federation? The question is - why is it being done? It's being done purposefully and professionally. We are a kind of object of great interest."

[Read full story here...](#)

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# Scientists: Medical Brain Implants Can Be Hacked And Used To Control People

Electronic security is almost never a forethought with a new technology project, and then becomes platitudes and assurances after it is done. The Technocrat mindset doesn't value humans any higher than herd animals. Citizens must live with no expectation of absolute electronic security. □  
TN Editor

Vulnerabilities in brain implants used to treat Parkinson's disease could be hacked by cyber attackers and used to control people, scientists have claimed.

A report by the Oxford Functional Neurosurgery Group and cyber security company Kaspersky claims that people's memories could be exploited by hackers and has called on cyber security companies, manufacturers and healthcare companies to develop new technology to

stop them.

Academics have [previously warned](#) that brain implants could prevent patients from “speaking or moving, cause irreversible damage to their brain, or even worse, be life-threatening”. They claimed that hackers could overload or disable the system, and could damage people’s brains.

Implantable pulse generators are used to treat patients with conditions such as Parkinson’s disease, essential tremor or major depression and have Bluetooth-enabled software for clinicians and patients to monitor through a smartphone or tablet.

This new report claims that hackers could use the wireless communication to intercept data transmitted, including patients’ personal details and could take over the device itself.

“Manipulation could result in changed settings causing pain, paralysis or the theft of private and confidential personal data,” scientists said.

The report has claimed that hackers could manipulate people through implanted or erased memories in the coming decades, or hold their memories to ransom. Although there have been no examples of cyber criminals hacking these devices, technological advances in the coming years would mean they are not hard to exploit, researchers said.

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