

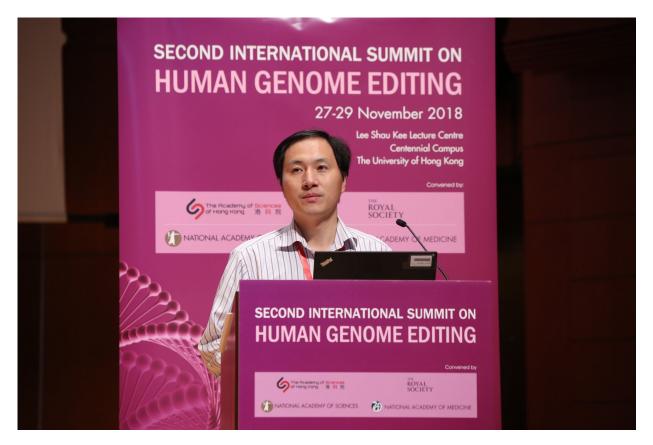
Genetically Modified Babies. The Genetic Editing of Human Life is "Big Business"

By <u>Prof Michel Chossudovsky</u> Global Research, April 28, 2019 Region: <u>Asia</u> Theme: <u>Biotechnology and GMO</u>

Last November, **He Jiankui**, a Chinese biology professor at Southern University of Science and Technology (SUST) in Shenzhen (Guangdong Province) announced that he and his team had created **the World's first "genetically edited babies": twin babies Lula and Nana.**

Dr. He Jiankui, used the CRISPR technology "to alter the embryos of seven couples [allegedly] to make them resistant to HIV". He Jiankui made his announcement at the Second International Summit on Human Genome Editing held at the University of Hong Kong.

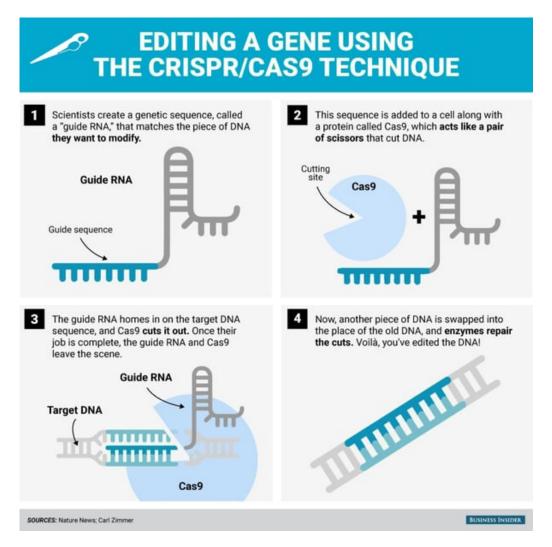
Dr. He claims to have used CRISP "to tweak the DNA of human embryos during in vitro fertilization".



The broad implications of this experiment are far-reaching. The genetic editing of human life forms including embryos has a bearing on the future of humanity.

It opens up the pandora's box of genetic engineering applied to human beings.

It undermines the "reproduction of real life". Potentially, it destroys humanity.



Screenshot Source Nature News Carl Zimmer, Click image to enlarge

The experiment raises important scientific and ethical issues. Human embryos are not commodities.

The Chinese government immediately opened an investigation, Dr He Jiankui was fired by his University in January 2019.

Corporate Interests: Genetic Editing is "Big Business"

Despite government regulations and ethical issues, there are powerful corporate interests involved in the development and patenting of genetic editing of life forms including Dr. He's findings on "genetically modified babies".

While Dr. He's University based lab biology project at SUST has been closed down, he nonetheless remains Chairman and major stakeholder of the Shenzhen based <u>Direct</u> <u>Genomics Biotechnology</u>, "a genome sequencing" firm, with extensive financial resources. Direct Genomics received at least US\$43 million in funding from both Chinese and international investors:

"... The funding was led by Shenzhen Cosun Venture Capital Investment Management, a venture capital firm owned by Shenzhen-listed Coship

Electronics and Chen Libei, an executive of state-backed Fortune Capital. ...

Other investors include **Beijing Xiyi Asset Management**, which has only one venture capital deal – Direct Genomics – since its inception in 2016 on public record. ...

In November 2016, Direct Genomics received an undisclosed amount of funding from three investors – Beijing **Tengye Venture Capital, Amer International Group, and Sinotech Genomics**, according to tianyancha.com, a Chinese corporate information data provider. (SCMP, November 29, 2018)

We're talking about "Big Business" involving the potential marketing and sale of genetically modified human and animal life forms. Imagine the potential strategic and military applications, not to mention the emergence of a corporate health service economy for the super-rich, where "perfect babies" can be purchased for a million dollars.

Following the Chinese government investigation, there is no concrete evidence that this corporate genetic editing project has been discontinued. Quite the opposite.

It is worth noting that **the intellectual property rights pertaining to the CRISPR -Cas9 gene editing** technology used by Dr. He's team (i.e. editing the DNA of human and animal life) are not registered in China. The patent belongs to a US based entity: the <u>Broad</u> <u>Institute</u>, located in Cambridge, Mass. with links to Harvard and MIT.

The <u>Broad Institute</u> is firmly committed to the pursuit of genetic editing of human living cells:

The ability to precisely edit the genome of a living cell holds enormous potential to accelerate life science research, improve biotechnology, and even treat human disease.

While the Broad Institute owns the intellectual technology, CRISPR-Cas9 was invented by a Chinese American scientist Dr. Feng Zhang based at the Broad Institute and MIT.

MIT Prof. Feng Zhang <u>responding to Dr He's controversial announcement</u> calls for "a moratorium on implantation of edited [human] embryos ...until we have come up with a thoughtful set of safety requirements first."

This statement represents the interests of the Broad Institute. According to Feng Zhang's colleague <u>Professor David Liu</u> (also on behalf of the Broad Institute):

"[Dr He's] reported **use of CRISPR nuclease to edit CCR5 in human embryos, resulting in live births,** ... [constitutes] a serious breach of ethics ... Foremost, that edited human babies were generated without the full engagement of independent scientific and ethics experts, relevant regulatory institutions, and governing bodies is appalling." (emphasis added)

These statements are tantamount to "crocodile tears". Failing effective government regulation (e.g. by the Trump administration), the ethical considerations will eventually be scrapped or bypassed.

"Moratorium" rather than "Abolition" of a potentially dangerous technology is the talking point: "We have a legal moratorium on that here," said U.S. FDA Commissioner Scott <u>Gottlieb</u>... The potential applications are also relatively dangerous if they get into the hands of people who don't have good judgment or have ill intent." (Bloomberg SFGate, November 27, 2018)

A moratorium on behalf of those who own the CRISPR patent does not foreclose the development and marketing for profit of genetic editing of human embryos. Money is the driving force. The Moratorium will eventually be lifted. Potentially, what is at stake is a multibillion dollar undertaking.

In all likelihood, there will be a battle for the intellectual property rights pertaining to CRISPR-Cas9 technology, involving both US and Chinese corporate interests.

While the Broad Institute was granted ownership of the CRISPR-Cas9 patent by the US Court of Appeals for the Federal Circuit, less than 3 months prior to Dr. He's announcement in Hong Kong, the ownership of CRISP is actively contested. The University of California at Berkeley is also involved in the fight for patent ownership against the Cambridge based Broad Institute. (Wired, September 11, 2018).

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