

## Forced Organ Harvesting and Corporate Complicity in China

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The Chinese Government is building the world's largest DNA database by acquiring DNA sequencing data from companies within China and across the globe, including USA.

Numerous biotechnology companies are assisting the Chinese police in building this database and may find themselves complicit in these violations. They include multinational companies such as US-based Thermo Fisher Scientific and major Chinese companies like BGI (Beijing Genome Institute), AGCU Scientific, Microread Genetics, and many more.

Chinese authorities are enrolling in genome surveillance, impacting tens of million people in Tibet and Xinjiang (aka East Turkistan), who have no history of serious criminal activity. Those individuals (including preschool-aged children) have no control over how their samples were collected, stored and used. Nor do they know of the potential implications of DNA collection for them and for their extended families.

The indiscriminate collection of biometric data in China was first reported by Human Rights Watch. Beginning in 2013, state authorities obtained biometric samples from nearly the entire population of Tibet (3million residents) and in 2016, a similar program was launched in Xinjiang, where data from all the region's 23 million residents was collected under the guise of free annual physical exams. Despite it being "free exams," no results were returned to these residents.

Mass DNA sequencing is a costly project. The least expensive sequencing of small portion of DNA today cost \$100 per sample. To sequence 23 million samples in Xinjiang can cost at least \$2-3 billion. To maintain these databases for tens of million samples, you need substantial number of professional bioinformatic specialists, specialized computers and software and expensive sequencing machines.

Why is the Chinese government investing billions of dollars to sequence the DNA of the entire populations of Xinjiang and Tibet?

What can be DNA sequenced data be used for?

DNA sequencing can be used in basic biological research, disease discovery, funding of novel treatment, forensics, ancestry research and in organ transplantation.

Now let's see which of these uses can be applied to Uyghur people in Xinjiang:

- Finding disease mutations and ancestry research? In the region, where Chinese government is conducting genocide against Uyghur people by detaining up to 3 million of them in prisons and camps? The answer is "NO"
- For forensic investigation? On the rest of the Uyghur population, who are not yet detained? On people, who are tightly monitored by extensive surveillance cameras? On people, whose passports are confiscated by authorities since 2016? On people, whose kitchen knives are chained in their homes? They live in an open air prison. They have no way to make any criminal act even if they want to. The answer is "NO".

Then the only other reason for DNA use left is for organ transplantation. And “YES”, its use for forced organ harvesting and transplantation can absolutely justify the enormous cost of mass DNA sequencing.

According to a witness, authorities in Xinjiang, on a mandatory basis, withdraw not only blood for DNA, but also perform ultrasound check of all internal organs and iris scans. Patients never receive the results of these health checks.

China’s organ transplantation industry accounts to 100,000 organ transplants per year. The least expensive kidney transplant cost around \$70,000 and some other organs can cost up to half a million dollars. In free countries like USA and Europe, organ donor recipients are in a waitlist for years for matching donor organs-- while in China the matching donors can be found in few weeks. The Chinese government favors forced organ harvesting from prisoners of conscience and this has been practiced for a substantial period of time involving a very large number of Falun Gong practitioners and now Uyghurs.

For successful organ transplantation, doctors rely on several important criteria including three main blood tests, cell surface tests and limited DNA tests to determine if a patient and a potential donor are a match. Current genetic tests detect differences in DNA sequences at just a few specific locations in the genomes of transplant recipients and their organ donor. The fewer differences, the better the chance of long-term acceptance of the new organ. Whole genome sequencing data for a large number of genes would give a better match of donor and recipient organs, which in return will result in no rejection and long-term survival of transplanted organs.

When a patient requests an organ in China, his/her DNA sequenced data will be blasted against millions in the DNA database stored in computers in Xinjiang. Within a few minutes, a perfect match will be found. If a

potential donor of the organs is not in prison or a camp, then Chinese authorities easily will find a reason to detain them to be killed for their organs on demand.

This is the main reason why Chinese government invested billions of dollars to DNA sequencing of entire population of Xinjiang and Tibet. Because it makes hundreds of billions or maybe trillions of dollars per year in return.

Thermo Fisher's involvement in forced organ harvesting in Xinjiang is undeniable. But, while it has vowed to stop selling sequencing machines to the region and to stop providing technical support to maintain them, the company is very successfully selling HLA kits and other custom-made DNA profiling products for organ transplantation. Thermo Fisher's Huaxia PCR amplification kit was developed specifically to identify the genotypes of Uyghur, Tibetan and Hui ethnic minorities.

The continued sale of DNA profiling products and technologies by Thermo Fisher to China has to be stopped by US government!

I urge US Congress and Senate to sanction Thermo Fisher for aiding China in the genocide of innocent Uyghur people of Xinjiang and prisoners of conscience in mainland of China!