Gene harvesting a security concern

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Over the past few years, inexpensive data storage coupled with advancements in supercomputers and artificial intelligence (AI) analytics have allowed the exploitation of population data in ways that megalomaniac technocrats and totalitarian dictators could only have dreamed of just a decade or two ago.

US government advisers in March said that Chinese firm BGI Group was constructing a vast bank of genomic data that, combined with AI tools, would allow China to monopolize the global pharmaceutical industry, "build" genetically enhanced soldiers and — most concerning of all — engineer pathogens to empower ethnically targeted bioweapons.

Reuters on Wednesday published a special report on BGI Group's gene harvesting that makes for chilling reading.

BGI Group's prenatal test, branded NIFTY (Non-Invasive Fetal TrisomY) is one of the most popular in the world and has been used to harvest genetic data from millions of women in at least 52 countries, the report says. The company reportedly stores and reanalyzes leftover blood samples and genetic data from the tests — taken by more than 8 million women around the world — to detect abnormalities such as Down syndrome in fetuses.

A review of scientific papers and company statements by Reuters found that the tests capture genetic information about the mother, which is what appears to be of interest to the Chinese military.

The report says that BGI Group has collaborated with the Chinese People's Liberation Army (PLA) on at least a dozen studies since 2010, including conducting research into population traits. One such study used a PLA military supercomputer to reanalyze gene data collected from NIFTY tests to isolate specific character traits in Tibetan and Uighur minorities.

The Reuters investigation found that genomic data collected by BGI Group from women outside of China have been stored in a gene database funded by the Chinese government.

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While some of the studies could have benign medical uses — such as tracking the effect of hepatitis B on different ethnicities to develop enhanced antiviral treatments — the PLA's involvement should be a red flag, especially given China's openly stated doctrine of "civil-military fusion."

The PLA could use the vast database to find genetic vulnerabilities in a population — perhaps an adversary nation. A particular susceptibility to disease could be identified and then targeted with a genetically tailored bioweapon. The collaboration of civilian and PLA scientists on "gain of function" coronavirus experiments at the Wuhan Institute of Virology is well-documented.

China is known to have initiated a biowarfare research program in the early 1950s. In 1984, Beijing signed the Biological Weapons Convention, a disarmament treaty prohibiting signatory nations from developing, acquiring or stockpiling biological and toxin weapons, but the US intelligence community regardless continues to be concerned about PLA research on bioweapons.

A senior US Department of State official, speaking anonymously to China analyst and author Bill Gertz last year, said that classified Chinese research on biological warfare includes engineered weapons designed to attack specific ethnic groups with pathogens.

"We are looking at potential biological experiments on ethnic minorities," the source said.

BGI Group's collaboration with the PLA could be the tip of the iceberg. Who knows if other Chinese companies are also harvesting gene data from around the world?

Taiwan and other nations must take the threat seriously and direct resources to discovering whatever they can about the capabilities and intent of what appears to be a covert Chinese bioweapons program — before it is too late.

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