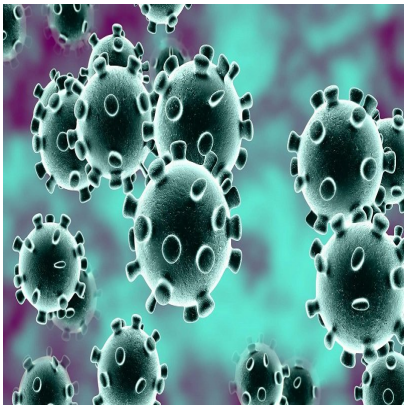

Genetic Research and U.S. Bio-Agents: Harvard Team Collected and Transferred China Blood and DNA Samples Back to the U.S.

Description

On 20 December 2000, a *Washington Post* article titled **“An isolated region’s genetic mother lode”** (Pomfret and Nelson 2000) disclosed that a Chinese American researcher of a renowned US University had been collecting blood samples from villagers living in the Dabie Mountains region of China’s Anhui province since 1995 with the financial support of the National Institutes of Health (NIH) and biopharmacy companies.

The blood samples were transferred to the US university’s genetic bank for research into asthma, diabetes, hypertension and other diseases. Because of the value of these carefully selected blood samples to the research and development of new drugs, the US team received a large amount of research funding from international organizations. The report exposed the loss of China’s genetic resources and triggered a stir both in China and worldwide.

The US university’s genetic harvest project, conducted in Anqing city in Anhui province between 1994 and 1998, involved tens of thousands of farmers in eight counties. The project, led by an associate professor at the US university as the “chief scientist” conducted genetics studies on multiple diseases, including asthma, high blood pressure, obesity, diabetes and osteoporosis, while the experiments on asthma and hypertension were funded by the NIH (Pomfret and Nelson 2000; Xiong and Wang 2001, 2002).

The principal investigator from the US team also collaborated with a US pharmaceuticals company, and received its financial support. The project had three Chinese partners, Beijing Medical University, Anhui Medical University (AMU) and Anqing Municipal Bureau of Public Health.

The US-based principal investigator started working with the AMU School of Public Health in 1993, and set up the Anhui Meizhong Bio-medicine and Environmental Health Institute in Anqing. The institute chose the Anqing Bureau of Public Health as its local partner, and selected the population groups suitable for taking samples based on grass-roots investigation.

It collected blood samples through physical examination and acquired DNA samples of the target group for research purposes.

The joint research project, which was conducted under the guise of free physical examinations for the farmers, mobilized the local population with the help of the local government. **Blood samples were collected from farmers in the eight counties of Anqing city**: Zongyang, Huaining, Qianshan, Tongcheng, Taihu, Wangjiang, Susong and Yuexi.

Media reports and the complaints of research personnel from the US university later exposed details of certain parts of the project that were suspected of compromising research ethics. …

According to the investigation by Chinese journalists, the collection of genetic samples had not been sanctioned by the relevant ethics committee in China (Xiong and Wang 2002).

There were also serious breaches of the requirements to keep the participants informed. Many farmers who participated in the physical examination were not aware they were taking part in research. They were never shown or briefed about the “letter of informed consent” , and did not sign or put their fingerprints on any such document.

They did not even know which institution they had given their blood samples to, and nobody told them about the real purpose and results of their “physical examination” or the rights and benefits they were entitled to as part of their contribution to research.

The asthma project was only one of the dozen human genetic research projects conducted by the US team in China. Other projects also involved **the genetic screening of blood samples collected from Chinese farmers** for the purpose of establishing the genetic links behind diseases like hypertension, diabetes, obesity and osteoporosis. Many of these projects **were first supported by the US pharmaceutical company** before NIH funds flowed in (Xiong et al. 2003).

In March 1999, the US University sent a team to China to ensure that the Anhui research was ethically and scientifically sound. Five months later, regulators from the US Department of Health and Human Services launched an investigation into the US university’s genetic research in China.

In March 2002, the department found that the genetic project in China seriously violated the regulations in multiple respects, including medical ethics, participant safety, and supervision and management (Yangcheng Evening News 2002).

On 2 May 2003, the US university [Harvard] published the investigation results of the US government, which stated that there had been some procedural errors in supervision and record-keeping, but no participant was found to have been harmed in any way, so the school would not be penalized (HSPH 2003). Some biomedical experts and ethicists in China expressed regret about these results. They insisted that the studies had apparently violated basic research ethics, and called for a joint US-Chinese review of the experiments (Pomfret and Nelson 2000).

In this international research cooperation on a “genetic harvest”, the actors and participants included both international and Chinese research institutes and research personnel, international companies, local government and the local residents who participated in the study.

During this cooperation, the US university [Harvard], from its commanding position as a world-famous, authoritative international scientific research institute with first-class research personnel and advanced

technologies, **attracted the participation of Chinese partners and sold them the idea of building partnerships and the opportunity for co-authorship with US research personnel in return for the provision of genetic resources used for research purposes. As a result, they obtained access to a valuable pool of research data resources.**

In 2003, the Chinese Ministry of Health and the Chinese Administration of Quality Supervision, Inspection and Quarantine jointly issued **regulations limiting the export of special medical articles involving human genetic resources.** However, **most of the DNA samples the US team had collected in Anhui had already been shipped to the US.** The principal investigator himself admitted that for the asthma research alone, 16,400 DNA samples had been transferred to the US (Zhao and Cai 2013). In 2002 and 2003, he set up a biopharmaceutical company and a biopharmaceutical research institute in China. Several Chinese research personnel who had participated in the genetic project in Anhui became his partners.

The US pharmaceutical company became the ultimate beneficiary after supplying research funds. As part of the agreement signed with the US university, they obtained the genetic information of Anhui farmers and claimed that it owned the relevant patents. In July 1995, the company announced that it was in possession of a large collection of asthma genetic samples from China. Soon afterwards, a large Swedish pharmaceutical company, invested USD 53 million in the pharmaceutical company for research into respiratory disease. The company's control of obesity and diabetes genes from China attracted another commitment of USD 70 million from a pharmaceutical giant. The stock price of the company soared from USD 4 per share, when it was listed in May 1995, to more than USD 100 per share in June 2000. Several of the company's senior executives earned a net profit of over USD 10 million each through trade in stocks (Xiong et al. 2003).

In striking contrast, the research participants from China received very few benefits from the project. Chinese research institutes and research personnel did gain the opportunity of working with renowned international research institutes, access to research funds and the co-authorship rights to scientific papers published in international academic journals – all of which appeal to most Chinese scientists – but the local residents who participated in the studies received nothing but a free meal and an insignificant sum of money in travel and job leave allowances. In the words of a Chinese journalist, it was China's national interests and the unprotected Chinese farmers that were most harmed by the project, and it was the big US companies, research institutes and research personnel that received the real benefits (Xiong et al. 2003).

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