China to create gigantic DNA database

A super-sized DNA sequencing platform will be built in Nanjing, capital of east China's Jiangsu Province, in order to create a genetic information database for ethnic Chinese, according to the provincial health authority.

The DNA project is part of the National Health & Medicine Big Data (Nanjing) Center, a six-billion yuan project under construction in Nanjing's Jiangbei New Area, said Lan Qing, deputy director of the provincial health and family planning commission.

During the first phase, health and medical information on about 80 million people, the equivalent of the population in Jiangsu, will be stored at the center, Lan said.

"When the facilities are ready, the designed capacity for DNA sequencing will be up to 400,000 to 500,000 samples per year," he said.

The DNA sequencing project will be jointly undertaken by the state-owned Yangzi Group, Southeast University and Nanjing Medical University.

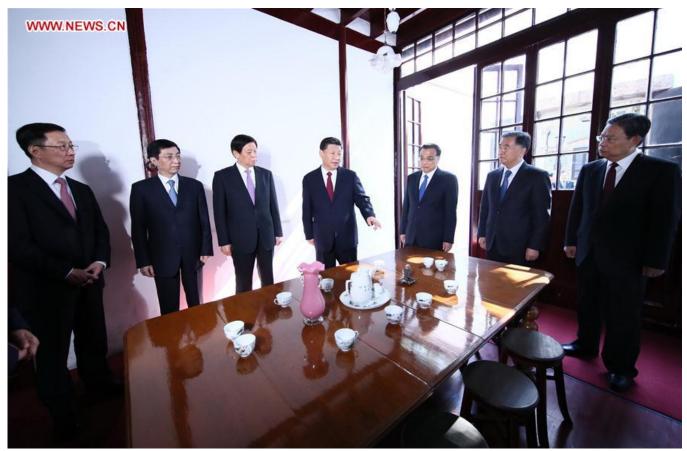
Researchers will then use big data created in the database to study genetic mutations related to major diseases, look for the impact of interaction between genes and environmental concerns on human heath, and provide statistical support for diagnosis and treatment of major diseases, Lan said.

Cai Long, board director of Yangzi Group, said the program will focus on population genetics, newborns, childhood brain and cognitive development, cancer, and rare and chronic diseases.

The database is expected to be complete in around four years, he said.

Newly-elected CPC leaders visit revolutionary historical site

Xi Jinping, general secretary of the Communist Party of China (CPC) Central Committee, and the other six members of the Standing Committee of the Political Bureau of the CPC Central Committee on Tuesday visited the site where the first CPC National Congress was held in 1921.



Xi Jinping (C), general secretary of the Communist Party of China (CPC) Central Committee, who is also Chinese president and chairman of the Central Military Commission, and the other members of the Standing Committee of the Political Bureau of the CPC Central Committee Li Keqiang (3rd R), Li Zhanshu (3rd L), Wang Yang (2nd R), Wang Huning (2nd L), Zhao Leji (1st R) and Han Zheng visit the site where the first CPC National Congress was held in 1921 in Shanghai, east China, Oct. 31, 2017. [Photo/Xinhua]

Xi, Li Keqiang, Li Zhanshu, Wang Yang, Wang Huning, Zhao Leji and Han Zheng arrived in Shanghai from Beijing by air Tuesday morning.

In July 1921, 12 delegates attended the first CPC National Congress, representing more than 50 CPC members nationwide.

On Oct. 18, about 2,300 delegates attended the 19th CPC National Congress, representing more than 89 million CPC members.

Chinese astronomers discover new evidence of galaxy formation

An astronomical group headed by Zhao Gang, researcher from the National Astronomical Observatory, under the Chinese Academy of Sciences, recently uncovered new clues involved in the galaxy's creation.

To decipher the codes and signals sent from a remote sparkling constellation, Zhao and his team spotted seven new stellar streams, half the number of global discoveries in this regard, and 33 low-alpha abundance stars in chemical space, double the aggregated discoveries in the world.

Unlike ordinary stars, low-alpha abundance stars from dwarf galaxies are hard to find once they disperse under the impact of the gravitational potential of the galaxy closest to them.

Based on their observation, Zhao and his team coined a morphological theory, describing the movements of the tidal stellar streams and dividing them into early, middle and late phases.

According to Zhao, those stars in the stellar streams stay together in the physical space at first, and move to the corners of the galaxy before being completely immersed in the gathering congregation.

While in the late stage, low-alpha abundance stars can only be distinguished by spectroscopic analysis, with their chemical evidence being tested to identify their origins, a process similar to DNA paternity testing.

The observation of the stellar stream in middle and late phases is constructive in decrypting the formation of galaxies and the trajectories of those stars, which, in turn, will help scientists chart an accurate picture of the gravitational potential and quality distribution of the galaxy, Zhao said.

The research published in the Beijing-based journal,"Research in Astronomy and Astrophysics", was based on the use of LAMOST, the world's top spectroscopic telescope made in China.

<u>Married students offered separate</u> dorms

A flurry of online discussion ensued after the posting last week of a long-standing offer of special dormitories for married students at Nankai University in Tianjin.

The post was forwarded and commented on by netizens, most of whom supported the university. Some even thought the policy might encourage students to get married while in school.

The dorms for married students are only available to couples if both partners are registered for school.

Students need to provide their campus ID and marriage certificates to apply

for the dorms, according to a message posted on the university's social media account on Thursday.

There are a total of 43 dorms for couples, divided between the university's two campuses, Balitai and Jinnan, said Sun Yue, a teacher in the Life Guide Center of the student affairs department.

Sun said the rooms, about 20 square meters each, are equipped with a double bed, wardrobe, a desk and shelf for two, a private bathroom and other basic furniture.

She said the annual fee for each room is 2,400 yuan (\$360), and it's up to the couple to decide whether or not to rent an air conditioner.

"Five more couples have checked in for this semester, and currently there are eighteen married student couples living in the dorms," Sun said.

She added: "The dorms for couples have been available at NKU for about seven to eight years. There are not many who apply for it, so we do not have a separate dorm building for couples."

Sun said the university provides special dorms for couples as a courtesy, and will continue doing so as long as there is enough space.

"Some married students waste a lot of money renting an apartment off campus so they can live together," Sun said. "The dorms for couples can relieve the economic pressure and help them focus on their studies."

"Currently, all the couples who have applied for the dorms are master's degree or doctoral students. Getting married is an individual behavior, and the university will not interfere in their personal decisions," she added.

Fan Xueni, 27, a second-year master's degree student, observed: "In general, for master's students, four people share a dorm, and two doctoral students share a dorm with affordable prices."

Fan's boyfriend is studying in Beijing, and they must rent a hotel room anytime they meet in Tianjin.

"I think few students meet the conditions. I don't see many married students around me, let alone both attending the same university. Most of my friends are in long-distance relationships, or dating people at their university — not married," Fan said.

In September 2005, the Ministry of Education scrapped a rule saying that undergraduates' freedom to marry would no longer be restricted under China's Marriage Law and marriage registration regulations.

The new rule meant that undergraduate-age couples — men 22 and above; women 20 and above — could get married as they wished, like other Chinese citizens.

Cai Xiao, 26, now a doctoral candidate in cognitive neuroscience at Renmin University of China, was one of the later beneficiaries:

<u>Compulsory parental education project</u> hailed a success

China's first pilot programme for compulsory parental education has helped various families since its debut in 2016, reports the Huaxi City Daily.



A mandatory parental education lecture is held in Chengdu, capital of Sichuan Province. [File Photo: cdxdjcy.gov.cn]

Initiated by procurators in Chengdu, capital of Sichuan Province, the project "forces the parents of juveniles involved in crimes to accept professional educational instructions," according to Yang Chunxi, deputy chief of a local procuratorate.

So far, a total of 128 courses have been offered to parents of 176 young offenders and 11 under-age victims.

"In one outstanding example, the parents of a minor restored their marriage after taking the parental education courses. That child then went on to pass the national college entrance exam," said Yang Chunxi.

Parents who don't attend the mandatory parental education lectures may be put into detention.

"It is an attempt to bring public intervention to family guardianships," added Yang.

Under-age crimes are a long-running concern in China.

Statistics show that since 2014, over 40% of young offenders and victims in the Chengdu area were from single-parent families, step-families or families going through a divorce.

The same stats suggest close to 80% of the young offenders and victims were either over-indulged or mistreated by their parents.