# Research excellence in agricultural science

A new research institute HAS BEEN ESTABLISHED IN SHENZHEN TO PURSUE RESEARCH in key areas of agricultural science





# The Agricultural Genomics Institute at Shenzhen (AGIS)

was jointly established at the beginning of 2014 by the Chinese Academy of Agricultural Sciences (CAAS) and Shenzhen Municipal Government. As the first national institution of agricultural genomics in China, AGIS is focusing on the research areas of genome assembly, molecular breeding and biosafety. The institute has more than a hundred staff, among them three are supported by the **Distinguished Young Scholars** Program of the National Natural Science Foundation, three are supported by the Ten Thousand Talents Program of the Chinese government, and nine are recognized as National Level Leading Talent of Shenzhen.

### **Research platforms**

AGIS occupies 150 acres of land, which includes around 90 acres of experimental farm, more than 10,000 m<sup>2</sup> of laboratories, and 10,000 m<sup>2</sup> of other facilities including greenhouse and cold room. AGIS has established multiple innovative platforms, including a molecular biology facility, a genome sequencing center and a computation center. At present, the computation center with a capacity of 35 trillion times per second, is one of the most powerful agricultural bioinformatics platforms in China. The genome sequencing center equipped with different models of Illumina sequencers such as HiSeq 3000, Hiseq 2500 and MiSeq, and can produce 2.5 terabytes of data in a week. In addition, a comprehensive experimental farm had been constructed for agronomics and crop genetics studies. These well established platforms fulfill the requirements of conducting modern agricultural research: from germplasm collection and characterization, gene discovery to genomics, design breeding and seed production.

## **Grant and Funding Resources**

The current total research budget is about 100 million RMB, which is comparable to many of the top agricultural research institutes worldwide. Two key laboratories, the Agricultural Genome Data Analysis Key Laboratory of the Chinese Ministry of Agriculture, and the Agricultural Genome Analysis and Utilization Key Laboratory of Shenzhen, are established in AGIS.



AGIS focuses mainly on advancing agricultural genomics and developing novel techniques and tools for cultivation and breeding of animals, plants and fungi for food, fiber, biofuel, medicinal and other products to sustain and enhance human life. The results of AGIS's research have been published in Science, Nature Genetics and other top international journals. AGIS will certainly play a leadership role in the agricultural genomics study internationally in near future.

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