

## 3. Brief Introduction of KIB

### 3.1 General Information

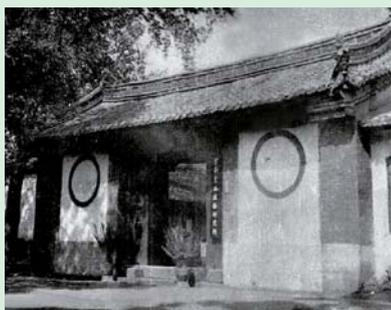
Located in the north suburb Heilongtan scenic area of Kunming, the famous 'Spring City', Kunming Institute of Botany (KIB), CAS is originally the Yunnan Provincial Institute Agricultural and Forestry Botany which was founded in 1938, and was renamed the present title in 1958. Adhering to the tenet of 'trace the origins of mountains and rivers, exhaustively name all of the herbs and trees', KIB dedicates to identifying and utilizing plants so as to benefit human. Present Director General of KIB is Dr. Li Dezhu and China's botanists of older generations such as Hu Xianxiao, Yan Chujiang, Wang Fazan, Yu Dejun, Cai Xitao, Chen Fenghuai, Wu Zhengyi, etc. once worked at KIB as a leader. The nation and Party top leaders, including Zhou Enlai, Zhu De, Deng Xiaoping, Li Xiannian and Hu Jintao ever inspected and visited KIB, giving suggestions and advice for its development.

Through the first and second phases of Knowledge Innovation Program of CAS, KIB appropriately optimized and integrated its research subjects and identified scientific research goals in accordance with national and regional strategic needs and scientific frontiers, creating a strategic system of 'two key laboratories, one garden and one germplasm bank'. Relying on multidisciplinary research contents, KIB has achieved a bunch of breakthroughs in health medical care, plant resources conservation and sustainable utilization, especially the registration of the new anti-HIV/AIDS drug, SH capsule in Thailand, resulting in remarkable international impacts. Steady progresses have been made for the State Key Science and Technology Project, 'Southwest China Wild Species Germplasm Bank' and significant improvements made for international cooperation. Work of scientific knowledge dissemination, informatization and creative culture building proceed continually and environments at KIB have become more beautiful.

Currently, there are 254 employees for both scientific research and management in KIB, among which are three CAS academicians, six winners of National Science Fund for Distinguished Young Scholars, six scientists of CAS 'Hundreds of Talents Program', more than 60 members of staff holding the job title of associate professors or higher. The average age of scientific research staff is 38.5 and faculty members under the age of 45 account for 82% of the total. For the senior researchers, 85% of the total has the experience of studying and/or living outside China ranging from one to six years. KIB owns 28 PhD supervisors, 131 PhD candidates, 40 MSc. supervisors and 139 MSc. students.

KIB occupies an area of 1018 mu with construction area exceeding 50,000 square meters and owns a great many large and middle-scale apparatuses such as 400 MHz and 500 MHz superconduct nuclear magnetic resonance spectrometer, high-resolution mass spectroscope, ultracentrifuges and confocal scanning laser microscopy, etc. The herbarium (KUN) of KIB houses over 1.2 million plant and fungal specimens and the library conserves 270,000 volume books. In addition, the newly built library, Huali Building, Logistics Center Building, Culture Plaza and two newly-decorated graduate student apartment buildings provide the institute with scientific research platforms, technological supports and logistic services.

Ever since 1999, KIB has presided over 250 scientific research projects, compiled more than 60 monographs, published over 1,500 scientific articles and received 60 awards of at the provincial and ministerial level or higher, and obtained over 60 patents, with one new drug and 5 pesticides registered. Relying on the institute's technology and transfer of scientific and technological achievements, the annual transfer value in 2005 amounted to RMB1.059 billion yuan with tax payment of RMB 102 million yuan (Yunnan only). Through exploring the channels of studying abroad by public expenses and international cooperation, KIB has sent scientific research personnel to over 20 overseas countries and regions for more than 400 person-times in terms of visit, study tour, continuing study and participating in conferences, etc. To date, KIB has established bilateral relations with more than 20 countries and regions including Japan, US, UK, Germany, France and Thailand, etc.





### 3.2 Strategic Target and Orientation

With the CAS Key Laboratory of Biodiversity and Biogeography, State Key Laboratory of Phytochemistry and Plant Resources in West China, Southwest China Wild Species Germplasm Bank and the botanic gardens as the basic research units and scientific research platform, KIB takes Yunnan and Southwest China as its bases, facing Southeast Asian areas and Himalayan mountain areas and aiming at the scientific frontiers of plant science and biodiversity conservation researches according to China's strategic needs, especially to the ambitious West Exploration Program. KIB dedicates its efforts to underscoring originally scientific innovation, strengthening strategic high-tech innovations to make basic, strategic, insightful, and leapfrogging contributions for sustainable utilization and conservation of biodiversity, regional economic development and social progress. By 2010, KIB will grow into a internationally competitive state research institute with strong innovation capability, sustainable development potentials and particular features, the base for cultivating high-level biodiversity experts and scientists and knowledge dissemination as well as a base for starting new business of natural drugs and flower industrialization.

### 3.3 Research Project Planning and Orientation

On basis of research accumulations, project planning and innovation targets, KIB regards biogeography, phytochemistry, plant resources and development and conservation of biodiversity as its three key innovation fields, and molecular biogeography and evolution and plant secondary metabolism and its biological significance as key basic researching subjects. Moreover, natural active substances, innovative drugs and wild flower resources and breeding of new varieties are deemed to be two important research aspects for knowledge transfer and industrialization. Main original research subjects conducted in KIB include plant evolutionary biology with main developing direction being plant biogeography and molecular evolution, phytochemistry and chemical biology with main developing direction being plant secondary metabolism and its biological significance, plant genomics with main research topics being wild plant gene resources and conservation biology with main developing direction being plant *ex situ* conservation. An integrated research system and platform focusing on biogeography, phytochemistry, new drug studies, plant genomics and conservation biology will be created at KIB and the Institute will grow into a big name in the international academia of plant diversity, plant resource studies and biotechnology industry, supplying a bunch originally innovative achievements for China's biotechnology industry, environmental protection and economy and society and making great contributions for biodiversity conservation in China, Southeast Asia and Himalayan mountain areas.

