

An optimistic vision of the future in Macau

MACAU UNIVERSITY OF SCIENCE AND TECHNOLOGY aims to become one of the most successful private universities in Asia, with investment in niche areas such as **CHINESE MEDICINE AND SPACE SCIENCE**.

As one of the key players of China's Greater Bay Area (GBA), Macau is set to become an innovation hub such as Shenzhen and Hong Kong. The success of the GBA will lie in transforming research results into real-world applications that bring benefits to society through collaboration between industry and academia. Macau University of Science and Technology (MUST) is primed and ready to contribute to this transformation.

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MUST was founded in 2000 to promote research and to diversify higher education in Macau. It was ranked 32nd in Times Higher Education's Young University Rankings in 2021, and has become a leading private institution. Joseph Hun-wei Lee, MUST's president, believes that such success is related to the structure of

the university, "As MUST is a private university, we can be very dynamic and flexible."

MUST's motto is "Dedication to practical studies, enhancement of knowledge, ability and quality". As Lee says: "We don't do everything, but try to achieve unique things and invest in quality niche areas". With eight faculties and two schools, covering IT, medicine, space science, and engineering, MUST is now focusing on innovations that can meet society's needs.

THE FIRST STATE KEY LABORATORIES AT MUST

In alignment with the GBA development plan, MUST founded the Zhuhai MUST Science and Technology Research Institute in Hengqin in 2020. The site is its first base integrating industry, education and research within the GBA, to lead Macau into a more active role in the development of the Guangzhou-Shenzhen-Hong Kong-Macau Science and Technology Innovation Corridor. The institute also houses branches of the State Key Laboratory (SKL) of Quality Research in Chinese



Medicines, and the SKL of Lunar and Planetary Sciences. Such national research platforms are supported by the Ministry of Science and Technology (MOST) of China. Both key labs are the first of their kind in these fields.

Established in 2011, the Chinese Medicines SKL is an important initiative to promote international development of the field. The laboratory aims to carry out frontier research in Chinese medicine and innovative drugs, to gather and cultivate talents, and to develop international academic exchanges and cooperation.

The SKL in Lunar and Planetary Sciences was founded in 2018 to advance

the development of planetary sciences in China. For more than a decade, MUST researchers have conducted research related to China's Chang'e space missions and contributed to the successful landing of the Mars probe, Tianwen-1.

The laboratory has been working with many national and international institutes to develop and launch Macau's first satellite — Macao Science 1, designed by Keke Zhang, director of the laboratory. It will become the world's first scientific exploration satellite to be placed in a near-equatorial orbit to monitor the geomagnetic field and space environment of the near-equator South Atlantic Anomaly (SAA).

An eminent water engineer and the president of the 85-year old International Association for Hydro-environment Engineering and Research (IAHR), Lee was proud to see the National Observation and Research Station of Coastal Ecological Environments in Macau approved in Oct 2021. Lee explains that the station will provide artificial intelligence (AI) assisted high-quality data to support the systematic monitoring of sea level rise, ecosystem services, and other issues related to climate change and urbanization.

Also in 2021, MUST and the Zhuhai People's Hospital jointly established the First Affiliated Hospital of the

Faculty of Medicine. In future, MUST students will be able to undertake an internship or conduct research in a hospital boasting world-class equipment, just 30 minutes away from the main campus.

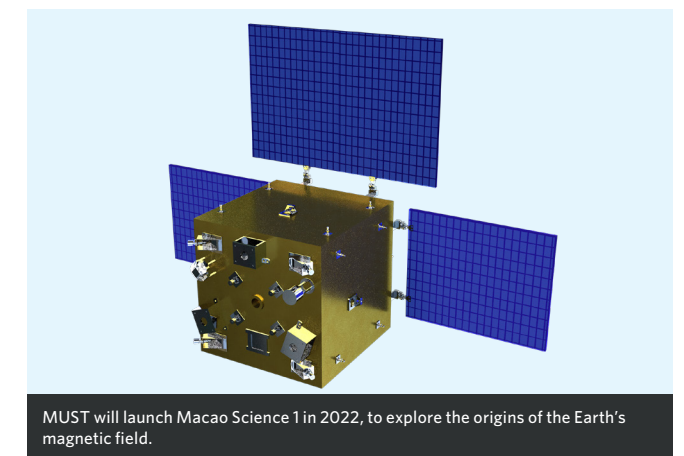
THE VISION OF MUST

MUST strives to become one of the most successful private universities in Asia. It's assembling great minds from around the world and aims to recruit 100 top scholars within five years, to enable inspirational teaching and the nurturing of new talent.

MUST is also ready to become a significant contributor to regional development, in line with the development plan



Joseph Hun-wei Lee, MUST president.



MUST will launch Macao Science 1 in 2022, to explore the origins of the Earth's magnetic field.

of the GBA. The university will build on its heritage to collaborate with government and industry partners, as well as research institutes at home and abroad, to promote knowledge and technology transfer.

With the deep history and relationship between Macau and Portugal, MUST will promote collaboration and partnership in science and technology with Portuguese-speaking countries, sharing and exploring emerging technologies and nature-based solutions for ecological civilization and sustainable development.

There are also plans to further enhance the R&D ecosystem and drive

innovation in small molecule drugs, interventional medical devices, OLED micro-displays, autonomous E-vehicles, advanced manufacturing, biomedical engineering, and intelligent water management. "Thanks to MUST's rapidly growing reputation and strong scientific support, our founders' vision is becoming reality," says Lee. ■



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