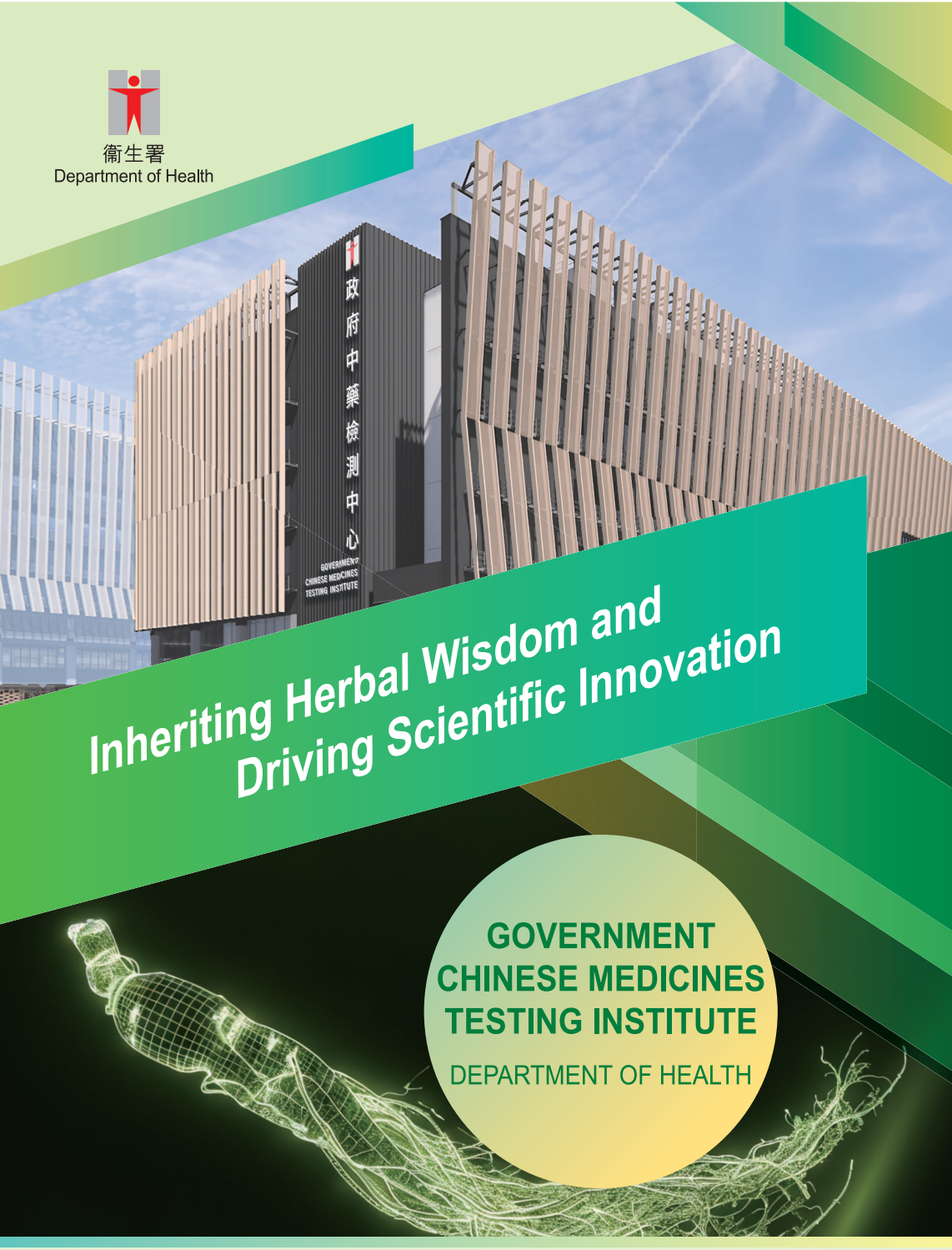
衞生署
Department of Health



Inheriting Herbal Wisdom and Driving Scientific Innovation

GOVERNMENT CHINESE MEDICINES TESTING INSTITUTE

DEPARTMENT OF HEALTH

CONTACT US

Address:
3 Pak Shing Kok Road,
Tseung Kwan O, N.T.

Website

1 GOVERNMENT CHINESE MEDICINES TESTING INSTITUTE

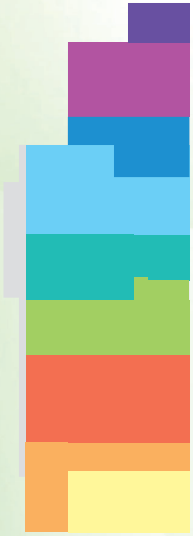
Shennong Herbal Garden

Seasonal Soups

- Yang-tonifying and Yin-nourishing medicines
- Tonic medicines
- Cough-stopping and panting-alleviating medicines
- Qi-regulating medicines
- Blood-circulating and blood stasis-resolving medicines

Local Herbal Teas

- Wind-eliminating and dampness-resolving medicines
- Interior heat-clearing medicines
- Exterior-releasing medicines
- Urination-promoting and dampness-draining medicines



Chinese Medicines Information and Research Division's Laboratories

Research and Development Section's Laboratories

Chinese Medicines Chemistry Section's Laboratories

Chinese Materia Medica Authentication Section's Laboratories

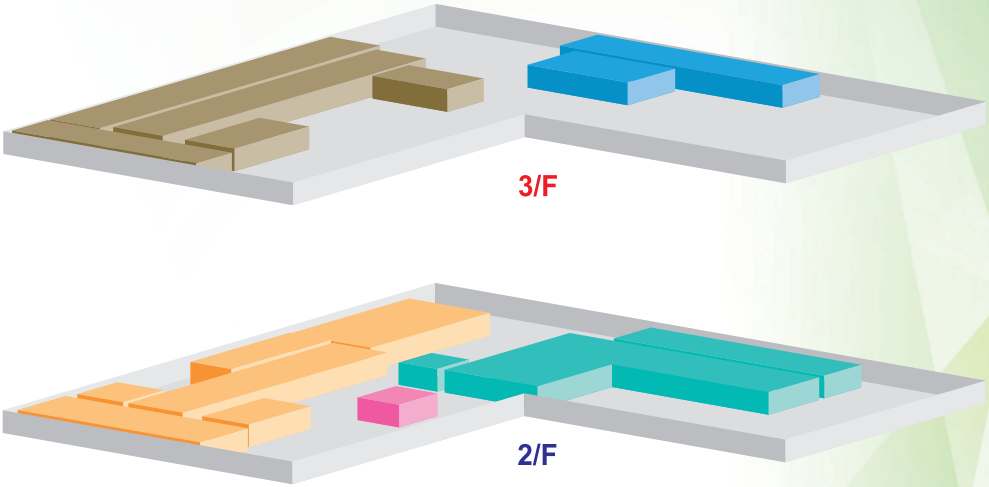
Quality Assurance and Quality Management Section's Laboratories

International Collaboration and Training Centre

Chinese Medicines Herbarium Laboratories

Atrium

THE PERMANENT GCMTI BUILDING



A Lift B Accessible Unisex Toilet C Toilet D Babycare Room

GOVERNMENT CHINESE MEDICINES TESTING INSTITUTE

Established in March 2017 by the Department of Health of Hong Kong Special Administrative Region, the Government Chinese Medicines Testing Institute (GCMTI) dedicated to establishing internationally recognised reference standards for Chinese medicines and their testing methods. It empowers the local industry and testing sector through skills transfer, fostering Hong Kong's development into an international hub for Chinese medicines quality control and testing.

Over the years, in addition to its dedicated efforts in establishing quality standards and developing innovative testing methods for Chinese medicines, the GCMTI has been actively promoting Chinese medicine culture and has been deepening exchanges and collaboration with institutions in Chinese Mainland and around the world, to enhance the international influence and credibility of Chinese medicines. Furthermore, the GCMTI places a high priority on building a professional team of elite talents from multidisciplinary backgrounds, providing sustained momentum for leading the future development of Chinese medicines.

In December 2025, the permanent GCMTI building commenced services in phases, marking a new milestone for the development of Chinese medicines in Hong Kong.

THE PERMANENT GCMTI BUILDING

Site area approx. **17,200 sq. metres**

4 specialties of advanced laboratories

Construction floor area up to **27,600 sq. metres**

Chinese Medicines Herbarium Laboratories (**7 Repositories, 27 Laboratories** for specimens)

Over **3,300 pieces** of laboratory equipment and IT systems equipment

700 sq. metres "Shennong Herbal Garden" (with around **180 species** of medicinal plants)

International Collaboration and Training Centre (**15 Training and technology transfer laboratories, 1 Multi-functional seminar room**)

DEVELOPMENT HISTORY

- 2015 The Chief Executive announced the establishment of the GCMTI
- 2017 The GCMTI commenced operation in the temporary facilities at the Hong Kong Science Park
- 2019 The Chief Executive announced the permanent site of the GCMTI
- 2021 Commencement of construction work for the dedicated premises for the GCMTI
- 2022 Groundbreaking Ceremony of the Chinese Medicine Hospital and the GCMTI
- 2024 Launching of the Digital Herbarium for Chinese Medicines
- 2025 Completion of the permanent premises of the GCMTI

MISSIONS

- Develop a series of internationally recognised reference standards for Chinese medicines and related products by employing advanced and innovative technology;
- Empower the industry's capabilities in quality control and identification of Chinese medicines through skill transfer; and
- Establish the brand image of Hong Kong for Chinese medicines, develop Hong Kong into an international hub for Chinese medicines testing and quality control, and enabling its high-quality advancement onto the global stage.

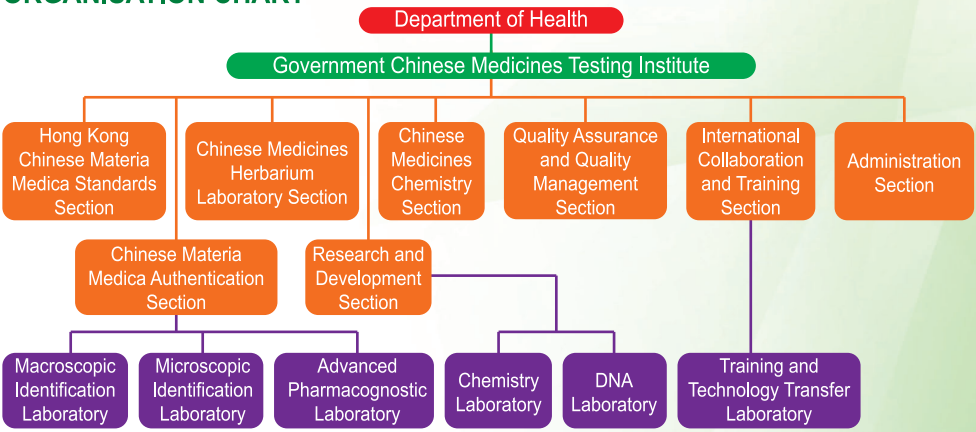
GOALS

- Building upon the Hong Kong Chinese Materia Medica Standards (HKCMMS) Project, to establish a more forward-looking quality standard system through the adoption of innovative and cutting-edge technologies;
- Set up high-tech, internationally accredited laboratories to embark on advanced scientific researches and the development of testing methods for Chinese medicines;
- Establish a world-class Chinese medicines herbarium laboratory, collecting specimens of Chinese materia medica and their source plants, and developing it into a digital herbarium accessible to the public, industry, and international research institutions for Chinese medicines identification purposes;
- Set up a training and technology transfer centre to provide training for the Chinese medicines and testing sectors, and to promote Chinese medicines reference standards; and
- Strengthen international collaboration to facilitate harmonisation in the development of reference and testing methods for Chinese medicines.

ADVISORY COMMITTEE

The GCMTI Advisory Committee serves as a platform for stakeholders to advise GCMTI on strategies, measures and specific proposals that are conducive to its continuous development. Membership includes representatives from the Government, Chinese medicine sector, academia, and the International Advisory Board of Hong Kong Chinese Materia Medica Standards.

ORGANISATION CHART



The scientific team of the GCMTI comprises experts from various disciplines, including Chinese medicines specialists, pharmacists, chemists, plant taxonomists, pharmacognosists, toxicologists, and DNA analysts, ensuring a multi-disciplinary and multi-pronged approach to all projects.

CHINESE MEDICINES HERBARIUM LABORATORIES

The Chinese Medicines Herbarium Laboratories (CMHL) are dedicated to the collection, identification, preservation, display, and research of various specimens of Chinese medicines and other herbal medicines. The herbarium's collections documented the information and changes of medicinal species over time while promoting public knowledge and the inheritance of Chinese medicine culture. All specimens are authenticated by authoritative experts, with traceability established by collecting source plants and medicinal materials from the same geographical area to ensure genuineness.

A key feature of the CMHL is its systematic display illustrating the entire lifecycle of Chinese medicines from the source plant and crude drug to the processed decoction pieces and finished proprietary Chinese medicines(pCm). The laboratories feature a transparent glass partition design, allowing visitors to gain thorough understanding of activities such as specimen preparation and conservation.

With a collection of more than 10,000 specimens, the CMHL provides the essential physical basis for scientific research, testing and comparative identification of Chinese medicines.

The herbarium's collection includes a variety of special exhibits:

Voucher Specimens for the Hong Kong Chinese Materia Medica Standards are housed in the collection.

Precious Gifts from the National Medical Products Administration, including a notable set of Cordyceps specimens that show the medicine in different growth stages and from various places of origin.

Specimens of Endangered Species are also on display, highlighting the importance of sustainable development of medicinal resources, including Aquilariae Lignum Resinatum specimens.

As an important milestone on the innovative application of Chinese medicine data, GCMTI launched the Digital Herbarium for Chinese Medicines (DHCM) website (www.cmherbarium.gov.hk) on 26th March 2024. Through systematic digitalisation of Chinese medicines specimens into a digital collection that covers high-resolution pictures and related data of hundreds of commonly-used Chinese medicines and their source plants, the DHCM is the first online herbarium of its kind that provides comprehensive information on Chinese medicines, and also the first in the world to use photogrammetry in producing three-dimensional (3D) images on traceable Chinese materia medica specimens through reconstruction of the spatial structure and 3D shape of each object. The DHCM currently provides data on plant specimens, medicinal material specimens, microscopic slice data, chemical data, and DNA data, establishing the traceability between Chinese medicines specimens and their source species through scientific analysis.

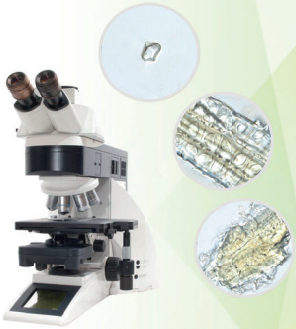
The DHCM is a user-friendly, freely accessible digital resource for the public, professionals from the Chinese medicine sector, testing and certification sector, as well as education and research institutions.

MACROSCOPIC IDENTIFICATION LABORATORY

Macroscopic Identification Laboratory is functionally divided into several areas, including a sample reception room, a sample weighing room, a sample temporary storage room, a sample preparation room, and the macroscopic identification laboratory.

The laboratory is equipped with high-resolution digital cameras and professional lighting equipment. The high-fidelity images captured not only accurately record the characteristics of the samples but also aid in the teaching and dissemination of macroscopic identification techniques. The laboratory is also responsible for developing standards and building a knowledge base for “micro-morphological identification”. This methodology, which involves using stereomicroscope to magnify tiny features of samples that are difficult to detect or see clearly with the naked eye, provides more reliable evidence for Chinese materia medica samples identification.

MICROSCOPIC IDENTIFICATION LABORATORY



Microscopic Identification Laboratory not only sets conventional microscopic identification standards but has also developed the “Simplified Powder Microscopic Identification” method. This innovative method offers a straightforward and accurate way to identify cortex type of decoction pieces that have few and similar macroscopic features. This method requires only a portable microscope and basic tools, allowing for widespread use in the field.

ADVANCED PHARMACOGNOSTIC LABORATORY

The GCMTI actively applies new equipment and modern technologies into traditional identification methods, achieving a fusion of traditional techniques and modern science.

The newly established Advanced Pharmacognostic Laboratory features specialised facilities, including an electronic nose analysis room, an electronic tongue analysis room, a colour and shade analysis room, a computer-aided identification room. Equipped with advanced electronic sensory analysis instruments, the laboratory supports sophisticated analysis of Chinese medicines. The application of these advanced technologies to Chinese medicines will further advance the modernisation and standardisation of Chinese medicines identification and quality control methods.

4 LABORATORIES AND EQUIPMENT

CHEMISTRY LABORATORY

Equipped with a wide range of analytical instruments, the Chemistry Laboratory employs advanced technologies for the qualitative and quantitative analyses of chemical markers in Chinese medicines. By integrating these methods as a complementary approach for the identification of Chinese medicines, the laboratory is committed to developing highly versatile and practical testing methods, with the aim of benefiting the industry and enhancing the quality control capabilities of pCm.

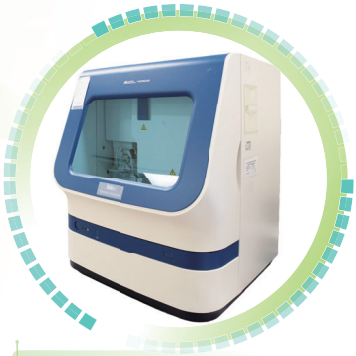
Quadrupole Ion Trap Tandem Mass Spectrometer

Quadrupole Time-of-flight Mass Spectrometer

DNA LABORATORY

With the advancements in biotechnology and its global applications, the DNA Laboratory is equipped with versatile instruments for comprehensive DNA analyses. Apart from developing complementary testing approaches for the identification of Chinese medicines, the DNA Laboratory also seeks to use DNA technologies to enhance the genetic traceability between Chinese medicines and their origin plant or animal species to ensure the quality and safety of Chinese medicines.

DNA Extraction Workstation



DNA Sequencer (Sanger Sequencing)

INTERNATIONAL COLLABORATION AND TRAINING CENTRE

The GCMTI has proactively fostered exchange and collaboration with professional organisations in the Greater Bay Area, Chinese Mainland and overseas, as well as international agencies. By hosting international collaborative and exchange activities, it strengthens global networks and drive the harmonisation of Chinese medicines reference standards and testing methods.

Serving as a key platform for this mission, the International Collaboration and Training Centre (ICTC) provides a dedicated high-quality space for the Chinese medicines industry, testing laboratories, academia, and research institutions, to host academic conferences, technical seminars and professional training.

The ICTC features a versatile seminar room for up to 50 people, with flexible layouts and equipped with a large-scale LED video wall, a high-definition video conferencing systems and professional audiovisual equipment.

TRAINING AND TECHNOLOGY TRANSFER LABORATORY

The GCMTI established the Training and Technology Transfer Laboratory to strengthen professional capabilities of the Chinese medicines and testing sectors, promote adoption of Chinese medicines standards, and accelerate the transfer of testing technology to the industry.

The laboratory features four functional areas: pre-lab area, sample preparation area, chemical analysis area, and DNA analysis area, equipped with advanced instruments like optical microscopes, high performance liquid chromatograph and real-time PCR thermal cyclers. Users may gain hands-on experience to master advanced testing techniques, ensuring practical proficiency.

SHENNONG HERBAL GARDEN

Shennong Herbal Garden is Hong Kong's first medicinal plant garden featuring Lingnan characteristics medicinal plants. It is systematically divided into 9 sections based on the different functions of medicinal plants, featuring approximately 180 species.

The garden highlights two main themes – “Local Herbal Teas” and “Seasonal Soups”, showcasing the corresponding medicinal plants. It employs a modular planting system to provide customised growing environments for diverse species. Furthermore, the garden is equipped with barrier-free access pathways to accommodate visitors with different needs.

STANDARD SETTING AND THEMATIC PROJECTS

With the support of the GCMTI Advisory Committee, the GCMTI has successfully delivered on a number of projects since its establishments. The achievements of these projects are available on the website of the GCMTI and the DHCM (www.cmherbarium.gov.hk)

HONG KONG CHINESE MATERIA MEDICA STANDARDS (HKCMMS) PROJECT

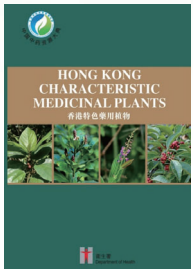
The HKCMMS project was launched in 2002 to develop standards for commonly used Chinese materia medica in phases to ensure their safety and quality. The work of HKCMMS project is guided by the following principles:

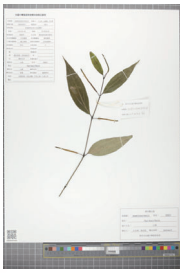
- To provide applicable and adoptable reference for the Chinese materia medica trade;
- To ensure the safety and quality of Chinese materia medica in protection of public health;
- To harmonise with the international standards; and
- To facilitate the trade in Chinese medicines.

The HKCMMS sets out the names, sources, descriptions of the Chinese materia medica, as well as methods of identification (including microscopic identification, thin-layer chromatographic identification, gas and high-performance/ultra high-performance liquid chromatographic fingerprinting), tests, extractives and assays.

Under the guidance of the International Advisory Board and the efforts of participating research institutions, standards for over 300 Chinese materia medica have been published. All monographs are available on the website of the GCMTI.

NATIONAL SURVEY OF CHINESE MATERIA MEDICA RESOURCES (HONG KONG REGION)





Since 2022, the GCMTI has participated in the "Fourth National Survey of Chinese Materia Medica Resources (Hong Kong Region)" (the Survey), a project organised by the National Administration of Traditional Chinese Medicine (NATCM).

As part of the outcome, the "Preliminary List of Chinese Materia Medica Resources in Hong Kong" has been compiled, documenting more than 1,250 species of medicinal plants, spanning more than 190 families and 800 genera. Reviewed and confirmed by the National Survey of Chinese Materia Medica Resources Office, the list has been incorporated into the "Checklist of Chinese Materia Medica Resources in China". Furthermore, 50 medicinal plants with Hong Kong characteristics were selected from the Preliminary List by experts and representatives from the local Chinese medicine sector and compiled into the publication "Hong Kong Characteristic Medicinal Plants". The publication has been listed in the "Encyclopedia of Chinese Materia Medica Resources" series by the NATCM.

The deliverables of the Survey will be compiled as " Encyclopedia of Chinese Materia Medica Resources Hong Kong" for publication. Also, the long-term preservation of physical specimens obtained from the Survey will also enrich the collection of the CMHL of the GCMTI, and provide support for future Chinese medicines research and the sustainable use of resources.

COLLABORATION AND TRAINING

Currently, the Department of Health and the GCMTI have entered into cooperation arrangements with the National Institutes for Food and Drug Control, the China Academy of Chinese Medical Sciences, as well as with various provincial and municipal testing institutes and medicinal plant gardens. Key collaboration areas include Chinese medicines standards, testing methodologies, conservation practices for medicinal plants and specimens, and professional training. Furthermore, the GCMTI provides professional support to the Department of Health in its role as a World Health Organization Collaborating Centre for Traditional Medicine.