



HONG KONG JOCKEY CLUB
INSTITUTE OF CHINESE MEDICINE LTD
香港賽馬會中藥研究院有限公司

**THE STATE OF THE MISSION
AND
THE WAY FORWARD**

(March 2005)

EXECUTIVE SUMMARY

The “**STATE OF THE MISSION & THE WAY FORWARD**” document, produced by the Hong Kong Jockey Club Institute of Chinese Medicine (“HKJCICM”), intends to update its key stakeholders – government offices, public institutions, research institutes and the industry on key progress of work and future development plan.

As a subsidiary of the publicly-funded ASTRI, the HKJCICM was set up as the local focal point to spearhead, co-ordinate and strengthen the modernization and further development of Chinese medicine as a high value-added industry for Hong Kong.

Its business is governed by its Board of Directors, supported by world-class advisors. Its public mission is guided by its CM Development Roadmap. Since May 2001, it has completed its formative stage including (i) the organisational set-up, (ii) recruitment of a seasoned team of managers and professionals overseeing the core business functions in corporate affairs, project management, IP and information management, (iii) building its corporate identity, and (iv) partnership networks with key stakeholders locally, in the Mainland and overseas.

Through its funded R&D in collaboration with research-based organisations, the HKJCICM is building its portfolio of IPs and has acquired first-hand understanding of market developments, the CM research landscape and regulatory requirements relevant to Chinese medicine, traditional, complementary and natural medicines. The HKJCICM will strengthen liaison with the industry and work with its stakeholders to effect commercialisation or technology transfer of R&D deliverables.

CMED *Management Philosophies*
From visioning to execution

- A learning organisation & ethical business
- Professionalism & accountability
- Action & result-driven orientations
- Innovation & productivity
- Champion-style management & team approach
- Central planning, co-ordination & execution
- Engagement & coherent communication

With the recent relocation of its office to the Bio-Informatics Centre (the life science cluster) of the Hong Kong Science Park, the year of 2005 marks the beginning of an accelerated growth phase for the HKJCICM. It will expand strategic partnerships and networks on all levels including (i) provision of strategic support to government initiatives over innovation and technology development and Chinese medicine development; (ii) tripartite government-research organisations-industry collaborations for the advancement of CM and quality and health-related applications; (iii) science and evidence-based R&D programmes; (iv) strengthening quality assurance and control of CM; and (v) information and exchange.

As a science, technology and information expert platform, the HKJCICM orchestrates efforts through planning and funding. By bringing together advanced analytical, pharmacological and processing technologies, IP and product development expertise, the HKJCICM is positioned to advance CM development and to assist industries developing higher quality CM-based medicines or products. Through collective efforts, the HKJCICM will help promote people's health and advance the modernisation of Chinese medicine.

Through this document, the HKJCICM also invites "Expression of Interest" and R&D proposal abstracts from qualified research-based organisations and companies.

The Team HKJCICM appreciates your advice and support over the years and looks forward to building fruitful and productive partnerships with you over the coming years.

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THE CORPORATE HKJCICM

The business of the HKJCICM is governed by its Board of Directors, comprising the Commissioner for Innovation and Technology, Director of Health, CEOs of Hong Kong Jockey Club and ASTRI, and other eminent businessmen. Its business is also supported by its Panel of Strategic Advisors and Pool of Expert Advisors (expanded from its former Technical Advisory Panel).

Led by the Executive Director, the management team at the HKJCICM is seasoned managers with extensive health-related industrial experience from CM, pharmaceutical and nutraceutical industries, and with expertise from Chinese medicine, chemistry to pharmacology. The management team is supported by competent project managers, scientists and professionals who cover core functions from corporate affairs and communications, scientific planning, project management, IP management, information management and business development.

FUNDING

The recurrent expenditures of the HKJCICM are met by the Government through the budget of the Applied Science and Technology Research Institute (“ASTRI”). R&D funding is provided by the Hong Kong Jockey Club Charities Trust through its pledged donation of HK\$500 million to the HKJCICM. Monitoring and review mechanism on the use of funds are in place within the HKJCICM for public accountability.

MISSION

"To spearhead the development of Chinese medicine as a high value-added industry for Hong Kong through promotion and coordination of related activities and strategic support for scientific and evidence-based development programs"

This will be achieved by the approaches described as follows:

- (a) Formulation of appropriate strategies for the development of Chinese medicine (CM) in Hong Kong and abroad;
- (b) Application of science and technologies to support CM standardization and value-added product development;
- (c) Initiation, collaboration, co-ordination and management of R&D programs or projects leading to (i) advancement of Chinese medicine through strengthening of its science and evidence-base and (ii) commercialization of R&D deliverables with health-related industries;
- (d) Partnership with the private sector by elevating the values of CM-based products through the enhancement of their safety, quality and efficacy and the promotion of Good Agricultural Practice (GAP), Good Manufacturing Practice (GMP), Good Laboratory Practice (GLP) and Good Clinical Practice (GCP); and
- (e) Information gathering and dissemination relating to local, Mainland and overseas R&D activities, regulatory requirements on CM based products in the major markets and related matters such as patent protection.

THE CHINESE MEDICINE DEVELOPMENT ROADMAP

The HKJCICM had established its CM Development Roadmap (see below) to execute its public mission and guide development from technologies & R&D to commercial applications. Having completed its start-up phase i.e. the formative phase for establishing its corporate identity and operational effectiveness (2001-2004), the work from now onward will concentrate towards enhancing the science and evidence base of CM in the long run through intensification of R&D alongside industrial development applications.

“CM Hong Kong – Your Strategic R&D and Business Partner In China”

Being a relatively new organization harnessing the complex yet alluring growth prospect of CM and related health industries, the HKJCICM focuses on its core value, regional know-how and expertise in order to accomplish its mission. Hong Kong is an established international city and has a reputation to deliver quality products and services. Through the value-added R&D approach towards innovation and technology development as championed by the government, the HKJCICM works with its key stakeholders to help raise Hong Kong to become an international centre for development of high quality CM-based standards, medicines and products, advancing CM for international recognition.

The Hong Kong Jockey Club Institute of Chinese medicine (HKJCICM) Limited
The local focal point to spearhead value-added & evidence-based development of CM

Chinese Medicine (CM) Development Roadmap: R&D, Technology and Applications

Industry Beneficiary Sectors / Application Areas: CM, Pharmaceuticals, Botanicals, Nutraceuticals & Food

Development Directions

1. Development of innovative or improved CM-based products and medicines
2. Enhancing quality assurance and quality control of CM
3. Facilitating exchange and dissemination of CM-related research and industry information

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
HKJCICM	Start-up Phase			<i>Partnerships with research-based organisations and the industry via value-added R&D</i>					
				<ol style="list-style-type: none"> 1. Mainstream CM R&D in ageing-related areas in endocrinology & neuroscience Other R&D and application areas 2. Assist CM industries developing higher quality CM-based medicines & products via R&D 					
				<i>Near to mid-term: Infrastructure-enabling, technology and R&D</i>					
				The CM Lab & Quality Research Collaborative Units & the Testing Lab Cluster R&D Planning and Resource Co-ordinating Unit The CM Information and Business Resource Unit					
				<i>Mid to Long-term: I. R&D and applications</i>					
				Industry-relevant QA & QC of CM (analytical methodologies & chemical markers) R&D for CM-based products/medicines					
				<i>Long Term: II. R&D and applications</i>					
				Evidence-based development of CM INDs or equivalent for CM-based medicines					

Research Clusters

Professional Clusters

Industry Clusters

HKJCICM - set up by the Government as a local focal point for action and co-ordination to spearhead CM development
A subsidiary of the publicly-funded ASTRI

The Local “Focal Point” For Action and Co-ordination To Spearhead The Development of Chinese Medicine Towards International Acceptance

With its public mission, the HKJCICM will continue to strengthen its role as the local focal point for action and co-ordination to spearhead the development of Chinese medicine (CM) to higher quality and value.

During the formative stage, the HKJCICM has established good cooperative and supportive networks with its key stakeholders – government offices, public institutions, research institutes and the industry. It strives to strengthen the partnerships, communications and commitment with each of them. Below is an illustration of the local network that the HKJCICM has established.

**The local focal point
for action & co-ordination to steer CM development**



ACHIEVEMENT TO DATE

The HKJCICM is building its portfolio of R&D projects. The Board of Directors of the HKJCICM and its strategic advisors, after the recent strategic review, agreed that the HKJCICM has laid a solid foundation and good progress of work to date. As a professional organisation dedicated to CM development, the HKJCICM has established extensive networks with key stakeholder communities locally, in the Mainland and overseas.

Through numerous specific research agreements and contracts with competent R&D organisations locally and in the Mainland at this stage of development, the HKJCICM has acquired first-hand understanding of market developments, the research landscape and regulations relevant to Chinese medicine, traditional, complementary and natural medicines.

As project management, IP and information management are key aspects of work for the Team HKJCICM, all internal processes will be reviewed and refined in light of developments and experience. As projects progress, the HKJCICM recognises the importance of the business development function and will work closely with key stakeholders to effect technology transfer or commercialisation of R&D deliverables.

For highlights of R&D, please visit our website (www.hkjcicm.org). Key achievements are summarised below:

Achievements to Date

- increasing visibility as the centre spearheading CM development

- **Seasoned managers (industry) & core team: 4 PhD/ 3 MSc/ 1 BSc**
- **A CM Development Roadmap**
- **Completed organisational start-up & established networks with key stakeholders**
- **The CM Lab (4 PhD / 3 BSc) & research network** – a dedicated technical platform for *development of QA schemes, standard-setting, provision of analytical methodologies and reference markers/standards for QC of CM, and quality extracts for research*
- **9 projects with 11 patents (filed/in drafting) and 3 approaching or have reached the stage of commercialisation**
- **40+ Publications, abstracts, presentations**
- **A web-based trilingual information platform (www.hkjcicm.org)**
- **Mainland-HK research collaborations**



THE WAY FORWARD

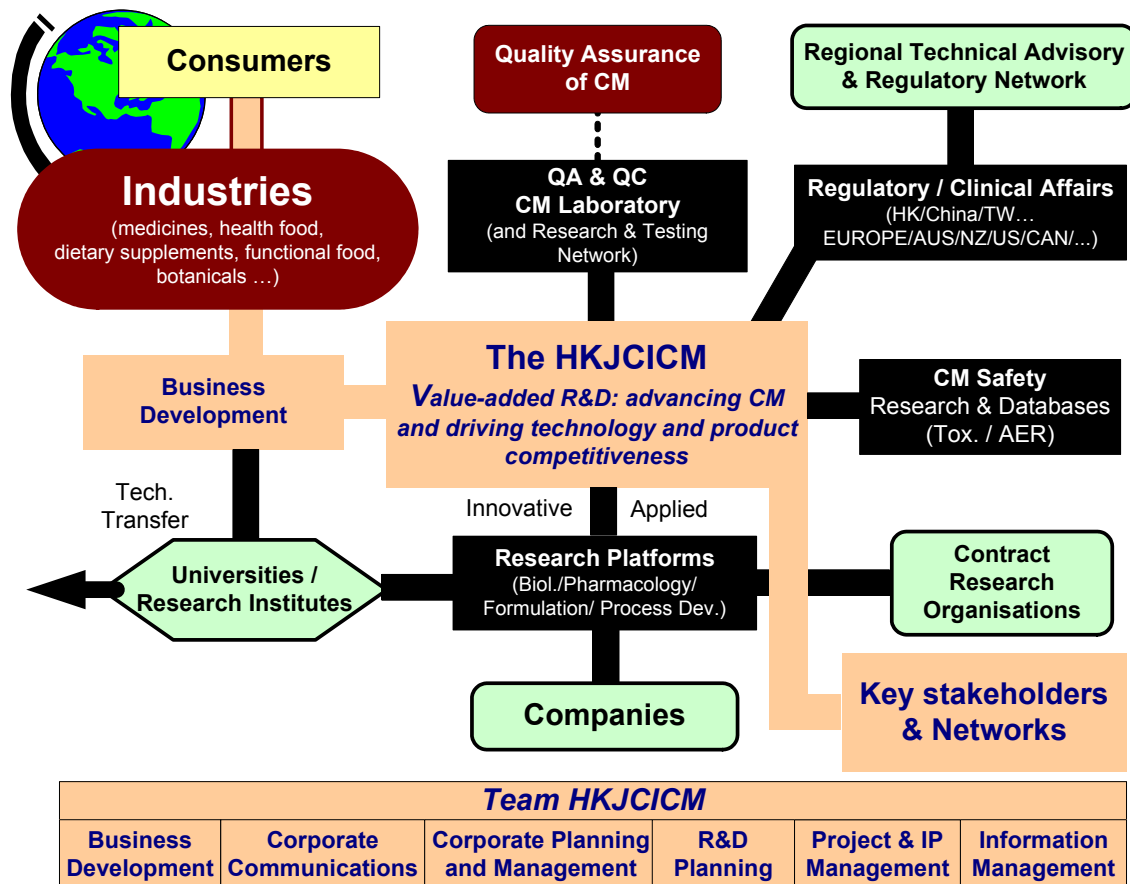
Through its funded R&D programs and projects, the HKJCICM will advance CM and also assist the industries to develop higher quality CM-based medicines or products across the CM, pharmaceuticals, nutraceuticals and health food application areas, meeting specific market and regulatory requirements.

As the strategic CM development platform, the HKJCICM will orchestrate development efforts, work with and leverage on available resources within and outside Hong Kong.

An Expert Platform To Advance CM Development And To Assist The Industries Developing High Quality CM-based Medicines or Products

The operational dynamics with key stakeholders of HKJCICM is conceptualised by the diagram below:

A Networked Expert Platform on Science, Technology and Information to help the industry develops better technologies, medicines & products for markets



Strategic Directions

With its public mission and research foci described in the next section, the HKJCICM will focus on the following strategic directions:

- (a) Strategic support to assist the government in fostering closer Mainland-Hong Kong R&D and industrial collaboration through CEPA and Mainland-Hong Kong Technology Collaboration initiative
- (b) Strategic support to the new government strategy of innovation and technology development and fostering industrial participation
- (c) Firm partnerships with strategic partners, for example, the National Center of Traditional Chinese Medicine of the State Administration of Traditional Chinese Medicine, PRC for collaborative R&D
- (d) Strengthening the science and evidence base of CM through R&D programs
- (e) Generating IPs and facilitating their applications
- (f) Supporting the CM-related industries through value-added R&D
- (g) Enhanced communication with key stakeholders on major CM development issues and progress of work

Research & Development Portfolio

(I) CM R&D in Ageing-related Areas of Endocrinology and Neuroscience

The HKJCICM recognises the health-related medical and social issues associated with the ageing population. The foci selected are in alignment with the government strategy of integrating Chinese medicine into the existing mainstream western medicine system. Furthermore, the foci take into account the nature of Chinese medicine, the unmet medical needs, the research capabilities in Hong Kong, business interests and market needs. Through researching CM for its evidence base to restore equilibrium of body states and opportunities for creating IPs, the HKJCICM aims to advance the science and facilitate applications in promoting health and delaying onset of disease progression.

Sources of Projects

- (i) **The HKJCICM will initiate specific R&D projects and seek competent research partners to collaborate or undertake research in defined areas.**

For science and evidence-based development of CM, the HKJCICM will initiate R&D projects and select CMs for R&D based on (i) evidence of historical use as traditional CMs, (ii) clinical and scientific evidence, (iii) sales or market track record, if applicable and, (iv) potential applications.

- (ii) **To accelerate research for applications along with our research foci, HKJCICM welcomes (i) companies or (ii) universities in Hong Kong* to initiate direct exploratory discussion with HKJCICM first. Follow up or call for specific proposals will be initiated by the HKJCICM when potential collaboration is deemed meritorious.**

The scope of research includes, among others, (a) new product development or application with enhanced value for existing CM-based medicines or products; (b) new or enhanced formulations of existing CM-based medicines or products; (c) development of analytical methodologies for enhanced quality control of existing CM-based medicines or products, (d) product development aimed for foreign markets or meeting registration requirements for targeted market; and (e) product development to enhance marketability and sales. For product-oriented proposals, HKJCICM anticipates tangible financial contributions and participation from the industry.

Mechanism of Solicitation: Call for Expression of Interest or Proposal Abstract

For (i): Potential research partners or implementation agents

In order for the HKJCICM to better engage or identify competent research parties in our R&D programs or projects, the HKJCICM now invites PIs or scientists with (i) a minimum of five years of consistent research track record in research areas within the R&D foci and (ii) interest in CM to express interest to perform collaborative or contract research with the HKJCICM. PIs should submit to the HKJCICM the following:

- their full CVs and copies of 5 latest peer-reviewed scientific publications in areas related to the research foci;
- the research interests and technology infrastructure of their associated laboratories relevant to said area

Subject to the approval of the HKJCICM, qualified researchers may be enlisted into its Pool of Expert Advisors.

For projects requiring specialist R&D expertise, the HKJCICM may directly commission competent parties for implementation. Subject to the extent of the availability of expertise, the HKJCICM may post “Solicitation of Expertise” or “Expression of Interest” for specific lines of research or projects onto the [R&D Portfolio of its website](#). *Interesting parties are invited to bookmark the site and check status from time to time.*

For (ii): Proposal Abstracts and Supportive Documentation

Companies and research-based organisations registered in Hong Kong* should submit one-page abstract to the HKJCICM clearly stating their intents and objectives for the proposed development. Proposers should include the following information, if needed as supplementary information:

- Registration status of organisations
- Scientific evidence as revealed in recent peer-reviewed scientific publications and/or patents
- Market information on products and associated sales data for the past three years, if applicable
- Declaration that the product(s) does not contain known western medicines or adulterants

The HKJCICM does not ask for confidential information at this stage of submission. However, all info submitted will be kept confidential and used for the purpose of internal evaluation.

For solicitation of proposal abstracts, please bookmark the [R&D Portfolio of the website of the HKJCICM](#) and check status from time to time.

- * The HKJCICM encourages partnership with Mainland and international research-based organizations.

(II) The Chinese Medicine Laboratory and Associated Research and Testing Network for QA and QC of CM

Taking into account the current state of play of the industry and the dire need for the industry to progressively upgrade the quality of CM-based medicines or products to meet increasingly stringent regulatory or registration requirements, HKJCICM will work with key stakeholders and aim to take the proactive role in orchestrating Hong Kong-wide efforts over the development of analytical methodologies and chemical markers for quality control of CM.

As a strategic technical platform, the HKJCICM will further develop its CM Laboratory and intensify research leading to the development of more analytical methodologies and chemical markers for quality control of CM. The HKJCICM will expand the research and testing network and establish strategic partnerships with leading research-based laboratories in the field.

- (i) Research, development and validation of analytical methodologies for individual Chinese Herbs and selected Fu Fangs;
- (ii) Compilation of well-known and developed analytical methods for CM;
- (iii) Development of high quality chemical markers for uncharacterised CM;
- (iv) Provision of specialist analytical research service or consultancy service to the industry on a fee basis;
- (v) An analytical research and testing service network with leading research laboratories and contract testing organisations;
- (vi) Scale up production of chemical markers (to be announced)

Call For Expression Of Interest To Become A Collaborating Laboratory On Research Of Quality Of CM

Research laboratories (defined as dedicated laboratories with resident research expertise and supportive technology infrastructure in CM pharmacognosy, phytochemistry and/or analytical chemistry) with a minimum of 2 years demonstrated research interests and solid publication record in peer-reviewed journals in the field of CM pharmacognosy, phytochemistry and/or analytical chemistry are welcome to submit an expression of interest to the HKJCICM.

This could lead to the establishment of the “HKJCICM Collaborating Laboratory on Quality Research of Chinese Medicines” Status and participation in related research programmes. Funding to HKJCICM’s Collaborating Laboratories will be via specific research contracts including 15% of overhead to local universities, wherever applicable.

The Expression of Interest should contain the following information:

- (i) Key scientists, their full CVs and copies of 5 latest research publications in related fields
- (ii) Description of the associated Laboratory and equipment (including model and make) that could be made accessible for research

Research Collaborations for Enhancing the Quality of CM-based Products

Through the Laboratory and its research network, the HKJCICM aims to establish research collaborations or undertake contract research for CM industries and the research community worldwide.

Interesting organisations are welcome to contact the HKJCICM via business@hkjicm.org.

THE ENGAGEMENT PROCESS

The process of engagement and assessment of proposals will follow the established project management and assessment mechanism at the HKJCICM.

1. The HKJCICM will acknowledge receipt of submission of interest or abstracts from the proposers. The Team HKJCICM will undertake initial assessment, supported by experts if needed, of those ideas for suitability for inclusion into its portfolio according to our CM Development Roadmap, corporate strategies and the Project and Funding Guide.
2. From a list of well-written abstracts, the HKJCICM will invite the proposers for exploratory discussion. The meeting and discussion could lead to detailed R&D and resource planning, identification of research partners or implementation agents (if applicable), and preparation of full proposals. The HKJCICM would not pledge funding at this stage. (For those abstracts that do not have clear objectives or backed up by supportive documents aforementioned, the HKJCICM reserves the right not to pursue further enquiry or arrange exploratory meetings.)
3. The full proposals will then be independently assessed by five experts drawn from our Pool of Expert Advisors.
4. The HKJCICM will recommend worthy proposals for funding consideration by the Board of Directors. The final funding decision rests with the HKJCICM. For information about the assessment process, please refer to the Project and Funding Guide which can be downloaded from the website.

There is no deadline for submission of “Expression of Interest” and research abstracts to the HKJCICM. The HKJCICM does not request confidential information at this stage and all received information will be kept confidential for internal use.

PRINCIPLES OF HANDLING INTELLECTUAL PROPERTY AND TECHNOLOGY COLLABORATION-RELATED MATTERS

The HKJCICM, with the support of its appointed counsels, will adopt a professional approach to handle IP and technology collaboration-related matters, using the following as general principles:

- (i) The HKJCICM will strive to maximise the value of our R&D portfolio through proper protection of IPs generated and exploitation of IPs and all other outputs from each project.
- (ii) For proprietary research, the HKJCICM will secure ownership of the rights of IP and outputs of research, and will encourage disclosure of related know-how.
- (iii) For collaborative research, IP and profit sharing arrangements will take into account the collaborating parties' intellectual and financial contributions. Profit sharing arrangements will also encourage disclosure of know-how when collaborative research is completed. The HKJCICM will acknowledge the need to grant a license back to university collaborators for non-commercial purpose.
- (iv) For specific research contracts agreeable between the initiators and the HKJCICM, the work will be implemented according to the pre-agreed contractual terms.
- (v) For development of IPs, the HKJCICM will, wherever practicable, support projects to include time and overhead charge contributed by a university for the specified IP. The fee-for-service and fee-for-use of laboratories approaches will be adopted wherever possible.
- (vi) In the event that ownership of IPs cannot be secured due to complexity of existing IP scenarios and new IPs, etc, the HKJCICM will arrange for a win-win proposal with partners in order to achieve technology collaborations and to derive a reasonable investment return.
- (vii) The HKJCICM will make reference to ASTRI's licensing and commercialiation strategies. Other modes of technology collaboration and attributes of licensing or commercialisation will take into account the market characteristics and will be developed in light of operational experience.

SUBMISSION OF EXPRESSION OF INTEREST AND RESEARCH ABSTRACTS

No deadline of submission.

Please e-mail the submissions with contact details to: business@hkjicm.org.

ENQUIRIES

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