

Macao Funding Scheme for Key R&D Projects 2024

Application Guideline for Projects of Traditional Chinese Medicine and Big Health (TCM Quality)

I. Background

Strengthening the quality supervision and improving the quality and safety are critical measures to ensure the clinical safety and effectiveness of traditional Chinese medicine (TCM). These measures are also the basis to ensure the inheritance, development, and utilization of the precious TCM. In 2022, the General Office of the State Council issued the “*14th Five-Year Plan*” for the Development of Traditional Chinese Medicine (hereinafter referred to as the “Plan”) to comprehensively deploy the TCM-related tasks during the “14th Five-Year Plan” period. The Plan clearly states that by 2025, the health service capacity of TCM will be significantly enhanced, policies and systems for high-quality development of TCM will be further improved, and positive results will be achieved in the revitalization and development of TCM, in which its unique advantages in building a Healthy China will be fully utilized. The Plan has deployed ten key tasks, including “promoting the high-quality development of the TCM industry” and “improving the TCM quality evaluation ability of drug test agencies to establish a sound safety supervision mechanism for the whole chain of TCM quality”.

The Macao SAR Government prioritizes the high-quality development of the TCM and big health industry. The *Second*

Five-Year Plan for Economic and Social Development of the Macao Special Administrative Region (2021-2025) proposes to “encourage and develop the big health industry by regarding the R&D and manufacturing of TCM as the entry point and promoting the quality control and standardization technology of TCM”. The *Development Plan for Appropriate Economic Diversification of the Macao SAR (2024-2028)* proposes to “accelerate the development of the TCM and big health industry to facilitate the development of the whole chain of industry-university-research of TCM, thus gradually establishing a national regional medical center”.

In order to fully exert Macao’s advantages in the development of TCM products, promote the modernization of TCM services and industrialization of TCM, the Science and Technology Development Fund (FDCT) has proposed this Scheme for Key R&D Projects after taking into opinions and suggestions from Macao’s researchers in relevant fields and seeking expertise from mainland experts. It is expected that scientific and technological innovation will further foster the high-quality development of the TCM and big health industry in Macao to benefit the general public and contribute to the development of a healthy country.

II. Overall Objectives

Through implementing this Scheme, it aims to exert Macao’s advantages in TCM talents and technologies, therefore building a distinctive R&D system for TCM quality evaluation technologies, improving the R&D technological level of TCM and big health products in Macao, and boosting the high-quality development of the TCM and big health industry in Macao.

III. Research Field

Research Field: Research and industrial application of key generic technologies for improving TCM quality.

Due to pivotal problems such as unclear material basis and action mechanism and unsound quality control technology in the quality evaluation of TCM prepared slices, TCM compounds, or TCM extracts, researchers should adopt multidisciplinary research methods to study the correlation between material basis and pharmacodynamics of TCM, so as to advance key generic technologies for quality evaluation that meet the characteristics of TCM and realize industrialization.

Performance indicators:

- (1) 2-3 key generic technologies for TCM's quality evaluation are established.
- (2) The quality standards of not less than 10 kinds of TCMs are improved by using the developed key technologies (quality improvement standards and drafting instructions are provided). Among the TCMs, 1-2 international standards are declared.
- (3) 2-3 new products are developed, registered and industrialized.
- (4) The Technology Readiness Level (TRL) of new R&D products shall achieve TRL 9.

IV. Application Requirements

- (1) The lead applicant shall be a Macao entity, and the project shall be led or participated by enterprises, which shall provide supporting funds of no less than 50% of the FDCT fund. If an enterprise participates in

the project, it shall be a Macao or Henggin enterprise.

- (2) A formal cooperation agreement shall be provided if the project is collaborative.
- (3) The project duration is 4 years. The maximum application amount for each project is MOP 15 million.

V. Experts Involved in the Formulation of the Guideline

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