

# Research on the Application of Traditional Chinese Medicine Culture in Garden Landscape Architecture

Xianqin Shi<sup>1</sup>, Tong Zhao<sup>1,\*</sup>, Bishan Wu<sup>1</sup>, Yuanheng Chen<sup>1</sup>, Jiaxin Chen<sup>1</sup>,  
Yanan Huang<sup>1</sup>, Yanmei Wu<sup>1</sup>, Xiaolan Lin<sup>1</sup>

<sup>1</sup>Guangdong Eco-Engineering Polytechnic, Guangzhou, Guangdong, 510520, China

\*Corresponding author

**Abstract:** Through the investigation of two traditional Chinese medicine theme landscape cases, the application of traditional Chinese medicine culture in the overall planning, zoning design, plant configuration and activity setting of garden landscape was analyzed. This paper proposes a planning and design strategy for miniature gardens and landscape gardens based on the theme of traditional Chinese medicine culture, providing guidance for using garden landscape as an effective carrier for the display and expression of traditional Chinese medicine culture, and striving to scientifically draw on the ideas, artistic language and To realize the diversification of landscape cultural connotation, and to realize the inheritance and dissemination of traditional Chinese medicine culture with the help of garden landscape.

**Keywords:** garden; landscape architecture; Traditional Chinese Medicine culture; medicinal ornamental plants

## 1. Introduction

Chinese classical gardens have a profound background and a long-lasting charm. From the bricks, tiles, plants and trees in the garden to the entire history of the garden, they all run through the connotation of traditional culture, expressing the extensive and profound traditional culture incisively and vividly. As an important part of Chinese traditional culture, Traditional Chinese Medicine (TCM) culture is the unique culture of the Chinese nation with profound accumulation and is a valuable component of China's intangible cultural heritage. How to integrate traditional Chinese medicine culture into landscape architecture, make ideology rely on material carriers, use garden landscape as an effective carrier for the display and expression of traditional Chinese medicine culture, and give full play to the cultural inheritance function of garden landscape is a key issue in China. An important topic in the development of gardens and traditional Chinese medicine culture. At present, the application forms of traditional Chinese medicine culture in gardens are mainly traditional Chinese medicine tourism resorts and medicinal plant gardens [1-5]. There are not many studies on how to express traditional Chinese medicine culture in landscape design. There is no systematic theory.

This paper analyzed two cases (Canton Chrysanthemum Exhibition with Theme of TCM Culture and the Shennong Herbal Garden), put forward the planning and design strategy of landscape gardens based on the theme of TCM culture, which is of great significance to enrich the expression of garden landscapes and promote the inheritance and dissemination of TCM culture.

## 2. Canton Chrysanthemum Exhibition with Theme of TCM Culture

"Canton Chrysanthemum Exhibition" is a professional flower exhibition with garden characteristics created through elaborate planning and organization by using chrysanthemum binding, artistic chrysanthemum planting and other planting techniques. The 61st Canton Chrysanthemum Exhibition was set up with the theme of "Chrysanthemum Fragrance Full of Apricot Forest Love", with chrysanthemum as the main flower, aiming to integrate traditional Chinese medicine culture into the chrysanthemum scene group.

### 2.1 Plant elements

The miniature garden uses chrysanthemum as the main material, mainly selects *Dendranthema*

*morifolium*, *Callistephus chinensis*, *Brachycome iberdifolia*, *Tagetes erecta*, *Helianthus annuus*, *Dahlia pinnata*, *Cosmos bipinnata*, *Dahlia pinnate* and *Echinacea purpurea* and other Asteraceae plants, supplemented by other ornamental plants with medicinal value Plants, such as *Canna indica*, *Euphorbia milii* and *Catharanthus roseus* and other ornamental plants, *Nephrolepis auriculata*, *Maranta arundinacea* and *Plectranthus scutellarioides* and other ornamental plants, *Bougainvillea spectabilis*, *Gomphrena globosa* and other ornamental bracts plants, *Asparagus setaceus*, *Podocarpus macrophyllus* and other ornamental plants.



Figure 1: Excellent landscape design works

## 2.2 Landscape elements of TCM

The participating chrysanthemum miniature gardens used TCM cabinets and boxes as flower pots to grow plants (Figure 2), and selected a variety of decorative elements with traditional Chinese medicine cultural connotations, such as medicinal wine jars, rolling boats, medical books, gourds and abacus. Garden pieces to create a landscape effect (Figure 3).



Figure 2: Functional garden sketches



Figure 3: Decorative garden sketches

### 3. Shennong Herbal Garden

Shennong Herbal Garden is a garden-style museum that integrates herbal planting, culture and viewing. It is divided into an entrance landscape area and a core landscape area. The entrance landscape area includes several major scenic spots such as the Chinese Medicine Culture Corridor, the "He" screen, the Hetu Luoshu Wall, the giant medical history relief landscape wall, the poison area and the Chinese Medicine Park. The core landscape area includes several major scenic spots such as Lingnan characteristic area, medicine and food homology area, aromatic area, anti-cancer area, Baopu Garden, and Lingnan Palace.

#### 3.1 Medicinal plant elements

The whole garden of Shennong Herbal Garden mainly includes six plant zones: Chinese medicine garden, Poisonous plants zone, Medicine and food homologous plants zone, Anti-cancer zone, Aromatic zone, and Lingnan special zone.

##### A Chinese characteristics medicine garden

The Chinese Medicine Garden has planted Chinese characteristics medicinal plants such as *Aquilaria sinensis*, *Manilkara zapota*, *Santalum album*, *Astragalus mongholicus*, *Archidendron clypearia*, *Ardisia japonica*, *Bridelia tomentosa*, *Mansoa alliacea* and *Oroxylum indicum*.

##### B Poisonous plants zone

The poisonous area is planted with plants with poisons such as *Antiaris toxicaria*, *Plumbago zeylanica*, *Datura stramonium*, *Euphorbia tirucalli* and *Buddleja lindleyana*.

##### C Medicine and Food Homologous plants zone

Edible and medicinal plants such as *Citrus limon*, *Citrus maxima*, *Averrhoa carambola*, *Punica granatum*, *Eriobotrya japonica*, *Myrica rubra* and *Ficus carica* are grown in the medicinal and edible homology area.

##### D Anti-cancer plants zone

Anti-cancer plants such as *Fallopia multiflora*, *Catharanthus roseus*, *Curcuma longa*, *Camptotheca acuminata*, *Schisandra sphenanthera* and *Belamcanda chinensis* were planted in the anti-cancer area.

##### E Aromatic region

The aroma zone is planted with *Chimonanthus praecox*, *Coffea arabica*, *Salvia japonica*, *Mentha spicata*, *Mentha canadensis*, *Cinnamomum burmannii* and *Artemisia argyi*.

##### F Lingnan special area

The Lingnan characteristic area is planted with plants with Lingnan characteristics such as *Excoecaria cochinchinensis*, *Alpinia japonica*, *Curcuma kwangsiensis*, *Syzygium jambos* and *Ficus hirta*.

In addition, Chinese herbal plants such as *Zingiber zerumbet*, *Davallia trichomanoides*, *Pilea notata*, *Kaempferia rotunda*, *Podocarpus macrophyllus*, *Dracontomelon duperreanum* and *Zanthoxylum armatum* are planted on the roadside and alleys of Shennong Herbal Garden, which are used to decorate alleys and arrange small garden scenes.

#### 3.2 Landscape elements of TCM

The park makes full use of the landscape walls to design Hetu Luoshu, medical science, pharmacology, classics, warnings, etc., to fully display the rich theoretical and cultural connotations of traditional Chinese medicine. The landscape walls, doors and windows adopt the design techniques of framed view, perspective view and leaked view to create a looming, subtle and elegant landscape effect. The garden road is paved with carvings to express the natural form and medicinal properties of medicinal plants. The paving pattern is used to convey the theme of Traditional Chinese Medicine and strengthen the artistic conception. Using a variety of artistic techniques such as relief, line carving, stone carving and copper casting, it presents a group of the most representative traditional Chinese medicine masters such as Que Bian, Tuo Hua, Hongjing Tao, and Shizhen Li.



Figure 4: Decorative garden sketches of Shennong Herbal Garden

#### 4. Data Analysis

Through field research, we analyze the data collected. The traditional Chinese medicine theme chrysanthemum miniature garden exhibition uses medicinal ornamental plants to create a soft landscape, and traditional Chinese medicine theme landscape sketches create a hard landscape. A total of 32 kinds of ornamental plants were selected in the micro garden, mainly Asteraceae, supplemented by Asparagaceae, Solanaceae, Araliaceae and Amaranthaceae. A total of 24 species of dicotyledonous plants, 6 species of monocotyledonous plants, 1 species of gymnosperms, and 1 species of ferns were used; including 6 species of shrubs, 23 species of terrestrial herbs, 1 species of aquatic herbs, and 2 species of vines; There are 18 kinds of flowering plants, 9 kinds of foliage plants, 2 kinds of bract plants, 1 kind of inflorescence plants, and 2 kinds of ornamental plants.

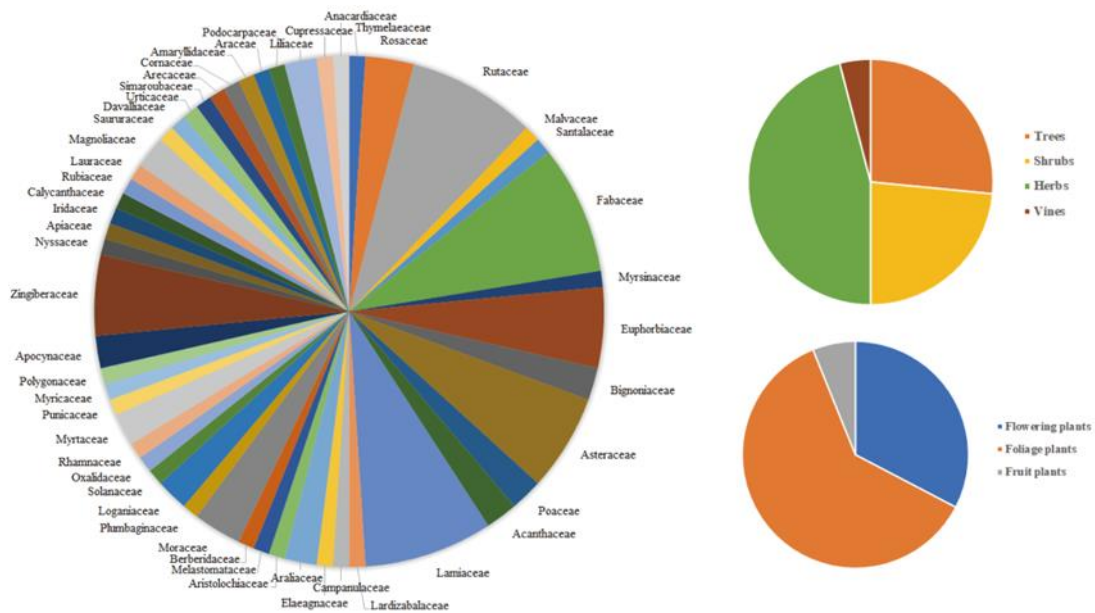


Figure 5: Classification, life form and ornamental characteristics of medicinal ornamental plants in "Shennong Herbal Garden"

Shennong Herbal Garden adopts the garden-style layout of "a garden in the hall, a palace in the garden, and a pavilion in the palace". The pavilions, pavilions and other buildings are imitated from the

Suzhou garden style. , using sculptures, reliefs, landscape walls, plant specimens, artificial medicine, exhibition walls and other artistic expression techniques, combining knowledge, interest and viewing, comprehensively showing the richness of traditional Chinese medicine culture, health culture culture, herbal tea culture, etc. The cultural connotation of the museum presents the audience with a unique garden-style traditional Chinese medicine museum style. There are many kinds of medicinal plants. We have investigated 98 kinds of ornamental plants with medicinal value (see Figure 5 for details), including 82 kinds of dicotyledons such as *Astragalus mongholicus*, *Euphorbia tirucalli*, *Glycosmis pentaphylla* and *Ficus hirta*, *Imperata cylindrica*, *Curcuma Longa*, *Belamcanda chinensis*, and *Alpinia japonica*, *Curcuma kwangsiensis*, *Zingiber zerumbet* and other 13 monocotyledonous plants, 2 gymnosperms, 1 fern; including 26 trees, 23 shrubs, 45 herbs, 4 vines ; 32 species of flowering plants, 60 species of foliage plants, and 6 species of fruit plants.

## 5. Discussion and Conclusion

As a national popular science education base and a national research and practice education base for primary and secondary school students, Shennong Herbal Garden is mostly aimed at the general public and primary and secondary school students. We believe that a health care experience area and a popular science education area should be added to improve public participation. In the popular science education area, a series of traditional Chinese medicine cultural experience courses are designed for primary and middle school students to reduce the introduction of too difficult scientific knowledge. Through interesting activities such as games and painting, starting from the small knowledge of traditional Chinese medicine, it is entertaining and deepening. Primary school students' understanding of traditional Chinese medicine culture. At the same time, considering that Shennong Herbal Garden was built by Baiyun Mountain Hutchison Whampoa Traditional Chinese Medicine Co., Ltd. with self-raised funds, it is recommended to set up a health care experience area. Brand promotion effect, increase business added value. It is recommended to design a series of health-preserving experience activities for adults, such as holding on-site health-preserving soup experience activities on weekends. According to the principles of traditional Chinese medicine, using methods such as combination of ingredients and homology of medicine and food, on-site production of health-preserving soup with therapeutic and health-preserving effects. Or herbal tea experience activities, and guide the public to make herbal tea with heat-clearing and detoxifying, fire-dispelling and dehumidifying activities according to the traditional Chinese medicine formula.

In terms of medicinal plant divisions, although Shennong Herbal Garden has several major divisions, such as medicinal and food homology area, anti-cancer area, poison area, aromatic area, and Lingnan characteristic area, the number of plant conservation is too small and the maintenance is poor. It is suggested to increase the types of medicinal plants and strengthen the maintenance to form the characteristics of each district. Fully excavate medicinal ornamental plants, pay attention to the configuration of medicinal ornamental plants, and form a variety of landscape effects according to the type, color, and seasonal changes of plants. At the same time, rationally configure the aromatic plant area, combine aromatic Chinese herbal medicine plants with horticultural therapy, and configure aromatic Chinese herbal medicine plant combinations with recuperating effects according to the principle of Chinese medicine compatibility.

Based on the survey results, we propose the following four TCM-themed landscape design strategies: (1) Highlight the subjectivity of medicinal plants. Traditional Chinese medicine is based on "Materia Medica", and its essence is the utilization of medicinal plants. In plant configuration, medicinal plants should be given priority to, and medicinal plants with ornamental value should be fully excavated, and small landscapes such as medicinal plants should be used for flower mirrors. (2) Ensure the rationality of layout and functional division. When planning and designing landscape gardens, attention should be paid to functional divisions, setting up divisions such as landscape areas, experience areas, and popular science areas, and designing sightseeing routes such as landscape routes, popular science routes, and health-preserving routes, so as to enhance the public's visiting experience; (3) Pay attention to The diversity of Chinese medicine culture expressed in garden landscape. Choose special flower utensils, choose medicine cabinets, medicine boxes, rolling boats and other traditional Chinese medicine processing tools as flower pots; through the construction of hard garden landscapes such as landscape walls, pavements and sculptures, combined with the construction of soft plant landscapes, to achieve diversification (4) Improve public participation. For different audiences, a series of different traditional Chinese medicine cultural experience courses are set up to give full play to the cultural inheritance function of garden landscapes.

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