

A wide-angle photograph of the Shanghai skyline across the water. The Oriental Pearl Tower is prominent on the left. Other notable buildings include the Shanghai Tower, the Shanghai World Financial Center, and the Jin Mao Tower. The sky is blue with some clouds, and a few boats are visible in the water.

# REGIONAL REPORT (SHANGHAI)

**Zhengtao Wang**

**Shanghai University of TCM**

**17<sup>th</sup> CGCM Meeting, Kuching, Malaysia, 2018**

# 10 CGCM Member Institutes in Shanghai

- Shanghai University of TCM / Shanghai Academy of TCM 上海中医药大学/上海市中医药研究院 (SHUTCM)
- Shanghai R&D Center for Standardization of Chinese Medicines 上海中药标准化研究中心(SHCSCM)
- School of Pharmacy, Fudan University 复旦大学药学院(FUDAN)
- School of Pharmacy, Shanghai JiaoTong University 上海交通大学药学院(SJTU)
- School of Sciences and Technology , Tongji University 同济大学生命科学与技术学院(TONGJI)
- School of Pharmacy, East China University of Science and Technology华东理工大学药学院(ECUST)
- Modern Research Center for TCM, Second Military Medical University 海军军医大学现代中药研究中心(SMMU)
- Shanghai Research Center for TCM Modernization, Shanghai Institute of Materia Medica 中国科学院上海药物研究所,上海中药现代化研究中心(SIMM)
- Institute Pasteur of Shanghai ,Chinese Academy of Sciences中国科学院,上海巴斯德研究所
- Shanghai PharmValley Innovation Institute of Biomedicine上海药谷生物医药创新研究院





# Major Research Activities

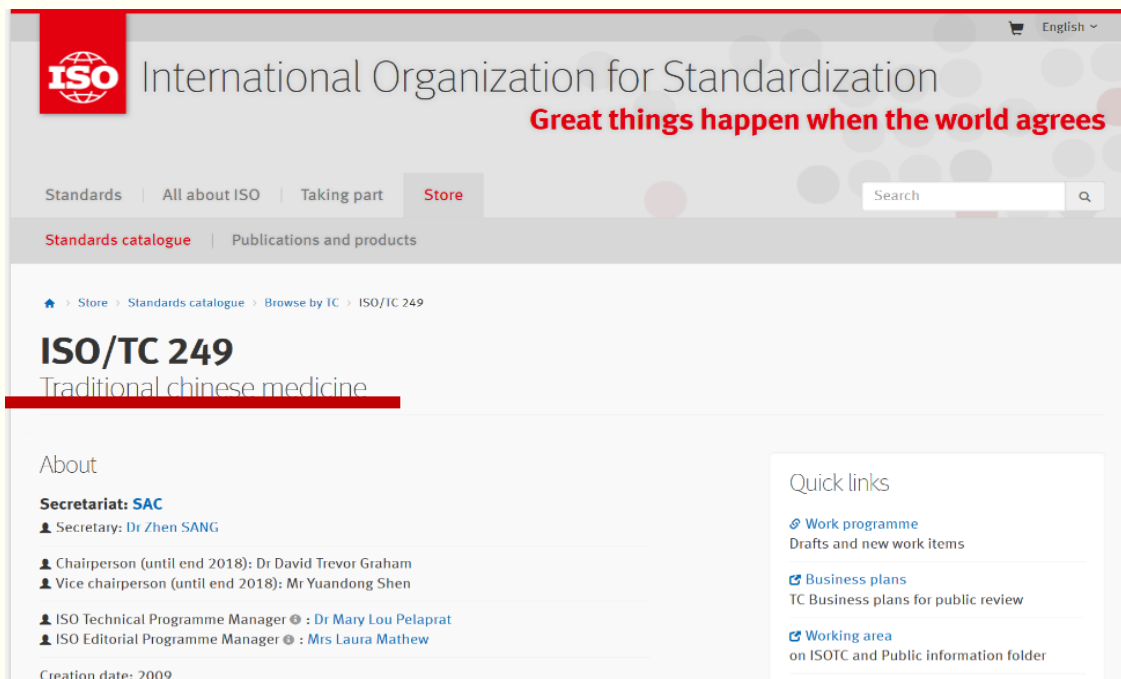
- **Quality Evaluation and Standardization of Chinese Medicines**
- **TCMs / Natural Products Chemistry**
- **Efficacy & safety of TCM compounds, herbs and formula**
- **Pharmaceutics of TCMs**
- **Biotransformation and synthetic biology of natural products**
- **New drugs / products/ healthcare products development from TCMs**
- **TCM informatics (databases, target prediction, etc)**
- **Academic Exchange and International Collaboration**
- **Platforms and technical services**

# Recent Advancements

- ISO/TC 249 Traditional Chinese Medicine
- National/international criteria of TCMs
- New drug R & D
- Academic Exchange and International Collaboration

# ISO/TC 249 Traditional Chinese Medicine

The secretariat of ISO/TC 249 Traditional Chinese Medicine has been allocated to Shanghai University of TCM since 2009



The screenshot shows the ISO website interface. At the top left is the ISO logo with the text "International Organization for Standardization" and the slogan "Great things happen when the world agrees". Navigation links include "Standards", "All about ISO", "Taking part", and "Store". A search bar is located on the right. Below the navigation, there are links for "Standards catalogue" and "Publications and products". The breadcrumb trail reads: "Home > Store > Standards catalogue > Browse by TC > ISO/TC 249". The main heading is "ISO/TC 249 Traditional chinese medicine".

**About**

**Secretariat: SAC**

- Secretary: Dr Zhen SANG
- Chairperson (until end 2018): Dr David Trevor Graham
- Vice chairperson (until end 2018): Mr Yuandong Shen
- ISO Technical Programme Manager: Dr Mary Lou Pelaprat
- ISO Editorial Programme Manager: Mrs Laura Mathew

Creation date: 2009

**Quick links**

- Work programme  
Drafts and new work items
- Business plans  
TC Business plans for public review
- Working area  
on ISOTC and Public information folder



# **Business scope of ISO/TC 249**

- **Standardization in the field of medical systems derived from ancient Chinese medicine which shall be able to share one common set of standards.**
- **Both traditional and modern aspects of these systems are covered.**
- **The committee focuses on quality and safety of raw materials, manufactured products and medical devices and of informatics, including service standards limited to involving the safe use and delivery of devices & medicines, but not into the clinical practice or application of those products.**

# 9th Plenary meeting of ISO/TC 249

- Jun 4-8, 2018, the 9th Plenary meeting of ISO/TC 249, Traditional Chinese medicine, was held in Shanghai University of TCM

The event welcomed a total of 226 representatives, including the experts from 14 ISO members such as China, Japan, South Korea, the United States, Germany and Australia and the representatives from liaison organizations such as ISO/TC 215 on health informatics, World Federation of Chinese Medicine Societies (WFCMS) and World Federation of Acupuncture-Moxibustion Societies (WFAS).





# ISO/TC249 TCM Working Groups



1. Quality and safety of raw materials and traditional processing
2. Quality and safety of TCM manufactured products
3. Quality of acupuncture needles and safe use of acupuncture
4. Quality and safety of medical devices other than acupuncture needles
5. Terminology and informatics
6. Education and research



## ISO/TC249 TCM

### --Projects led by organization or company in Shanghai

#### Published standards: 5

- ISO 19614:2017 Traditional Chinese medicine -- Pulse graph force transducer
- ISO 20311:2017 Traditional Chinese medicine -- Salvia miltiorrhiza seeds and seedlings (丹参种子种苗)
- ISO 20495:2018 Traditional Chinese medicine -- Skin electrical resistance measurement devices
- ISO 20498-2:2017 Traditional Chinese medicine -- Computerized tongue image analysis system -- Part 2: Light environment
- ISO23193: 2017- Traditional Chinese Medicine—Lycium barbarum and Lycium Chinense fruit (枸杞子)

# Projects under development: 9

- **ISO 20493 Traditional Chinese medicine -- Infrared moxibustion-like instrument**
- **ISO/PRF TR 20498-5 Traditional Chinese medicine -- Computerized tongue image analysis system -- Part 5: Method of acquisition and expression of tongue colour and tongue coating colour**
- **ISO/DIS 21291 Traditional Chinese medicine --Therapeutic fumigation devices**
- **ISO/FDIS 21316 Traditional Chinese medicine -- Isatis indigotica root**
- **ISO/DIS 22988 Traditional Chinese medicine -- Astragalus mongholicus root**
- **ISO/CD 22584 Traditional Chinese medicine -- Angelica sinensis root**
- **ISO/AWI 23190 Traditional Chinese medicine --Determination of Aristolochic Acids in Manufactured Products from Traditional Chinese Medicine**
- **ISO/AWI 23191 Traditional Chinese medicine -- Determination of selected Aconitum alkaloids by HPLC**
- **ISO/NP 22894 Traditional Chinese medicine -- Pulse waveform format**

# Preliminary work items: 7

- **ISO/PWI 22585 Traditional Chinese medicine – Codonopsis pilosula root**
- **ISO/PWI 22586 Traditional Chinese Medicine- Radix Paeoniae Alba**
- **ISO/TC 249/N412 Traditional Chinese Medicine- Aquilariae lignum resinatum**
- **ISO/TC 249/N600 Traditional Chinese Medicine – Priority list for developing standards for single herbal medicines in ISO/TC249**
- **ISO/TC 249/N795 Traditional Chinese Medicine – Unprocessed and processed aconitum carmichaelii daughter root**
- **ISO/TC249/WG5/ N157 Traditional Chinese Medicine -Vocabulary for diagnostics - Part 1: Tongue**
- **ISO/TC249/WG5/ N158 Traditional Chinese Medicine -Vocabulary for diagnostics-Part 2: Pulse**

# ISO/TC249 International Standard

“Traditional Chinese Medicine—

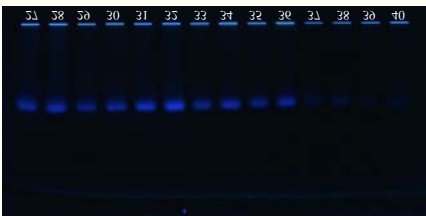
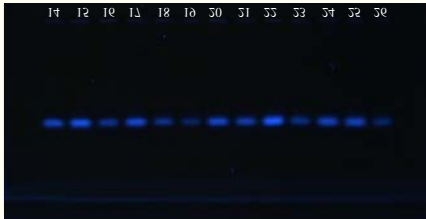
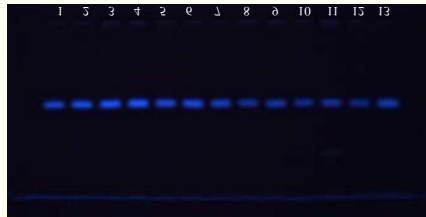
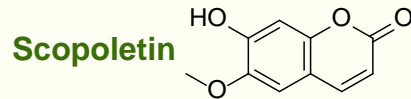
*Lycium barbarum* and *Lycium Chinense* fruit 枸杞子”

- Approved and NP voted by ISO/TC249 International standard ---2018.1.20
- Presented on the 9<sup>th</sup> ISO/TC249 plenary meeting 2018.6.6, Shanghai
- CD voting---2018.9



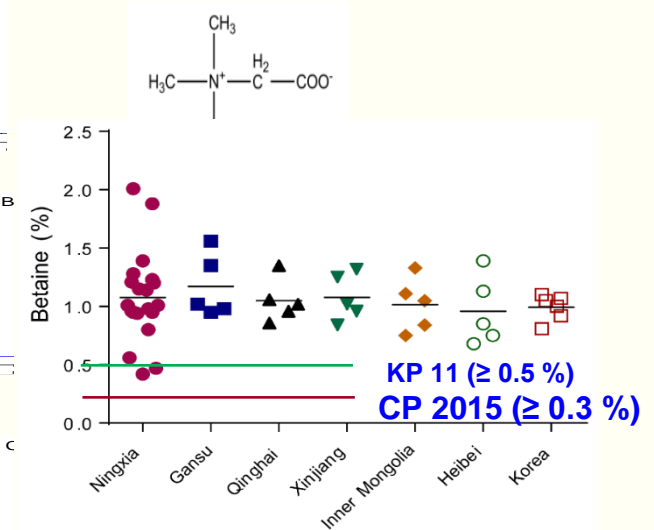
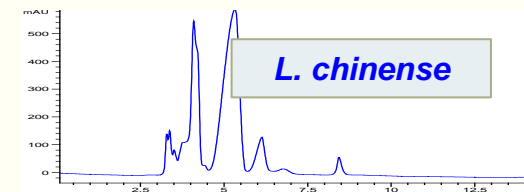
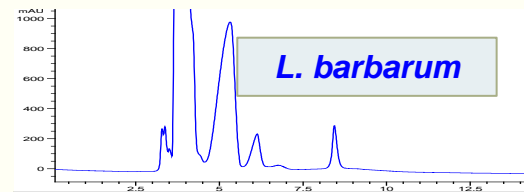
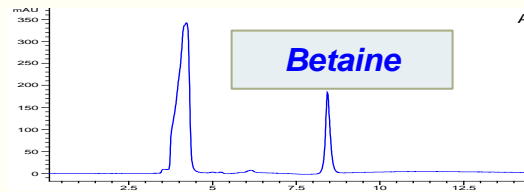
# *Lycium barbarum* and *Lycium Chinense* fruit 枸杞子”

## TLC identification



- 1: Scopoletin reference standard;
- 2 : Reference crud drug;
- 3-40: *Lycium* fruits

## HPLC method for determination of Betaine



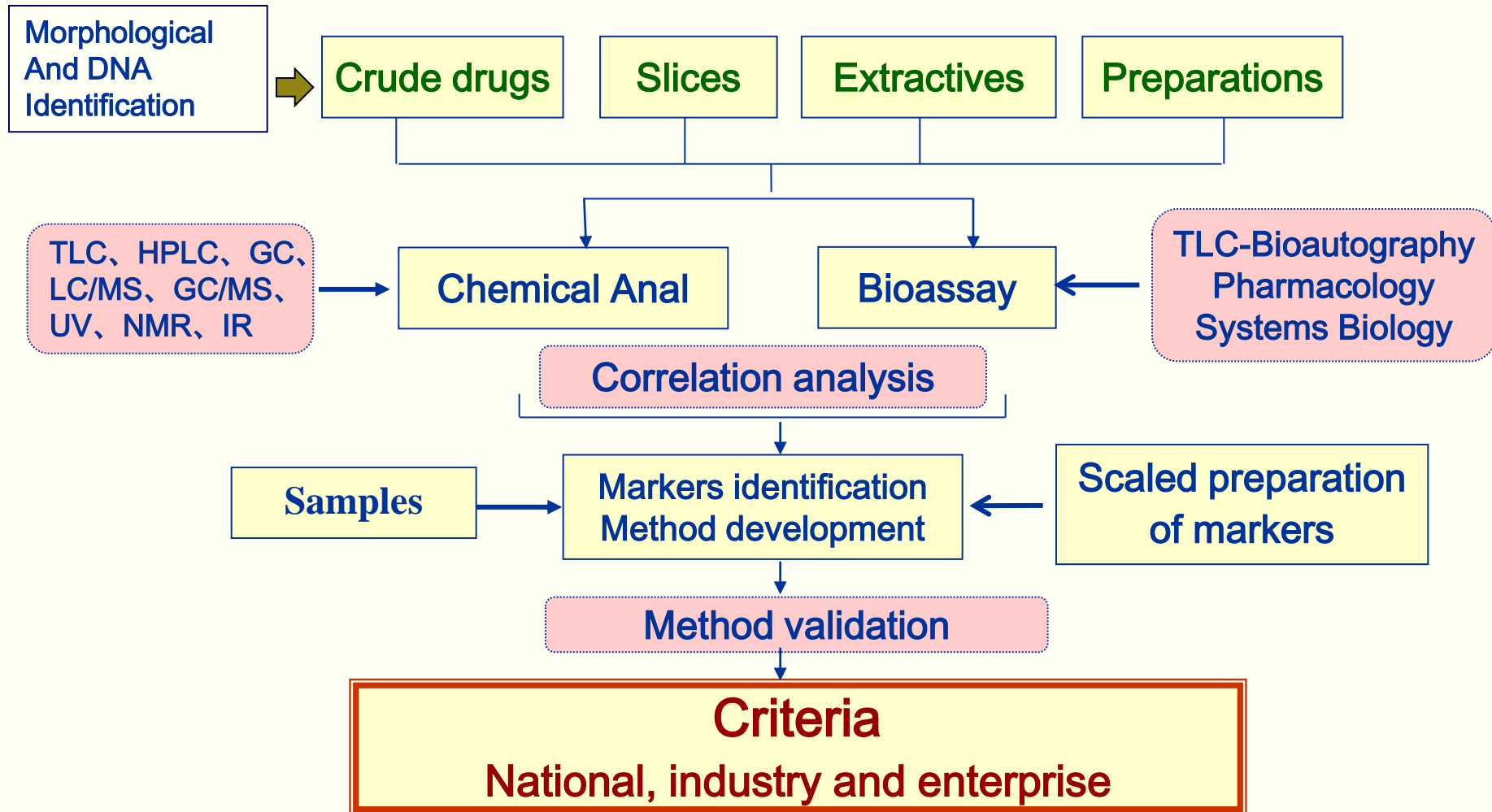


# **Advances in Standardization of TCMs conducted in our Institute**

- ☐ International/interregional standards of TCMs**
- ☐ ChP Standards**
- ☐ Chemical markers identification and preparation**



# Platform for Quality Evaluation of TCMs



# New drugs R & D

## Simplified Registration of Compound TCM Preparations from the Well Recognized Classical Formulae 中药经典名方复方制剂简化注册

- 100 formulae as the 1st trial list
- Clinical validated and used up to date
- Original formulated and Processed
- Standard decoction based preparation
- The starting materials Sustainable and traceable
- Quality well designed and integrally controlled.
- Safety to be evaluated by GLP labs.





# A key project investigated by Shanghai University of TCM

- **Contracts of more than 20 formulations signed with TCM manufactories**
- **Cross College and interdisciplinary team collaboration**
- **Directed by Prof ZT Wang and 7 groups organized**
  - **Formulation & Herbology study 处方与本草考证**
  - **Natural products chemistry and marker substances 物质基础与指标成分确认**
  - **Pharmacognosy and quality standard 生药学与质量标准研究**
  - **Processing of slices for decoction 饮片炮制工艺研究**
  - **standard decoction and preparation 标准汤剂与制备工艺研究**
  - **Safety evaluation 安全性评价**
  - **Activity and mechanism 药效与作用机理**

# WHO Collaborating Center for Traditional Medicine

- Jun 18, 2018 The 11th Revision of the International Classification of Diseases (ICD-11) was released on the official website of WHO including the chapter of Traditional Medicine.

International Classification of Traditional Medicine (ICTM, 传统医学国际疾病分类) project is initiated by WHO to incorporate traditional medicine into the family of International Classification of Diseases (ICD). The Research and Service Evaluation Center for Traditional Medicine International Classification of Diseases (affiliated to Shanghai University of TCM) plays an important role in the project.

- Apr. 27, 2018 “International standard terminologies on TCM” has been submitted to WHO by Shanghai University of TCM.

It will be the first international standard for the complete coverage of Chinese medicine terminology issued by WHO

# International conferences/symposiums of TCM

- Oct. 29-31, 2017 2017 Shanghai International Conference on Traditional Chinese medicine and Natural Medicine 第十届上海中医药与天然药物国际大会(Organized : Shanghai Research Center for TCM Modernization, Co-Organized : SHUTCM, Second Military Medical University)
- Mar. 22-23, 2018 2018 Queenstown Molecular Biology Meetings -Drug Discovery and Societal Impact 2018年皇后镇分子生物学 (上海) 会议 (co-host: School of Pharmacy, Fudan University)
- Jan. 6-8, 2018 The Third International Young Scientist Forum on medicine and life science 2018年第三届同济大学国际青年学者论坛——医学与生命科学分论坛(host: School of Sciences and Technology , Tongji University)



# Chinese medicine culture communication

## ■ SHUTCM

**Shanghai Summer School of Traditional Chinese Medicine  
(2017.7.1-7.27)**

**32 international students from 15 countries.**





# Chinese medicine culture communication

## ■ SHUTCM

Jun 18- Jul 13, 2018, **UCLA Medicine-Global Health Summer Overseas Study Project** (美国加州大学洛杉矶分校 (UCLA) 医学-全球健康暑期海外学习项目)

27 UCLA students from USA, Malaysia, Iran, etc.



# Chinese medicine culture communication

■ **SHUTCM** (Organized: Shanghai Municipal Education Commission,  
Co-Organized: SHUTCM)

Oct.16-Nov.3, 2017 TCM Workshops for Medical senior personages from countries along “the Belt and Road” (首届“一带一路”沿线国家医学高端人士中医药研习班)

16 Ministry of health officials, professors, doctors from 14 countries, e.g. Hungary, Italy, Malaysia, Malta, etc.

Topic: “The inheritance innovation and medical charm of TCM 中国中医药的传承创新与医学魅力” - divided into three subjects “TCM Policy”, “Clinical medicine of TCM” and “TCM Culture”.



# “World-Class Discipline” Construction Project of China

- Sep. 21, 2017 The list of “Double first-class” Universities and disciplines was published
- The term “double first-class,” which refers to “world-class university” and “world-class discipline”. The project, in the form of five-year plans, envisages China having some 40 universities and a number of disciplines recognized as world-class by 2020.
- **Chinese Materia Medica and Traditional Chinese Medicine** --The two disciplines of Shanghai University of TCM were selected in the construction list of “world-class discipline”.

## 一流学科建设高校95所

序号	学校名称
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39

上海中医药大学

Shanghai University of TCM

## “双一流”建设学科名单

(按学校代码排序)

序号	学校名称	学科名称
56	上海中医药大学	中医学、中药学

# The 4th round national discipline assessment of China

Dec. 28, 2017 The results of the fourth round of the national discipline assessment of China were published.

## 3 A+ grade disciplines in SHUTCM:

- Chinese Materia Medica 中药学
- Traditional Chinese Medicine 中医学
- Integrated Chinese and Western Medicine 中西医结合学



# Symposium on construction of the first class discipline of Chinese Materia Medica

- Jan. 6, 2018 “ Symposium on construction of the first class discipline of Chinese Materia Medica ” was held at Shanghai University of TCM.
- More than 400 representatives from 48 universities and research institutes with the authorized degree of Chinese medicine attended the meeting.



# Thanks and welcome to visit SHUTCM

***Shanghai R&D Center for Standardization of Chinese Medicines,  
Institute of Chinese Meteria Medica,  
Shanghai University of Traditional Chinese Medicine***

