Website:
https://www.kingscicm.org (English)
https://chinese.kingscicm.org (中文)

KING'S College LONDON

The King's Centre for Integrative Chinese Medicine

An innovative approach to society's major healthcare challenges

Appendix 1. **Evidence-based ICM:** RCT Evidence and Mechanistic Insights

TCM drugs for disease prevention

- **Neuroprotection and prevention of oxaliplatin-induced neuropathy** with Huangqi Guizhi Wuwu Decoction: a 12-center randomized, double-blind trial with mechanistic validation. (Sun X, et al. Phytomedicine. 2026;159:158539)
- Efficacy and safety of Naoxintong capsule for **secondary prevention after reperfused acute myocardial infarction:** a randomized, double-blind, placebo-controlled, multicenter trial. (Wan H, et al. Phytomedicine. 2026;160:158593).
- Tongxinluo for the **secondary prevention of atherosclerotic disease**: a systematic review and meta-analysis of randomised clinical trials. (Feng Y, et al. *Brain Behav*. 2026;16:e71232).
- Jinlida for **diabetes prevention** in impaired glucose tolerance and multiple metabolic abnormalities: The FOCUS randomised clinical trial (Ji H et al. *JAMA Intern Med* 2024; 184:727-35).
- Effects of ginseng berry saponins from panax ginseng on glucose metabolism of patients with **prediabetes**: A randomised, double-blinded, placebo-controlled, crossover trial. (Gao J et al. *Phytomedicine* 2024;132:155842).
- **Atrial tachyarrhythmia prevention** by Shensong Yangxin after catheter ablation for persistent atrial fibrillation: the SS-AFRF trial (Huang H et al. *Eur Heart J* 2024;45:4305-14).
- Entecavir plus Biejia-Ruangan compound **reduces the risk of hepatocellular carcinoma** in Chinese patients with chronic hepatitis B (Ji D et al. *J Hepatol* 2022;77:1515).

TCM drugs for treating heart diseases and stroke

- **Coronary atherosclerotic plaque intervention** with Tongxinluo capsule (TXL-CAP): a multicenter, randomised, double-blind and placebo-controlled study (Ni M, et al. *Signal Transduct Target* Ther. 2026;11:72).
- ***Heart failure***:
  - The traditional Chinese medicine Qiliqiangxin in heart failure with reduced ejection fraction: a randomised, double-blind, placebo-controlled trial. (Cheang I et al. *Nat Med* 2024; 30:2295-302).
  - A multicenter, randomised, double-blind, parallel-group, placebo-controlled study of the effects of qili qiangxin capsules in patients with chronic heart failure (Li X et al. *J Am Coll Cardiol.* 2013;62:1065-72).
- ***Acute myocardial infarction*** and ***coronary heart disease***:
  - Traditional Chinese medicine compound (Tongxinluo) and clinical outcomes of patients with acute myocardial infarction: The CTS-AMI randomised clinical trial. (Yang Y et al. *JAMA* 2023;330:1534-45).
  - A multicenter, randomised, double-blind, placebo-controlled trial to evaluate the effect of Tongmai Yangxin pill on ventricular remodelling in acute anterior STEMI patients after primary PCI. (Wang Y et al. *Phytomedicine* 2024;135:156133).
  - Efficacy and safety of yangxinshi versus trimetazidine on exercise tolerance in patients with coronary heart disease after percutaneous coronary intervention: Multicenter, double-blind clinical trial (Li Y et al. *Phytomedicine* 2024;135:156198).
  - Impact of Xuezhikang on coronary events in hypertensive patients with previous myocardial infarction from the China Coronary Secondary Prevention Study (CCSPS). (Li JJ, et al. *Ann Med.* 2010;42:231-40).
  - Effect of Xuezhikang, an extract from red yeast Chinese rice, on coronary events in a Chinese population with previous myocardial infarction. (Lu Z, et al. *Am J Cardiol.* 2008;101:1689-93).
  - Xuezhikang, an extract of cholestin, protects endothelial function through antiinflammatory and lipid-lowering mechanisms in patients with coronary heart disease. (Zhao SP, et al. *Circulation* 2004;110:915-20).
- ***Acute ischaemic stroke***: Tongxinluo and functional outcomes among patients with acute ischemic stroke: a randomised clinical trial (Dong Y, et al. *JAMA Netw Open* 2024;7:e2433463).

TCM drugs for diabetes, diabetic kidney disease and other chronic kidney disease

- Shaoyao-Gancao decoction for the treatment of **muscle cramps in maintenance hemodialysis**: A prospective randomised crossover controlled trial. (Li C, et al. *J Ethnopharmacol*. 2025;347:119758)
- Randomised controlled clinical trial of Shenzhuo Formula in the treatment of macroalbuminuria in **diabetic kidney disease** and its inflammation-modulating mechanisms. (Wang A, et al. *Precis Clin Med.* 2025;8:pbaf031).
- Chinese herbal medicine (Tangshen Formula) formula treatment of patients with **diabetic kidney disease**: a systematic review and meta-analysis. (Zhao P, et al. *Front Endocrinol (Lausanne)*. 2025;16:1522759.
- The clinical efficacy of Gegen Qinlian Decoction in treating **type 2 diabetes** is positively correlated with the dose of coptidis rhizoma: three randomised, double-blind, dose-parallel controlled clinical trials. (Kang X et al. *Drug Des Devel Ther* 2024;18:5573-82).
- Add-on astragalus in **type 2 diabetes** and **chronic kidney disease**: A multi-centre, assessor-blind, randomised controlled trial (Chan KW et al. *Phytomedicine* 2024;130:155457).
- Add-on rehmannia-6-based chinese medicine in **type 2 diabetes** and **CKD**: A multicenter randomised controlled trial (Chan KW et al. *Clin J Am Soc Nephrol* 2023;18:1163-74).
- Efficacy of combined abelmoschus manihot and irbesartan for reduction of albuminuria in patients with **type 2 diabetes and diabetic kidney disease**: a multicenter randomised double-blind parallel controlled clinical trial (Zhao J et al. *Diabetes Care.* 2022;45:e113-5).
- Bupi Yishen Formula versus losartan for **non-diabetic stage 4 chronic kidney disease**: a randomised controlled trial. (Mao W, et al. *Front Pharmacol.* 2021;11:627185).
- Efficacy and safety of Abelmoschus manihot for **IgA nephropathy**: A multicenter randomized clinical trial. Li P, et al. *Phytomedicine.* 2020;76:153231).
- Zheng Y, et al. Efficacy and safety of niaoduqing particles for delaying **moderate-to-severe renal dysfunction**: a randomized, double-blind, placebo-controlled, multicenter clinical study. (Zheng Y, et al. *Chin Med J (Engl).* 2017;130:2402-2409).

TCM drugs for COPD, cancer and other major unmet medical needs

- Qibai Pingfei Capsule ameliorates NK-cell dysfunction in **COPD**: Insights from single-cell sequencing in a randomized multicenter double-blinded placebo-controlled trial. (Shi M, et al. Phytomedicine. 2026;159:158570)
- Chinese herbal medicine (JianPi-BuShen) and completion rate of adjuvant chemotherapy for patients with stage II and III **colon cancer**: A randomized clinical trial. (Sun L et al. *Eur J Cancer*. 2024;213:115109).
- Effectiveness and safety of Sanhan Huashi granules versus nirmatrelvir-ritonavir in adult patients with **COVID-19**: A randomised, open-label, multicenter trial. (Zou X et al. *Sci Bull (Beijing).* 2024;69:1954-63).
- Effects of Lianhuaqingwen Capsules in adults with mild-to-moderate **COVID-19**: an international, multicenter, double-blind, randomised controlled trial. (Zheng JP et al. *Virol J* 2023;20:277).
- Xiaoyao Pills, a Chinese patent medicine, treats mild and moderate **depression**: A randomised clinical trial combined with DNA methylation analysis. (Fan L et al. *Phytomedicine* 2024;130:155660).
- Efficacy and safety of YOXINTINE for **depression**: A double-blinded, randomised, placebo-controlled, phase 2 clinical trial (Dong Z et al. *Phytomedicine.* 2024;136:156204).
- Efficacy and safety of Qushi Huayu, a traditional Chinese medicine, in patients with **nonalcoholic fatty liver disease** in a randomised controlled trial. *(*Liu Y et al. *Phytomedicine.* 2024;130:155398).
- Effects of the Zishen Yutai Pill on live births compared with placebo among **infertile women** with frozen-thawed embryo transfer cycle: A multicentre double-blind randomised controlled trial. Phytomedicine (Chen X et al. *Phytomedicine* 2024;135:156072).
- Effect of Xuefu zhuyu oral liquid on **tension-type headache**: A randomised clinical trial (Zhou L et al. *Phytomedicine* 2024;135:156112).

- Efficacy and safety of Dachaihu decoction for **sepsis**: A randomised controlled trial (Huang N et al. *Phytomedicine* 2024;136:156311).
- The efficacy and safety of Bazi Bushen Capsule in treating **premature aging**: A randomised, double blind, multicenter, placebo-controlled clinical trial (Mei J et al. *Phytomedicine* 2024;130:155742).
- Efficacy of Chinese medicine WW-1 in managing gastric atrophy and intestinal metaplasia in patients with **chronic atrophic gastritis**: A multicenter, randomized, double-blind, placebo-controlled trial. (Yang Y, et al. *Pharmacol Res*. 2026;227:108176).

TCM non-drug interventions to address major unmet medical needs

- **Acupuncture for migraine prevention and treatment**
  - Acupuncture for **migraine** without aura and connection-based efficacy prediction: a randomized clinical trial (Zhang X, et al. *JAMA Netw Open.* 2026;9:e2555454).
  - Acupuncture improves **migraine** and quality of life in patients with migraine: a systematic review with meta-analysis (Lu T, et al. *Syst Rev.* 2025;14:220).
  - Manual **acupuncture versus sham acupuncture** and usual care for prophylaxis of **episodic migraine** without aura: multicentre, randomised clinical trial. (Xu S et al. *BMJ* 2020;368:m697).
  - The long-term effect of **acupuncture for migraine prophylaxis**: a randomised clinical trial (Zhao L et al. *JAMA Intern Med* 2017;177:508-15).
- **Acupuncture for management of stroke and heart disease**
  - Electroacupuncture modulates multiple pathways for **neuroprotection and neurorepair in ischemic stroke** (Zhao M, et al. *CNS Neurosci Ther*. 2026;32:e70862)
  - Acupuncture and **stroke motor rehabilitation**: a decade of evidence synthesis via systematic mapping (2015-2024) (Ke C, et al. *Front Neurol.* 2025;16:1647086)
  - Comparing the effect of acupuncture, sham acupuncture, and waiting-list control on patients with **post-stroke cognitive impairment**: A randomised clinical trial. (Chen X, et al. *QJM*. 2025:hcaf181)
  - Effect of acupuncture vs sham acupuncture on patients with **poststroke motor aphasia**: a randomized clinical trial (Li B et al. *JAMA Netw Open*. 2024 Jan 2;7(1):e2352580.
  - Cost-effectiveness of speech and language therapy plus scalp acupuncture versus speech and language therapy alone for community-based patients with Broca's **aphasia after stroke**: a post hoc analysis of data from a randomised controlled trial (Liu Z, et al. *BMJ Open*. 2021;11:e046609)
  - Acupuncture as adjunctive therapy for **chronic stable angina**: a randomised clinical trial (Zhao L, et al. *JAMA Intern Med*. 2019;179:1388-1397).
- **Acupuncture for disorders of joints, bones and muscles**
  - Electroacupuncture for **knee osteoarthritis**: a multicentre randomised controlled trial assessing symptomatic and structural efficacy. (Hang M, et al. *EClinicalMedicine.* 2026;96:103982).
  - Functional connectivity changes in the thalamocortical network due to **neck pain** and the multiscale regulatory effects of acupuncture: a cross-scale multi-omics neuroimaging study. (Gao Z, et al. *Front Neurosci.* 2026;20:1783910).
  - Acute effects of a single electroacupuncture session on purinergic signaling and inflammatory markers in patients with chronic nonspecific **low back pain**: a pilot study. (Ecco JC, et al. *Purinergic Signal.* 2026;22:48).
  - GABRB3 gene polymorphisms influences the analgesic response to acupuncture treatment in patients with **chronic knee pain**: a randomised controlled neuroimaging transcriptomics study. (Wu S, et al. *FASEB J*. 2026;40:e71779).
  - **Acupuncture vs sham acupuncture** for **chronic sciatica from herniated disk**: A randomised clinical trial (Tu J et al. *JAMA Intern Med* 2024; 184:1417-24).
  - Effect of **acupuncture** on neurogenic claudication among patients with **degenerative lumbar spinal stenosis**: A randomised clinical trial (Zhu L et al. *Ann Intern Med*. 2024;177:1048-57).

- Efficacy of intensive acupuncture versus sham acupuncture in **knee osteoarthritis**: a randomised controlled trial. (Tu JF, et al. *Arthritis Rheumatol*. 2021;73:448-458).

- **Acupuncture for other disorders**
  - Effect of electroacupuncture on **postherpetic neuralgia**: a randomised clinical trial. (Chen L, et al. *JAMA Neurol*. 2026:e261443).
  - Efficacy of acupuncture in **irritable bowel syndrome** (ACTION): A Multicenter Randomised Controlled Trial (Yang JW, et al. *Gastroenterology*. 2025;169:958-969.e5).
  - Neuroinflammation-informed neuroimaging-transcriptomic signatures explaining acupuncture's therapeutic effects in **chronic insomnia**. (Lin W, et al. *Chin Med.* 2025;20:207).
  - Cerebral blood flow changes and their spatial correlations with gabaa and dopamine-d1 receptor explaining individual differences in **chronic insomnia** and the therapeutic effects of acupuncture. (Yu L, et al. *Hum Brain Mapp.* 2025;46:e70183).
  - Electroacupuncture reduces duration of **postoperative ileus after laparoscopic gastrectomy for gastric cancer**: a multicenter randomised trial (Pei L, et al. *Gastroenterology.* 2025;169:73-84)
  - Effect of adding **electroacupuncture** to standard triple antiemetic therapy on **chemotherapy-induced nausea and vomiting**: A randomised controlled clinical trial. (Shen G et al. *J Clin Oncol* 2024;42:4051-9).
  - Effect of acupuncture for **methadone reduction**: a randomised clinical trial. (Lu L et al. *Ann Intern Med* 2024;177:1039-47).
  - Effectiveness of acupuncture for **anxiety among patients with Parkinson's disease**: a randomised clinical trial (Fan JQ et al. *JAMA Netw Open* 2022;5:e2232133)
  - Effect of electroacupuncture on **urinary leakage among women with stress urinary incontinence**: a randomised clinical trial (Liu Z, et al. *JAMA*. 2017;317:2493-2501).

- **Other non-drug interventions**
  - Effect of **Baduanjin on blood pressure** among individuals with high-normal blood pressure: a multicenter, open-label, blinded-outcome randomised controlled trial (Pu B, et al. *J Am Coll Cardiol.* 2026 Feb 18:S0735-1097(26)00077-X. doi: 10.1016/j.jacc.2026.01.014)
  - **Tai chi or cognitive behavioural therapy for treating insomnia** in middle-aged and older adults: randomised non-inferiority trial (Siu PM, et al. *BMJ.* 2025 Nov 26;391:e084320).
  - **Tai chi and postural stability in patients with Parkinson's disease.** (Li F,et al. *NEJM* 2012;366:511-9).

Note:

- This document highlights a selection of RCTs, systematic reviews, and meta-analyses from leading journals. Coverage is not comprehensive, and studies on pure herbal compounds are excluded.
- Most publications included in this list are from the past five years. For earlier evidence-based studies of TCM herbal drugs (including TCM-derived pure compounds), see: Chao J, Dai Y, Verpoorte R, Lam W, Cheng YC, Paoletti R. Major achievements of evidence-based traditional Chinese medicine in treating major diseases. *Biochem Pharmacol* 2017; 139: 94–104.

"Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less."
Marie Curie (1867 - 1934)