Integrative Medicine
East meets West

Joseph Sung MD, PhD
The Chinese University of Hong Kong
The question is...

- Is there a need to combine Western and Chinese Medicine?
- Is there a scientific basis to combine Western and Chinese Medicine?
Where is our patient load?

- Elderly
  - Musculo-skeletal pain e.g. OA knee, low back pain
  - Dementia
- Chronic non-infectious diseases
  - Psychiatric disorders
  - DM, Cardiovascular diseases
  - Gastrointestinal problems
  - Skin conditions
- Cancer
  - No effective chemotherapy
  - As an adjuvant
A consumer-driven health-care system

- Institute for Public Opinion in Allensback

- Germany survey 2005
  772 subject interviewed

- “If you were sick, would you prefer a therapy consisting of Western medicine or a combination of Chinese and Western medicine?”
Acupuncture in patients with osteoarthritis of the knee: a randomised trial

C Witt, B Brinkhaus, S Jena, K Linde, A Streng, S Wagenpfel, J Hummelberger, H U Walther, D Melchart, S N Willich

Summary
Background Acupuncture is widely used by patients with chronic pain although there is little evidence of its effectiveness. We investigated the efficacy of acupuncture compared with minimal acupuncture and with no acupuncture in patients with osteoarthritis of the knee.

Methods Patients with chronic osteoarthritis of the knee (Kellgren grade ≤2) were randomly assigned to acupuncture (n=150), minimal acupuncture (superficial needling at non-acupuncture points; n=76), or a waiting list control (n=74). Specialised physicians, in 28 outpatient centres, administered acupuncture and minimal acupuncture in 12 sessions over 8 weeks. Patients completed standard questionnaires at baseline and after 8 weeks, 26 weeks, and 52 weeks. The primary outcome was the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) index at the end of week 8 (adjusted for baseline score). All main analyses were by intention to treat.

Results 294 patients were enrolled from March 6, 2002, to January 17, 2003; eight patients were lost to follow-up after randomisation, but were included in the final analysis. The mean baseline-adjusted WOMAC index at week 8 was 26.9 (SE 1.4) in the acupuncture group, 35.8 (1.9) in the minimal acupuncture group, and 49.6 (2.0) in the waiting list group (treatment difference acupuncture vs minimal acupuncture -8.8, [95% CI -13.5 to -4.2], p=0.0002; acupuncture vs waiting list -22.7 [-27.5 to -17.9], p<0.0001). After 52 weeks the difference between the acupuncture and minimal acupuncture groups was no longer significant (p=0.08).

Interpretation After 8 weeks of treatment, pain and joint function are improved more with acupuncture than with minimal acupuncture or no acupuncture in patients with osteoarthritis of the knee. However, this benefit decreases over time.
Acupuncture & Osteoarthritis

Witt et al. Lancet 2005
Figure 3: Development of the mean WOMAC Index in the three treatment groups
Vertical bars represent standard errors.

Witt et al. Lancet 2005
Gingko for Dementia

Weinmann et al. BMC Geriatrics 2010, 10:14
http://www.biomedcentral.com/1471-2318/10/14

RESEARCH ARTICLE

Effects of Ginkgo biloba in dementia: systematic review and meta-analysis

Stefan Weinmann¹, Stephanie Roll¹, Christoph Schwarzback², Christoph Vauth², Stefan N Willich¹

Abstract

Background: The benefit of Ginkgo biloba has been discussed controversially. The aim of this review was to assess the effects of Ginkgo biloba in Alzheimer’s disease as well as vascular and mixed dementia covering a variety of outcome domains.

Methods: We searched MEDLINE, EMBASE, the Cochrane databases, CINAHL and PsycINFO for controlled trials of ginkgo for Alzheimer’s, vascular or mixed dementia. Studies had to be of a minimum of 12 weeks duration with at least ten participants per group. Clinical characteristics and outcomes were extracted. Meta-analysis results were expressed as risk ratios or standardized mean differences (SMD) in scores.

Results: Nine trials using the standardized extract EGb761® met our inclusion criteria. Trials were of 12 to 52 weeks duration and included 2372 patients in total. In the meta-analysis, the SMDs in change scores for cognition were in favor of ginkgo compared to placebo (-0.58, 95% confidence interval [CI] -1.14; -0.01, p = 0.04), but did not show a statistically significant difference from placebo for activities in daily living (ADLs) (SMD = -0.32, 95% CI -0.66; 0.03, p = 0.08). Heterogeneity among studies was high. For the Alzheimer subgroup, the SMDs for ADLs and cognition outcomes were larger than for the whole group of dementias with statistical superiority for ginkgo also for ADL outcomes (SMO = -0.44, 95% CI -0.77; -0.12, p = 0.008). Drop-out rates and side effects did not differ between ginkgo and placebo. No consistent results were available for quality of life and neuropsychiatric symptoms, possibly due to the heterogeneity of the study populations.

Conclusions: Ginkgo biloba appears more effective than placebo. Effect sizes were moderate, while clinical relevance is, similar to other dementia drugs, difficult to determine.
# Gingko for Dementia

<table>
<thead>
<tr>
<th>Study or Subgroup</th>
<th>Ginkgo</th>
<th>Placebo</th>
<th>Std. Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Total</td>
</tr>
<tr>
<td>Ihl 2008</td>
<td>-1.4</td>
<td>2.8</td>
<td>202</td>
</tr>
<tr>
<td>Kanowski 1996</td>
<td>-2.1</td>
<td>3.15</td>
<td>106</td>
</tr>
<tr>
<td>LeBars 1997</td>
<td>-0.3</td>
<td>5.35</td>
<td>134</td>
</tr>
<tr>
<td>Maurer 1997</td>
<td>-2.9</td>
<td>2.5</td>
<td>9</td>
</tr>
<tr>
<td>Napryeyenko 2007</td>
<td>-3.2</td>
<td>2.3</td>
<td>198</td>
</tr>
<tr>
<td>Schneider 2005</td>
<td>1.6</td>
<td>5.8</td>
<td>169</td>
</tr>
<tr>
<td>vanDongen 2000</td>
<td>0.8</td>
<td>4.1</td>
<td>79</td>
</tr>
<tr>
<td>Total (95% CI)</td>
<td>897</td>
<td></td>
<td>855</td>
</tr>
</tbody>
</table>

Heterogeneity: Tau² = 0.53; Chi² = 178.92, df = 6 (P < 0.00001); I² = 97%
Test for overall effect: Z = 2.01 (P = 0.04)

ADAS-cog = Alzheimer’s disease Assessment Scale cognitive subscale; ITT = intent-to-treat; LOCF = last observation carried forward; SD = standard deviation; SKT = Syndrom Kurz-Test; 95% CI = 95% confidence interval.

**Figure 2** ITT/LOCF change scores for cognition outcomes (ADAS-cog, SKT) by individual trial and pooled standardized mean difference compared with placebo.

Weinmann et al. BMC 2010
Gingko for Dementia

<table>
<thead>
<tr>
<th>Study or Subgroup</th>
<th>Ginkgo</th>
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<tbody>
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<td>-0.8</td>
<td>2.1</td>
<td>106</td>
</tr>
<tr>
<td>LeBars 1997</td>
<td>-0.05</td>
<td>0.42</td>
<td>138</td>
</tr>
<tr>
<td>Napryeyenko 2007</td>
<td>-1.9</td>
<td>2.7</td>
<td>198</td>
</tr>
<tr>
<td>Schneider 2005</td>
<td>-0.1</td>
<td>0.4</td>
<td>169</td>
</tr>
<tr>
<td>vanDongen 2000</td>
<td>1.4</td>
<td>4.8</td>
<td>79</td>
</tr>
<tr>
<td><strong>Total (95% CI)</strong></td>
<td></td>
<td></td>
<td>892</td>
</tr>
</tbody>
</table>

ITT=intent-to-treat; LOCF=last observation carried forward; SD=standard deviation; 95% CI=95% confidence interval.

Figure 3 ITT/LOCF change scores for activities of daily living outcomes by individual trial and pooled standardized mean difference compared with placebo.

Weinmann et al. BMC 2010
Tai Chi and Fall

Interventions for preventing falls in elderly people (Review)

Gillespie LD, Gillespie WJ, Robertson MC, Lamb SE, Cumming RG, Rowe BH
Review

The effects of Tai Chi on fall prevention, fear of falling and balance in older people: A meta-analysis

Inge H.J. Logghe a,b,*, Arianne P. Verhagen a,b, Arno C.H.J. Rademaker b, Sita M.A. Bierma-Zeinstra a, Erik van Rossum c,d, Marjan J. Faber e, Bart W. Koes a

a Department of General Practice, Erasmus MC, University Medical Centre Rotterdam, P.O. Box 2040, 3000 CA Rotterdam, The Netherlands
b Avans Hogeschool, University of Applied Sciences, P.O. Box 90116, 4800 RA Breda, The Netherlands
c Department of Health Care and Nursing Science, Faculty of Health, Medicine and Life Sciences, Maastricht University, P.O. Box 616, 6200 MD Maastricht, The Netherlands
d Zuyd University of Applied Sciences, Centre of Research on Autonomy and Participation, P.O. Box 550, 6400 AN Heerlen, The Netherlands
e Scientific Institute for Quality of Healthcare, Radboud University Nijmegen Medical Centre, P.O. Box 9101, 6500 HB Nijmegen, The Netherlands
Tai Chi and Fall

Fig. 1. Overview of the search for relevant trials and papers (Rotterdam, the Netherlands, 2009).
### Table 3
Effect of Tai Chi on falls, fear of falling and balance versus non-exercise controls. Overall results and results of subgroup analyses (Rot)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Analysis</th>
<th>Studies included</th>
<th>Effect: pooled incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls</td>
<td>Overall result</td>
<td>Logghe 2009, Voukelatos 2007, Wolf 1996, Wolf 2003, Woo 2007</td>
<td>0.79 (0.60–1.03)</td>
</tr>
<tr>
<td></td>
<td>Subgroup analyses</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community setting</td>
<td>Logghe 2009, Voukelatos 2007, Wolf 1996, Woo 2007</td>
<td>0.74 (0.50–1.09)</td>
</tr>
<tr>
<td></td>
<td>High intervention dose &gt;40 sessions</td>
<td>Wolf 2003, Woo 2007</td>
<td>0.71 (0.41–1.23)</td>
</tr>
<tr>
<td></td>
<td>Low intervention dose &lt;40 sessions</td>
<td>Logghe 2009, Voukelatos 2007, Wolf 1996</td>
<td>0.81 (0.54–1.24)</td>
</tr>
<tr>
<td></td>
<td>Post-treatment</td>
<td>Logghe 2009, Voukelatos 2007</td>
<td>0.81 (0.57–1.13)</td>
</tr>
<tr>
<td>Fear of falling</td>
<td>Overall result</td>
<td>Logghe 2009, Wolf 2003, Zhang 2006</td>
<td>0.37 (0.03–0.70)</td>
</tr>
<tr>
<td></td>
<td>Subgroup analyses</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community setting</td>
<td>Logghe 2009, Zhang 2006</td>
<td>0.27 (−0.18–0.72)</td>
</tr>
<tr>
<td></td>
<td>High intervention dose &gt;40 sessions</td>
<td>Wolf 2003, Zhang 2006</td>
<td>0.54 (0.29–0.78)</td>
</tr>
<tr>
<td></td>
<td>Post-treatment</td>
<td>Logghe 2009, Zhang 2006</td>
<td>0.29 (−0.06–0.65)</td>
</tr>
<tr>
<td></td>
<td>Follow-up (12 months)</td>
<td>Logghe 2009, Wolf 2003</td>
<td>0.31 (−0.10–0.73)</td>
</tr>
<tr>
<td>Balance direct measurement</td>
<td>Static post-treatment</td>
<td>Wolf 1997, Voukelatos 2007</td>
<td>0.30 (−0.50–1.10)</td>
</tr>
<tr>
<td>Indirect measurement</td>
<td>Static post-treatment</td>
<td>Li 2008, Zhang 2006</td>
<td>1.11 (−0.25–2.46)</td>
</tr>
</tbody>
</table>

*Significant result.*
Cancer and Chinese medicine

- Protect normal cell, i.e. reduce side effects
- Enhance potency of Chemo/RT
- Prolong life span of patients
- Reduce inflammation around cancer
- Improve general condition of patients
- Improve Quality of life for patients

TCM as complementary therapy for Cancer
Anti-cancer TCM

Wendy et al. Planta Med 2010
Anti-cancer TCM

Wendy et al. Planta Med 2010
Anti-cancer TCM

- Cellular and animal studies have provided strong molecular evidence of anticancer activities
- But...
  - Does cellular and animal studies translate into human therapeutic effects?
  - Do they have other side effects?
  - How do they compare with standard chemotherapeutic agents?
Cancer and Chinese medicine

“In general, most of the published clinical studies are at evidence of level III; in other words, they were trials without rigorous randomization or they involve single group pre-post, cohort, time series, or matched case control studies. As a result, there are a number of contradictory reports regarding the therapeutic effectiveness of TCM on the treatment of cancer”

Wendy et al. Planta Med 2010
Contemporary Clinical Research of Traditional Chinese Medicines for Chronic Hepatitis B in China: An Analytical Review

Lingyi Zhang,1 Guqi Wang,1,2 Weihong Hou,1 Ping Li,3 Andrea Dulin,1 and Herbert L. Bonkovsky1,4,5,6

Fig. 1. Numbers of publications reporting studies of TCM on HBV in China knowledge infrastructure from Jan., 1998 to June, 2008.
Fig. 2. Summary of studies reviewed and those selected for or excluded from this meta-analysis.
TCM looks promising

<table>
<thead>
<tr>
<th>Variables</th>
<th>TCM Alone versus IFN (16 RCTs)</th>
<th>TCM + IFN versus IFN (18 RCTs)</th>
<th>TCM Alone versus LAM (6 RCTs)</th>
<th>TCM + LAM versus LAM (14 RCTs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of patients</td>
<td>925</td>
<td>993</td>
<td>895</td>
<td>843</td>
</tr>
<tr>
<td>Age (years)</td>
<td>34.1 ± 2.8</td>
<td>36.6 ± 2.8</td>
<td>36.4 ± 3.8</td>
<td>34.4 ± 5.9</td>
</tr>
<tr>
<td>Male sex (%)</td>
<td>63.7 ± 16.3</td>
<td>70.3 ± 10.9</td>
<td>54.0 ± 6.3</td>
<td>65.4 ± 13.0</td>
</tr>
<tr>
<td>Duration of treatment (days)</td>
<td>145 ± 71.0 (90, 260)</td>
<td>147 ± 85 (90, 260)</td>
<td>150 ± 67.1 (90, 190)</td>
<td>212 ± 155 (90, 720)</td>
</tr>
<tr>
<td>Normalization of serum ALT (%)</td>
<td>72.3 ± 20.0</td>
<td>53.5 ± 22.8</td>
<td>74.1 ± 16.3</td>
<td>51.5 ± 17.5</td>
</tr>
<tr>
<td>OR (95% CI)</td>
<td>2.42 (1.51-3.89)</td>
<td>3.07 (2.35-4.00)</td>
<td>1.96 (1.15-3.32)</td>
<td>3.40 (2.45-4.70)</td>
</tr>
<tr>
<td>Test of heterogeneity (I²)</td>
<td>58.7%</td>
<td>0%</td>
<td>60.8%</td>
<td>7.9%</td>
</tr>
<tr>
<td>Overall effect</td>
<td>P = 0.0003</td>
<td>P&lt; 0.00001</td>
<td>P = 0.01</td>
<td>P&lt; 0.00001</td>
</tr>
<tr>
<td>Loss of serum HBeAg (%)</td>
<td>55.5 ± 16.3</td>
<td>41.7 ± 14.1</td>
<td>51.0 ± 12.0</td>
<td>33.6 ± 7.9</td>
</tr>
<tr>
<td>OR (95% CI)</td>
<td>1.50 (1.00-2.54)</td>
<td>2.17 (1.74-2.72)</td>
<td>1.57 (0.60-4.12)</td>
<td>2.54 (1.95-3.32)</td>
</tr>
<tr>
<td>Test of heterogeneity (I²)</td>
<td>76.3%</td>
<td>0%</td>
<td>86.6%</td>
<td>0%</td>
</tr>
<tr>
<td>Overall effect</td>
<td>P = 0.05</td>
<td>P&lt; 0.00001</td>
<td>P = 0.36</td>
<td>P&lt; 0.00001</td>
</tr>
<tr>
<td>Clearance of serum HBV DNA (%)</td>
<td>51.0 ± 12.1</td>
<td>43.3 ± 11.0</td>
<td>58.4 ± 11.8</td>
<td>43.2 ± 14.6</td>
</tr>
<tr>
<td>OR (95% CI)</td>
<td>1.31 (0.87-1.98)</td>
<td>2.05 (1.59-2.65)</td>
<td>1.20 (0.61-2.36)</td>
<td>3.20 (2.09-4.92)</td>
</tr>
<tr>
<td>Test of heterogeneity (I²)</td>
<td>63.6%</td>
<td>26.0%</td>
<td>76.3%</td>
<td>48.6%</td>
</tr>
<tr>
<td>Overall effect</td>
<td>P = 0.20</td>
<td>P&lt; 0.00001</td>
<td>P = 0.59</td>
<td>P&lt; 0.00001</td>
</tr>
</tbody>
</table>

Data are presented as the mean ± standard deviation (range) unless indicated otherwise.
Astragalus (Huang Qi)

Polygonum (Hu Zhang)

Radix (Da Huang)

Phyllanthus (Ye Xian Zhu)
A systematic review of treating *Helicobacter pylori* infection with Traditional Chinese Medicine

Jiang Lin, Wei-Wen Huang
# TCM and Helicobacter pylori

<table>
<thead>
<tr>
<th>Trials</th>
<th>No. of cases</th>
<th>Age (yr)</th>
<th>Gender (male) (%)</th>
<th>Jadad score</th>
<th>Regimen of TCM group</th>
<th>Regimen of triple therapies group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chen et al[10] (2001)</td>
<td>419</td>
<td>23-68</td>
<td>62.1</td>
<td>2</td>
<td>Fixed formula × 7 d</td>
<td>(PPI + A + F) × 7 d</td>
</tr>
<tr>
<td>Fan et al[12] (2006)</td>
<td>50</td>
<td>NA</td>
<td>NA</td>
<td>1</td>
<td>Anzhong Yin × 28 d</td>
<td>(CBS + A + F) × 14 d</td>
</tr>
<tr>
<td>Hua et al[13] (2006)</td>
<td>150</td>
<td>23-85</td>
<td>61.3</td>
<td>1</td>
<td>Jianwei Miyou Inеспissant × 60 d</td>
<td>(CBS + A + C) × 7 d + CBS × 49 d</td>
</tr>
<tr>
<td>Ma et al[14] (2006)</td>
<td>106</td>
<td>44.2/43.8</td>
<td>79.3</td>
<td>2</td>
<td>Weikang Capsule × 60 d</td>
<td>(RBC + A + M) × 14 d</td>
</tr>
<tr>
<td>Wang et al[15] (2006)</td>
<td>77</td>
<td>NA</td>
<td>47.7</td>
<td>1</td>
<td>Jianpi Qinghua formula × 30 d</td>
<td>(CBS + A + T) × 14 d</td>
</tr>
<tr>
<td>Wu[16] (2006)</td>
<td>71</td>
<td>19-65</td>
<td>67.6</td>
<td>2</td>
<td>Jianwei Liumo Decoction × 56 d</td>
<td>(PPI + A + M) × 10 d</td>
</tr>
<tr>
<td>Yang et al[17] (2006)</td>
<td>80</td>
<td>22-65</td>
<td>70</td>
<td>2</td>
<td>Weitongning Tab × 28 d</td>
<td>(CBS + A + M) × 14 d</td>
</tr>
<tr>
<td>Zhou et al[18] (2006)</td>
<td>56</td>
<td>23-70</td>
<td>47.2</td>
<td>2</td>
<td>Qingwei Decoction × 14 d</td>
<td>(PPI + A + M) × 14 d</td>
</tr>
<tr>
<td>Huang[19] (2007)</td>
<td>320</td>
<td>18-77</td>
<td>55.6</td>
<td>2</td>
<td>Mainemeng Granule × 28 d</td>
<td>(PPI + A + M) × 14 d</td>
</tr>
<tr>
<td>Wang et al[21] (2008)</td>
<td>60</td>
<td>20-64</td>
<td>61.7</td>
<td>1</td>
<td>Meinou Decoction × 14 d</td>
<td>(CBS + A + T) × 14 d</td>
</tr>
<tr>
<td>Ling et al[22] (2008)</td>
<td>46</td>
<td>33.2/35.1</td>
<td>71.7</td>
<td>2</td>
<td>Jianwei Yuyang Granule × 6 wk</td>
<td>(PPI + A + M) × 1 wk + PPI × 1 wk</td>
</tr>
<tr>
<td>Xiao et al[24] (2008)</td>
<td>80</td>
<td>19-77</td>
<td>62.5</td>
<td>2</td>
<td>Weiyan Decoction × 20 d</td>
<td>(PPI + A + C) × 7 d</td>
</tr>
<tr>
<td>Xin et al[25] (2008)</td>
<td>70</td>
<td>48.6/44.6</td>
<td>60</td>
<td>2</td>
<td>Weikang formula × 1 mo</td>
<td>(PPI + C + T) × 7 d</td>
</tr>
</tbody>
</table>

TCM: Traditional Chinese Medicine; PPI: Proton pump inhibitor; CBS: Colloidal bismuth subcitrate; RBC: Ranitidine bismuth citrate; A: Amoxilin; M: Metronidazole; T: Tinidazole; C: Clarithromycin; F: Furazolidone. NA: No available.
Table 2 *H pylori* eradication rates comparison between TCM and triple therapies

<table>
<thead>
<tr>
<th>Trials</th>
<th>TCM (n/N)</th>
<th>Triple therapies (n/N)</th>
<th>RR (95% CI)</th>
<th>P</th>
<th>Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed formula vs PPI + A + F</td>
<td>161/211</td>
<td>160/204</td>
<td>1.02 (0.91, 1.13)</td>
<td>0.60</td>
<td>[10]</td>
</tr>
<tr>
<td>Anzhong Yin vs CBS + A + F</td>
<td>19/30</td>
<td>14/20</td>
<td>0.90 (0.61, 1.34)</td>
<td>0.63</td>
<td>[12]</td>
</tr>
<tr>
<td>Jianwei Mieyou Inspissant vs CBS + A + C</td>
<td>60/100</td>
<td>22/50</td>
<td>1.43 (1.01, 2.03)</td>
<td>0.06</td>
<td>[13]</td>
</tr>
<tr>
<td>Weikang Capsule vs RBC + A + M</td>
<td>46/56</td>
<td>42/50</td>
<td>0.98 (0.82, 1.16)</td>
<td>0.80</td>
<td>[14]</td>
</tr>
<tr>
<td>Jianwei Liumo Decoction vs PPI + A + M</td>
<td>37/41</td>
<td>28/30</td>
<td>0.97 (0.84, 1.11)</td>
<td>0.64</td>
<td>[16]</td>
</tr>
<tr>
<td>Weitongning Tab vs CBS + A + M</td>
<td>32/40</td>
<td>31/40</td>
<td>1.03 (0.82, 1.30)</td>
<td>0.78</td>
<td>[17]</td>
</tr>
<tr>
<td>Qingwei Decoction vs PPI + A + M</td>
<td>13/29</td>
<td>19/27</td>
<td>0.64 (0.40, 1.02)</td>
<td>0.05</td>
<td>[18]</td>
</tr>
<tr>
<td>Maimendong Granule vs PPI + A + M</td>
<td>166/200</td>
<td>98/120</td>
<td>1.02 (0.91, 1.13)</td>
<td>0.76</td>
<td>[19]</td>
</tr>
<tr>
<td>Maimendong Granule vs PPI + A + M</td>
<td>43/50</td>
<td>40/48</td>
<td>1.03 (0.87, 1.22)</td>
<td>0.71</td>
<td>[20]</td>
</tr>
<tr>
<td>Mieyou Decoction vs CBS + A + T</td>
<td>22/32</td>
<td>19/28</td>
<td>1.01 (0.73, 1.43)</td>
<td>0.88</td>
<td>[21]</td>
</tr>
<tr>
<td>Formulae vs CBS + A + M</td>
<td>81/93</td>
<td>49/56</td>
<td>1.00 (0.88, 1.13)</td>
<td>0.94</td>
<td>[23]</td>
</tr>
<tr>
<td>Weiyan Decoction vs PPI + A + C</td>
<td>28/40</td>
<td>29/40</td>
<td>0.97 (0.73, 1.28)</td>
<td>0.80</td>
<td>[24]</td>
</tr>
<tr>
<td>Changweiqing oral lique vs CBS + A + F</td>
<td>53/103</td>
<td>36/52</td>
<td>0.74 (0.57, 0.96)</td>
<td>0.03</td>
<td>[11]</td>
</tr>
<tr>
<td>Jianpi Qinghua formula vs CBS + A + T</td>
<td>15/42</td>
<td>29/35</td>
<td>0.43 (0.28, 0.66)</td>
<td>&lt; 0.01</td>
<td>[15]</td>
</tr>
<tr>
<td>Jianwei Yuyang Granule vs PPI + A + M</td>
<td>11/24</td>
<td>18/22</td>
<td>0.56 (0.35, 0.90)</td>
<td>0.01</td>
<td>[22]</td>
</tr>
<tr>
<td>Weikang formula vs PPI + C + T</td>
<td>26/40</td>
<td>26/30</td>
<td>0.75 (0.57, 0.98)</td>
<td>0.04</td>
<td>[25]</td>
</tr>
</tbody>
</table>

Lin et al. World J Gastro 2009
Chinese Medicine vs Western Medicine

- When there is a potent remedy in WM, why explore CM?
- When there is a potent remedy in WM with serious side effects, should we try CM?
- When there is no remedy in WM, should we try CM to relieve the symptom?
Combining Western and Chinese Medicine Practice

- Combined therapy has fewer side effects
- Consumer demand is high
- High acceptance for Chinese medicine
- Good clinical evidence for the efficacy in some (pain relief, dementia, fall)…but not other (hepatitis, infection) areas
What is Integrative Medicine?

Conventional Western Medicine

+ Complementary and Alternative Medicine

**Natural products**: Herbal medicine

**Manipulative and body-based practices**: Massage, acupuncture

**Mind-body medicine**: Mindfulness

Medical care based on robust evidence and theoretical basis through a holistic, individualized approach of healing the mind, body and spirit
Institute of Integrative Medicine: Objectives

- *International hub for healthcare service, drug development, research and education*
  - Multidisciplinary specialist service
  - Herbal medicine development
  - International education center

- *Academic center with social responsibility*
  - High value-added economy (healthcare, education and innovation technology)
  - Affordable alternative medical service for the community
Institute of Integrative Medicine: Structure

Institute of Integrative Medicine

CUHK-UMB East-West Center
- Drug development and registration
- Translational clinical research
- Training and education

Integrative Medical Clinic
- Multidisciplinary specialist outpatient service
- Platform for clinical trials and clinical attachment
Integrative Medical Clinic: Model of care

- Combined diagnosis and management protocol
- Combined consultation
- Bi-directional referral system
- Family physician as coordinator for self-referrals
- Joint electronic medical record and streamlined appointment booking system
- Synergy with CUHK/PWH Medical Center
Role in research and education

- Research clinic session
  - Conduction of clinical trials
  - SFDA and FDA standard

- Teaching clinic session
  - Clinical attachment for students, practitioners and visiting scholars
Future development

- Satellite clinics in downtown
- Inpatient consultation service in Prince of Wales Hospital
- Subsidized outpatient service for under-privileged groups
CUHK-UMB Center for Integrative Medicine

CUHK

University of Maryland Baltimore (UMB)
Research in Integrative Medicine

- Translation clinical research for drug development and registration
  - Western and Eastern methodology and outcome measures
  - Mono-therapy or Combination therapy
- Industry-sponsored or investigator-initiated clinical trials
- Strategic plan for SFDA accreditation on TCM
Registration requirements of proprietary Chinese medicine in HK

- **Product safety**
  - Heavy metals, pesticide residues, microbial, toxicity, mutagenicity, carcinogenicity, teratogenicity

- **Product efficacy**
  - Pharmacodynamics; clinical trial data

- **Product quality**
  - Manufacturing method; physiochemical properties of crude drugs; product specification, method and certificate of analysis; stability test reports
Herbal medicine for digestive disorders

**Tong Xie You Fang**

- **He Zi** (诃子)
- **Bai Zhu** (白朮)
- **Hou Po** (厚朴)
- **Bai Shao** (白芍)
- **Yi Yi Ren** (薏苡仁)
- **Yan Hu Suo** (延胡索)
- **Huo Tan Mu** (火炭母)

**Hemp Seed Pill**

- **Zhi Shi** (枳實)
- **Hou Po** (厚朴)
- **Xing Ren** (杏仁)
- **Bai Shao** (白芍)
- **Da Huang** (大黃)
- **Huo Ma Ren** (火麻仁)

**Qi Wei Bai Zhu Powder**

- **Fu Lin** (茯苓)
- **Ge Gen** (葛根)
- **Gan Cao** (甘草)
- **Bai Zhu** (白朮)
- **Ren Shen** (人參)
- **Mu Xiang** (木香)
- **Huo Xiang** (藿香)

**Irritable bowel syndrome**

**Constipation**

**Chemotherapy-related diarrhea**
Other research in Integrative Medicine

- Public health issues
  - Jockey Club School of Public Health and Primary Care
  - Policy, financing and healthcare delivery model
- Branch of Cochrane Center on TCM and CAM
  - Systematic reviews and meta-analysis
- Basic science
  - Drug mechanism and development
Education and training: Highlights

- Postgraduate training in Chinese Medicine
  - Clinical research methodology
  - English speaking setting
  - Overseas experience

- Non-Chinese medicine streams
  - MBChB, BSc (Public Health), BPharm

- International networking
  - Visiting scholarships
  - Exchange program
  - Conferences and workshop
Partners: Hong Kong

- CUHK
  - School of Chinese Medicine
  - Oncology Acupuncture Center
  - Institute of Chinese Medicine
  - Jockey Club School of Public Health and Primary Care
  - School of Pharmacy
- School of Chinese Medicine, HKBU
- Hospital Authority
- Industrial partners
Partners: International

Center for Integrative Medicine, University of Maryland Baltimore, USA

Department of Medicinal Chemistry and Pharmaconopsy, University of Illinois, USA

National Institute of Complementary Medicine, Australia

Complementary and Integrative Medicine University of Duisburg-Essen, Germany
Target diseases

- Common
- Chronic or recurrent in nature
- No effective treatment or marked side effects in conventional Western medicine
- Well accepted CAM treatment with high demand in the public
Integrative Medicine

- **Digestive diseases**: Functional gastrointestinal disorder, Obesity
- **Neurological diseases**: Dementia, Stroke, Parkinson’s disease
- **Musculoskeletal diseases**: Chronic arthritis, Fibromyalgia, Chronic low back pain
- **Oncology**: Supportive care for chemotherapy, pain control
- **Psychological disorders**: Anxiety, Depression, Insomnia
- **Dermatology and Immunology**: Chronic eczema, Allergic rhinitis
- **Cardiovascular and Metabolic diseases**: Hypertension and Diabetes mellitus