

The Rise and Rise of Traditional Chinese Medicine

Gold Coast Skeptics

18 September 2017



Presented by
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Friends of Science in Medicine



Traditional Chinese Medicine (TCM)

- ▶ What is Traditional Chinese Medicine (TCM)?
- ▶ Does it work?
- ▶ What about the Nobel Prize for Artemisinin?
- ▶ What is influencing TCM's growth?

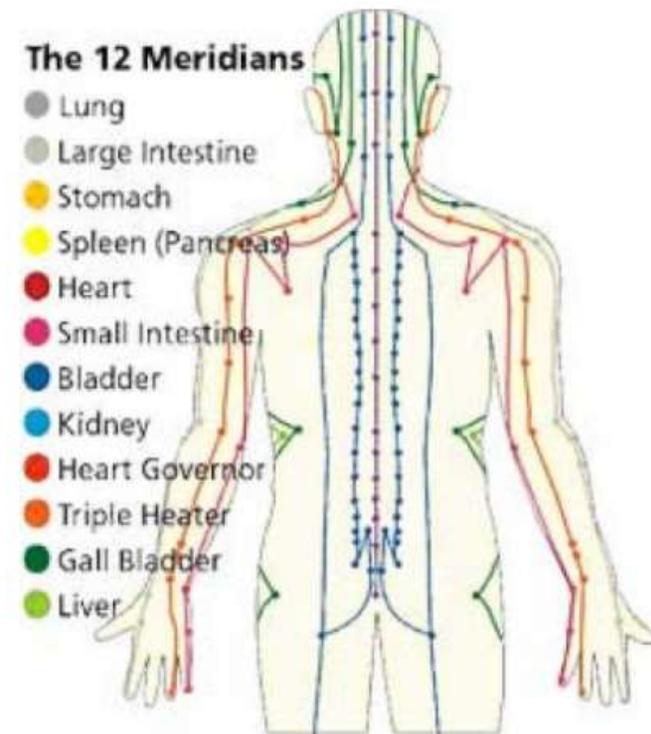
What is Traditional Chinese Medicine (TCM)?



Basis of TCM theory:

- ▶ Claims to be “**holistic**, meaning it takes into account the connection between mind and body, and body and environment *and* how physical health problems might be related to emotions, and vice versa”.
- ▶ ‘**Qi**’ - a **mystical energy force** that they claim flows freely through ‘meridians’ and your organs supposedly to “work in harmony, so your body can remain healthy”.
- ▶ **Acupuncture points**- specific locations along meridians used in TCM to restore/balance the flow of ‘Qi’.
- ▶ 9 -12 meridians? 360-2000 acupuncture points? **No research** has ever been able to document the existence of acupuncture points or meridians or ‘Qi’.

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Meridians of the Body | Source

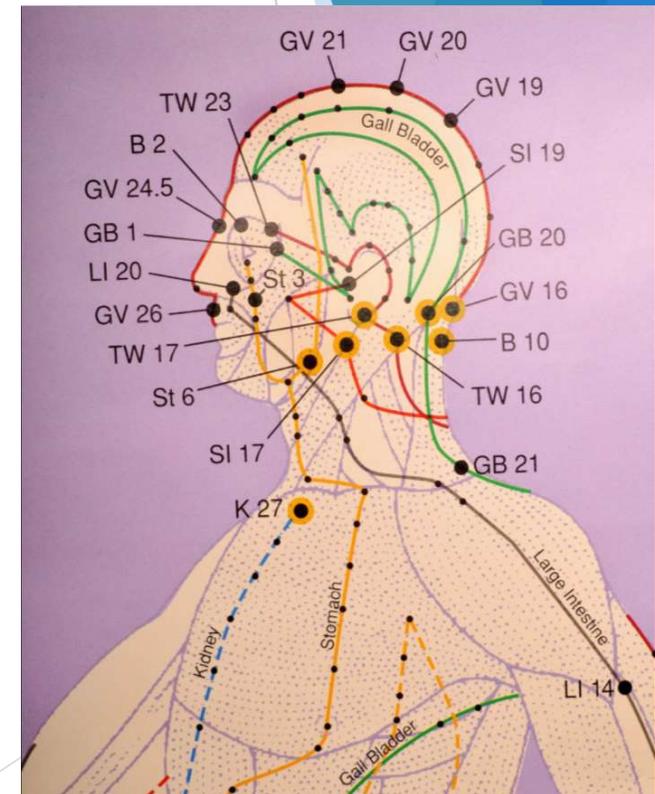


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What is Traditional Chinese Medicine (TCM)?

Uses a combination of various practices including:

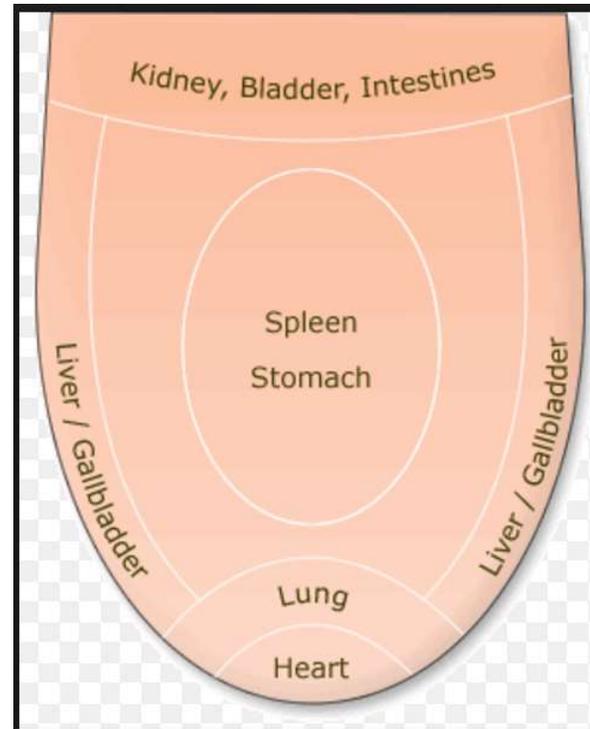
- ▶ **acupuncture**
- ▶ **medicinals made from plant parts**, animal parts and minerals also
- ▶ cupping
- ▶ moxibustion (burning moxa - a cone or stick of dried herb)
- ▶ massage therapy
- ▶ breathing and movement exercises called qi gong
- ▶ movement exercises called tai chi
- ▶ diet



What is Traditional Chinese Medicine (TCM)?

TCM uses four diagnostic methods:

- ▶ Inspection (eg tongue diagnosis)
- ▶ Palpation (eg pulse diagnosis)
- ▶ Listening and Smelling, &
- ▶ Inquiring



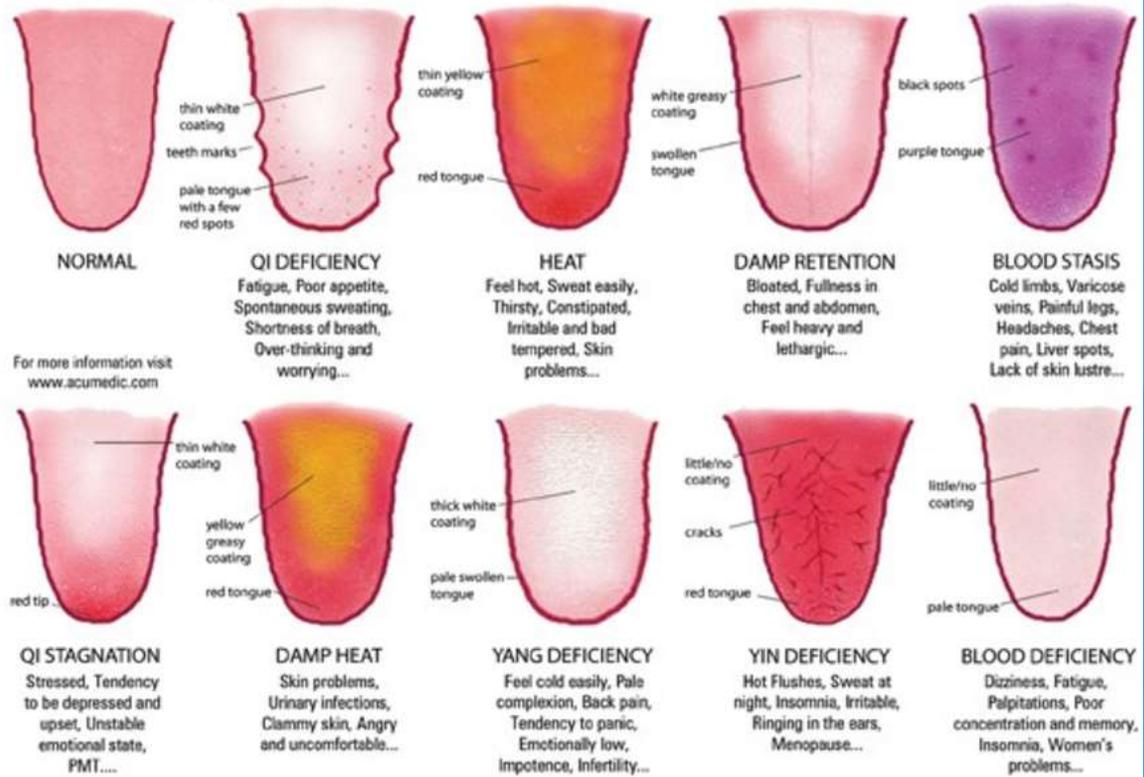


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Which Tongue Are You?





What is Traditional Chinese Medicine (TCM)?

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- ▶ Inspection (eg tongue diagnosis)
- ▶ Palpation (eg pulse diagnosis)
- ▶ Listening and Smelling, &
- ▶ Inquiring

Diagnosis may be "Qi and Blood Stagnation", "Kidney deficiency" or cold, damp, wind, heat channel obstructions

An Illustrated Guide to Traditional Chinese Medicine Pulse Diagnosis*

3 Positions
Place 3 fingers over radial artery, with middle (guan) position over the styloid process of the wrist.

3 Levels
Press fingers over radial artery first lightly, increasing pressure gradually to moderate force, then lastly to deep.

Left Hand	Right Hand	Both Hands
First position (Cun).....Heart	First position (Cun).....Lung	Superficial level.....Heaven
Middle position (Guan).....Liver	Middle position (Guan).....Spleen	Middle level.....Human
Third position (Chi).....Kidney yin	Third position (Chi).....Kidney yang	Deepest level.....Earth

While palpating each pulse location and depth, take note of pulse speed, strength, shape and rhythm. Together these elements make up a TCM pulse diagnosis. Here are some of the more clinically common pulses:

Superficial pulse (fu mai) Easily felt with gentle touch. Typically indicates exterior syndromes in the early stage.	Rapid pulse (shu mai) More than 5 beats per breath. Typically indicates heat syndromes.	Wiry pulse (xuan mai) Feels taut, straight & long, like the string of a guitar. Typically indicates disorders of the liver & gallbladder channels, pain and phlegm/fluid retention.
Deep pulse (chen mai) Felt only on heavy pressure. Typically indicates interior syndromes.	Weak pulse (chen mai) Forceless at all 3 positions, in all 3 levels. Typically indicates syndromes of a deficiency type.	Thready pulse (xi mai) Feels like a fine thread, but is distinct and clear. Typically indicates deficiency due to overstrain & stress or deficiency of qi and blood.
Slow pulse (chi mai) Less than four beats per breath. Typically indicates cold syndromes.	Forceful pulse (shi mai) Forceful at all 3 positions, all 3 levels. Typically indicates syndromes of an excess type.	Slippery pulse (hua mai) Feels smooth and flowing like pearls on a dish. Typically indicates phlegm & fluid retention, retention of food and excess heat.

EMPEROR'S COLLEGE
OF TRADITIONAL ORIENTAL MEDICINE



What is Traditional Chinese Medicine (TCM)?

Does acupuncture work?

- ▶ Acupuncture is practiced globally in 103 countries besides China.
- ▶ US (2007): National Health Statistics Report: 18,000 visits to acupuncturists at an out-of-pocket cost of more than **\$827 million**.
- ▶ Aust - requested Medicare items processed for acupuncture from July 2011 to June 2016 - **Children \$1.25 mill** - from a **total \$121 mill**.
- ▶ Over **40 Cochrane reviews** have failed to find robust evidence for acupuncture for any condition.
- ▶ **100% of acupuncture studies** conducted in China show a positive outcome in their primary outcome measure



What is Traditional Chinese Medicine (TCM)?

Does acupuncture work?

- ▶ National Institute for Health & Care Excellence (UK):
November 2016: **Rejected** acupuncture in management for low back pain & Sciatica.

Acupuncture

1.2.8 Do not offer acupuncture for managing low back pain with or without sciatica.

- ▶ Claims removed from *Hospital for Sick Children*, Toronto, Ontario, (ranked No. 2, in top 40 Canadian research hospitals) after massage therapy student took them on.

It is now considered an ‘elaborate placebo’



What is Traditional Chinese Medicine (TCM)?

Do Chinese medicines work?

- ▶ Roughly **13,000 medicines** are used in China and over **100,000 medicine prescriptions** are recorded in the ancient literature.
- ▶ National Institutes of Health (US) looked at 70 systematic reviews of Chinese medicine treatments. In 41 of them, the trials were too small or badly designed to be of use. In 29, the studies showed **possible benefits** but problems with sample sizes and other flaws meant the **results were inconclusive**.
- ▶ China (2012): The majority of systematic reviews of acupuncture published don't search the literature thoroughly and don't evaluate it properly. *“Much of the research being reviewed is itself questionable, there **is ample reason to be suspicious of the conclusions** of such systematic reviews”.*
- ▶ 2016: A one year review of clinical trials undertaken by China's Food and Drug regulator - 80% data fabricated.

No definitive evidence that any disease or disorder can be cured by TCM.



What is Traditional Chinese Medicine (TCM)?

What about the Nobel Prize in 2015 for Artemisinin?

- ▶ The majority of soldiers following the Ho Chi Min Trail came down with a form of malaria which is resistant to chloroquine. Also, Malaria was a major cause of death in China's southern provinces.
- ▶ In 1967, Mao Zedong was convinced to set up a secret drug discovery project.
- ▶ In 1969, 39 years old Tu YouYou was appointed head of the project. She had the idea of screening Chinese herbs.
- ▶ Tu both investigated the Chinese medical classics in history and on her own, she visited TCM practitioners all over China.



What is Traditional Chinese Medicine (TCM)?

What about the Nobel Prize in 2015 for Artemisinin?

- ▶ Tu **identified 640 prescriptions**. Her team screened over **2,000 traditional Chinese recipes and made 380 herbal extracts from 200 herbs**.
- ▶ Sweet wormwood (*Artemisia annua*), was found to be effective on mice & monkeys.
- ▶ Tu volunteered to be the first human subject.
- ▶ In 1977 Tu's work was published anonymously and presented to WHO in 1981.
- ▶ She was awarded the Nobel Prize in Medicine on 5 October 2015. The jury specified that the prize **was not being awarded to the tradition**.
- ▶ **This does not validate** TCM but is an excellent case study that illustrates the inherent limitations and weaknesses in TCM (also naturopathy & herbalism) while reinforcing just what evidence-based medicine is capable of delivering.



Youyou Tu is bringing TCM into the modern clinic.



Why is TCM on the rise?

Major organizations that are encouraging TCM:

- ▶ World Health Organization
- ▶ Chinese Government
- ▶ Australian Government
- ▶ Australian Health Practitioners Regulation Agency
- ▶ Therapeutic Goods Administration
- ▶ Sponsors of complementary medicines &
- ▶ Universities/Colleges.



Why is TCM on the rise?

World Health Organization (WHO) & acupuncture

- ▶ A 1999 report published on the WHO website claimed that acupuncture was clinically proven to be effective or effective for over **90 disease & disorders**.
- ▶ These included depression, dysentery, induction of labour, rotating babies in the breech position, Rheumatoid arthritis, stroke and whooping cough!
- ▶ Following letters from FSM to WHO, the link from the WHO website was removed in 2013. However, the report remained on their website.
- ▶ In 2017, FSM documented over **1100 websites** in Aus (400+), UK, NZ, South Africa & Canada that referred to WHO as 'evidence' that acupuncture works.
- ▶ All links have now been **removed**.

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Chinese Medicine Board Newsletter - Issue 14, July 2017



Acceptable evidence needs to be up to date. Recent complaints have identified that many Chinese medicine practitioners say in their advertising (including websites) that the claims they make are based on a statement previously published by the World Health Organisation (WHO) about conditions acupuncture can effectively treat.

As the WHO document has not been updated for more than five years, the Board's advice to practitioners is that it does not meet the requirements to be acceptable evidence. Information about what is acceptable evidence to support therapeutic claims was published by National Boards in October 2016.



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3 September 2017, Sunday Mail, Body & Soul

3 COSMETIC ACUPUNCTURE
Acupuncture can treat a whole range of health concerns – the World Health Organization lists almost 30 clinically proven uses – but it's also emerging as a useful beauty treatment, especially for those who'd prefer not to go down the more invasive route of cosmetic treatments. Acupuncturists claim the needles can help stimulate the production of collagen, and are great for treating fine lines and wrinkles, bags under the eyes, acne, dermatitis and eczema. That's got to be worth a try!



Why is TCM on the rise?

World Health Organization (WHO) & TCM

- ▶ 2002: The WHO released a global strategy "to provide a framework for policy to assist countries to regulate [TCM] to make its use safer, **more accessible** to their populations and **sustainable**."
- ▶ "Margaret Chan, director-general of the WHO, urged the Chinese government to promote acupuncture and TCM in general abroad to **benefit more people** worldwide."
- ▶ "I am Chinese, and I have used traditional Chinese medicine throughout my lifetime"
- ▶ Chan claimed that TCM is a way to "**reduce the burden** on health services".
- ▶ After over 10 years as director-general, Chan was replaced in July this year.

Why is TCM on the rise?



Jan 2017: Life Size Bronze Statue - gift from President of China to WHO



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Why is TCM on the rise?

Chinese Government:

- ▶ TCM has been on the decline in China in recent decades with 80% of people relying on Western medical treatment.
- ▶ BEIJING, 30 June 2017: Chinese Vice Premier Liu Yandong called for more efforts to promote traditional Chinese medicine (TCM) overseas.
- ▶ A new law came into effect on 1 July 2017 which aims to protect TCM, promising equal status for TCM and western medicine.
- ▶ Provisions include encouragement for hospitals to set up TCM centres, and a licensing system for practitioners.
- ▶ 2016: ‘Strategic Development Plan for Chinese Medicine (2016-2030)’ - TCM courses are now being “rolled out in Chinese schools as 12-year-olds learn acupuncture”.
- ▶ TCM accounts for a third of sales in China’s \$117bn pharmaceutical market - \$40 Billion!!



Why is TCM on the rise?

Chinese Government:

- ▶ TCM-products are amongst the most profitable of all the Chinese exports
- ▶ China (2014): Out of the 1.33 million case reports of adverse drug event reports received by the National Adverse Drug Reaction Monitoring, TCM represented around 17.3% (equivalent to **around 230,000 cases**).
- ▶ Aust (2015): Combining DNA sequencing, toxicology and heavy metal testing to elucidate the true composition of 26 TCMs (all imported from China), they found that nearly **nine in ten** of them had some form of undeclared substance in them as either adulteration or contamination (eg strychnine, arsenic, cadmium, lead, snow leopard, pit viper, frog, rat, cat & dog - also warfarin & Viagra).
- ▶ China (2017): **Only 22%** of common Chinese medicine were found it include the ingredients listed.



Why is TCM on the rise?

Australian Government:

- ▶ In Nov 2014, Aus signed an \$18Bn Free Trade Agreement with China
- ▶ TCM was singled out for special attention and that could see Australia welcoming hundreds of practitioners from China, to be officially registered to practice here.

A new research-led Chinese medicine clinic in Sydney, better patient outcomes and the potential for Australia to tap into the \$170 billion global traditional Chinese medicine market are among the benefits set to flow from an agreement signed today in Canberra in the presence of Prime Minister Tony Abbott and People's Republic of China President Xi Jinping.

The Memorandum of Understanding is between world-leading Beijing University of Chinese Medicine (BUCM) and the University of Western Sydney (UWS), which is the home of the National Institute of Complementary Medicine (NICM). UWS and NICM have a longstanding relationship with BUCM in both research and education.

The focus of the new agreement will be the development of an Australian-first, high quality Chinese medicine integrative clinical service in Sydney, which will have a close connection to both clinical and laboratory-based research. It is hoped that the research will lead to the development of new treatments for unmet medical needs and new medicines for export around the world.



Why is TCM on the rise?

Australian Health Practitioners Regulation Agency

- ▶ TCM practitioners were included in AHPRA in July 2011
- ▶ They are registered but self regulated
- ▶ Statement 20 July 2017:

Board Chair, Professor Charlie Xue, said Chinese medicine practitioners should not include any therapeutic claims about the treatment of health conditions in their advertising that **could not be substantiated with acceptable and up-to-date evidence.**

'If a practitioner decides to do this, and intentionally or inadvertently breaches the National Law , they will be asked to provide acceptable evidence as expected by the public to justify the claims,' he said.

Advertisers must ensure that any statements and claims made about Chinese medicine practice are not false, misleading or deceptive or create an unreasonable expectation of benefits from such services.



Why is TCM on the rise?

Therapeutic Goods Administration:

- ▶ In the latest proposed changes, contain around 140 traditional Chinese medicine indications, such as “Harmonise middle burner (Spleen and Stomach)”, “Unblock/open/relax meridians”, “Balance Yin and Yang”.
- ▶ There are also around 900 additional indications for unspecified “traditions”. These include, “Renal tonic”, “Helps healthy liver regeneration”, “Emmenagogue”, “Vermifuge” and “Vulnerary”.
- ▶ Samples not independently tested before placing them on the market





Why is TCM on the rise?

Sponsors of complementary medicines:

- ▶ Over \$100 million is spent by the sponsors of complementary medicines on advertising annually in Australia.
- ▶ 2016: Blackmores paid \$23 million for Global Therapeutics, the market leader in Chinese herbal medicine in Australia.





Why is TCM on the rise?

Universities/Colleges:

- ▶ Aus course notes on acupuncture sent to specialists - disorders of the eye, ear, nose throat, anxiety, hysteria, HIV/AIDS, obesity and women's physiology
- ▶ Comments included *“amazing rubbish”, “I can't believe it!!”, “I am horrified”, “no scientific basis establishing its efficacy”, “laughable”, “utterly ridiculous stone-age theories”, “completely fanciful”, “beyond belief”, “no scientific value whatsoever! Fanciful nonsense”, “people will not be adequately diagnosed or treated”* and *“harmful, if only because it results in inappropriate treatment”*
- ▶ On graduating, these students can register with the Australian Health Practitioners Regulation Agency (AHPRA) and start working immediately in community clinics, referring to themselves as ‘doctors’ of Chinese Medicine



Why is TCM on the rise?

Universities/Colleges:

► Collaboration with Chinese Institutions includes the following:

1. RMIT
2. University of Adelaide
3. University of Western Sydney
4. University of Technology Sydney, &
5. Griffith University.

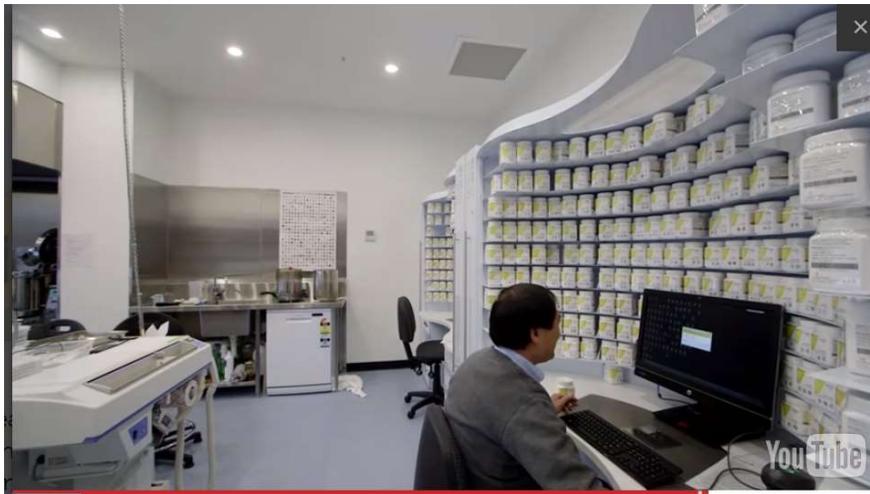
• Current grants

- Cultural Aspects in the Development of Evidence-Based Chinese Medicine - Stages 6. Funded by: Confucius Institute Headquarters Business Development Program Fund from (2016 -2017) - \$220,000 [CIA]
- Evaluation of Traditional and Scientific Evidence of Chinese Medicine (Stage I, II and III projects), Guangdong Provincial Academy of Chinese Medical Sciences, 2008-2016, \$3,050,000): [CIA]
- The China-Australia Research Centre for Chinese Medicine, 2013-2020, \$2,400,000: CIA and Co-Director of the Centre



Why is TCM on the rise?

Universities/Colleges:
Health Science Clinic - RMIT:



Housing new UWS/TCM Research Centre-2018?



Artist impression of the UWS residential and commercial development at Westmead which could house the Chinese Medicine Research Centre.

Friends of Science in Medicine



“What can you do?”

Complain!

Friends of Science in Medicine



“To foster good science in Medicine”

No battle was ever won by spectators!

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