

Ethnobotany. Lecture 26

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Outline

- 1 Traditional systems of herbal medicine

Lab 7

- Lab 7 will summarize our work in greenhouse
- Bring reports from labs 1 and 3 tomorrow!

Western medicine

- Developed with the evolution of Western science, based on strict and positive scientific evidence, experiments and statistical analysis
- For the long time, Western science ignored other branches of human medicine

Main non-western medicines

- Traditional Chinese medicine (TCM)
- Ayurveda
- Traditional African medicine
- Traditional American medicinal practices

Some general aspects

- Healing in traditional systems is mostly applicable to minor disorders
- Chronic and serious disorders often considered to be a “super-natural”
- Dose is not calculated
- Too powerful chemicals are not usually used
- There is a strong, but not absolute correlation between traditional and Western systems

Traditional Chinese medicine (TCM)

- Started more than 3,000 BC
- Based on specific philosophy
- Uses a large variety of plants and other biological compounds

TCM history

- Started to develop in relation with Taoism and based on philosophical principle of yin and yang
- Knowledge transferred from religion (shamans) to philosophers
- In Han times (200 BC – 200 AD) Zhang Zhongjing invented acupuncture
- In Min dynasty times (\approx 1550) Li Shizhen produced the herbal encyclopedia Ben Cao Gang Mu (52 volumes)

Zhang Zhongjing (150–219)



Acupuncture map



Li Shizhen, 1518–1593



Ben Cao Gan Mu volumes



TCM concepts

- Qi (or chi) is a source of life energy (yuan qi)
- Yin and yang interactions and five elements (heart/fire, liver/wood, spleen/earth, lungs/metal and kidneys/water)
- Six excesses: wind, cold, summer heat, dampness, dryness and fire
- Seven emotions (internal causes of diseases): joy, anger, anxiety, concentration, grief, fear, fright

Diagnosis in TCM

- Based on observation of **external** characters and interview
- Normally, tongue and pulse are observed, then massage and palpation help to obtain an information

Treatment

- Purpose is to rectify harmony
- For every cause, “antidote” with alternative features should be used
- E.g., for cold TCM uses “warm” herbs as ginger

Qingping market, Guangzhou: plants



Qingping market, Guangzhou: gin seng



Qingping market, Guangzhou: animals



Kampo

- Japanese variant of TCM, started in \approx 600 AD
- Based on acupuncture and herbs
- Pharmacopoeia contains \approx 170 herbs and mushrooms

Ayurveda

- System of sacred Hindu medicine
- Started 3,000 BC

Ayurveda principles

- Every patient is an individual
- Greatly values subjectivity
- Similarly to TCM, consider human as microcosm which should be rectified and balanced

Ayurveda basics

- Five elements (similar to TCM)
- Three humors of life: vata (air/movement), pitta (fire and water/heat energy), kapha (water and earth/structure)
- Agni (digestive fire) is essential pitta

Ayurveda diagnosis and treatment

- Malas (waste products) are important for the diagnosis
- Diagnosis also involves astrology and karma analysis
- Treatment is based on the idea of cleaning
- Among herbal remedies, rasayana are most useful

Durga bears remedies



Amla, *Phyllanthus officinalis* (Euphorbiaceae)



Unani

- Urdu (Pakistan and India), Arab and Persian traditional medicine
- Avicenna (Ibn Sina from contemporary Uzbekistan) established its main principles
- Close to Ayurveda

Traditional African systems (TAMS)

- Multiple systems, often independent and unrelated
- Zulu (South Africa) and Yoruba (Nigeria) traditions are best known

TAMS concepts

- Every living thing, gods and ancestral spirits are connected
- Disharmony in these connections will cause a disease
- Invisible insects and worms may start to inhabit human body and also cause disease

TAMS diagnosis and treatment

- Diagnosis involve religious practices
- Plant remedies are often not taken, but used as amulet or even without contact with patient

Sangoma healers, South Africa



Traditional American medical systems

- Multiple, often unrelated and non-standardized practices
- Have a big ceremonial component related with shamanism
- Tribal women are most important carriers of medicine information

Shaman dance



Summary

- Traditional Chinese medicine and other non-Western system are holistic (wholesome) approaches
- The goal of traditional healing is to restore a harmony
- These medicines are based on a extensive using of herbs

For Further Reading



A. Shipunov.

Ethnobotany [Electronic resource]. 2011—onwards.

Mode of access:

http://ashipunov.info/shipunov/school/biol_310



M. Heinrich and others.

Fundamentals of pharmacognosy amd phytotherapy (selected chapters). [Electronic resource].

Churchhill Livingstone, 2004.

Mode of access: http://ashipunov.info/shipunov/school/biol_310/heinrich2004_fund_pharm_part.djvu

Pages 170–183.