



## Ethnobotany. Lecture 25

Alexey Shipunov

Minot State University

March 27, 2013

# Outline

- 1 Traditional systems of herbal medicine
  - Basic aspects



# Traditional systems of herbal medicine

## Basic aspects



# 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



# Avicenna (Ibn Sina, 980–1037)



# 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



# Eskimo medicine man



# 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](http://ashipunov.info/shipunov/school/biol_310)



M. Heinrich and others.

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

Churchill Livingstone, 2004.

Mode of access: [http://ashipunov.info/shipunov/school/biol\\_310/heinrich2004\\_fund\\_pharm\\_part.djvu](http://ashipunov.info/shipunov/school/biol_310/heinrich2004_fund_pharm_part.djvu)

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