Session 1

Introduction to Herbal Medicine *Materia Medica* 1

- Outline
- Rationale
- Assessment
- Student Resources

- History of *Materia Medica*
- Therapeutic Actions: A
Introduction
Herbal Medicine Materia Medica 1

Subject Outline
Course is 13 sessions: 2 hour lectures & 1 hour tutorial

Content: Herbs that primarily support these systems
- Respiratory system (weeks 4-6)
- Immune system (weeks 6-7)
- Integumentary system (weeks 8-9)
- Circulatory system (weeks 10-11)
- Digestive system (weeks 12-13)
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Rationale:

- Herbs are delivered in one system that they support even though they each support many.
- This grouping is to introduce you to the herbs for ease of learning and reduce repetition.
- Individually, the herbs are explored by actions & indications, dose & administration for clinical application.
- This information is based on traditional, historical & current research.
Herbal Medicine *Materia Medica* 1

**Preparation:**

- Pre-read for each session: lectures are delivered at a level where this is assumed.
- Tutorials need to be completed: adds clinical context to the subject & prepares you for the exams as the case studies are loosely based on the tutorial work.
- Self-study the herbs (Google, Youtube, texts, journal articles) & complete your Worksheets: Herbal Actions & Herbal *Materia Medica*. 

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**Assessment: Open Book Mid-Semester Exam**

- 1 hour + 5 minutes reading time (short answer & case study) conducted in week 7.

Printed documents & no electronic devices:

- Printed powerpoint notes, Session 1 Worksheet - Herbal Actions, Session 4 Worksheet - Herbal Materia Medica & hand-written or typed notes.
- Set texts

The mid-semester exam will be based loosely around the tutorials and activities from session 1-6.

You will still be expected have a knowledge of **all** symptoms, conditions, diseases & concepts covered in tutorials 1-6.
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**Assessment: Herbal Monograph**

- Choose 1 (one) herb that is studied in WHMF112 only and generate a herbal monograph.
- This will require you to explore the herb using traditional and modern texts and current research.
- Please read the marking criteria on the assessment carefully as this indicates the marks weighted to each section.
Final Examination

• 1.5 hour closed book examination (exam week)
• Multiple choice, short answer & case study.
• Herbal dosages table (Latin binomials only) will be included in the exam for student reference.
• Content covered is session 1-13.

Exam preparation:

• Review all learning material utilized
• Weekly practice review quizzes on the LMS are similar to the multiple choice in the final exam.
History of *Materia Medica*
History of *Materia Medica*

*Materia medica* means a group of ‘medicinal plants and other materials’. (van Wyk & Wink, 2010)

Every culture has utilized herbs from their surroundings to support health. Before the earliest reporting, this was passed by word of mouth from generation to generation. (Potterton, 1983; van Wyk & Wink, 2010; Bone & Mills, 2013)

All traditional healing systems explored energetic herbalism for the holistic management of health. (Wood, 2004)
History of *Materia Medica*

**Ayurvedic Herbalism**

- Over 5,000 years old & explores all aspects of being to maintain health. Songs and poems (*Rig Veda*) were transcribed into text called the *Veda* around 2000BC. (van Wyk & Wink, 2010)

- Energy management of a person is defined in terms of *dosha* characteristics.

- Disease and subsequent herbalism addresses the imbalances between nervous energy (*vata*), metabolic catabolism (*pitta*) and metabolic anabolism (*kapha*). (Frawley & Lad, 1986)
History of *Materia Medica*

**Middle Eastern & Arabian Herbalism**

- Groundings in Babylonian, Assyrian & Sumerian cultures (2600-4000BC). Existing clay tablets, wall paintings and papyrus scrolls recording medicinal herbs were found in Egyptian tombs & in Ebers Papyrus scrolls (3000-1500BC).  
  
  (van Wyk & Wink, 2010)

- Arabic medicine utilized the four qualities of hot, cold, wind, damp, dry & summer heat (humid heat) to analyze health and disease.  
  
  (Wood, 2004)
History of *Materia Medica*

**Traditional Chinese Medicine**

- Over 5,000 years old & contextualizes the internal and external elements effects on health.
- Chinese emperors (Shen Nong 2800 BC), Huang Di Nei Jing (Yellow Emperor ~100-200BC) and more recently Li Shizhen (1590 AD) defined the healing system into text. (van Wyk & Wink, 2010)
- Chi/Qi is both material and energy. Herbs are classified in terms of temperature and their curative properties on organs and meridians. (Tierra, 1988)
History of *Materia Medica*

**Greek Herbalism**

- Hippocrates (460-377BC) and Aristotle (384-322BC) utilized cultural traditions of ancient India and Egypt to influence European herbal healing traditions.  
  (van Wyk & Wink, 2010)

- Early medical models that defined four humors defined by Hippocrates. This model emphasized balance and a holistic approach to healing.  
  (Griggs, 1981)
History of *Materia Medica*

**Roman Herbalism**

- Galen (AD 131-199) incorporated Greek and Roman medicinal principles into a medicinal system while Dioscorides (C1st) began classifying herbs into healing actions and wrote the book *De Materia Medica*.

  (van Wyk & Wink, 2010; Spitzer, 2012)

- Biological humors had elemental characteristics of temperature (hot/cold) and fluid levels (moist/dry)

  (Tierra, 1988)
History of *Materia Medica*

**European Herbalism**

- Paracelsus (1493-1541) explored the Doctrine of Signatures (like cures like) and began exploring the dosages of herbs to generate healing. Jakob Bohme (1575-1624) expanded on this work.
- This work then went on to influence the work and writings of Nicholas Culpepper (1616-1654) who was the ‘founder of English language herbalism’ and other European herbalists.

(Wood 2008; van Wyk & Wink, 2010; Spitzer, 2012)
History of *Materia Medica*

- Samuel Thompson (1769-1843) and Wooster Beech (1794-1868) explored the herbal remedies and native practices of North America.
- The Physiomedicalist movement influenced European herbalism and is still evident today.  
  
  (van Wyk & Wink, 2010)
History of *Materia Medica*

- Traditional African, Central & South American and Australian herbalism was diverse and are unique to the various regions and tribes but poorly recorded.
- Herbs from these regions are in common use.  
  
  (van Wyk & Wink, 2010)

- It is surmised that almost 25% of all plant species has some sort of medicinal use somewhere in the world.

  (Verpoorte, 2009)
History of *Materia Medica*

The exploration of medicinal material or *Materia Medica* has evolved into the modern day each with it’s origins in these traditional teachings:

1. Pharmacology of allopathic medicine: The primary method of treatment of modern medicine is *Materia Medica*.
2. Homeopathy which uses minute dosages of *Materia Medica* in its medicines.
3. Herbalism that uses herbal medicine.
Therapeutic Actions
Therapeutic Actions

- Through the world-wide evolution of herbal usage, common characteristics of herbs and their efficacy for conditions and disease states have been identified.
- Once such way of exploring herbs and their effects is to categorize according to commonly defined actions within the body as created by Traditional herbalists.
- This is the form of classification system that will be utilized in this unit and throughout the rest of your study at Endeavour.
Therapeutic Actions

• Due to this the next three sessions, in part will be dedicated to exploring and understanding these herbal actions.

• For ease of reference these actions have been delivered in alphabetical order.

• The Session 1 Worksheet has space for you to define the action in your own words, and then list the system where this action would work.

• Note, some actions are specific to some systems but others will work in many systems highlighting the versatility of herbs.
Actions Activity

• Open the WHMF112_SN01_Herbal Actions Worksheet

• As your lecturer discusses each action fill in the worksheet. Session 1 covers: Actions: A.

• Create a memory key (something that you uniquely identify with the action), and give examples of herbs that present with this action.

• Discuss your findings with the group.
Therapeutic Actions: A’s
Therapeutic Actions

Adaptogen

• Supports hypothalamus function. Improves endocrine regulation aiding an appropriate stress response. (Wood, 2008)

• Beneficial for depleted adrenal cortex stress hormones. (Mills, 1985)

• Stressors include physical, environmental, emotional or biological agents. (Hechtman, 2012)
Therapeutic Actions

Adrenal Tonics / Restoratives

• Support and reinvigorate the action of the adrenal glands.
  (Hechtman, 2012)
• “Improves the tone, histology, and function of the adrenal glands (especially the cortex)”
  (Bone, 2003 p. 481)
Therapeutic Actions

**Alterative / Depurative**

- Improves elimination & reduces the accumulation of metabolic wastes from tissues.
  
  (Mills, 1985; Hechtman, 2012)

- Removes toxins, mucus & mucopolysaccharides from the lymph & blood.
  
  (Wood, 2008)

- “Supports elimination via kidneys, liver, lungs or skin.”
  
  (Hoffmann, 2003 p. 605)
Therapeutic Actions

Analgesic/ Anodyne

- Reduces or relieves the sensation of pain.
  (Hoffmann, 2003)
- Effect occurs thorough altering the sensations of the nerves, spinal cord and/or the brain.
  (Hechtman, 2012)
Therapeutic Actions

Antacid

- A substance that neutralizes acid.  
  (Hoffmann, 2003)

- Regulates the production of hydrochloric acid ($\text{HCl}^-$) in the stomach. This will lower the overall acidity within the gastrointestinal tract.  
  (Hechtman, 2012)
Therapeutic Actions

Anthelmintic

• Greek *anti* (against) *helmins* (worms). Evidence of this being used in Egyptian and Roman cultures.
  (Hechtman, 2012)

• Eradicates & eliminates intestinal worms from the gastrointestinal tract.
  (Mills, 1985)

(Kohler, F.E. (1897). Artemisia absinthium Retrieved 7th April, 2014
from http://commons.wikimedia.org/wiki/File:Artemisia_absinthium
-_Kohler-s_Medizinal-Pflanzen-164.jpg)
Therapeutic Actions

Anti-allergic

• Down-regulates the allergic response by stabilizing the membranes of mast cells.
  (Bone, 2003)

• This in turn may reduce the secretion of histamine.
  (Hechtman, 2012)
Therapeutic Actions

Anti-bacterial

• Destroys bacteria (bactericidal) or inhibits the growth of bacteria (bacteriostatic).

  (Bone & Mills, 2013)

• This action was not coined until the 19th century when the microscope was invented.

  (Hechtman, 2012)
Therapeutic Actions

Anti-catarrhal / Mucolytic

• Reduces the formation of excessive mucus.
  (Bone & Mills, 2013)

• This can occur by encouraging the body to produce less viscous mucus so it is easier to expel or by reducing the quantity produced.
  (Hoffmann, 2003)
Therapeutic Actions

Anti-depressant

- Aids in alleviating depression.  
  (Bone & Mills, 2013)
- Traditional terminology would refer to depression as ‘melancholy’.
  (Hechtman, 2012)
Therapeutic Actions

Anti-emetic

- Prevents or reduces nausea & vomiting.
  (Braun & Cohen, 2010; Bone & Mills, 2013)
- Usually herbs with a high volatile oil content making them antispasmodic to the smooth muscle of the digestive tract.
  (Hechtman, 2012)
Therapeutic Actions

Anti-hyperhydrotic / Refrigerant

• Reduces excessive sweating.  
  (Bone & Mills, 2013)

• Locally cools, lowers body temperature and may reduce excessive thirst sensations.  
  (Fisher, 2009)

Therapeutic Actions

Anti-inflammatory

• Reduce inflammation or the severity of inflammatory diseases. (Mills, 1985)

• The body’s normal response to infection / damage is inflammation.

• Anti-inflammatory herbs support the body processes within the affected tissue or organ. (Hoffmann, 2003)

Therapeutic Actions

Anti-lithic

• Reduces the formation of stones (calculi) within the urinary tract or gall bladder

(Fisher, 2009; Bone & Mills, 2013)

Therapeutic Actions

Anti-microbial/ Antiseptic

- Work directly on destroying micro-organisms or indirectly via enhancing the immune system response to the presence of these agents.
- Micro-organisms can be bacteria, fungi, parasites, viruses, or protozoa

(Hoffmann, 2003; Bone & Mills, 2013)
Therapeutic Actions

Anti-oxidant

- Protect or minimize damage to cells against oxidation and free radical damage.
  (van Wyk & Wink, 2010)
- Oxidation damage to cells is indicated as one of the primary factors in the generation of many diseases.
  (Fisher, 2009)

(Von Siebold P.F., & Zuccarini J.G. (1870) Ginkgo biloba
Retrieved 7th April, 2014 from
http://commons.wikimedia.org/wiki/File:Ginkgo_biloba_SZ136.png)
Therapeutic Actions

Anti-platelet

- Reduces platelet aggregation within the blood.
- This reduces thrombus formation and increases bleeding time.

(Bone & Mills, 2013)

Therapeutic Actions

Anti-pruritic

• A substance that relieves or prevents itching.

   (Braun & Cohen, 2010)
Therapeutic Actions

Anti-pyretic / Febrifuge

- Used to reduce or prevent fever.

(Bone & Mills, 2013)

(Kohler F.E. (1897). Gentiana lutea Retrieved 7th April, 2014 from http://commons.wikimedia.org/wiki/File:Gentiana_lutea_-_K%C3%B6hler%E2%80%93s_Medizinal-Pflanzen-066.jpg)
 therapeutic Actions

Anti-rheumatic

- A substance that prevents or relieves rheumatic symptoms.  
  (van Wyk & Wink, 2004)

- This action characterizes a group of actions that specifically support this disease state. These include anti-inflammatory, analgesic, alterative actions.  
  (Hoffmann, 2003)
Therapeutic Actions

Antitussive

• Reduce coughing by suppressing the cough reflex. (Hechtman, 2012)

• Most often herbs containing cyanogenic glycoside constituents act to suppress the cough reflex. (Mills, 1991)


(Duval, R. Prunus serotina bark Retrieved 7th April, 2014 from http://upload.wikimedia.org/wikipedia/commons/7/78/Prunus_serotina-bark.jpg)
Therapeutic Actions

Antiviral

- Inhibits the growth, destroys or increases the immune systems response to the presence of a virus.
- Modern action given the recent understanding of viruses (since the 18th Century).

(Hechtman, 2012)
Anxiolytic / Thymoleptic

• Aids in reducing or treating anxiety states.

(Braun & Cohen, 2010; Hechtman, 2012)

Therapeutic Actions

Aromatic Digestive

- Herbs high in volatile oils that are pleasant in smell and/or taste (pungent or spicy) and are warming.
- These herbs reduce spasm and increase circulation to the digestive tract

(Tierra, 1988; Wood, 2008; Bone & Mills, 2013)
Astringent

• Localized action of tannins binding to proteins.
  (Hoffmann, 2003)

• Contracts tissues thereby reducing excretions, creating a short-term barrier to inflammation and irritation.
  (Mills, 1985; Fisher, 2009)
References


References


Tutorial: Session 1
Tutorial

Break into groups of 1-3 (max).
Each group is assigned a condition:

- Group 1: Tonsillitis
- Group 2: Laryngitis
- Group 2: Common cold (nasopharyngitis)
- Group 3: Sinusitis
- Group 4: Allergic rhinitis
- Group 5: Acute bronchitis
- Group 6: Influenza
Tutorial

In your groups define your condition:

• What are the common symptoms?
• What generally makes it better or worse?
• What systems are involved?
• What actions would be relevant to the management of this condition? Why?

• Discuss your findings with the group.
• Take notes from the findings of the other groups as they report.
• Hint: one or more of these conditions are used in examinations for this unit.
Recommended Readings

- Video: A history of herbal medicine, Medical herbalism
  https://www.youtube.com/watch?v=S8SHvgM1bMc

- Mountain rose blog 2013, *Understanding & Identifying Basic Herbal Actions*. Viewed 15/12/2015
  http://mountainroseblog.com/understanding-herbal-actions/

- American botanical council, 2013 *Terminology* Viewed 15/12/2015
  botanicahttp://abc.herbalgram.org/site/PageServer?pagename=Terminology

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