

Herbal Medicine 1

Separating fact from fiction

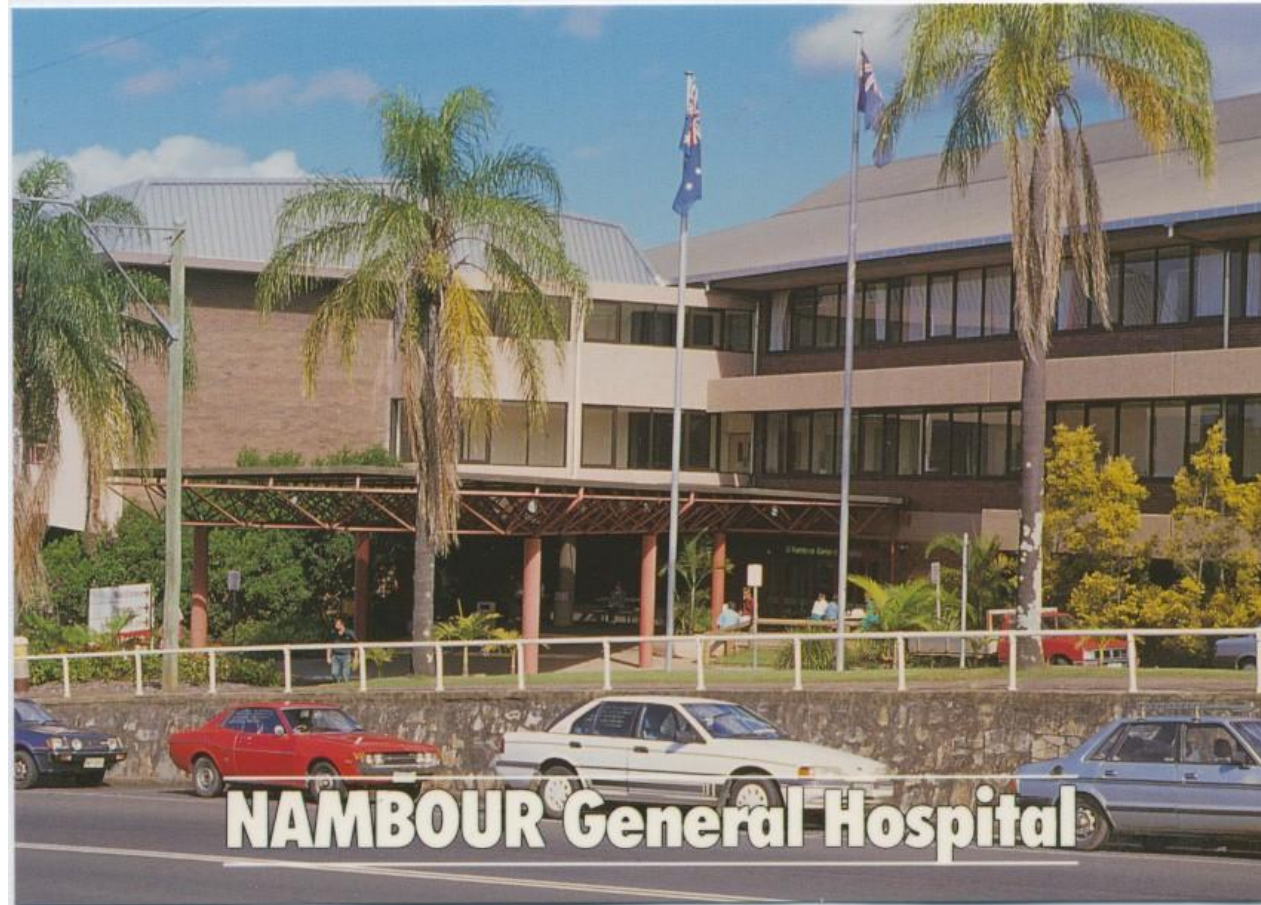
Dr Graham Pinn, FRCP, FRACP, FACTM, MRNZCGP, DCH

Charing Cross Hospital, The Strand, London

Built 1820, occupied by me from 1963



Nambour Hospital 1993



The itinerant doctor's travels





Herbal Medicine lecture series

- Term 1:
- 1 Introduction
- 2 Cardio-vascular system
- 3 Metabolic and Endocrine
- 4 Gastro-enterology
- 5 Obstetrics/Gynaecology
- 6 Neuropsychiatry
- 7 Oncology
- 8 Infectious Diseases
- Term 2:
- 9 Respiratory disease
- 10 Rheumatology
- 11 Kidney/ bladder disease
- 12 Dermatology
- 13 Adverse effects
- 14 what really works

NATURAL MEDICINES - not only herbs

Plants

Trees

Animals/Insects

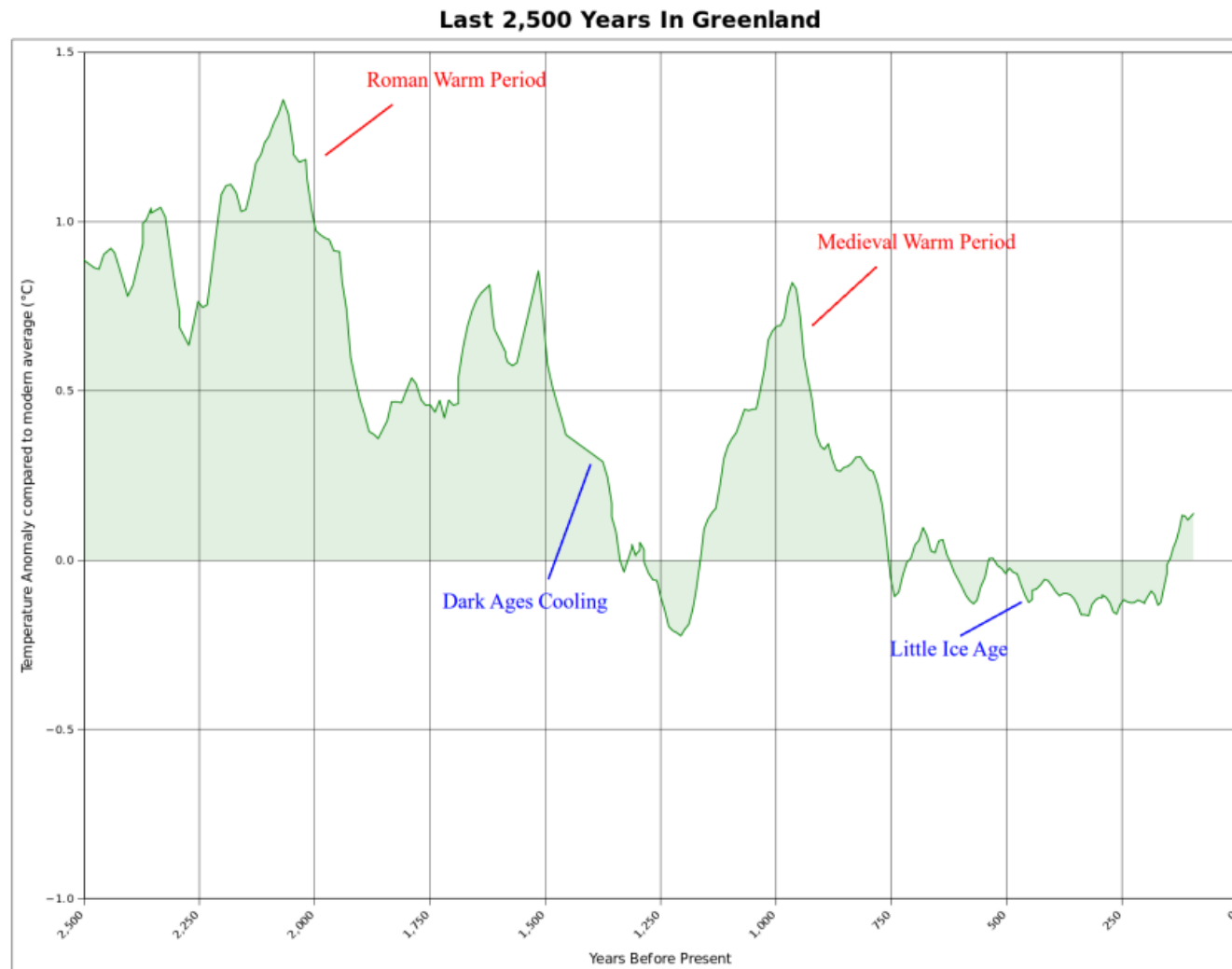
Bacteria

Fungi

Ancient medicine- slow evolution, with written transfer. Clay tablets, papyrus, paper, printing

- Sumerians – 5000 to 2000 BC in Iraq –fertile triangle, Minoan warming
- Egyptians
- India, ayurveda
- Arabia
- Greece
- Rome
- Europe
- Each country has traditions; estimated 25,000 medicinal plants
- (China geographically separate)

Industrialization and climate change, maybe not CO2 related?



Global warming

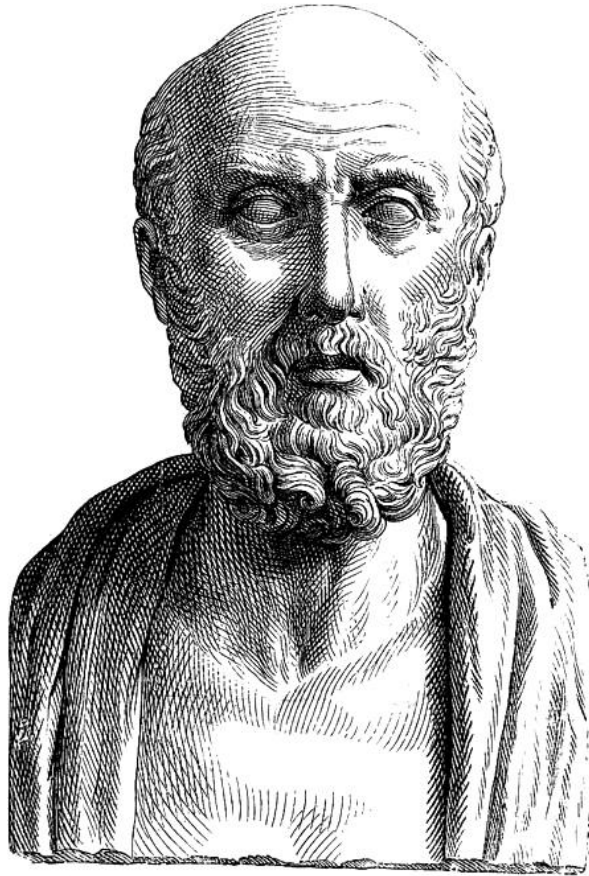
Advantages

- Advantages:
- More food – crops grow
- Spare time – art, education, medicine
- Less disease, less malnutrition
- Less war
- Less clothes
- Fewer deaths from heat than cold
- Disadvantages:
- ?Sea levels – not yet rising

Roman colosseum – Roman warming



Hippocrates –died 370BC
Examine the pulse



Galen, died 216 AD. Examined internal organs of gladiators. Concepts followed for 1500 years. Balancing the 4 humours (black bile, yellow bile, phlegm, blood) - all wrong

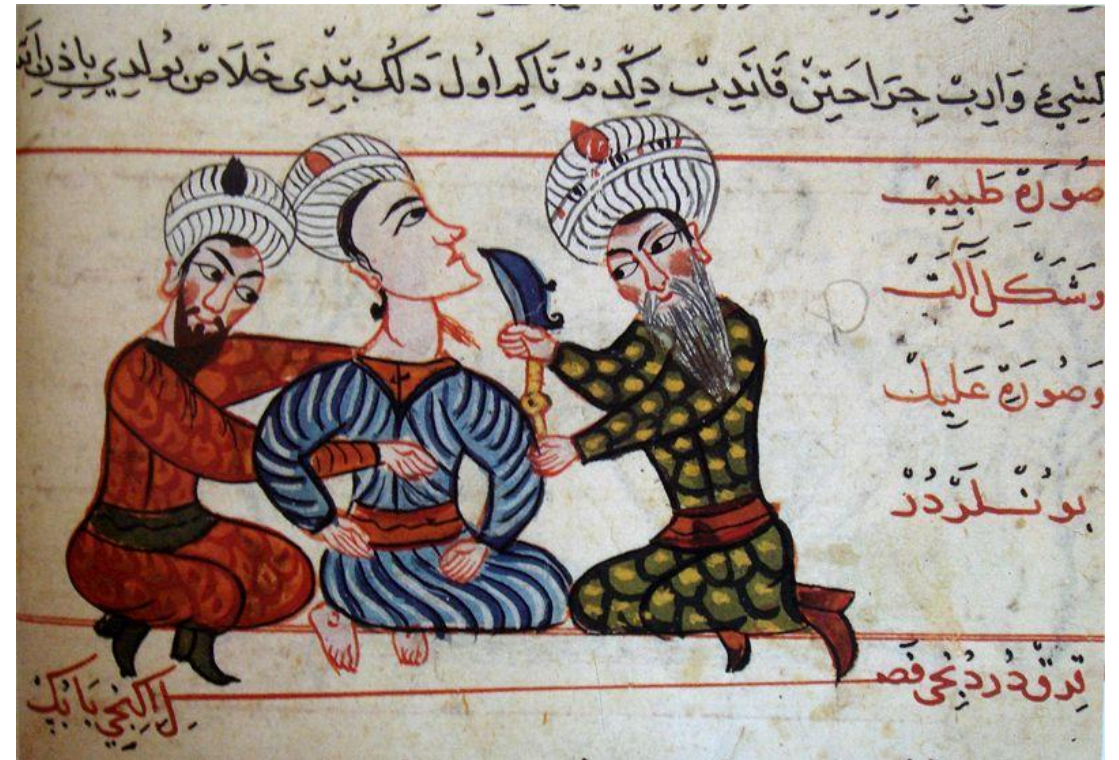


Arabic invention, medicine, spread to Europe via the Greek and Roman Empires

Inventions, 1000+years ago

- Built observatory for astronomy
- Developed mathematics, algebra
- First mental institute in 782, hospitals
- Syringes
- First drug trials, animals
- Magnifying glass lens
- Ligatures for arteries, antisepsis
- Identified plants for medicine
- Described diseases
- After Islam inventiveness declined

Early surgery



Arabic civilization 12 – 1400 –Europe still in the dark ages

Inventions not only medical

- Water pump
- First flush toilets (not T Crapper)
- Robot musicians
- Hard soap
- Crankshaft
- Clocks
- Fountain pen

Elephant clock



Early medicine

- Connected with religions
- Administered by priests, often hallucinogenic substances
- Associated rituals
- Oracles of Delphi – possible ethylene leak from rift in earth's crust
- Connection with planets, or gods, or colours, or moon phases
- Concepts of disease transferred from Sumerians, Egyptians, Indians, Arabs, Greeks, to Europe
- Europe in Medieval times, plant medicine formulated in monasteries
- 19th Century Homeopathy (Prince, now King Charles)

Folk-lore medicine

- Warts caused by handling toads
- Malaria cured by hanging a spider in a nutshell around the neck
- Spider in muslin, pinned to mantle piece to cure whooping cough, alternatives: eating fried mice or owl broth.
- Transfer pain to a dog or duck
- Plants picked at Mid-summer Eve had medicinal properties
- Crawl under a bramble bush to cure rheumatism
- Healing colours, Red for Chinese and Maori, protect (placebo)

Monasteries in Europe – preserved literacy, education, grew medicinal plants in medieval warming period. Plant names- officinal



Early herbal treatments – orthodox then

- Oral herbs
- Inhalation – Aromatherapy – some benefit in anxiety/depression
- Cupping
- Moxibustion
- Topical applications, leeches, blood letting, adjusting the humours
- France imported 41 million leeches in 1832!
- Enemas (clyster) – now popular again!
- Acupuncture
- No I/V access

Moxibustion – Ancient Asian remedy, burning mugwort (Artemesia) close to the skin. Still practiced in many countries (and Os) –no benefit



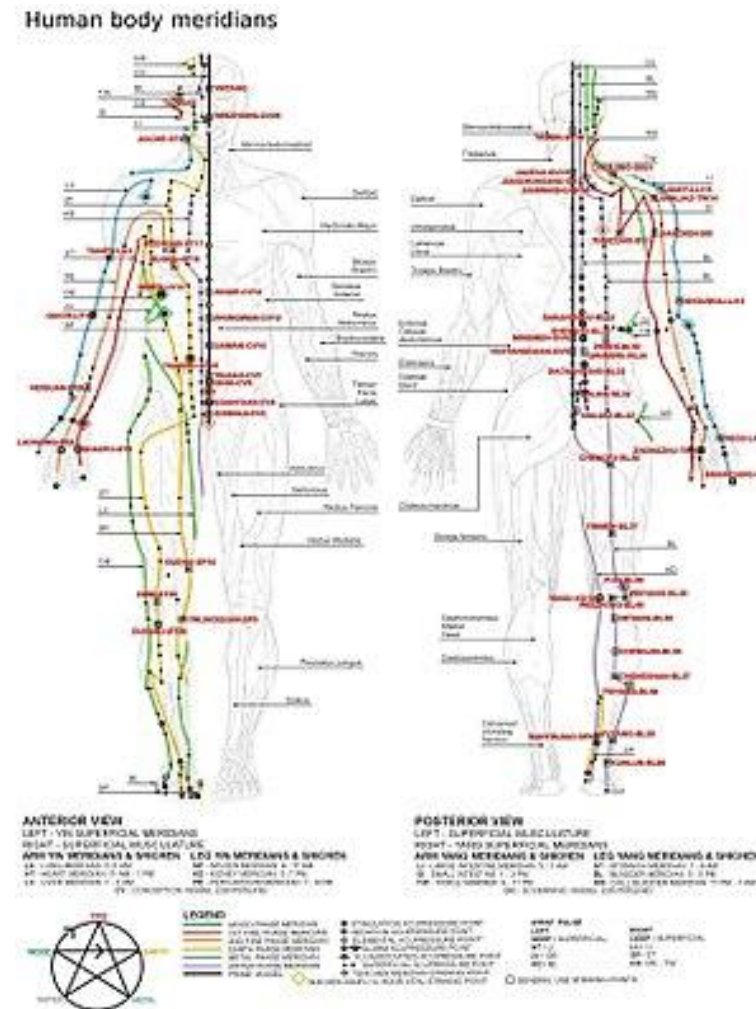
Chinese treatment - Cupping – no benefit



Acupuncture – trials suggest possible benefit in migraine, headache, neck pain, peripheral joint pains



Acupuncture pain relief, little evidence of benefit in orthodox clinical trials



Bleeding to balance humours -still Galen's theories
George Washington – bad throat. Poultice to neck,
bled 4 times. Emetics. Died 1799, age 67

George Washington



Bleeding bowl 1750



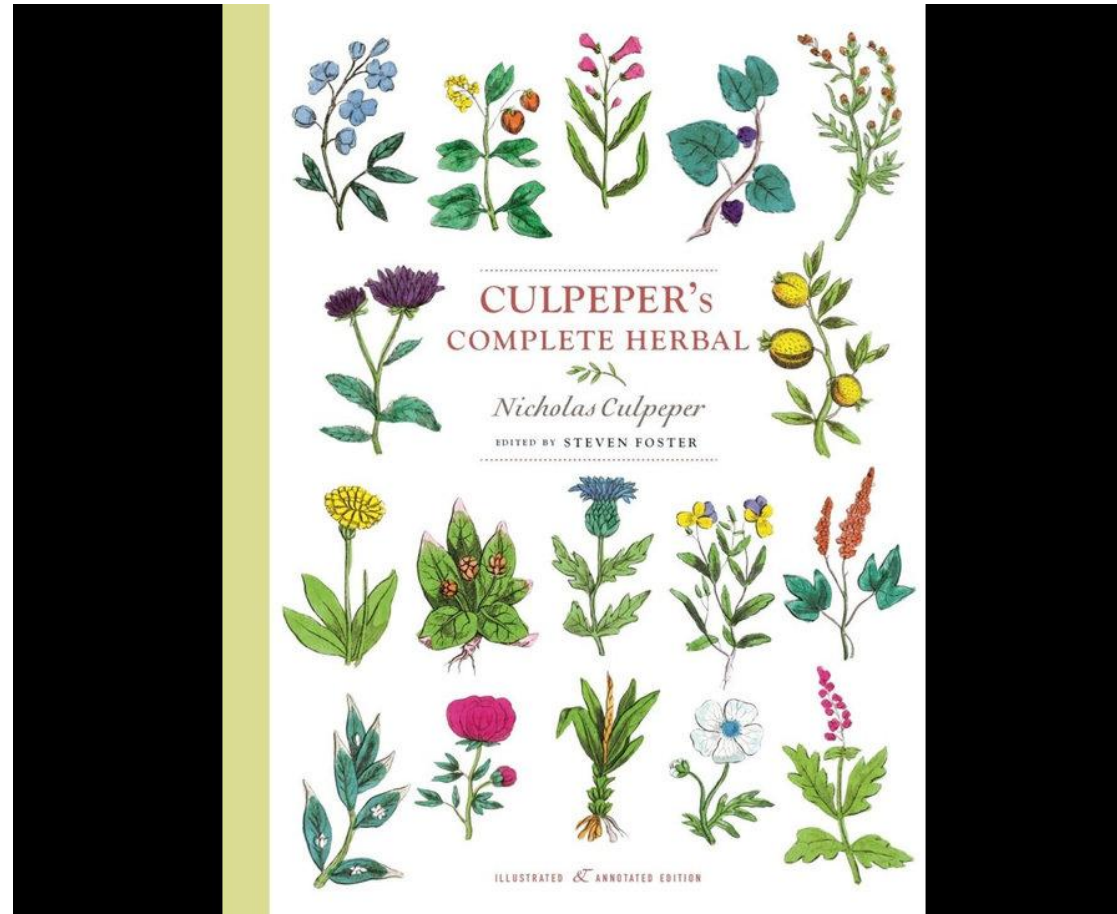
Homeopathy, a recent invention

- Concept invented in Germany by Samuel Hahnemann in early 1800's
- Theory: A substance which causes symptoms of disease in healthy can, in minute amounts, cure similar symptoms in the sick.
- 110 placebo controlled trials, in many countries, show no benefit
- These organizations report that no evidence exists that homeopathic treatment is effective, but that there is evidence that using these treatments produces harm and can bring indirect health risks by delaying conventional treatment.
- King Charles still believes in it – maybe an orthodox approach, with cancer now?

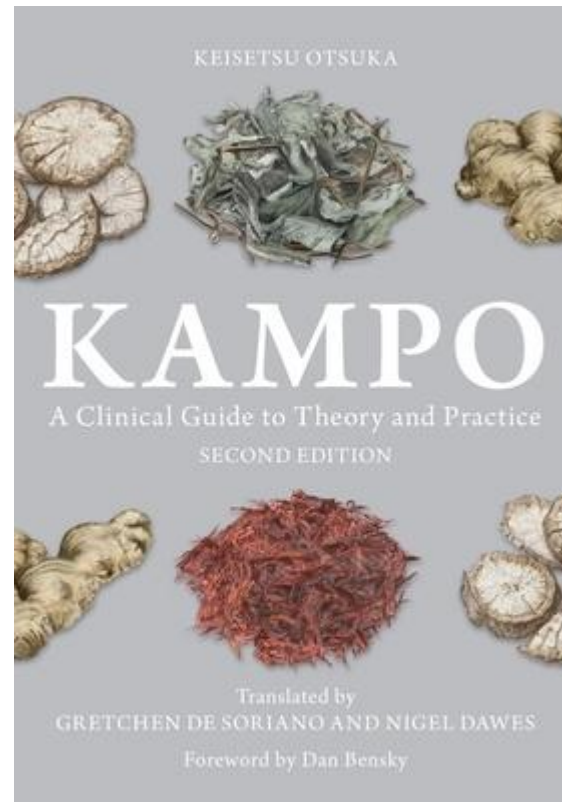
Many conditions successfully treated, by natural products were transient, superficial or Psychiatric

- Colds and coughs
- D and V
- Headaches, fever
- Skin rashes, wounds
- Arthritis and pain
- Sleep disturbance
- Stress
- Infertility
- Impotence

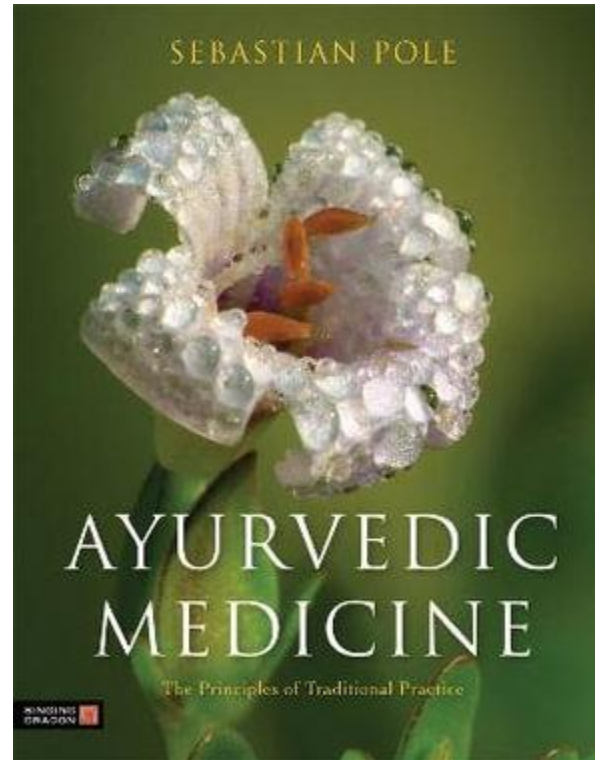
Nicholas Culpepper 1653



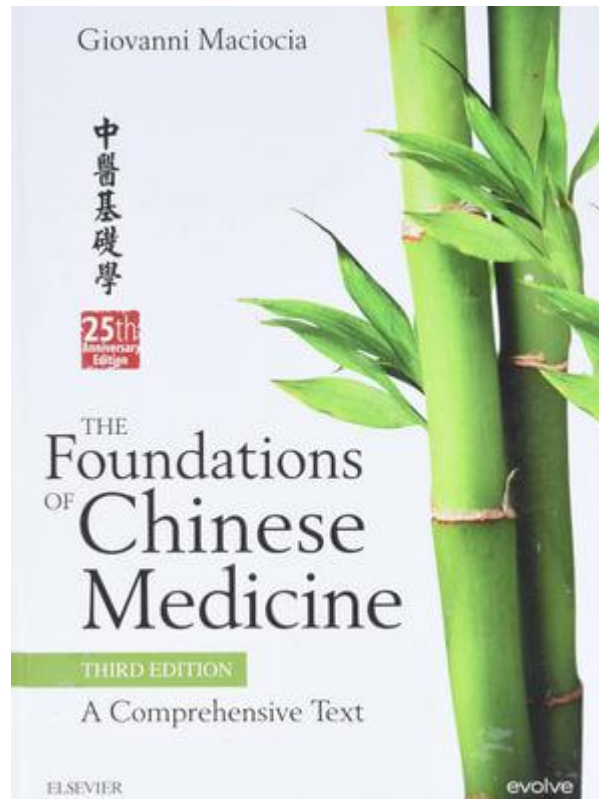
Japanese medicine



INDIAN MEDICINE



Chinese medicine – 300 to 500 plants used

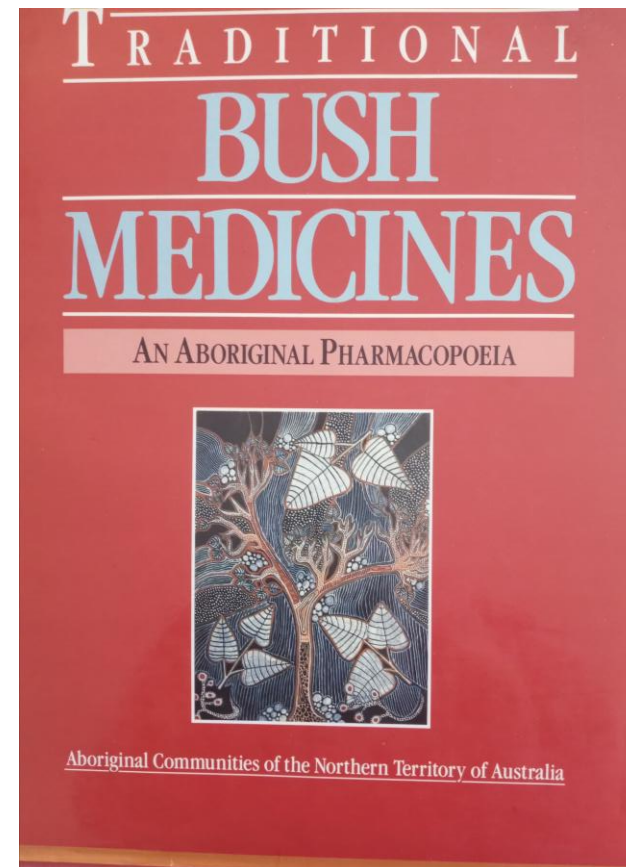


Aboriginal medicines

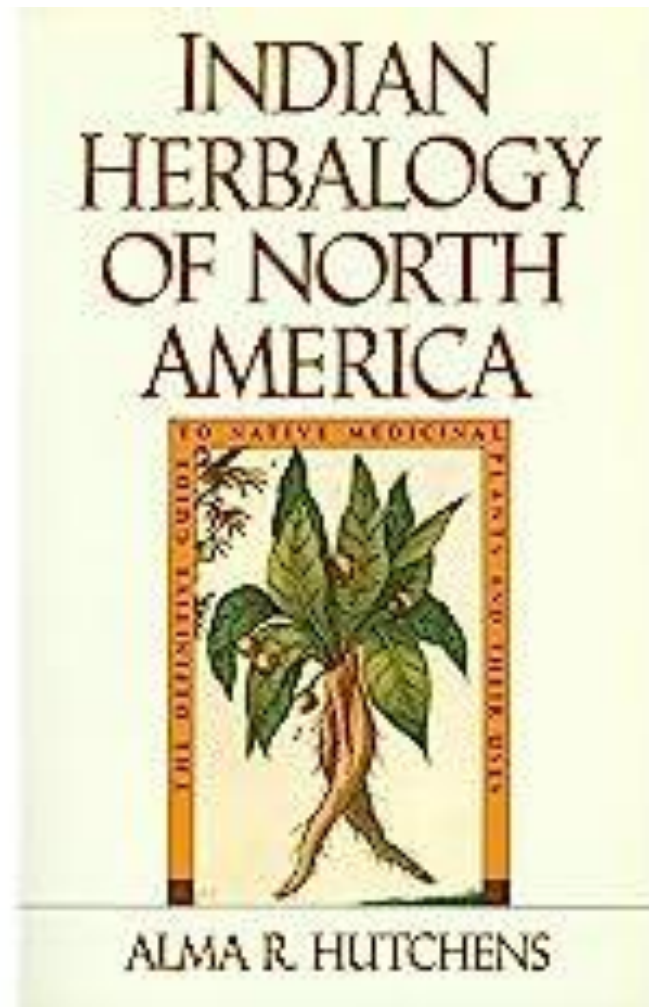
Conditions treated

- Antiseptic 30
- Post-natal 1
- Warts 2
- Cough 7, Decongestant 12, URT 1
- Fever 2
- Analgesia 5
- Diarrhoea 6, vomiting 1
- Itching 5
- No heart, cancer, bp, diabetes etc – not known

Aboriginal pharmacopoeia



North America

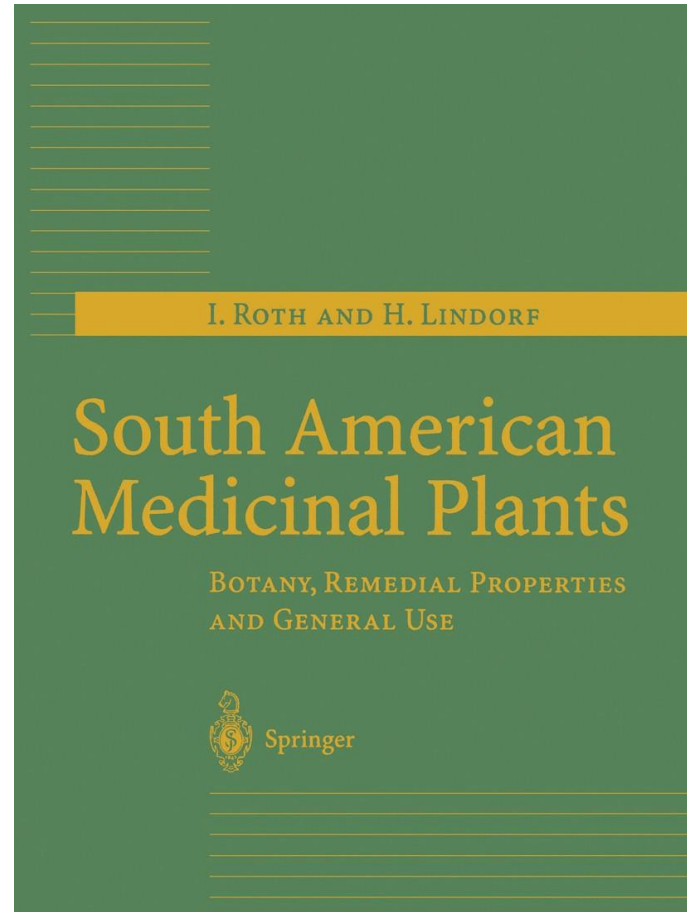


Shaman –Medicine man

- The shaman often acts a bridge between man and these spirits. It is important to note that there is some disagreement among scholars about distinctions between the terms shaman and medicine man. Some still use the term when referring to Native American healers, with the term **Indian shaman** occurring in literature.



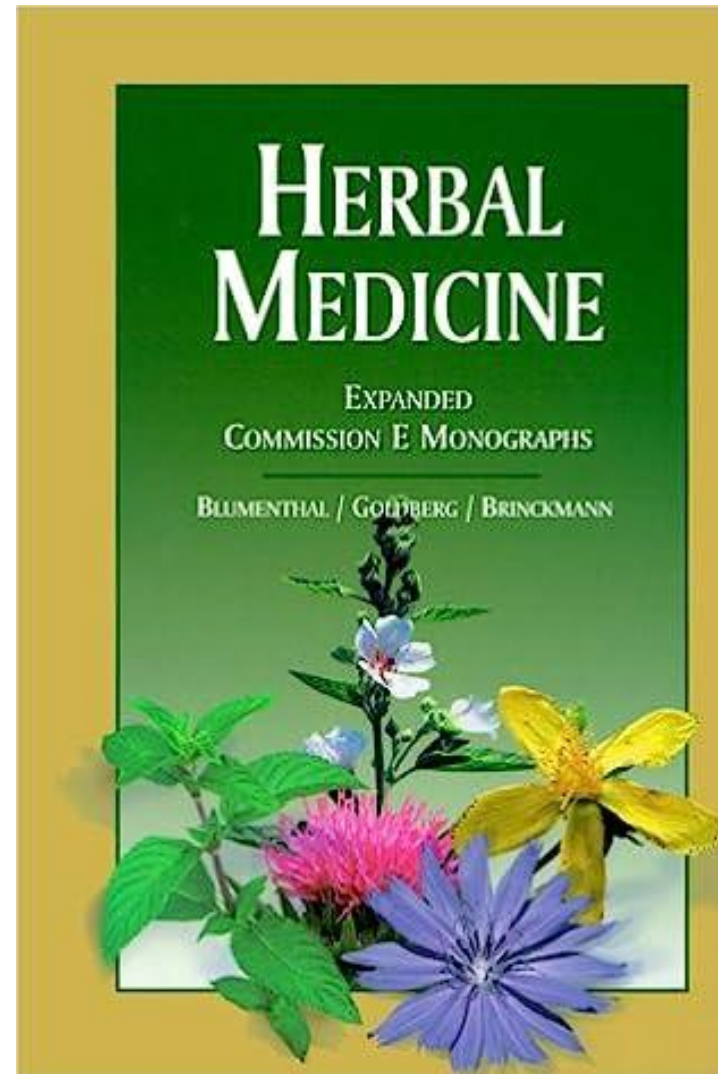
South America



Amazon rainforest cancer cures

- Contain 30% of world's plants, 80,000 species, less than 1% tested
- In more than a decade of searching, the group brought back 2,200 samples from the tributary of the mighty, tea-dark Rio Negro (Black River) to its laboratory in Sao Paulo, of which about 70 have shown some effect in laboratory against tumors.
- Eg Lapacho, Pau d'arco, (*Handroanthus impetiginosus*), Tawari (*Tabebuia incana*), Cordoncillo negro (*Piper aduncum*) - all have traditional uses – but -
- Despite hyperbole, none (so far) proven clinical benefit in cancer

Commission E Monographs



Herbal Medicine

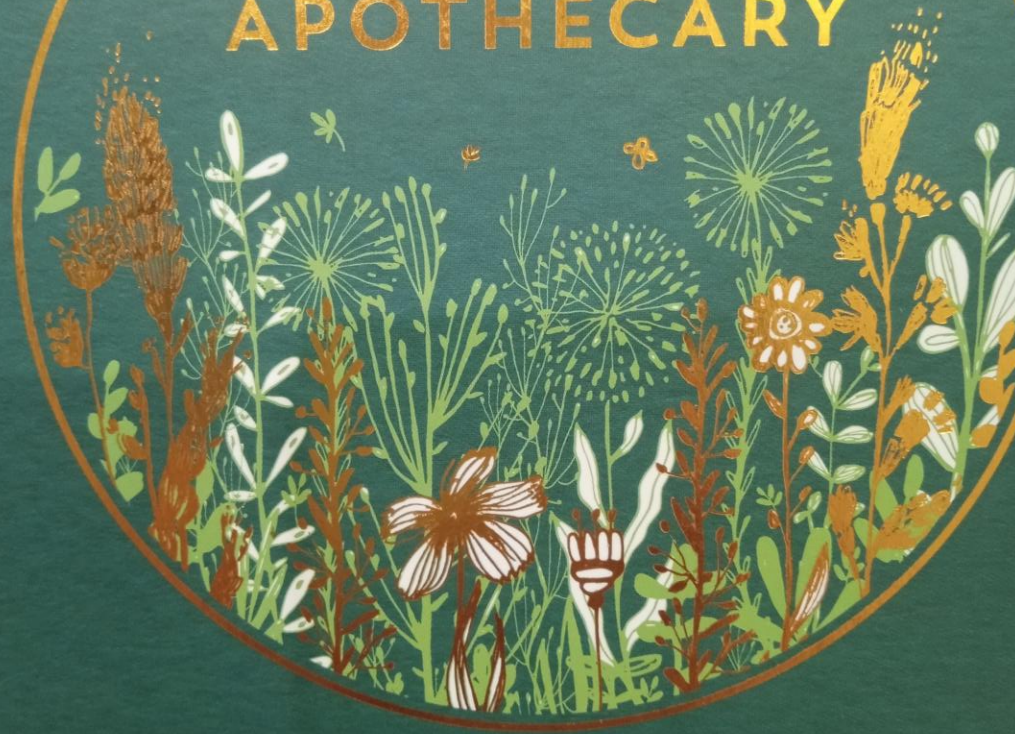
A PRACTICAL
GUIDE FOR
MEDICAL
PRACTITIONERS

DR GRAHAM PINN



Blackwell
Publishing

THE GARDEN APOTHECARY



RECIPES, REMEDIES AND RITUALS

CHRISTINE IVERSON

author of the bestselling *The Hedgerow Apothecary*



Which country uses the most herbal medicine?

In many countries orthodox medicines unavailable or unaffordable. Long useage does not mean it works!

In **China**, traditional medicine still accounts for around 40% of all health care delivered. In Chile 71% of the population, and in Colombia 40% of population, have used such medicine. In India, 65% of the population in rural areas use Ayurveda and medicinal plants to help meet their primary health care needs.

Traditional medicine is provided not only by traditional practitioners, but also by popular demand by medical doctors. In Canada, 57% of herbal therapies, 31% of chiropractic and 24% of acupuncture treatment are provided by general practitioners. In the Netherlands, 50% of general practitioners prescribe herbal medicines and provide manual therapies and acupuncture.

The communication between doctors and traditional practitioners should be strengthened and appropriate training programs established. Further, as traditional medicine is mostly used as self-care, health authorities should develop education and training programs for consumers on its proper use.

It's not a competition!

What is the global market for herbal medicine currently? Big money, much misdirected.

07, 2023 (GLOBE NEWSWIRE) -- The Global Herbal Medicine Market Size Was Valued At **USD 151.91 Billion In 2021**. The Market growing from USD 165.66 Billion in 2022 To USD 347.50 Billion By 2030, Exhibiting a CAGR Of 11.16% during the forecast period.

7 Feb 2023

Vitamins

- Australian market value \$211 million in 2022
- Annual growth rate 5.6%
- Sports facilities, pharmacies, on-line, supermarkets
- “wellness” is the word
- Big pharma – Pfizer, Unilever, Novartis etc, make or sell nearly all supplements and herbal medicines.
- Scurvy - vit C, rickets –Vit D, were real deficiency diseases (Captain cook, limeys)

Rickets Vit D deficiency (+ no sunshine)



Centrum

Contents:

Vitamins: A, B multiple, C, D, E, K.

Amino acids

Minerals: Calcium, magnesium, iron, zinc, manganese, chromium, selenium, potassium, iodine.

Conclusions: Evidence is insufficient to prove the presence or absence of benefits from use of multivitamin and mineral supplements to prevent cancer and chronic disease.

The Vitamin verdict

- The researchers concluded that multivitamins don't reduce the risk for heart disease, cancer, cognitive decline (such as memory loss and slowed-down thinking) or an early death. They also noted that in prior studies, vitamin E and beta-carotene supplements appear to be harmful, especially at high doses. Only exception is folic acid in pregnancy.
- "If you follow a healthy diet, you can get all of the vitamins and minerals you need from food."
- <https://lpi.oregonstate.edu/mic/vitamins/vitamin-C#cancer-treatment>

Mineral supplements

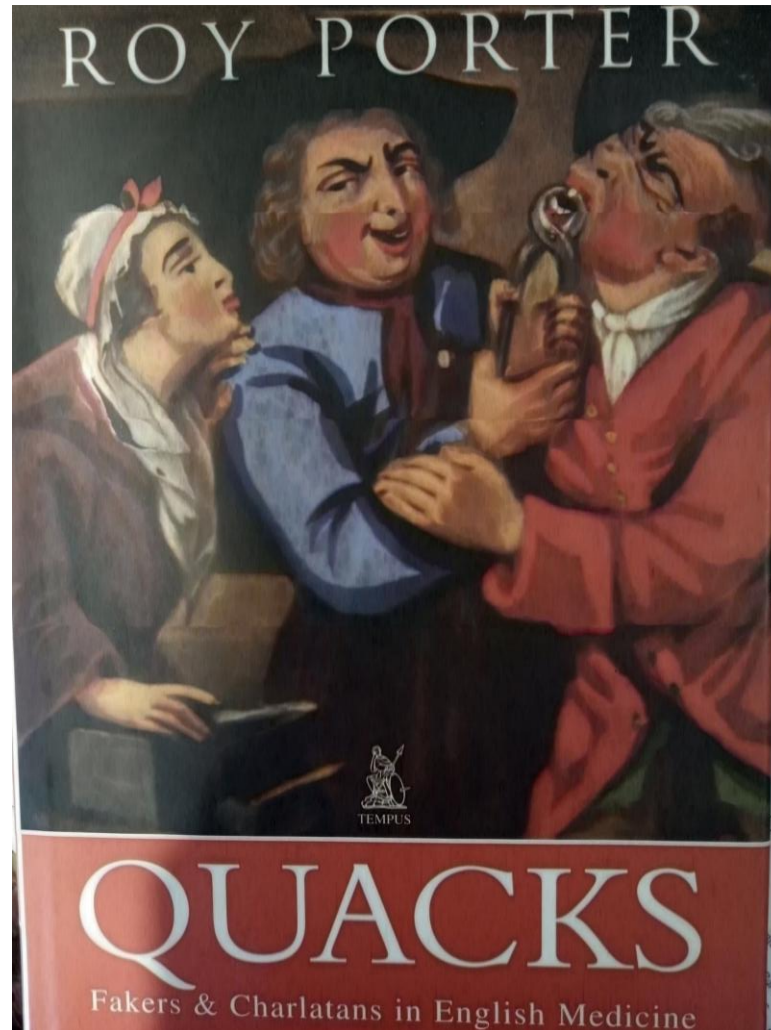
- The global mineral supplements market size stood at \$13.19 billion in 2021, which is expected to reach \$21.0 billion by 2030, advancing at a CAGR of 5.3% during 2021–2030.
- What supplements help mineral deficiency?
- Iron tablets, if heavy periods
- calcium tablets, vitamin D tablets - osteoporosis
- vitamin B tablets –skin disorders
- Magnesium – cures everything!

Modern herbals



- Company is Pfizer/GSK
- “Supports” (not proven):
- Energy
- Immunity
- Muscle function
- Healthy skin
- “Clinically proven”
- testimonials

SNAKE OILS



Modern medicine ,began 1800's with anatomy study and the microscope

- Original theory of balanced humours, from Galen for 1500 years
- Over-stimulated – treatment opium, bleeding
- Under-stimulated - treatment with emetics and purging
- 1518 – Royal College of Physicians, under Henry VIII
- 1540 - United company of barber surgeons (scalpels)
- 1617 – Apothecary's Society
- 1815 – Apothecary's Act – registered medicine suppliers
- 1847 – Chloroform – 1st anaesthetic – surgery, labour
- 1854 – General medical council, training and register doctors
- 1860 – First formal nurse training school, St Thomas's Hospital
- 1962 – Still using Greek measures – minims, drachms - metrification

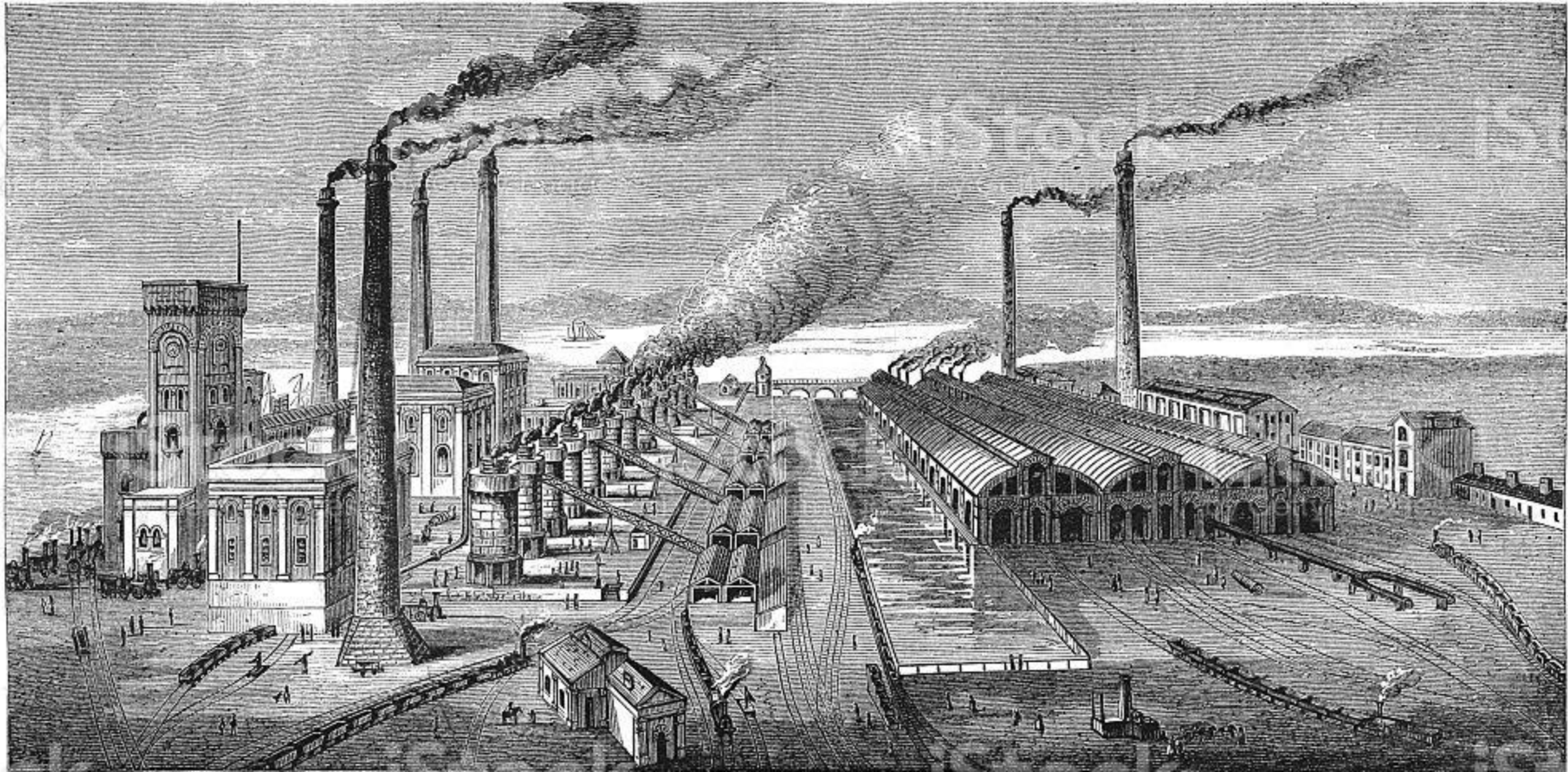
Plough Court opens

Apothecary Silvanus Bevan opened Plough Court pharmacy in 1715, offering medical advice and medicinal products. Office clerk William Allen joined in 1792, becoming a partner in 1795. A renowned medical professional, Allen was also a founding member of the Royal Pharmaceutical Society in 1841.

In 1856 the Plough Court pharmacy became Allen & Hanburys. The company was eventually acquired by Glaxo Laboratories Ltd, one of GSK's major legacy companies.



Industrial revolution – and CO₂!



Former shepherd Thomas Beecham opened his first shop in the north of England in 1848. He developed the recipe for Beecham's laxative pills before building what was claimed to be the first factory in the UK with electricity, in 1887.

A provider of healthcare products across the UK, Beecham eventually diversified into pharmaceutical research with a focus on antibiotics, merging with SmithKline Beckman Corp. to form SmithKline Beecham plc.

Modern Medicines

50% derived from natural sources

Aspirin

Quinine and other anti-malarials

Anti-biotics

Cancer drugs

Statins

Heart drugs

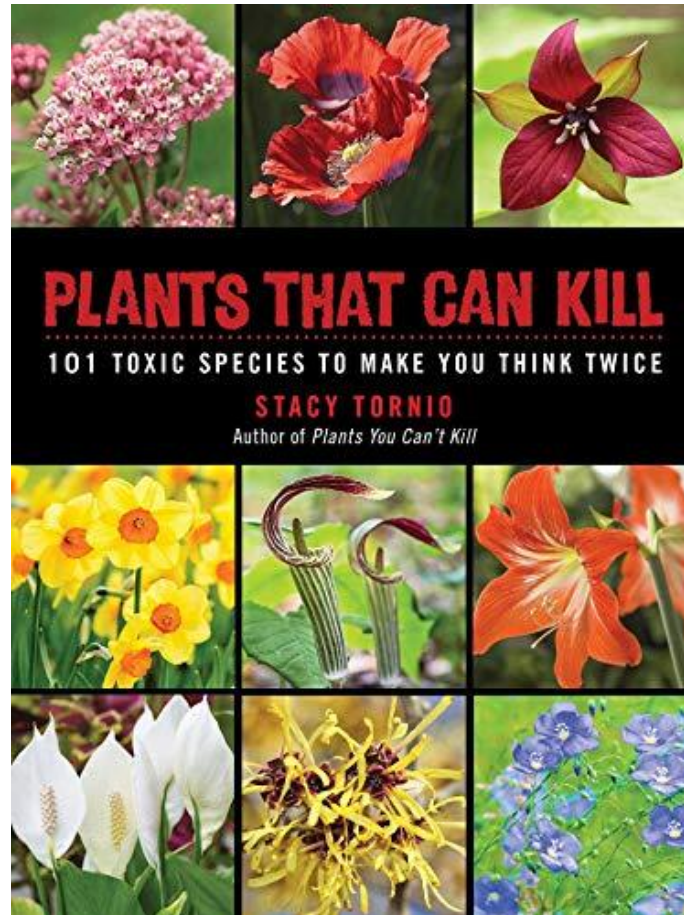
Diabetic drugs

When alternative medicine is
proven it becomes orthodox

Problems with Natural Medicines

- Identification
- Collection, extinction
- Contamination
- Preservation
- Active ingredients
- Standardisation
- Storage
- Adulteration
- Proof of benefit
- Historical use
- Clinical trials
- Safety, long-term use
- Advertising
- Approval - TGA

All plants are not harmless!



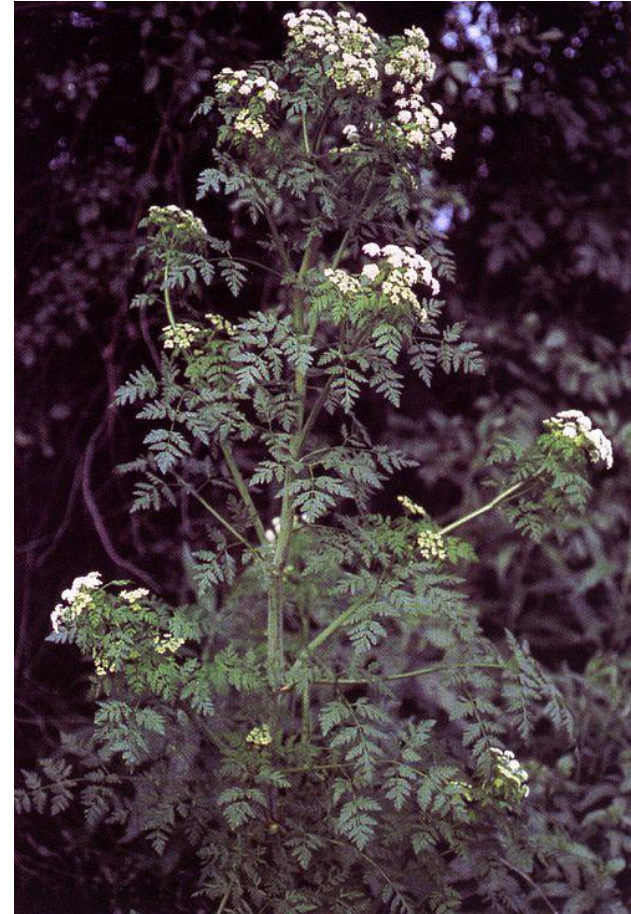
Macbeth

- Witches 3 : "root of hemlock digg'd i' the dark"
- Hemlock, in Macbeth, is consistently linked with evil, poison, and a loss of reason, playing a significant role in shaping the play's atmosphere of darkness and treachery.



Hemlock – *Conium maculatum*

- In Shakespeare's Hamlet, the poison used to kill Hamlet's father is referred to as "hebenon," but it's not explicitly identified as hemlock. While hemlock is mentioned in other Shakespearean works like Macbeth and Henry V.



Atropa belladonna – deadly nightshade



- Atropos
- Greek mythology
- 3 fates
- Atropine
- Hyoscine

Beef Wellington- plant misidentification,
accidental or intentional?



Evidence based medicine – for both orthodox or alternative –what really works!

- Commenced in 1990's
- Peer review
- Reproducible evidence of efficacy
- Possibly undermined clinical experience (anecdotal)
- Cochrane library of clinical trials
- Statistics
- Treatment protocols
- Consensus
- Problems with multiple diseases, multiple specialists, conflicting treatment

Physic Garden



The Rockery, planted by Joseph banks in 1773,
containing clam shells from his trip with Australian
“invader” Captain Cook.

