

# Cannabis and Health

Module 2

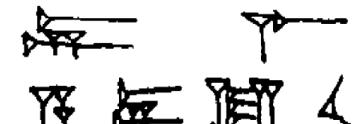
Lecture 1: Cannabis History

# Cannabis: A History

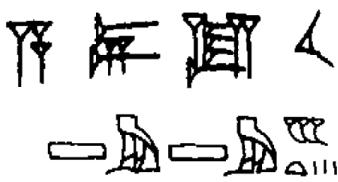
- It's unclear when or where cannabis was first used medicinally
  - Likely occurred at many times/places
- Early nomads probably travelled with cannabis, which allowed it to spread and be discovered across different regions

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Sumerian: A.ZAL.LA



Akkadian: *azallû*



Hieroglyphic: *shemshemet*



Chinese *kanji*: *ma*



Sanskrit: *bhang*



Persian: *shadanaj*



Hebrew: *kaneh bosem*



Greek: *cannabis*

Fig. 5. Cannabis in various ancient languages

# Cannabis: Pharmacological Discovery

- Once discovered, cannabis was valued for three purposes:
  - Fiber (stalks / hemp - ~ 10,000 years ago)
  - Edible (seed - shortly after use as fiber)
  - Pharmacological effects (flower - ~2500-3000 BCE)

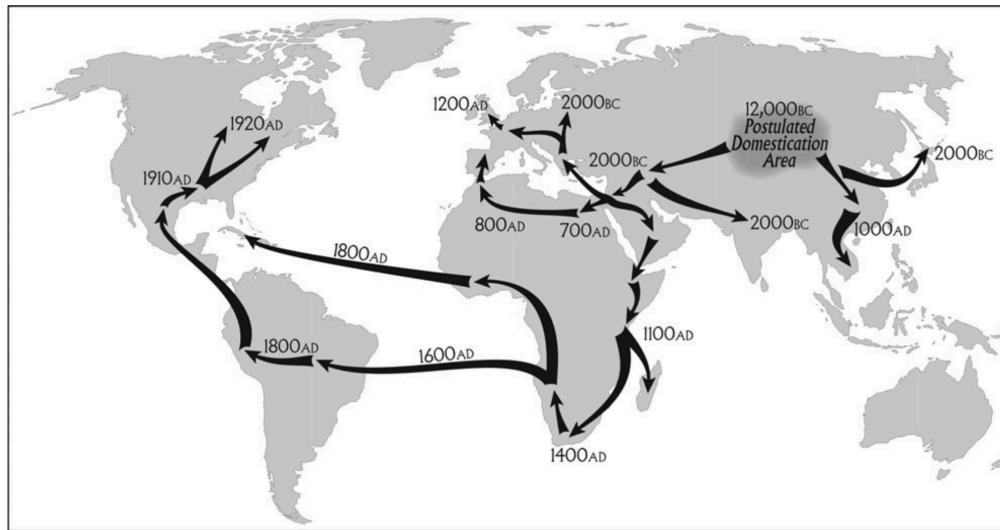
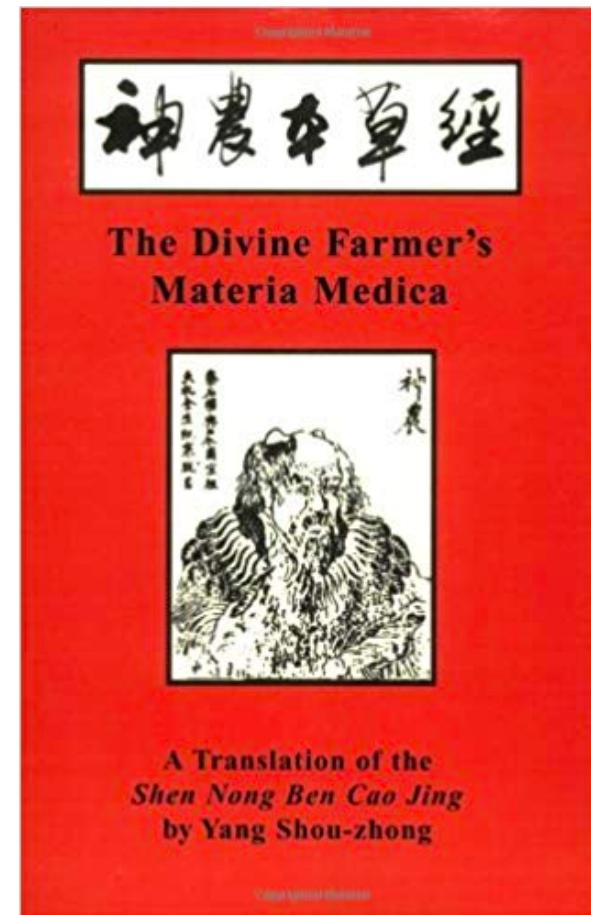


FIG. 1—Historical diffusion of Cannabis Sativa.

# Cannabis: Pharmacological Discovery

- Oral Chinese traditions described cannabis from 28<sup>th</sup> century BCE
- Documented in the oldest Chinese Pharmacopeia (100 CE; Divine Farmer's Materia Medica / Shen Nung Ben Cao Ching):
  - Hallucinatory effects
  - Appetitive stimulation
  - Tonic effects
  - Anti-senility



# Cannabis: Pharmacological Discovery

- Engraved in stone in Egyptian Pyramids (2350 BCE)
- Medicinal use noted in Papyrus Ramesseum (1700 BCE)
  - Oral, rectal and topical applications
  - Treatment for eyes
  - May have been used for glaucoma or as anti-inflammatory



# Cannabis: Subsequent Discoveries

- 1800 BCE (Babylon & Thompson, 1903; Russo 2007)
  - Used in ancient Sumeria for
    - Grief
    - Epilepsy
    - Pain
    - Lice
- 1500 BCE (documented by Indian Hemp Drugs Commission, 1894)
  - Anti anxiety
- 200 BCE (Erh-Ya; Chinese Dictionary)
  - Male is superior for fiber; female for intoxication

# Cannabis: History of Burn Treatment

- Pliny the Elder (Roman Empire 23 – 79 AD), first known writing about benefits of cannabis for burns

- “It is applied raw to burns, but it must be frequently changed, so as to not let it dry.”



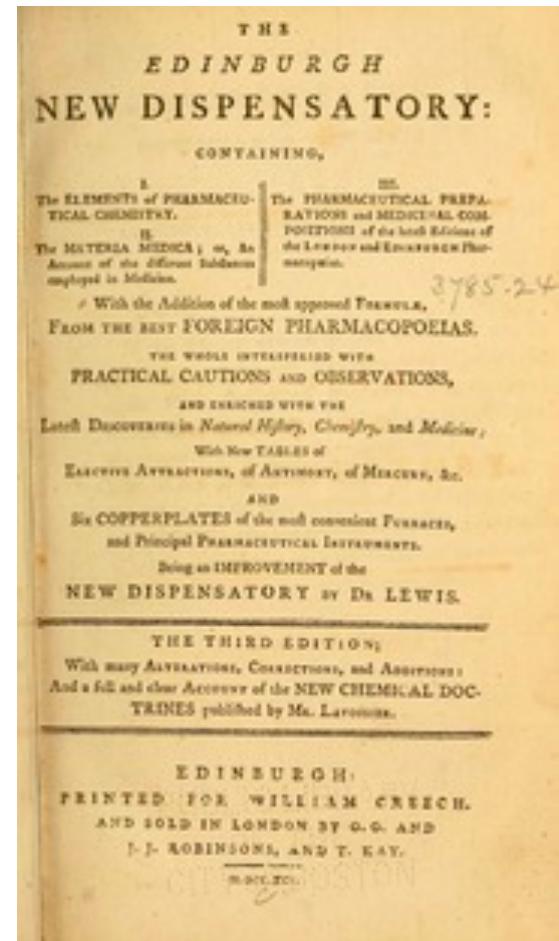
- Similarly, François Rabelais (France, 1400s):

- “If you want to cure a burn... just rub on raw [hemp], just as it comes out of the earth.... But be careful to change the dressing when you see it drying out.”



# Cannabis: Modern Documentation

- First documents of modern medical uses in 1700s
- Edinburgh New Dispensatory – Lewis (1794)
  - “The plant when fresh has a rank narcotic smell....the water in which the stalks are soaked in order to facilitate the separation of the tough rind for mechanic uses is said to be violently poisonous and to produce its effects almost as soon as drank....”



# Cannabis: First Empirical Studies

- First empirical studies were likely conducted in India but we know more about the first studies in England

- O'Shaughnessy (1838)

- Initially, studied the Indian Pharmacopoeia
  - Later, tested dogs, then patients, for the effects on tetanus, rabies, epilepsy, rheumatoid disease

- Clendinning (1843)

- Found evidence that Indian hemp treats cough in tuberculosis, pertussis, migraine, joint pain, gout, and morphine withdrawal



# Cannabis: History of Tinnitus Treatment

- Tinnitus (ringing ears) is usually treatment resistant
- 1698: Nicholas Lemery (Russo, 2014)
  - “Hemp contains much oil, little salt, it is specific for burns, for roaring in the ears, to kill worms”
- Raby et al. (2006) documented improvement in tinnitus associated with benign intracranial hypertension by THC
- These claims gain plausibility, given that cannabinoid receptor type 1 (CB1) is expressed in cochlear nucleus cells (Zheng et al. 2007)

# Cannabis: History of Tetanus Treatment

- O'Shaughnessy conducted the seminal work on treating tetanus (infections) with cannabis.
  - Tetanus was almost always fatal at the time
  - In three case studies, all three survived after treatment (one later died after refusing amputation and developing gangrene)
- Documented use in 1863, for a Union soldier who received a cannabis tincture for a musket ball wound (compound radioulnar fracture, tetanus, and gangrene)
- Was the treatment of choice for tetanus in India at the turn of the century

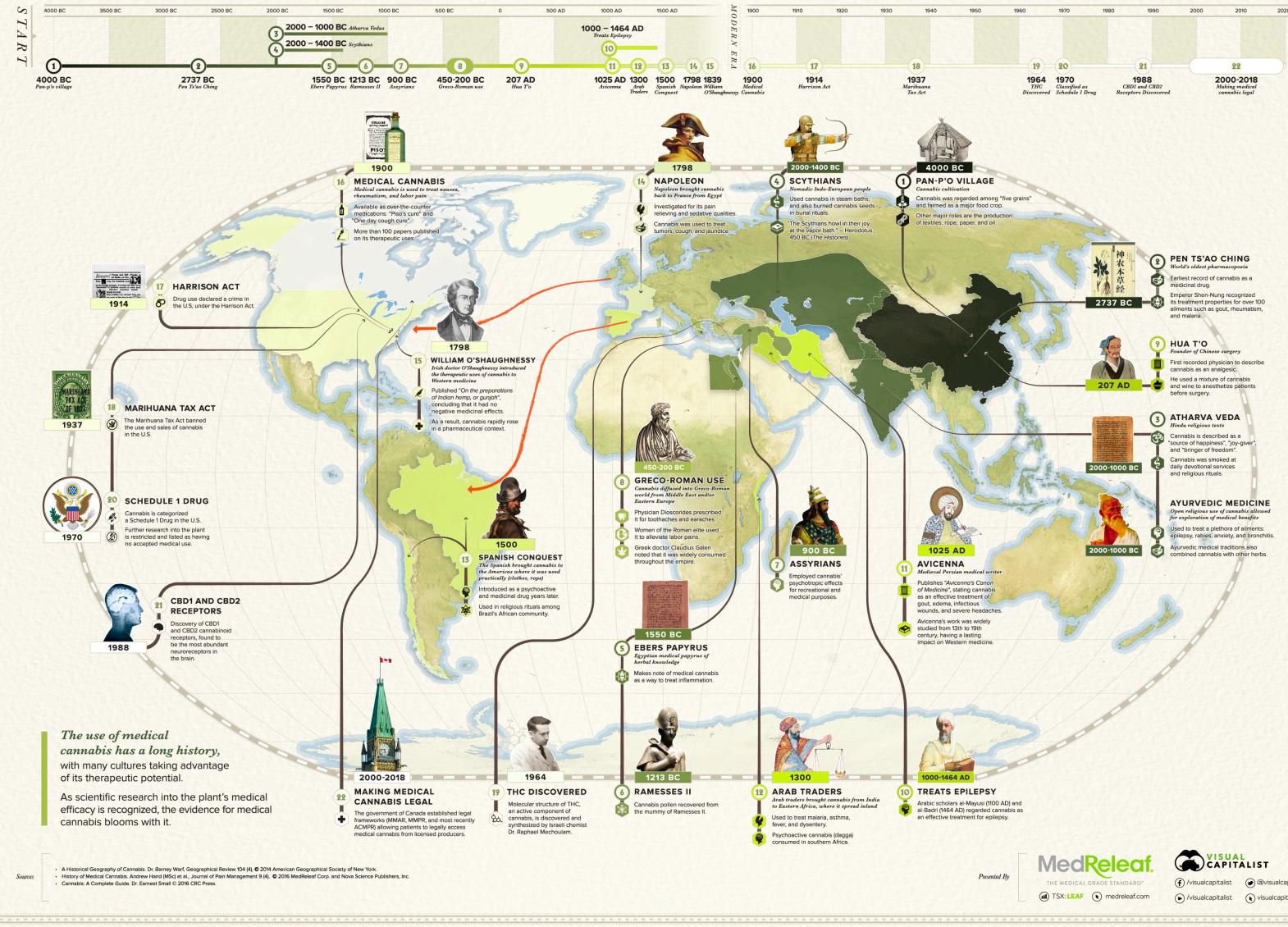
# Cannabis: History of Pediatric Treatment

- Cannabis has been employed in children probably as long as in any other age group
  - O'Shaugnessy's work studied children, including 40-day-infant with seizures
- Recent, documented uses (1970s – 1990s)
  - Mixed with sweets to calm children (Nepal)
  - Analgesic for boys undergoing circumcision (Uzbekistan)
  - Ganja compresses used for pain in neonates (Jamaica)
  - Combined with mint tea to expel intestinal worms (Morocco)
- Unwise given putative effects of cannabinoids on developing brain

# a 6,000 YEAR HISTORY of CANNABIS

## THE CANNABIS SPACE IS HIGHLY POLARIZED TODAY.

However, it's less known that the plant has over 6,000 years of documented history – and its therapeutic applications appear to have been realized by most cultures. With medical cannabis making a comeback around the world, it's worth tracing the plant's humble beginnings and how it played a vital role throughout the centuries.



**The use of medical cannabis has a long history,**  
with many cultures taking advantage of its therapeutic potential.

As scientific research into the plant's medical efficacy is recognized, the evidence for medical cannabis blooms with it.

Sources: 1. A Historical Geography of Cannabis. Dr. Barrie Rast. Geographical Review 104 (4). © 2014 American Geographical Society of New York.  
2. History of Medical Cannabis. Andrew Hand (MSc) et al. Journal of Pain Management 9 (4). © 2016 MedReleaf Corp. and Nova Science Publishers, Inc.  
3. Cannabis: A Complete Guide. Dr. Bennett Small © 2016 CRC Press.

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<https://www.visualcapitalist.com/history-medical-cannabis-shown-one-giant-map/>

# Conclusions

- Humans used cannabis plant as fiber and food source as long as 10,000 years ago
- Humans used cannabis flower as medicine as long as 2500 years ago
- Throughout history, different cultures and civilizations leaned on cannabis as a plant based alternative medicine for a number of different ailments
  - some of which may have some biological plausibility – but none of which were tested in a rigorous scientific approach (consistent with the times)
- What are the parallels with the “medical marijuana” trend in the U.S. over the past 15 years?
- How does our recent experience with cannabis derived CBD and childhood seizures map onto this?