AYAHUASCA
“The vine of the soul”
WHAT IS AYAHUASCA?

- Psychoactive plant mixture consumed as a drink (tea)
  - Hallucinogenic

- Two common components:
  - *Banisteriopsis caapi* (Malpighiaceae family)
    - Flowering plant which grows up trees to expose flowers to sun
    - Bark is used in mixture and soaked in water
  - *Psychotria viridis* (Rubiaceae family)
    - Large tropical shrub
    - Leaves are used in the mixture
CREATION

- Are there effects from either *B. caapi* or *P. viridus*?
  - No, neither is active on its own if ingested individually

- How was it created then?
  - Not entirely clear, but somehow it was discovered thousands of years ago
EFFECTS

- Can induce hallucinations

- Taste: reported to be awful, one description “The smell and acrid taste was that of the entire jungle ground up and mixed with bile”

- Used as a purgative, as it often induces intense vomiting

- Almost no reported cases of use leading to death
AYAHUASCA’S ORIGINS AND LOCATIONS

- South American and the Amazon Basin
  - Brazil, Peru, Colombia, Ecuador, Bolivia

- Some use today in the United States, although neither *B. caapi* or *P. viridus* are grown here
ACTIVE COMPOUNDS

- There are many compounds, but evidence indicates the psychoactive effects result from specific compounds in each plant.
- **B. Caapi**: Contains 3 different β-Carbolines (harmine, harmaline, and tetrahydroharmine) which are alkaloids.
- **P. Viridus**: Contains an alkaloid commonly called DMT or N,N-dimethyltrytamine.

![Chemical structures of harmine and DMT]
COMPOUND INTERACTION

- DMT is the psychotropic compound with hallucinogenic effects
- Normally DMT is broken down by digestive enzymes in the stomach
- Enter the β-Carboline, which inhibit these enzymes and allow DMT act in the brain
USES: RELIGION

- Ayahuasca has been used in spiritual/religious ceremonies for thousands of years.

- Today, there are three significant religions primarily in Brazil openly using ayahuasca on a regular basis, the União do Vegetal (UVD), the Santo Daime, and the Barquinia.
USES: RELIGION

- The UVD is international and has a branch in the US of approximately 150 members in Santa Fe, New Mexico.
- Reasoning for ayahuasca use is it allows people to have religious experiences where they can communicate with spiritual forces.
USES: TRADITIONAL MEDICINE

- Used by local healers in the Amazon Basin
  - Sickness is viewed differently, can have spiritual causes that need to be addressed
  - Ayahuasca is believed to fix health problems because it addresses a person’s spirit
USES: MODERN MEDICINE

- Primarily implicated in treating psychological disorders including alcoholism, depression, and anxiety disorders
  - Possibly has an effect on serotonin receptors
- Suggested to possibly influence Parkinson’s disease, with β-Carboline increasing dopamine release
- Research for Western medicine is in very early stages
LEGAL ISSUES

Intricate Legal Status:

- Ayahuasca is not explicitly illegal
- DMT is illegal, a class I banned substance
- Brazil in 1992 and US Supreme Court in 2006 approved its use in religious settings (UVD in United States)
FUTURE OF AYahuasca

- Drug Tourism: tourists ingesting ayahuasca
- More research needs to be conducted on the effects and possible benefits
  - Could lead to clinical trials

- Future research needs legal status to be clarified
  - Different regulations depending on status