



Psychedelic Medicine

PRESENTATION BY NATHANIEL QUALLS

Drugs or Medicines?

Drugs – Dangerous, illegal substances that are abused

Medicines – Legal substances that are safe and helpful

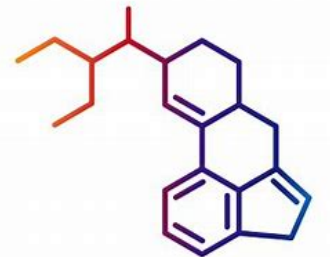
Psychedelics – Illegal substances that have proven to have medicinal purposes

Psychedelics of Interest

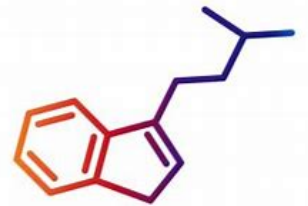
Psilocybin – Magic
mushrooms, Shrooms



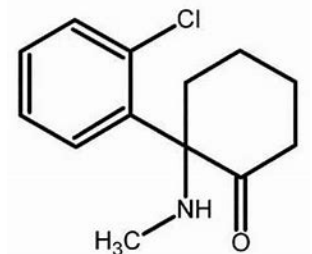
LSD – Acid



DMT – Ayahuasca



Ketamine – horse
anesthetic



Classification and Scheduling

- Scheduling results in the substances' legality
- Schedule 1 substances – High risk of abuse, and no medical purposes
- Higher schedule number means the substance is at a lower risk of abuse and has more medical properties

Problems with this Classification

1971 convention of psychotropic substances

Psychedelics were deemed illegal and useless before science understood them

An outdated system

Potentially biased system

Psychedelics as Medicine

Carhart-Harris et al. Psilocybin Study

- Psilocybin improved memory recollection
- fMRI showed stronger activation in visual and other sensory function regions

Psychedelics as Medicine

Emotional breakthrough

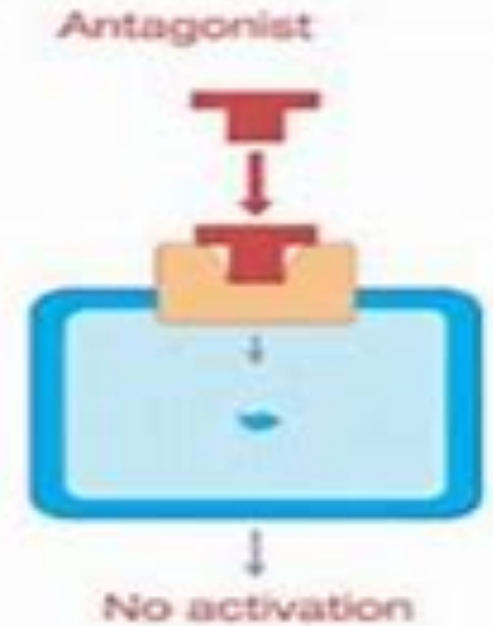
- Extreme openness to intense emotions
- Releases repressed feelings
- Helps patients talk about, and recognize painful experiences
- Overall enhanced emotional processing

Antagonist Vs. Agonist

Antagonistic Drugs – Bind to the targeted site, trigger no reaction, and prohibit other neurotransmitters from binding to the receptor site.

Agonistic Drugs – Bind to the targeted receptor site, and triggers a reaction

Antagonist Vs. Agonist



Serotonin 5HT2A Receptor

Credited with mood
and emotional
regulation

Most antianxiety and
antidepressants involve
the 5HT2A receptor site

- Act as antagonists

Psychedelics bind to
same receptor site

- Act as agonist
- Psilocybin

Ayahuasca study

- Orsolini et al. studied the effects of DMT via ayahuasca
- Dimethyltryptamine (DMT) – active psychedelic chemical in ayahuasca
- Ayahuasca is a kind of tea brewed from a vine indigenous to the Amazon
 - Banisteriopsis caapi vine



Similar, but Better?

- Psychedelics and addiction
- Psilocybin, DMT, and Ketamine
- Lower the amount of dopamine in the brains reward pathways
- Helps fight against addiction

Single Dose Longevity

Dos Santos et al. Study

- Terminal patients with anxiety and depression
- LSD and Psilocybin
- Effects were almost immediate
- Anxiety levels remained reduced for 3 months after experiment
- Depression levels remained reduced for 6 months after experiment

Psychedelic Therapy

Professional administration yields best results

Avoids negative experience from substances

Challenge experience

Belief Relaxation

Positive reinforcement and Cognitive therapy

Recap on Psychedelics

Psilocybin, LSD, and DMT, all interact with the 5HT2A receptor site

Scheduling was premature

Fast acting with long lasting effects

When paired with a professional, positive results increase

Not addictive

- Psilocybin, DMT, MDMA, and Ketamine used to treat addiction

Psychedelics Wrapped Up

Further research is needed

Faster and effects last longer than traditional options

Less addictive than their legal counterparts

Improve vivid memory recollection, and emotional openness

The full realm of possibilities is unknown

Sources

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