

ELTE, Institute of Psychology

PPK-PSY:64 Psychedelic Psychotherapies

autumn semester 2023



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Psychedelic Psychotherapies presentations & seminar (5 x 4 h)

[01] Sep 15 [01.1] Course Introduction and Overview
[01.2] Altered State Assisted Therapies
[01.3] The Broader Context of Psychedelics

[02] Oct 6 [02.1] Psychedelics: Substance Information

13:25-14:10

[02.2] Psychology of Psychedelic Experience

14:25-15:10

[02.3] Psychedelics: Research, Experiments, Healing

15:25-16:10

+ fun part! 16:20-17:05

[03] Oct 27 [03.1] Psychedelic-Assisted Psychotherapies: Theory
[03.2] Psychedelic-Assisted Psychotherapies: Practice

[04] Nov 17 [04] Psychedelic Experience Integration

[05] Dec 8 [05] Summary and Outlook

[01.2] Altered State Assisted Therapies

Sep 15

Altered states of consciousness (ASC): definitions and phenomena.

Spontaneous, pathological and induced states.

Physiological, pharmacological and psychological inductions.

Altering subsystems of consciousness.

Therapeutic applications of ASC.

[01.3] The Broader Context of Psychedelics

Sep 15

Hallucinations: definitions and phenomena.

Hallucinogens: dissociative, deliriant, psychedelic.

Other related substances.

Purposes of substance use.

The drug instrumentalisation hypothesis.

Psychonaut subculture.

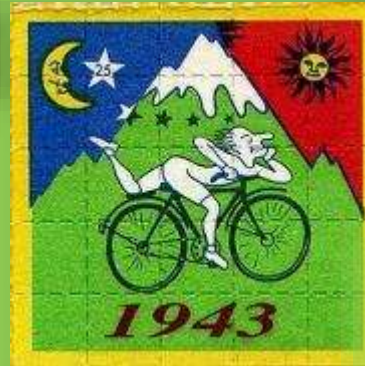
Biohacking.

Course Topics

- altered states of consciousness; psychedelics
- **transpersonal psychology; trauma processing and regression;**
- **psychedelic research, experiments and healing**
- **psychometric measuring; addictions and dependence; assisted psychotherapies; ethics**
- **psychedelic and psycholytic therapies; therapist training; therapy protocols**
- **MDMA, psilocybin, ketamine, LSD, ibogaine, ayahuasca**
- **psychedelic experience integration**

[02.1] Psychedelics: Substance Information

Oct 06



[02.1] Psychedelics: Substance Information

TOC

**History, physiology, psychology and phenomenology of
psychedelics and related substances:**

ayahuasca

cannabis

DMT

ibogaine

ketamine

LSD

MDMA

muscimol

psilocybin

salvinorin A

LSA

mescaline

WARNING!

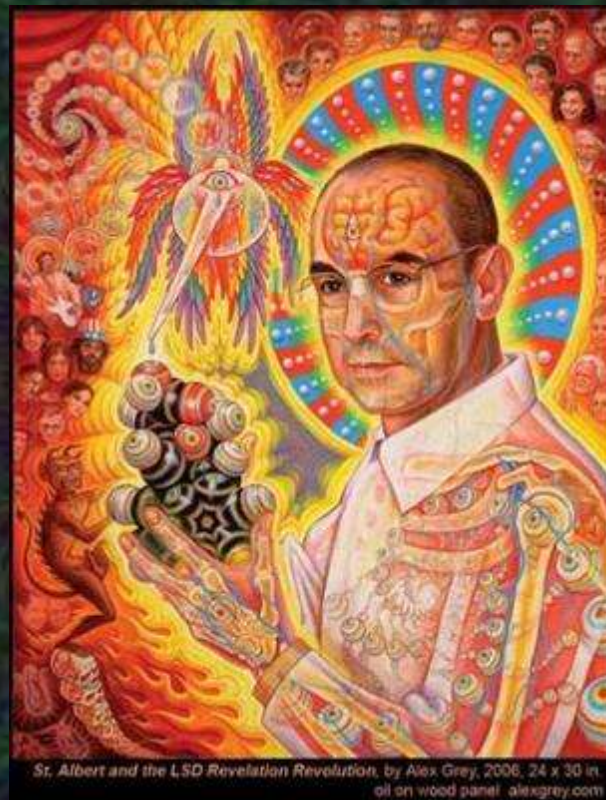
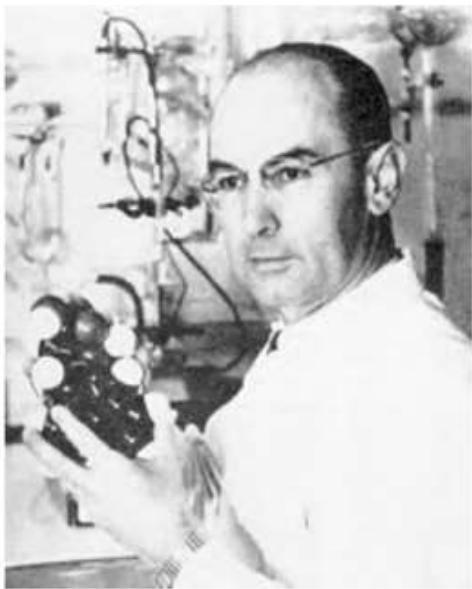
DRUGS ARE BAD



The following information about psychoactive substances is not meant to aid, assist, encourage, facilitate, foster, further, promote, put forward, redound, set forward or subserve the use of any drugs!

Albert Hofmann & LSD

(1943)



“In a dreamlike state, with eyes closed [...] I perceived an uninterrupted stream of fantastic pictures, extraordinary shapes with intense, kaleidoscopic play of colors.”

Hofmann A (1979) "LSD - My Problem Child"

Albert Hofmann (1906-2008)



Basic concepts

HALLUCINOGENIC

psychoactive substance that manifests perceptual experiences in the mind

PSYCHOTOMIMETIC

psychoactive substance that elicits effects that resemble symptoms of mental illness

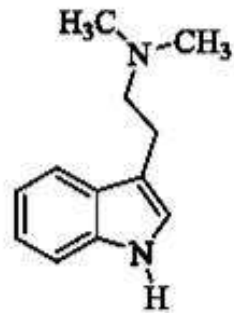
PSYCHEDELIC

psychoactive substance that manifests, "expands" the mind

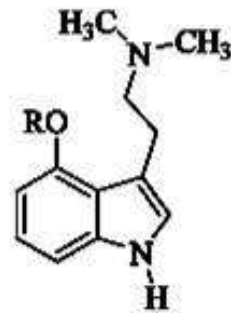
ENTHEOGENIC

psychoactive plant or substance that is used as a sacrament for eliciting spiritual or mystical experiences

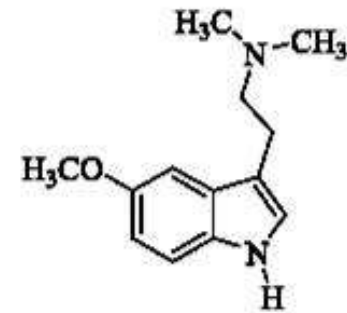
Chemistry



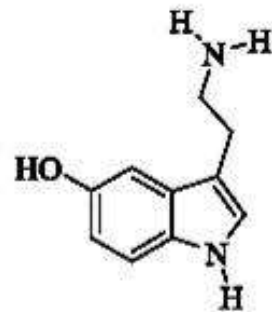
DMT



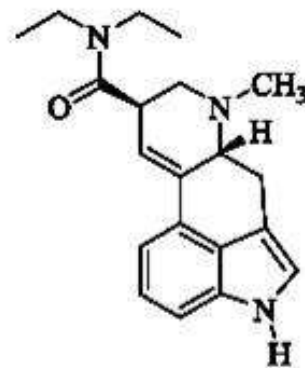
R = H; Psilocin
R = PO₃H; Psilocybin



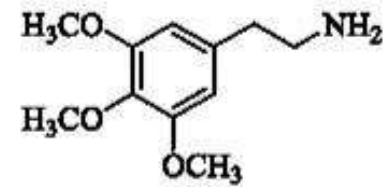
5-Methoxy-DMT



Serotonin; 5-HT



LSD



Mescaline

Neuropharmacology

Chemical resemblance: serotonin (5-HT) neurotransmitter
Usually serotonin 5-HT_{2A} receptor agonists
Minimal physiological effects/tolerance, no reward



Psychophysiology

Importance of **SET** and **SETTING!**

1. **Bodily effects:** vertigo, weakness, trembling, nausea, sleepiness, numbness, blurry vision
2. **Perceptual effects:** changed forms and colours, difficulty to focus on objects, sharpened hearing, in rare cases synaesthesia
3. **Mental effects:** mood changes (altering happy, sad, irritable), tension, changes in sense of time, difficulty to express thoughts, ego dissolution, dreamlike feelings, visual hallucinations

Phenomenology

- increased mood
- increased associations and creativity
- increased understanding and appreciation of music
- heightened senses (eating, drinking, smelling)
- open- and closed-eyed visuals (OEV & CEV)
- unusual thoughts and speech
- changed perception of time
- quickly changing emotions
- deep, life-changing spiritual experiences

Major psychedelics - from outside



LSD



psilocybin



mescaline



DMT

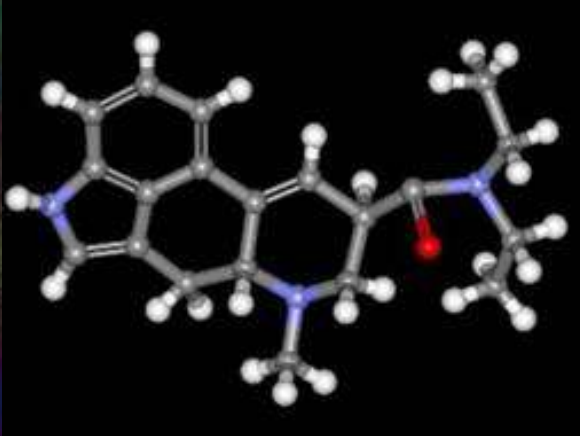


salvinorin-A



LSA

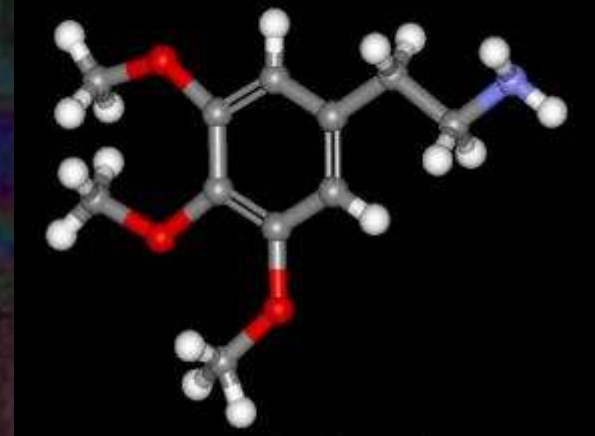
Major psychedelics - from inside



LSD



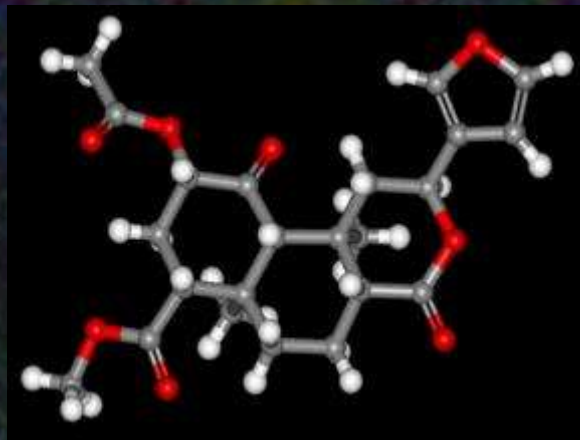
psilocybin



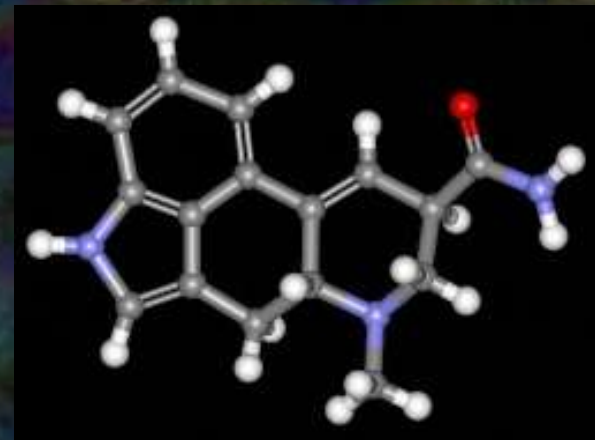
mescaline



DMT



salvinorin-A



LSA

psychedelics 1/12:
ayahuasca



ayahuasca

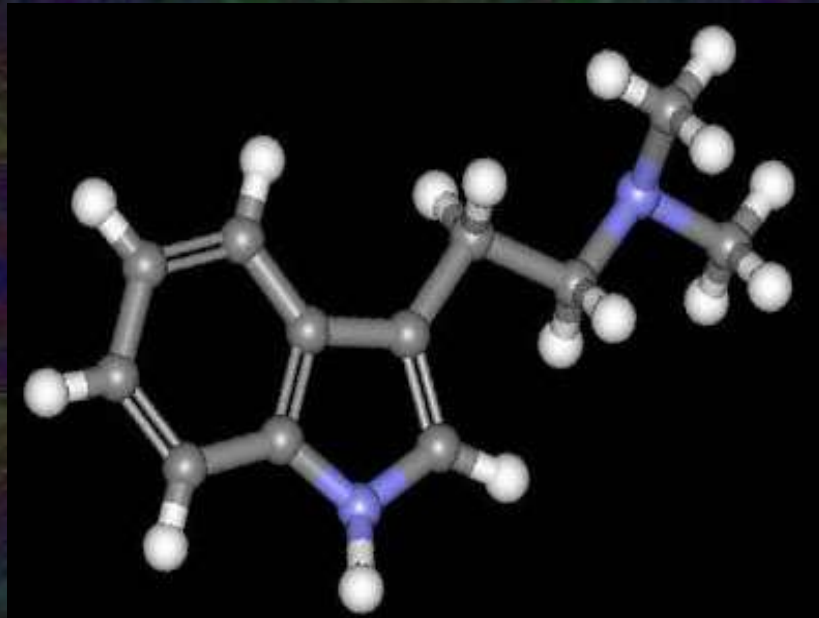
- plant decoction (DMT + MAOI)
- jungle retreats, religious-ritual ceremonies
- controlled setting, religion (community) as protective factor
- lower rate of substance use
- psychotherapy strongly "spiritual" - transcendence
- group experience: expectations, sharing
- immunological effects

psychedelics 2/12:
cannabis

- *Cannabis sativa var. indica*
- THC, CBD, CBDV, ...
- Marinol, Sativex, Bedrocan, Epidyolex
- antiemetic - appetite increasing (cancer, HIV)
- Sclerosis Multiplex muscle rigidity
- neurogenic pain
- antiepileptic
- „Cannabis Cures Cancer”
- antitumor effects: blood vessel growth, CB2, CBD

psychedelics 3/12:
DMT

N,N-dimethyl-tryptamine



- plants, e.g. acacia, reed canary grass; "pineal gland*" -> lung
 - 'Ayahuasca' decoction contains MAOI
 - strongest hallucinogenic effects
- duration: 15 mins (smoked/vaped) to few hours (IV, oral*)

DMT

- N,N-DMT: endogenous sigma-1 receptor ligand!
- HUN: important experiments between 1956-1968
- 'psychotomimeticum', „experimental psychosis”
- schizophrenia, alcoholism
- brain rehabilitation after stroke
- anti-inflammation, immunomodulation
- HUN: Dr Ede Frecska & Dr Attila Szabó (Debrecen)
- i.v. DMT: short/'extended", very strange!

Szabo, A., Kovacs, A., Frecska, E., & Rajnavolgyi, E. (2014). Psychedelic N,N-Dimethyltryptamine and 5-Methoxy-N,N-Dimethyltryptamine Modulate Innate and Adaptive Inflammatory Responses through the Sigma-1 Receptor of Human Monocyte-Derived Dendritic Cells.

psychedelics 4/12: ***ibogaine***

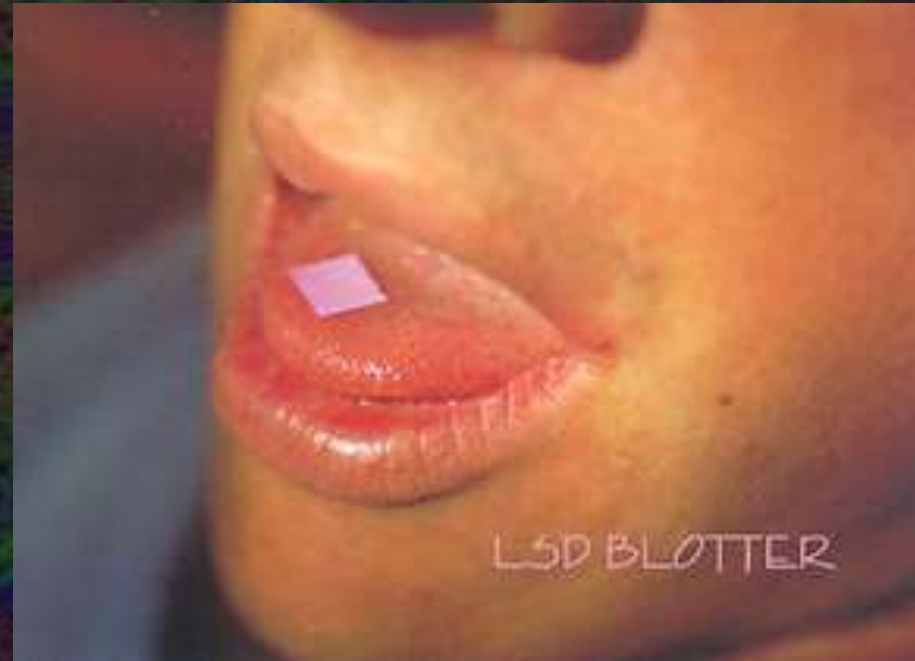
- *Tabernanthe iboga*, Western African shrub
- Bwiti ceremonies (rites of passage)
- one or few times therapy
- stops craving for opioids!
- opiates, non-opiates, stimulants, cannabis
- 60+% abstinence
- 1-2 week retreats (relapse in old environment)

Schenberg, E. E., de Castro Comis, M. A., Chaves, B. R., & da Silveira, D. X. (2014). Treating drug dependence with the aid of ibogaine: A retrospective study.

psychedelics 5/12:
ketamine

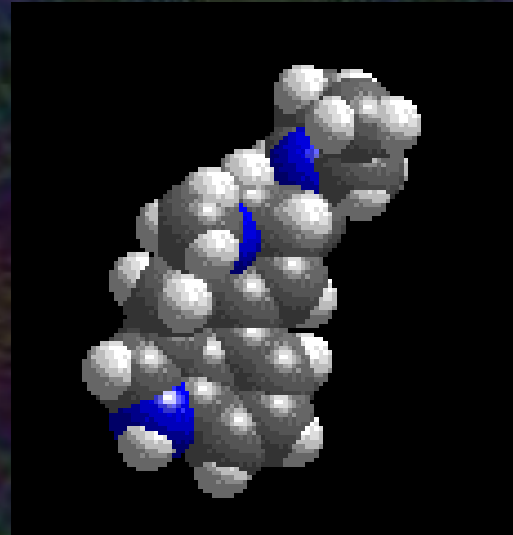
- "horse tranquiliser" :)
- dissociative anesthetic
- separation of body(feeling) and mind
- higher dose: "K-hole"
- recently as antidepressant
- therapy-resistant depression
- in Debrecen: Kenézy hospital
- in Budapest: Semmelweis University
- ketamine-clinics already opened worldwide

psychedelics 6/12:
LSD



LSD

d-lysergic acid diethylamide



- semi-synthetic ergot derivative
- most known and studied hallucinogen
- more than 40000 subjects/patients
- more than 1000 scientific publications
- duration: 8-12 hours

LSD

- revolution in psychiatry?
- serotonin neurotransmitter system
- serotonergic and (later) dopaminergic!
- psycholythic and psychedelic therapies
- 2012 meta-analysis: efficient in treating alcoholism
- end-of-life anxiety

Krebs, T. S., & Johansen, P.-Ø. (2012). Lysergic acid diethylamide (LSD) for alcoholism: meta-analysis of randomized controlled trials

psychedelics 7/12:
MDMA



MDMA

- „empathogen“, „entactogen“
- MAPS: clinical studies (-2023?)
- most clinical studies, results ready!
- PTSD!
- war veterans, victims of sexual violence
- MDMA psychotherapist trainings have started
- therapy series, sessions of a few hours

Carhart-Harris, R. L., Wall, M. B., Erritzoe, D., Kaelen, M., Ferguson, B., De Meer, I., . . . Nutt, D. J. (2013). The effect of acutely administered MDMA on subjective and BOLD-fMRI responses to favourite and worst autobiographical memories.

psychedelics 8/12:
muscimol

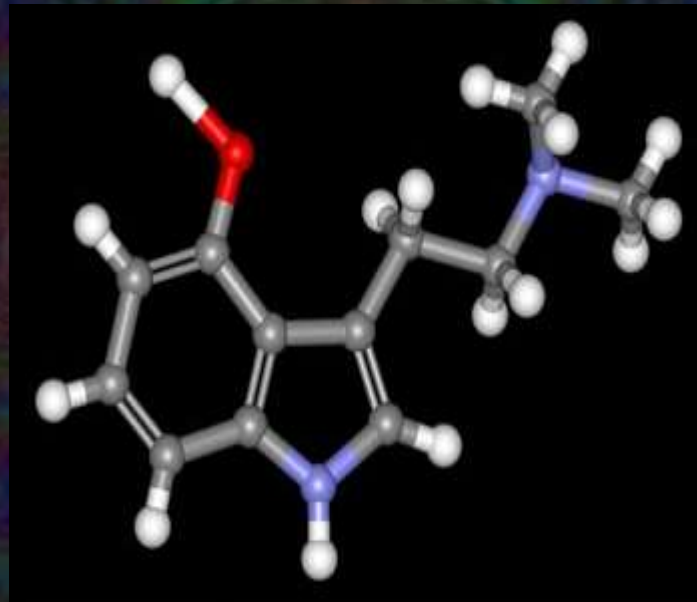
- an active component of fly agaric mushroom (*Amanita muscaria*)
- GABA_A receptor agonist
- decreases self-dosing of alcohol (in animal studies)
- aid to psychotherapy...?

psychedelics 9/12:
psilocybin



psilocybin

4-hydroxy-dimethyl-tryptamine



- Psilocybe mushrooms
- traditional use in Mexico
- duration: 4-6 hours

psilocybin

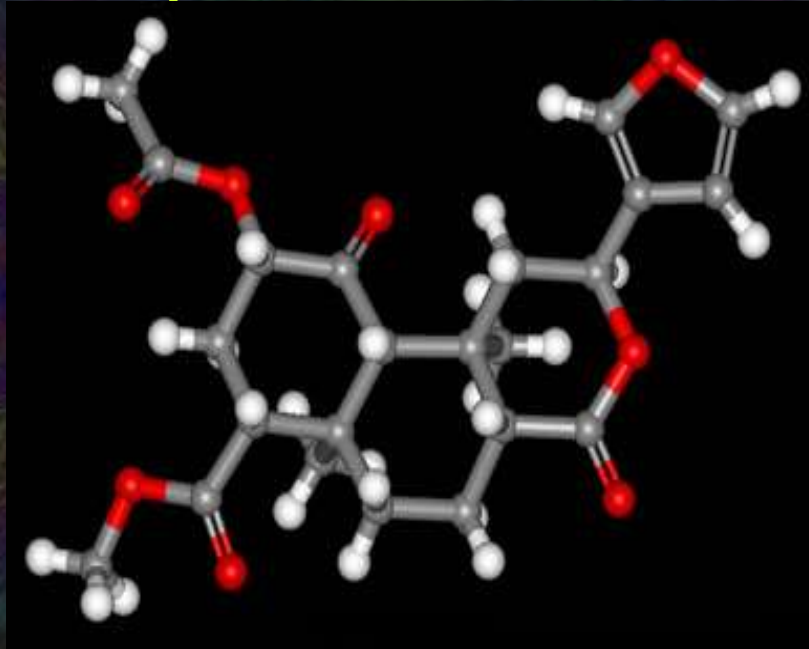
- also serotonergic
- shorter duration, easier to handle than LSD
- effective antidepressant properties!
- promising results in treating alcohol dependence
- successful experiments for tobacco smoking cessation
- OCD symptom alleviation
- hospice: acceptance of death (spiritual trip)

psychedelics 10/12:
salvinorin A



salvinorin-A

(2S,4aR,6aR,7R,9S,10aS,10bR)-methyl-9-acetoxy-2-(furan-3-yl)-6a,10b-dimethyl-4,10-dioxo-dodecahydro-1H-benzo[f]isochromene-7-carboxylate



- cultigen Mexican mint
- Kappa opioid receptor agonist
- changes in space/time/body perception, entity encounters
- duration: a few minutes (smoked) to a few hours (oral chewed)

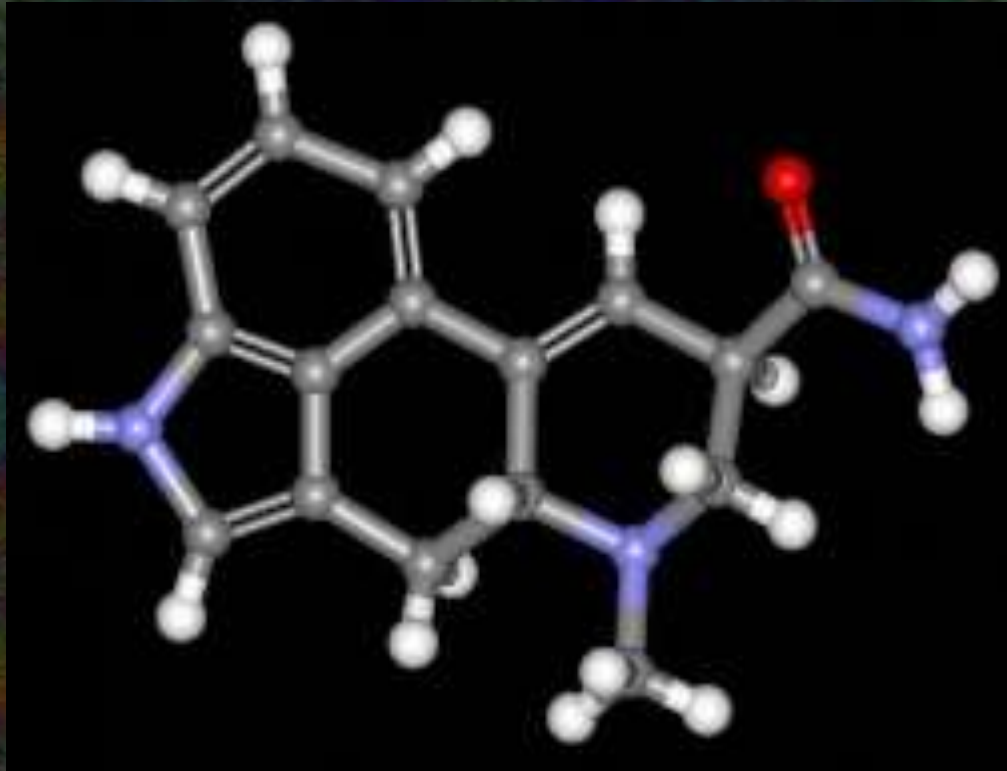
salvinorin-A

- depersonalisation, derealisation, dysphoria
- antiaddictive? (psychostimulants)
- neuroimaging experiment 2020
- consciousness research: space/time/body perception changes
- entity encounters

psychedelics 11/12:
LSA



LSA



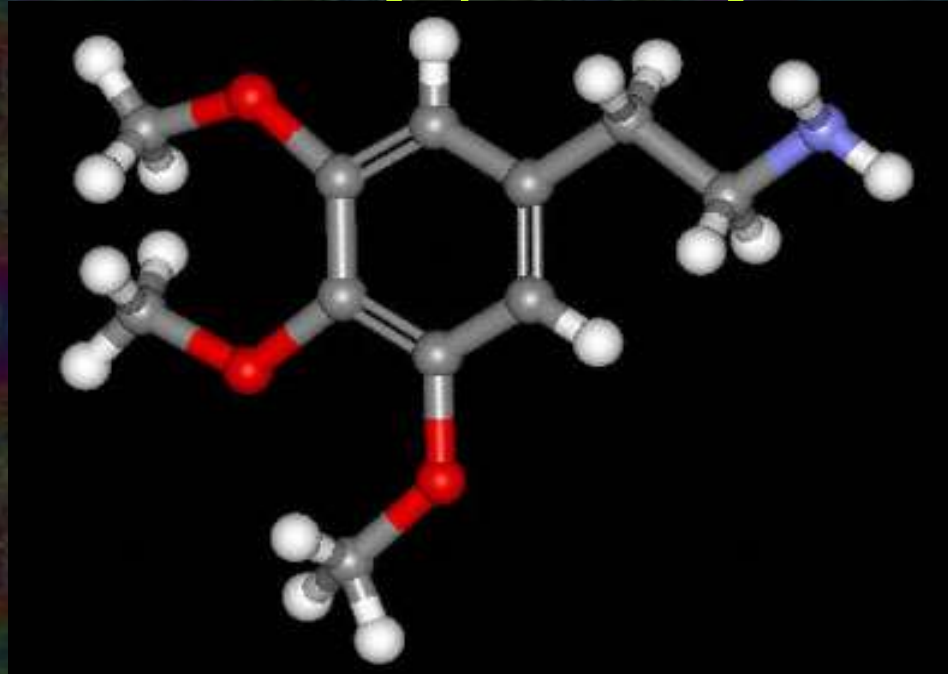
- plant seeds, e.g. morning glory, Hawaiian baby woodrose
- seeds may cause vasoconstriction and nausea
- precursor of LSD
- duration: 4-8 hours

psychedelics 12/12:
mescaline



mescaline

3,4,5-trimethoxy-phenethylamine



- cactus alkaloid (Peyote and San Pedro)
- 250 000 members of Native American Church: sacramental use
- Aldous Huxley: "The Doors of Perception"
- duration: 3-6 hours

[02.1] Psychedelics: Substance Information Summary

**History, physiology, psychology and phenomenology of
psychedelics and related substances:**

ayahuasca

cannabis

DMT

ibogaine

ketamine

LSD

MDMA

muscimol

psilocybin

salvinorin A

LSA

mescaline

QUESTIONS



Course Topics

- altered states of consciousness; psychedelics
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- **psychedelic experience integration**

[02.2] Psychology of Psychedelic Experience

Oct 6



Relative relationship of mystical experience to treatment outcome



Paper	Substance	Treatment	Outcome measure	Mystical exp. correlation size
Bogdanich et al., 2015	psilocybin	Alcohol dependence	Heavy drinking days %	-.85
Garcia-Romeu et al., 2014	psilocybin	Tobacco addiction	Change in craving	-.65
Rothberg et al. 2020	ketamine	Alcohol dependence	Heavy drinking days %	-.62
Griffiths et al., 2016	psilocybin	End of life depression & anxiety	Anxiety (20 6 weeks)	-.59
Ross et al., 2016	psilocybin	End of life depression & anxiety	Depression (20 6 weeks)	-.49
Ross et al., 2016	psilocybin	End of life depression & anxiety	Anxiety (20 6 weeks)	-.42
Davis et al., 2020	psilocybin	Major Depressive Disorder	Depression (20 4 weeks)	-.41
Griffiths et al., 2016	psilocybin	End of life depression & anxiety	Depression (20 6 weeks)	-.36



Stanislav GROF

LSD PSZICHOTERÁPIA

For the Hungarian
Psychedelic Community
Stan Grof

[02.2] Psychology of Psychedelic Experience

TOC

Psychoeducation.

Theories and models.

Set and setting.

Intention and integration.

Deconditioning agents.

Transpersonality and spirituality.

Entheogens.

Trauma processing and regression.

Stanislav Grof and the perinatal matrix.

Metaphysical considerations.

Psychoeducation

Substance use

- **knowledge (info and disinfo)**
- **attitudes (ideology, culture, subculture)**
- **observations (others' behaviours)**
- **own experience (with other substances)**

Introspection!

Harm reduction

World view

Theories and models

Maslow (1943) Theory of human motivation

- satisfying basic needs (unsatisfied will surface!)

Merleau-Ponty (1945) Phénoménologie de la perception

- lived body as medium (phenomenological psychology)

Antonovsky (1961) Salutogenesis model

- preserving of (mental) health vs. treating of illness

Frankl (1963) Search for ultimate meaning

- orientation toward / giving "meaning", (posterior) explanation

Engel (1977) Biopsychosocial model of health

- a person's biological, psychological and soci(et)al factors

Yalom (1980) Existential psychotherapy

- death, freedom, isolation, meaninglessness as life problems

Bishop (2009) Biopsychosociospiritual medicine

- meta-level identification facilitated by transpersonal experience

Müller & Schumann (2011) Drugs as instruments

- learning of an intended behaviour by a psychoactive substance

Heuristic ASC-model

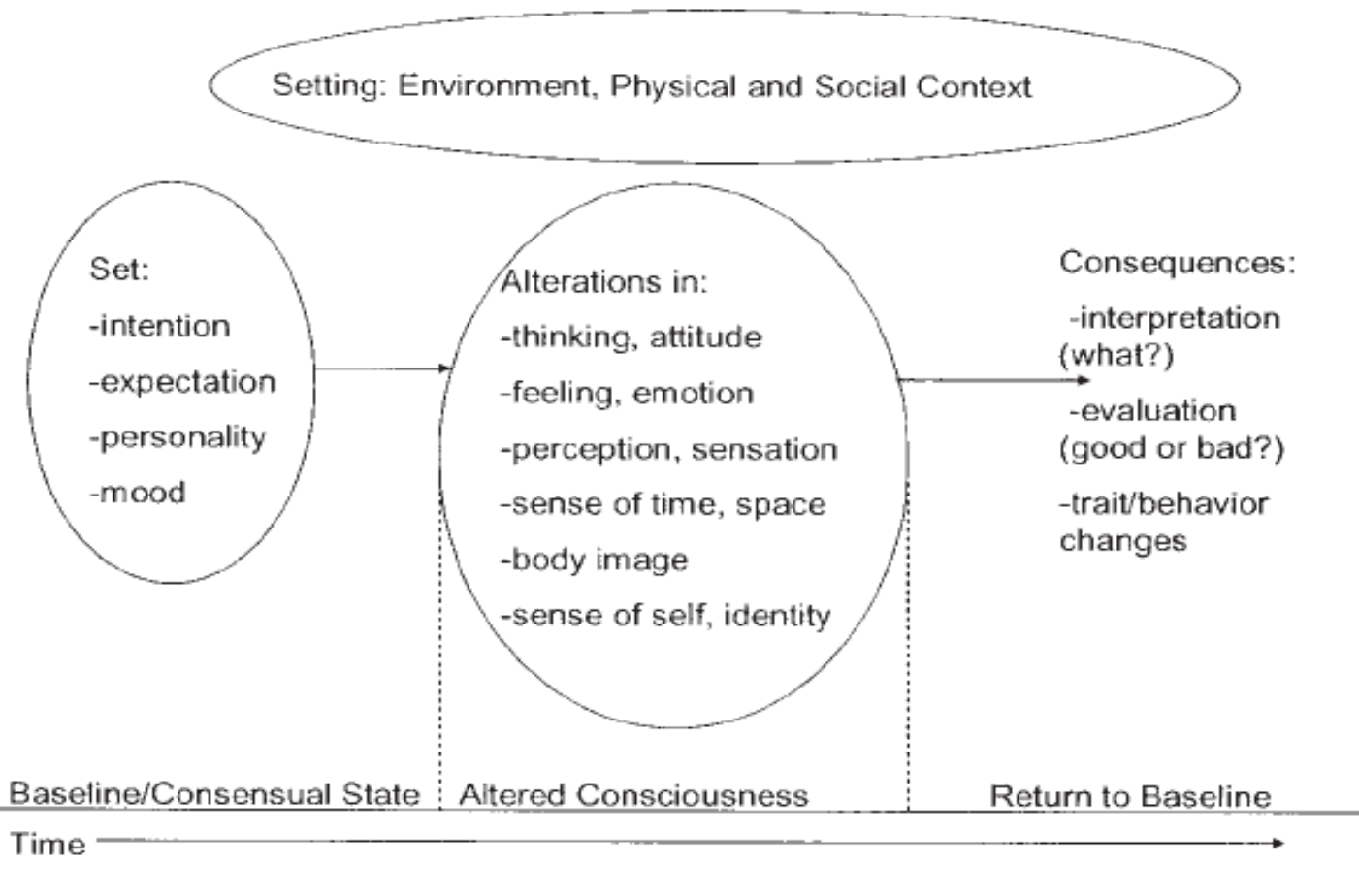


Figure 2.1. General Heuristic Model of Altered States of Consciousness

Set and setting

" In the triad: drug, set and setting, the one that is least important, or most dispensable, is drug."

(Rick Strassman, DMT researcher)

- **extrapharmacological/nonpharmacological factors**
- **Set: personality, expectations, preparations, intention (goal, purpose)**
- **Setting: physical, social, cultural environment**
- **significant differences between same-dose same-substance experiences**
- **basis of placebo and "contact high" effects?**

Zinberg (1984) Drug, set, and setting - the basis for controlled intoxicant use

Hartogsohn (2017) Constructing drug effects: A history of set and setting

Intention and integration

Intention (prior)

- **concept system!**
- **pre-defined / pre-declared expectations**
- **helps at obstructions, gives direction**
- **self-programming of the unconscious mind**

Integration (posterior)

- **framing, re-interpretation, giving meaning, utilisation**
- **expressing, writing down, sharing, talking about - external helper**
- **"bad" experience may be transformed to "useful" experience!**

Deconditioning agents

- "psychointegrator" - "deconditioning agent" (different set and setting)
- **deconditioning: extinction of old habits and imprinted behavioural patterns**
- **can be risky when done improperly!**
- **opens up reintegration possibilities in a proper setting**
- **rites-of-passage ceremonies in native cultures: symbolic death and rebirth**
- **transformation of personality**
- **change of values within a relatively short timeframe**
- **takes years (or not possible) in Western education and psychotherapy**

Transpersonality and spirituality

- upper levels in Maslow's hierarchy of needs
- religion vs. spirituality
- concept of a bigger unit
- transpersonal psychology can handle altered states of consciousness
- direction: upwards / inwards

Christianity: “The kingdom of God is within you.”

Islam: “He who knows himself, knows Allah.”

Judaism: “[He is in everything and everything is within him.]”

Confucianism: “[If you know your own nature well, you know Heaven.]”

Lao Ce: “[In the depth of your soul you will find the One.]”

Buddhism: “[Look into yourself, you are Buddha!]”

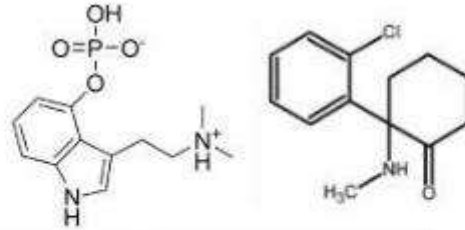
Transcendental / spiritual experiences

- directly experiencing mystical phenomena
- transcendent quality, incomprehensibility, ineffability
- transformation of world view
- elevated view of values
- need for an explanative belief system
- processing of religious-mystical experiences
- creating of a congregation
- spiritual development:
 - experiencing transcendence
 - direct religious experiences
 - altered states of consciousness as instruments
 - progressing on the spiritual path

*Ruck, Bigwood, Staples, Ott, & Wasson (1979) Entheogens
Schultes & Hofmann (1979) Plants of the Gods: Origins of Hallucinogenic Use*

Mystical experiences

Relative relationship of mystical experience to treatment outcome



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Bogunschutz et al., 2015	psilocybin	Alcohol dependence	heavy drinking days %	-.85
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Entheogens

en [εν] „inside”, *theo* [θεος] „god, -ly”, *-gen* [γενος] „create”

- ritual-ceremonial psychoactive substances (sacraments)
- archeological findings, cultural anthropological and ethnobotanical evidences, historical documentations:
 - hindu Vedas: *soma*
 - Meso-American cultures: psilocybe mushrooms
 - ancient Greek Eleusinian mysteries: *kykeon*
 - Siberian shaman: fly agaric

Trauma processing and regression

Traumas 1.: ("others did to me")

mother/father/sibling/child/relative/friend/partner/acquaintance/etc:

died / absent / killed / committed suicide / left / sexually abused / physically abused / misused / ignored / neglected / battered / wounded / terrorised mentally / was unjust / exploited / cheated / stole / got sick / committed to mental institute / convicted to prison / caused an accident / was alcoholic / was addict / was mistreated / outcasted / discredited / etc.

Traumas 2.: ("I did to others")

Traumas 3.: ("I did to myself")

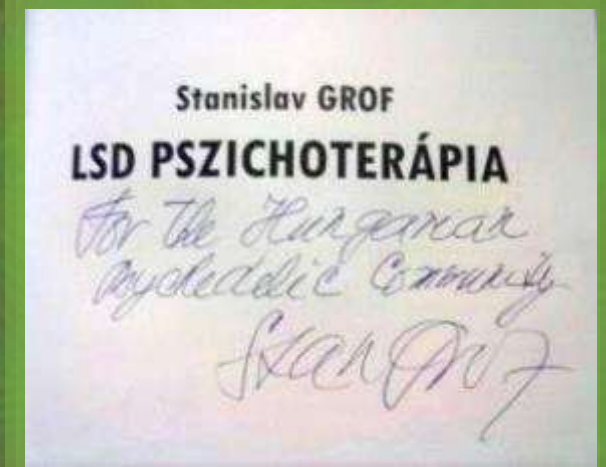
Traumas 4.: (others did to others)

Regression: at what age had I the best time of my life? (time machine question)

Stanislav Grof and the perinatal matrix



- Stanislav Grof (1931-) Czech/American psychiatrist
- LSD-experiments / holotropic breathwork / transpersonal psychology
- perinatal = around birth (before - after)
- traumatic experience patterns related to birth
- basic perinatal matrices (BPM I-IV):
- **unity, disharmony, cooperation, separation [mother]**
 - connected psychopathologic syndromes
 - related activities in Freudian erogenous zones
 - relevant memories from after-birth life
 - phenomenology of LSD sessions



Metaphysical considerations

- **metaphysical = beyond physical (perceptual) "reality"**
- **sources of 'gnosis':**
 - **perception (naïve reality) -> materialism**
 - **deduction/logic/analogies (intellectual)**
 - **faith / transferred knowledge (from authentic source)**
 - **lived experience / subjective experience**
- **client's own model of explanation?**
- **(psychedelic experience can transform it)**

[02.2] Psychology of Psychedelic Experience

Summary

Psychoeducation.

Theories and models.

Set and setting.

Intention and integration.

Deconditioning agents.

Transpersonality and spirituality.

Entheogens.

Trauma processing and regression.

Stanislav Grof and the perinatal matrix.

Metaphysical considerations.

QUESTIONS

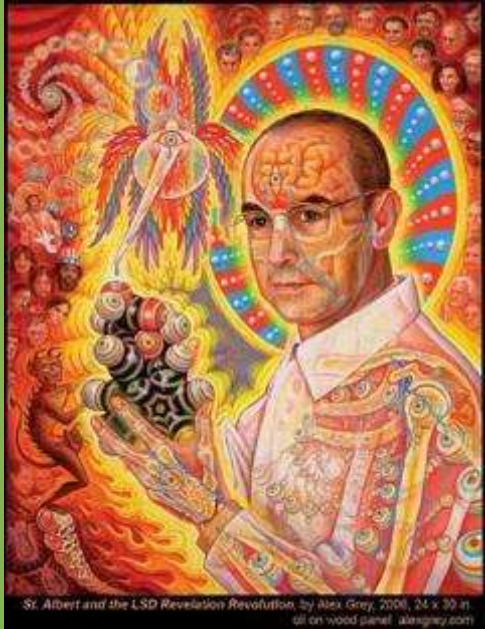


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[02.3] Psychedelics: Research, Experiments, Healing

Oct 6



BECKLEY
FOUNDATION



MAPS
MULTIDISCIPLINARY ASSOCIATION
FOR PSYCHEDELIC STUDIES

Albert Hofmann



1906-2008

[02.3] Psychedelics: Research, Experiments, Healing

TOC

The dawn, golden age, pause and renaissance of psychedelic research.

Early results.

Current research directions.

Psychometric measuring instruments.

Treatments of addictions and dependence.

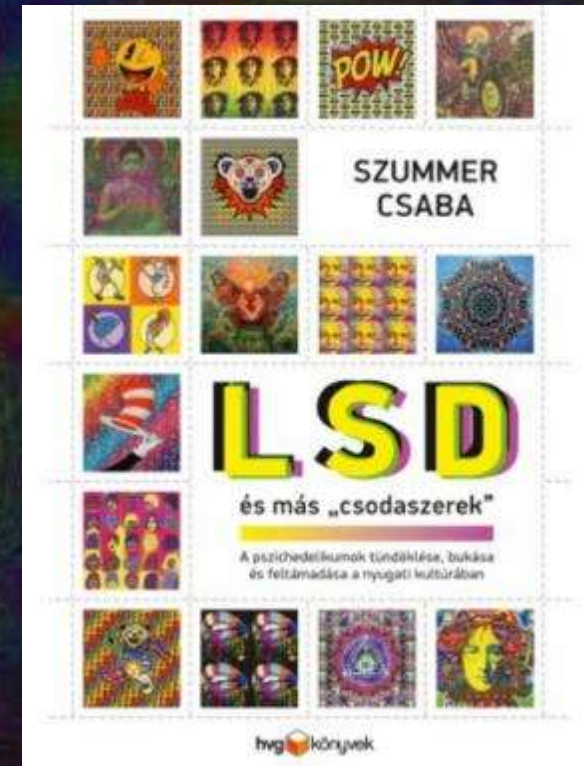
Hospice use: end-life anxiety.

The dawn and golden age of psychedelic research

- (end of) 19th century : peyote/mescaline self-experiments
- 1938/1943 Albert Hofmann & LSD!
- 1947- Sandoz LSD (free for researchers, recommended for psychiatrists)
- 1949- in the USA 'psychotomimetic'; later discovery of serotonin
- '50s :LSD-psychotherapy (treating alcoholism and depression)
- 1953-1973 C.I.A. project MKUltra : LSD, electroshock, hypnosis, torture
- 1956- Hungary: LSD, DET, DMT @ psychiatry (Stephen Szára)
- end of '50s: psilocybin isolation + synthesis (Albert Hofmann)
- '60s: Timothy Leary (1920-1996) @ Harvard psychology - LSD!
- 1960- Alexander 'Sasha' Shulgin: synthesis of 200+ novel psychoactives
- 1960-67 Stanislav Grof @ Prague: psychiatry research, 4000 LSD Ss

The pause of psychedelic research

- '60s: youngsters, hippies, revolting, counterculture, anti-war etc.
- overpopularising, moral panic, repressive USA drug policies
- 1967 Timothy Leary: 'turn on, tune in and drop out'
- 1966/68/70 USA, 1971 UN psychotropic convention
- '70s and '80s: Nixon (+ Reagan) drug war
- impossible research (financing, career, materials)
- NIDA-sponsored animal research, deterrence
- (meanwhile in Switzerland: psycholytic therapies!)
- (meanwhile in USA: MDMA-psychotherapy 1977-85)

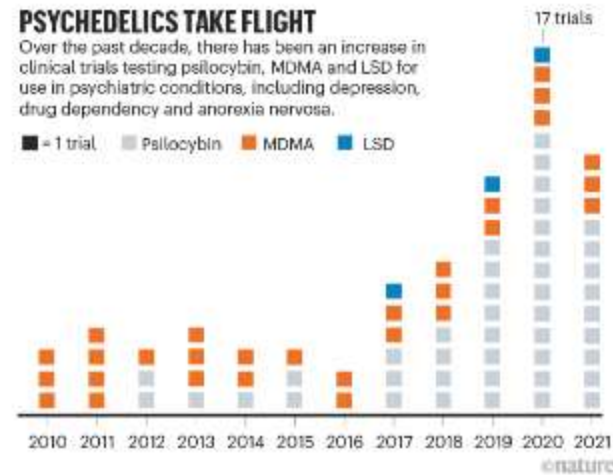


The renaissance of psychedelic research

- **1986- MAPS: MDMA as medicine**
- **1990- Rick Strassman DMT studies (USA)**
- **2000- Johns Hopkins university (USA) psilocybin**
- **international conferences: 2010- MAPS (USA), 2010- ICPR (NL), 2011 MTPK (HU), 2011- Breaking Convention (UK), 2016- Beyond Psychedelics (CZ), ...**
- **Germany: Torsten Passie MDMA**
- **Switzerland: Zürich (+ Basel)**
- **UK: Beckley -> Imperial (David Nutt), neuroimaging studies**
- **psychedelic (research)societies/associations**
- **ketamine as antidepressant**

Psychedelic research institutes

- **1986- Multidisciplinary Association for Psychedelic Studies (MAPS) (+PBC)**
- **Beckley Foundation (UK) (+ Beckley Psytech Ltd.)**
- **Heffter Research Institute (USA)**
- **University of Zurich (CH) Vollenweider lab**
- **+ Imperial (UK), Johns Hopkins (USA), Basel (CH) + companies (USD 2 Bn)**



Early results

- **LSD 'model psychosis' -> personnel's self-experiments as training**
- **unsuccessful for treating depression, shock therapy**
- **increases re-living (regression)**
- **assisted approach: resolving blocks, hindrances, stagnations during the psychotherapeutic process**
- **experience approach: preparation, experiencing, integration**
- **combined with hypnosis ('hypnodelic therapy')**
- **alcoholism: LSD peak experience is a successful for abstinence (AA)**
- **treating childhood schizophrenia with LSD and psilocybin**
- **cf. Daath.hu » Könyvtár » Tanulmány » Gary Fisher » original text**

Current research directions

- **clinics: ketamine » MDMA » psilocybin » LSD, ayahuasca, ibogaine**
- **+ everything else: DMT, 5-MeO-DMT, fly agaric mushroom**
- **+ new analogs! (also non-psychoactives!)**



Psychometric measuring instruments

APZ scale

- subjective experience reports, independent judges/assessors
- measuring the dimensions of ASC

1. Oceanic Boundlessness (OB)

derealisation and Ego-dissolution, increased sensation, positive basic mood, as during a mystical experience

2. Anxious Ego Dissolution (AED)

thought disturbances, Ego-dissolution, losing autonomy and self-control, agitation, anxiousness, paranoid feelings of emergency

3. Visionary Restructuralization (VR)

auditory and visual illusions, hallucinations, synaesthesia, notable changes in the meaning of various perceptions

Treatments of addictions and dependence

- **biological/neuropharmacological mechanisms (w/o therapy?)**
 - **psilocybin (USA; smoking cessation)**
 - **ayahuasca (Canada: Gabor Maté!)**
 - **ibogaine (Mexico + New-Zealand: opioids)**
 - **ketamine (Russia: heroin)**

Hospice use: end-life anxiety

- **alleviation of end-life anxiety in final stage cancer patients**
- **Johns Hopkins (USA) psilocybin**
- **New York University (USA) psilocybin**
- **Switzerland (LSD)**



[02.3] Psychedelics: Research, Experiments, Healing Summary

The dawn, golden age, pause and renaissance of psychedelic research.

Early results.

Current research directions.

Psychometric measuring instruments.

Treatments of addictions and dependence.

Hospice use: end-life anxiety.

QUESTIONS



Thank you for your attention!



Next lecture:

[03.1] Psychedelic-Assisted Psychotherapies: Theory

[03.2] Psychedelic-Assisted Psychotherapies: Practice

Oct 27 Friday 13:15