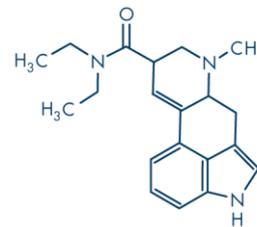


IDH3035 U32 The Psychedelic Renaissance Course Syllabus



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A. Course Description

Psychedelics are natural and synthetic psychoactive compounds which cause “mind manifesting” experiences (literally the Greek definition for the words *psyche* and *delóo*). Characterizations of the psychedelic experiences include distortion of sensory input and thought processes in ways that are often intense, creating sinuous boundaries, a hyperassociative mind and sometimes providing mystical experiences.

Evidence of natural psychedelic use goes back thousands of years, while synthetic psychedelia began with the synthesis of mescaline in the late 19th century, the notable synthesis of LSD in the mid 20th century and subsequent new compounds since. In 1971, President Richard Nixon enacted the Controlled Substance act creating a scheduling system for drugs, ultimately making psychedelics illegal. Though the CSA was a United States legislative act, it carried internationally. Consequently, the study and practice with psychedelic compounds in public or in an academic setting had been mostly absent for much of the later 20th century.

But there has been a paradigmatic shift in the views of these compounds the last 20-30 years. This couldn't be more evident than with legislation passed just in the last 4 years including bills in cities and states to decriminalize mushrooms (Santa Cruz, Oakland and Denver in 2019, Washington DC and the state of Oregon in 2020, Ann Arbor, MI in 2021), decriminalize other naturally occurring psychedelics (Somerville, Northampton, and Cambridge Massachusetts in 2021), and legislation to allow psychedelic-assisted services for those seeking treatment for mental health struggles in the state of Oregon (2020) and in Colorado (2022).

In this course, we delve into the psychedelic space, starting with the basics of their chemical structures, pharmacology and neurobiology as we understand them today. We will review their historic use, tracing back as far as thousands of year and then following through with an in-depth view of the 20th and 21st century psychedelic history.

One common thread will be an understanding that psychedelic compounds are not a *new* thing. They are getting a LOT of attention right now. Is this because mankind is finally recognizing the true value of

psychedelics as a cure for mental health problems?¹ Or are we in some sort of psychedelic hype bubble that could pop soon and potentially leave society with greater consequence?²

There is *a lot* to cover! This will be the true epitome of a multidisciplinary course covering chemistry, neurobiology, ethnobotany, public policy, history, philosophy, spirituality, psychology, anthropology, research methods and design, and more. We will have a mix of assignments intended to ensure that students are keeping up with all the readings involved, engaged in discussions, leading discussions, gaining critical thinking skills in reading and presenting scientific literature, and thinking beyond to what the future may hold for this field.

B. Pre and Co-requisites

Though there are no formal pre-requisites it is suggested that students have completed the organic chemistry sequence CHM2210/2211.

C. Learning Outcomes

- Review the history of plant medicines from antiquity through today
- Structurally identify psychedelic compounds chemically and understand the motifs that are critical to their structures
- Investigate serotonin (5-hydroxytryptophan, 5-HT) receptors and in particular the 5-HT_{2A} which is the primary target for serotonergic psychedelics
- Explain the agonist/antagonist behaviors of compounds and how they have been used to understand the serotonergic system
- Review the existing neurobiological models for the psychedelic experience
- Critically investigate the recent research on therapeutic usage of psychedelic compounds in areas of trauma, end of life care, addiction, headaches and more
- Historically understand why policies were created in scheduling the compounds as class 1
- Identify the growing psychedelic industry specifically looking at the leading companies and what they are doing
- Prepare you to be able to critically decide whether the value that is being proposed in the scientific community is indeed viable or whether it is a veil for something else.

D. Required Materials for course

1. [*American Trip: Set, Setting, and the Psychedelic Experience in the Twentieth Century*](#) by Ido Hartogsohn, *The MIT Press*, 2020. ISBN 978-0262539142
2. [*Your brain on psychedelics: How do psychedelics work? Pharmacology and neuroscience of psilocybin, DMT, LSD, MDMA, mescaline*](#) by Genis Ona *Psychonautguides.com*, 2022. ISBN 9788418943348

Many other primary research articles, news articles and videos will be used and made available on canvas. You will find the listed readings, videos and podcasts in the calendar in section G. In section H of the syllabus, you will find a list of research articles. For the journal club assignment, you are encouraged

¹ Georgiou, A. "Can Psychedelics Cure? Science Is on the Verge of Finding Out" *Newsweek* 10/19/22
<https://www.newsweek.com/can-psychedelics-cure-science-verge-finding-out-1753312>

² Yaden DB, Potash JB, Griffiths RR. Preparing for the Bursting of the Psychedelic Hype Bubble. *JAMA Psychiatry*. 2022;79(10):943–944. doi:10.1001/jamapsychiatry.2022.2546

to pick an article from 2010-current. If you wish to use an article not found in this syllabus, you may do so pending approval from the professor.

Students will be encouraged as well to use the website EROWID for many references in this course:

<http://www.erowid.org>

E. Grading Scheme

Students will be graded with the following percentages:

1. Quizzes	20%					
2. Weekly Reflections and HW	20%					
3. Discussion Leader		20%				
4. Analysis paper			10%			
5. Journal club presentation				20%		
6. Participation					10%	
7. (Extra Credit): Cannadelic						2%
<hr/>						
Total	20% + 20% + 15% + 15% + 20% + 10% + 2% = 102%					

Quizzes (20%)

There will be 2 midterm quizzes. The dates for the quizzes are on the calendar. You will have the entire class time to take the quiz. Quizzes will be ~10 questions and will cover weekly material and readings. Most questions will be short answer but may include structural drawings, data analysis, or essays.

Weekly reflections and HW (20%)

Weekly reflections: Each Thursday night (starting week 1) you will submit a reflection of 500 (or more) words on canvas that highlights critical evaluation of the readings, videos, in class discussions, and material for the week.

Suggested ideas for demonstrating understanding could include (but are not limited to):

- Addressing an unanswered question from class time by finding outside resources to support (include your references!)
- Providing argument either to support or refute theories/ideas presented in the readings using evidence and logic (include your references!)
- Dissecting research design and methodology
- Assessing variables in the readings/experiments discussed such as population size and demographics
- Thinking about the chemistry or biology and evaluating of chemical structure similarities within compounds discussed
- Critique potential errors or conflicts in the work, whether this reading is confirmed elsewhere (might want to look things up)
- Evaluating funding sources, historical context, international collaborations, do conclusions match evidence, is there sufficient evidence, length of time of studies, and/or anything that

shows genuine understanding of the readings and class material being presented. (again, include your references!)

Your weekly reflection will be graded on a scale of 1-5 based on clarity of your ideas, comprehension of material, application to the course materials, and overall readability.

Homework assignments: throughout the semester you will have assignments to submit through canvas which will include: an info slide on a psychedelic of your interest, an info slide on a 20th century psychedelic researcher and an info slide on a 21st century psychedelic researcher. The grade for the HW assignments will also be based on a scale of 1-5, with a 5 being the highest score for an excellent submission with clarity, nicely presented, and well developed.

Class discussion/presentation lead (15%) (Honors portfolio material)

Working in groups of 3, you will choose one day from the course calendar to present the material and lead the class discussion. On that chosen day, the Discussion Leaders will have read and analyzed the daily reading/video material, and prepared a 20-minute presentation to give to the class, and then lead the class discussion (i.e., asking three or more discussion questions to classmates and responding to classmates' questions).

While the assigned material will be the main topic of focus in the discussion, the Discussion Leaders will be the day's expert on the topic matter and will be tasked with providing extra content/analysis for their classmates by presenting, explaining, and interweaving any supplementary material into a broader discussion.

You will end your discussion with questions for your classmates. Some examples might be: Why is this of interest? What does this add to the assigned reading/s? Are any arguments presented opposed or convergent? How can I best communicate this? How can this subject be tied to the broader focus of the course, or to adjacent thematic topics? It is up to the student to be insightful and creative in their presentation and explanation of both the assigned and supplemental materials. You may use video clips as part of your presentation if it helps, but please keep them short.

Presentations should follow this general format:

- ~10-12 PowerPoint slides, with the first slide being a summary of the overall topic under consideration
- Discussion of the important concepts/theories of the reading/s—if the concepts are new, define and explain them; if no new concepts exist, connect the reading/s with prior readings' concepts
- Presentation and description of any quotes or particular sections of interest
- A summary of the reading
- 3-5 broad discussion questions (see above for general questions, though you should develop a few of your own)

Analysis Paper (15%) (Honors portfolio material)

Prior to presenting your material to the class, members of your discussion leading team will INDEPENDENTLY turn in a 1,000 word written analysis of the chosen material (assigned and supplementary) the day before it is to be presented in class. One paper per group.

The analysis paper should include concise summary of the readings and any pertinent questions intended to drive class discussion. You may also include your own answers to the questions you intend to pose, and hypothesize how the class might respond. The analysis paper is intended to help you formulate your presentation ideas a bit more clearly and to demonstrate a deep understanding of this material.

A suggested process by which the discussion and analysis paper should be done is as follows:

- 1) Read and watch the assigned material
- 2) Develop your presentation.
- 3) If you need more background to support your slides, do some additional supplementary reading
- 4) Finalize your presentation
- 5) Write your analysis paper based on what you read, what you additionally research and after you have put together your presentation
- 6) If after you have written the analysis paper you have some other questions or ideas, you may fine tune your presentation again before presenting to the class.

Journal club (20%) (Honors portfolio material)

One of the major learning outcomes of this course is to investigate psychedelic research that is being done. At the end of the semester you will team up in groups of 3 and you will present a recent research article on psychedelics. You may use the list of articles found in the syllabus (2010- current) or you may look up something on your own.

You will provide a 15 min presentation where you will discuss:

- The main point of the paper
- The research methodology used (which may include any constructive criticisms along with explaining what was done)
- Results and analysis
- Reception of the work from journals, news sources, etc.
- Other work being done by that research group

The class will have been tasked with reading the papers to be presented prior to coming to class and will follow along and be graded on the types of questions that are asked by the rest of the class.

Participation (10%)

Like so many of your honors courses, this class **DEPENDS** on class discussions and involvement. Therefore you will be graded for your involvement in the class will be evaluated, so it will be advantageous to be in class on time, every time and to be involved in class discussions or assignments.

Extra Credit: Cannadelic Miami (2%)

Attend Cannadelic Miami the weekend of February 2-4 and interview 2 people about their role/position in the psychedelic space. Questions to ask: How did you get started in the psychedelic space? What are the greatest benefits of psychedelics for society? What are the greatest risks to society? Do you feel your role in the psychedelic space is helpful to certain causes and why? What would you want young people who are interested in this space to know about it?

You will be able to submit what you find out about them to canvas. You can either take a video of your interview with them or you can write down what you talked about, but if you do not do a video, please do at least take a selfie with them at the event so I can see that you were there.

F. Tentative Grading Scale

90-100 A
80-89 B
70-79 C
60-69 D
0-59 F

(plus and minus may be awarded at or near the cut offs)

G. Class schedule

(Please note: This is a tentative schedule subject to change with notice.)

Week 1:

Monday January 9th: **Introduction/Overview of the Modules, Epistemology & Psychedelic education**

Read: Syllabus (emailed and on canvas)

Watch: [What is Epistemology?](#) Kent Löfgren, YouTube

Wednesday January 11th: **Module 1: Chemical/Pharmacological overview of Psychedelics: Pharmacology primer**

Read: Chapter 1, p.35-68 *Your Brain on Psychedelics*, Genis Ona

Watch: [Introduction to Pharmacology](#), Professor Dave, YouTube

Week 2:

Monday January 16th: **NO CLASS MLK DAY**

Wednesday January 18th: **Classification/Overview of the 6 major groups of psychedelics: Tryptamines (i.e. Psilocybin, DMT), Ergolines (i.e. LSD), “new” tryptamines (i.e. 5-MeO-DIPT, 4-AcoMET)**

Read: Chapter 2, p. 69-73, 75 *Your Brain on Psychedelics*, Genis Ona

Chapter3. p. 85-97, 100-102. *Your Brain on Psychedelics*, Genis Ona

Mind Fixers, Anne Harrington, p.145-160

EROWID.org, review the pages on Psilocybin, DMT, LSD

Watch: [Categorizing Drugs: Classes, Names, and Schedules](#), Professor Dave,

[The Serotonin 2A receptor pt.1: brain effects | Psychedelic Brain Receptor](#),

Manesh Girn

Week 3:

Monday January 23rd: **Classification/Overview of the 6 major groups of psychedelics: Phenethylamines (i.e. mescaline, MDMA, 2C-B)**

Read: Chapter 2, p.74, *Your Brain on Psychedelics*, Genis Ona
Chapter 3, p.98-99, *Your Brain on Psychedelics*, Genis Ona
EROWID.org, review the pages on MDMA, 2C-B, 25i-NBome

Watch:

[Mescaline: A Global History](#), Mike Jay, Breaking Convention (2019)
[Ann and Sasha Shulgin discussing Phenethylamines and Tryptamines](#)
[Deadly Highs](#) CNN Report in 2014

Wednesday January 25th: **Classification/Overview of the 6 major groups of psychedelics: NMDA receptor agonists (i.e. ketamine, PCP) and atypical psychedelics (i.e. iboga, salvia) END: Module 1**

Read: Chapter 2, p.75-84, *Your Brain on Psychedelics*, Genis Ona
Chapter 3, p.100-11, *Your Brain on Psychedelics*, Genis Ona
EROWID.org, review the pages on ketamine, PCP, iboga, salvia

Watch:

[Ketamine \(2 Min-Neuroscience\)](#)
[PCP and Ketamine lecture.](#) Daniel Kochli

Listen: [Drug Science Podcast: Ibogaine with Deborah Mash](#)

Week 4:

Monday January 30th: **Module 2: Early evidence of plant medicines**

Read: Samorini, G. (2019) Oldest Archaeological Data Evidencing the Relationship of Homo Sapiens with Psychoactive plants. *Journal of Psychedelic Studies* 3(2) p-63-80
Merlin, M.D. (2003) Archaeological evidence for the tradition of psychoactive plant use in the old world *Economic Botany* 57(3) p295-323

Watch: [Giorgio samorini – The archaeology of psychoactive plants. A world wide look](#)
Breaking Convention 2019

Wednesday February 1st: **The Eleusinian Mysteries**

Read: Ruck A, Hoffman A, Wasson G. *The Road to Eleusis*, chapters 2 & 3, appendix
Muraresku, B. *Immortality Key*, Chapter 7

Watch: [Joe Rogan Experience #1543 with guests Brian Muraresku & Graham Hancock.](#)
October 2020. Only need to listen/watch 0:00- 1hr 20min.

Week 5:

Monday February 6th: **Indigenous Plant medicine tradition: foundations**

Read: Devereaux, P. The Long Trip, Chapter 3

Wednesday February 8th: **Indigenous Plant medicines: Today, END: Module 2**

Read: UMIYAC (Unión de Médicos Indígenas Yageceros de la Amazonía). 2000.

“The Beliefs of the Elders: Code of Ethics for Indigenous Medicine of the Colombian Amazon.”

Feinberg, Ben. 2018. “Undiscovering the Pueblo Mágico: Lessons from Huautla for the Psychedelic Renaissance.” Pp. 37–54 in Plant Medicines, Healing and Psychedelic Science: Cultural Perspectives,

Week 6:

Monday February 13th: **QUIZ 1**

Wednesday February 15th: **Module 3: 20th century Psychedelia: Albert Hoffman and the Synthesis of LSD, extraction of psilocybin, the Psychotomimetic model**

Read: American Trip, Introduction and Chapter 1

Watch: [The Beyond Within](#) (1986)

Week 7:

Monday February 20th: **MK Ultra**

Read: American Trip, Chapter 2

Watch: [ABC Special Report: Mission Mind Control](#) (1979)

Footage showing US and British soldiers getting dosed with LSD in government-sponsored tests (1958, 1964)

Wednesday February 22nd: **Shift from psychotomimetic to psychedelic, potential for therapy, Aldous Huxley and mescaline, Humphrey Osmond and the term "psychedelic", Betty Eisner and Sidney Cohen, Stan Grof**

Read: American Trip Chapter 3

Watch: [1950s clip in which Dr. Sidney Cohen interviews a female research subject who has ingested LSD.](#)

Week 8:

Monday February 27th: **SPRING BREAK (NO CLASSES)**

Wednesday March 1st: **SPRING BREAK (NO CLASSES)**

Week 9:

Monday March 6th: **Timothy Leary, The Harvard Psilocybin Project, Good Friday Experiment, Concord Prison Experiment, Set and Setting, Psychedelic Evangelism, The Controlled Substance act of 1970**

Read: American Trip Chapter 4

Watch: Psychedelic mysticism, The Good Friday Experiment and Beyond

[Timothy Leary, Al Hubbard, Oz Janiger, Humphry Osmond, Sidney Cohen party 1979 video](#)

Wednesday March 8th: **The researchers who never stopped the work, Bill Richards (Spring Grove Laboratory) Sasha Shulgin, David E Nichols , the 70s, 80 and 90s, END: Module 3**

Read:

In Class: viewing of Dirty Pictures

Week 10:

Monday March 13th: **Module 4: 21st century Psychedelic Renaissance: Rick Strassman and DMT**

Read: Strassman RJ (1991) Human Hallucinogenic Drug Research in the United States: A Present Day Case History and Review of the Process

Strassman RJ, Qualls CR, Uhlenhuth EH, Kellner R. (1994) Dose-Response Study of N,N-Dimethyltryptamine in Humans: I. Neuroendocrine, autonomic, and cardiovascular effects Arch Gen Psychiatry. 51(2)

Watch: [Rick Strassman presentation at Horizons 2010](#) (“Old Testament Prophecy – A Western Model of the Psychedelic Experience”)

Wednesday March 15th: **Multidisciplinary Association of Psychedelic Studies and Rick Doblin**

Read: review the MAPS.org webpage

Watch: [Rick Doblin, TED2019, The future of psychedelic-assisted psychotherapy](#)

Week 11:

Monday March 20th: **Roland Griffiths and the Johns Hopkins Center for Psychedelic and Consciousness Research**

Read: Roland Griffiths (2006) Psilocybin can occasion mystical-type experiences having substantial and sustained personal meaning and spiritual significance, Psychopharmacology

Watch: [Roland Griffiths, TedXMidatlantic 2009, Psilocybin and Experimental Mystical Experience](#)

Wednesday March 22nd: **The changing psychedelic legal landscape, END: Module 4**

Read: [Denver, Colorado, Initiated Ordinance 301, Psilocybin Mushroom Initiative \(May 2019\)](#), ballotpedia

Measure 109, Oregon Psilocybin Services.

<https://www.oregon.gov/oha/ph/preventionwellness/pages/oregon-psilocybin-services.aspx>

Q&A with Mason Marks on New Psychedelics Law and Regulation Initiative, July 2021

Week 12:

Monday March 27th: **JOURNAL CLUB PRESENTATIONS**

Read: Articles TBA and posted online

Wednesday March 29th: **JOURNAL CLUB PRESENTATIONS**

Read: Articles TBA and posted online

Week 13:

Monday April 3rd: **JOURNAL CLUB PRESENTATIONS**

Read: Articles TBA and posted online

Wednesday April 5th: **JOURNAL CLUB PRESENTATIONS**

Read: Articles TBA and posted online

Week 14:

Monday April 10th: **Module 5: The Psychedelics Industry and Ethics: Boom in growth in the last decade**

Read: Phelps J, Shah RN, Lieberman JA. The Rapid Rise in Investment in Psychedelic, Cart Before the Horse. JAMA Psychiatry. 2022;79(3):189–190. doi:10.1001/jamapsychiatry.2021.3972

Lee, Yeji Jesse (2022) What to know about the booming psychedelics industry, where companies are racing to turn magic mushrooms and MDMA into approved medicines. *Business Insider*

Listen: [Shayla love: The High Stakes Game of Psychedelic Capitalism](#). Soundcloud

Wednesday April 12th **Psychedelic Ethics**

Read: Langlitz et. Al. (2021) Moral Psychopharmacology Needs Moral Inquiry: The Case of Psychedelics. *Frontiers of Psychiatry*
<https://doi.org/10.3389/fpsyt.2021.680064>

Listen: Cover Story, Power trip. Podcast

Week 15:

Monday April 17th: **Quiz 2**

Wednesday April 19th : **Final wrap up**

H. Primary source bibliography collection for course

The following are published articles on psychedelics from popular scientific journals going as far back as 1799 and as recent as 2023. For your journal club presentations please consider a paper from this list that is more recent than 2010. If you want to look up an article on your own, you may.

Before 1940:

- Brande E (1799) Mr. E. Brande on a poisonous species of Agaric. *The Medical and Physical Journal* 3:41-44.

1940-1969:

- Gaddium JH, Picarelli ZP (1957) Two kinds of tryptamine receptor. *Br J Pharmacol Chemother.* 12:323-328.
- Woolley DW, Shaw E (1957) Differentiation between receptors for serotonin and tryptamine by means of the exquisite specificity of antimetabolites. *J Pharmacol exp Ther.* 121(1):13-17
- Cohen S (1960) Lysergic Acid Diethylamide: Side effects and complications. *Journal of Nervous and Mental Diseases* 130:30-40.
- Ludwig AM (1966) Altered States of Consciousness. *Arch Gen Psychiatry* 15:225-234
- Shulgin AT, Sargent T, Naranjo C (1969) Structure-activity relationships of one ring psychotomimetics, *Nature* 221:537-541

1970-1999:

- Aldous FA, Barrass BC, Brewster K, Buxton DA, Green DM, Pinder RM, Rich P, Skeels M, Tutt KJ (1974) Structure-activity relationships in psychotomimetic phenylalkylamines, *J. Med Chem* 17:1100-1111.
- Nichols DE, Pfister WR, Yim GK (1978) LSD and phenethylamine hallucinogens: new structural analogy and implications for receptor geometry. *Life Sci* 22:2165-2170
- Nichols, DE (1981) Structure-activity relationships of phenethylamine hallucinogens. *J Pharm Sci* 70:839-849.
- Hermle L, Funfgeld M, Oepen G, Botsch H, Borchardt D, Gouzoulis E, Fehrenbach RA, Spitzer M (1992) Mescaline-induced psychopathological, neuropsychological and neurometabolic effects in normal subjects: experimental psychosis as a tool for psychiatric research. *Biol Psychiatry* 32; 976-991.
- Vollenweider FX, Leenders KL, Scharfetter C, Antonini A, Maguire O, Missimer J, Angst J (1997a) Metabolic hyperfrontality and psychopathology in the ketamine model of psychosis using positron emission tomography (PET) and [F-18]fluorodeoxyglucose (FDG) *Eur. Neuropsychopharmacol* 7:9-24

- Vollenweider FX, Leenders KL, Oye I, Hell D, Angst J (1997b) Metabolic hyperfrontality and psychopathology in the ketamine model of psychosis using positron emission tomography (PET) and [¹⁸F]fluorodeoxyglucose (FDG) Eur. Neuropsychopharmacol 7:9-24
- Schmid Y, Enzler F, Gasser P, Grouzmann E, Preller KH, Vollenweider FX, Brenneisen R, Muller F, Borgwardt S, Liechti ME (2015) Acute effects of LSD in healthy subjects. Biol Psychiatry 78:544-553

2000-2009:

- Marek GJ, Wright RA, Schoepp DD, Monn JA, Aghajanian GK (2000) Physiological antagonism between 5-hydroxytryptamine(2A) and group II metabotropic glutamate receptors in prefrontal cortex. J Pharmacol Exp Ther 292:76-87.
- Vollenweider FX, Meyer GA (2001) A systems model of altered consciousness: integrating natural and drug-induced psychoses. Brain Res. Bull 56: 495-507
- Nichols CD, Sanders-Bush E (2002) A single dose of lysergic acid diethylamide influences gene expression patterns within the mammalian brain. Neuropsychopharmacology 26: 634-642.
- Bressloff PC, Cowan JD, Golubitsky M, Thomas PJ, Wiener MC (2002) What geometric visual hallucinations tell us about the visual cortex. Neural Comput 14:473-491
- Chen ZY, Jing D, Bath KG, Ieraci A, Khan T, Siao CJ, Herrera DG, Toth M, Yang C, McEwen BS, Hempstead BL, Lee FS (2006) Genetic variant BDNF (Val66Met) polymorphism alters anxiety-related behavior. Science 314: 140-143
- Griffiths R, Richards W, McCann U, Jessor R (2006) Psilocybin can occasion mystical type experiences having substantial and sustained personal meaning and spiritual significance Psychopharmacology (Berl) 187:268-283
- Sewell, RA, Halpern JH, Pope HG Jr. (2006) Response of cluster headaches to psilocybin and LSD. Neurology, 27;66:1920-1922
- Urban JD, Clarke WP, von Zastrow M, Nichols DE, Kobika B, Weinstein H, Javitch JA, Roth BL, Christopoulos A, Sexton PM, Miller KJ, Spedding M, Mailman RB (2007) Functional selectivity and classical concepts of quantitative pharmacology. J. Pharmacol Exp Ther 320:1-13.
- Gonzalez-Maseo J, Weisstaub NV, Zhou M, Chan P, Ivic L, Ang R, Lira A, Bradley-Moore M, Ge Y, Zhou Q, Sealon SC, Gingrich JA (2007) Hallucinogens recruit specific cortical 5-HT(2A) Receptor-mediated signaling pathways to affect behavior. Neuron 53:439-452.
- Yuen E, Jiang Q, Chen P, Feng J, Yan Z (2008) Activation of 5-HT2A/C Receptors counteracts 5-HT1A regulation of NMDAR channels in pyramidal neurons of prefrontal cortex. J Biol Chem 283(25):17194-204.
- Griffiths R, Richards W, Johnson M, McCann U, Jesse R (2008) Mystical-type experiences occasioned by psilocybin mediate the attribution of personal meaning and spiritual significance 14 months later. J. Psychopharmacol 22:621-632
- Kammermeier PJ (2008) Endogenous homer proteins regulate metabotropic glutamate receptor signaling in neurons. J Neurosci 28:8560-8567.
- Begic D, Mahnik-Milos M, Grubisin J (2009) EEG characteristics in depression, "negative" and "positive" schizophrenia. Psychiatry Danub 21(4):579-584

2010-2019:

- Li N et al (2010) mTOR-dependent synapse formation underlies the rapid antidepressant effects of NMDA antagonists. Science 329: 959-964
- Schmid CL, Bohn LM (2010) Serotonin, but not N-methyltryptamines, activates the serotonin 2A receptor via a β -arrestin2/Src/Akt signaling complex in vivo. J Neurosci official J Soc Neurosci 30:13513-13524
- Maclean KA, Johnson MW, Griffiths RR (2011) Mystical Experiences Occasioned by the Hallucinogen Psilocybin Lead to the Increase in Personality Domain of Openness. Journal of Psychopharmacology
- Gonzalez-Maeso J (2011) GPCR oligomers in pharmacology and signaling. Mol Brain 4:20.
- Camchong J et al (2011) Altered functional and anatomical connectivity in schizophrenia. Schizophr Bull 37(3):640-650
- Wischhof L, Hollensteiner KJ, Koch M (2011) Impulsive Behavior in Rats induced by intracortical DOI infusions is antagonized by co-administration of an mGlu-2/3 receptor agonist. Behav Pharmacol 22, 805-813.
- Grob CS, Danforth AL, Chopra GS, Hagerty M, McKay CR, Halberstadt al, Greer GR (2011) Pilot study of psilocybin treatment for anxiety in patients with advanced stage cancer. Arch Gen Psychiatry 68:71-78
- Carhart-Harris, RL, Williams, TW, Sessa, B, Tyacke RJ, Rich AS, Feilding A, Nutt DJ (2011) The administration of psilocybin to healthy, hallucinogen-experienced volunteers in a mock-functional magnetic resonance imaging environment: a preliminary investigation of tolerability. Journal of Psychopharmacology 25(11):1562-1567
- Canal CE, Morgan D (2012) Head-twitch response in rodents induced by the hallucinogen 2,5-dimethoxy-4-iodoamphetamine: a comprehensive history, a re-evaluation of mechanism and its utility as a model,. Drug Test Anal 4:556-576.
- Delille HK et al (2012) Heterocomplex formation of 5-HT_(2A)-mGlu2 and its relevance for cellular signaling cascades. Neuropharmacology 70:296-305
- Studerus E, Gamma A, Kometer M, Vollenweider FX (2012) Prediction of psilocybin response in healthy volunteers. PLoS One 7:e30800
- Nau F Jr, Yu B, Martin D, Nichols CD (2013) Serotonin 5-HT2A receptor activation blocks TNF-alpha mediated inflammation in vivo. PLoS ONE 8:e75426
- Halberstadt AL, Geyer MA (2013) Characterization of the head twitch response induced by hallucinogens in mice: detection of the behavior based on the dynamics of head movement. Psychopharmacology 227:727-739.
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I. Psychedelic Organizations and Organizations for students

FIU Psychedelics Club: <https://www.instagram.com/fiupsychedelics/>
Intercollegiate Psychedelics Network: <http://www.ipnpsychedelics.org/about>
Students for Sensible Drug Policy: <http://www.ssdp.org>
Source resource foundation: <http://www.sourceresearchfoundation.org>

J. Religious Observances

Every effort will be made, where feasible and practical, to accommodate students whose religious practices coincide with class requirements or scheduling. Please make sure to notify your instructor at the beginning of the semester of which dates you will be absent or any anticipated problems with completing course work.

K. Physical, Mental and Sensory Challenges

The Disability Resource Center collaborates with students, faculty, staff, and community members to create diverse learning environments that are usable, equitable, inclusive and sustainable. The DRC provides FIU students with disabilities the necessary support to successfully complete their education and participate in activities available to all students. If you have a diagnosed disability and plan to utilize academic accommodations, please contact the DRC at 305-348-3532 (MMC) or at 305-919-5345 (BBC) to schedule an appointment. You can also visit them in person in GC 190 at MMC or in WUC 131 at BBC campus.

L. Honors College Policies and Requirements

Academic Misconduct Procedures and Policies

In The Honors College, the term “honor” refers both to academic accomplishment and character. Students in Honors should therefore adhere to and be held to the highest standards of personal academic accountability. Academic dishonesty in any form, including plagiarism, is antithetical to the very definition of being an Honors student at FIU. Consequently, an Honors College student found responsible for academic misconduct will be dismissed from the College. An Honors faculty member may bring charges of academic misconduct against an Honors student if the faculty member suspects plagiarism or other forms of academic misconduct. The faculty member will decide whether to pursue informal resolution, file formal resolution charges, or take no further action, and will follow the procedures outlined in the Academic Misconduct Procedures available at <https://studentaffairs.fiu.edu/get-support/student-conduct-and-academic-integrity/academic-integrity/index.php>. Please refer to the following documents for additional information:
FIU Student Handbook: <https://studentaffairs.fiu.edu/about/student-handbook/index.php>

Student Portfolios

The Honors College will be using a portfolio method to assess students’ learning outcomes. The portfolio allows for maximum flexibility in gauging student learning. Students decide (with instructor consultation) what “artifacts” or assignments to include for consideration in their portfolios to demonstrate successful achievement of each of five key student learning outcomes over the 4-year Honors experience. Portfolios provide a rich context for students to show what they have learned and to explain their learning process. Because the Honors curriculum is meant to be thought-provoking and reflective, student self-assessment through portfolios will facilitate learning and provide in-depth assessment. Each Honors College course includes at least one assignment that could potentially fit portfolio requirements.
<http://honors.fiu.edu/current-students/portfolio/>

Honors Engagement

Requirements Honors College students are required to accumulate at least 20 engagement points each academic year (Fall and Spring) by attending Honors College activities. Students attending only one

semester (Fall or Spring) are required to accumulate 10 engagement points. Each activity has a point value. Students may select which events and activities they want to attend. The new system is designed to be more flexible for students, offering events at various days and times (including some weekend events) and allowing for a variety of ways to meet the requirements. Please plan accordingly.

<http://honors.fiu.edu/current-students/citizenship/>

Community Service

Honors College students must also complete 20 volunteer service hours. These hours DO NOT count toward the 20 engagement points discussed above. <http://honors.fiu.edu/current-students/community-service/>

Honors Education in the Arts (HEARTS)

The HEARTS program is designed to give Honors College students opportunities to “explore and appreciate different artistic and cultural traditions and modes of artistic expression. HEARTS will also serve as a clearinghouse (and curatorial framework) for our students to experience the arts on campus and in the community by providing them with information about cultural activities and access to performances with free or discounted tickets. <http://honors.fiu.edu/current-students/hearts/>

M. Panthers Care & Counseling & Psychological Services

If you are looking for help for yourself or a fellow classmate, Panthers Care encourages you to express any concerns you may come across as it relates to any personal behavior concerns or worries you have, for the classmate’s well-being or yours; you are encouraged to share your concerns with FIU’s Panthers Care website. Counseling and Psychological Services (CAPS) offers free and confidential help for anxiety, depression, stress, and other concerns that life brings. Learn more about CAPS at caps.fiu.edu. Professional counselors are available for same-day appointments. Don’t wait to call 305-348-2277 to set up a time to talk or visit the online self-help portal.