Welcome to the UC Berkeley Center for the Science of Psychedelics

Psychedelics prompt us to ask some of the most fundamental questions about what it is to be human. What is the nature of the brain and mind? How do we relate to each other and to the world around us? How do people heal and learn - and how do our societies adapt to change?

The resurgence of interest in the nature and impacts of psychedelics, as well as our connection with them, means that it is more important than ever to deepen our understanding of them. That is why the UC Berkeley Center for the Science of Psychedelics (BCSP) exists; to explore the potential of these substances, for the benefit of all.

From conducting foundational research into how psychedelics affect us, to training psychedelic leaders of tomorrow, to informing the public conversation through fact-based education and independent journalism, the BCSP works to provide nuanced & evidence-based perspectives on the progress in our field.

We’re grateful for the support of our many friends, donors, partners - and are looking forward to working alongside more of you in the months and years to come.

Professor Michael Silver
Faculty Director

Imran Khan
Executive Director
**Public Education**

Public education is a central part of the BCSP’s mission. We aim to provide trustworthy, accessible, and evidence-based information to the public through journalism, public conversations, and courses about psychedelics.

**BCSP’s new online course, Psychedelics and the Mind, offers everyone the chance to learn about the basic science of psychedelics - and so much more.**

As dialogue and research on psychedelics becomes more mainstream, many practitioners, policymakers and members of the public are looking for evidence-based, balanced, and culturally-informed information. The Center is thrilled to launch a first of its kind, free, massive open online course (MOOC) on the fundamentals of psychedelics. ‘Psychedelics and the Mind’ will enable people of all educational backgrounds to obtain deep and broad knowledge about many aspects of psychedelics.

Professor David Presti has been teaching on the subject for more than thirty years, and skillfully navigates through the science, culture, and history of these substances in a way that’s engaging for both the novice learner and the curious expert.

The course will be available for free on edX starting August 2023. Sign up at [www.edx.org/course/psychedelics-and-the-mind](http://www.edx.org/course/psychedelics-and-the-mind)

“I love the diversity of expertise available at UC Berkeley, and one of our intentions is to bring that multidisciplinarity to exploring the rich histories and powerful potentialities of psychedelics. Good science, education, journalism, training, and psychedelic humanities are all essential for informing and guiding the current enthusiasm for these materials and their engagement with contemporary culture. We sincerely hope that what we do at the BCSP will serve to incline the arc of future history a bit in the direction of beneficial outcomes not only for humanity, but for all our biospheric relations, and the future of the planet as well.”

Professor David Presti, Member of the BCSP Executive Committee
The Microdose is published twice per week to identify and share the most important and compelling news and stories emerging across the burgeoning field of psychedelics — from scientific research and policy to business and culture. Our goal is to keep subscribers up-to-date and informed, whether they are already participating in this important and emerging field, or are simply curious and eager to become more knowledgeable and involved. Get the latest news and views about psychedelics straight to your inbox from our head writer and award-winning journalist, Jane. C. Hu. Subscribe at themicrodose.substack.com/

**Ferriss - UC Berkeley Psychedelic Journalism Fellows**

Established in 2022, through a generous gift from leading podcaster and bestselling author Tim Ferriss, these fellowships support high-impact reporting on the business, science, policy, and culture of this booming field. The Ferriss Fellowship program funds and supports investigative reporting in articles, books and audio.

These journalism fellowships do more than help underwrite one-off stories; they establish and nurture a new generation of journalists who can approach the subject with an unusual degree of depth and can situate these stories within rich political, economic, scientific and cultural contexts.

Ultimately, the goal of this program is two-fold: it will raise the standards for reporting on psychedelics, and it will help the field mature by keeping it accountable.

“Psychedelic reform is already underway. Last year state legislators introduced 36 different psychedelics-related bills. Journalists need to be out in front of this rapidly evolving field asking big, thoughtful questions of the scientists, business people, policy makers, and leaders who are deciding how, where, and when these substances will be used.”

Malia Wollan, editor-in-chief of journalism projects
UC Berkeley Center for the Science of Psychedelics
Already, powerful stories are emerging from our first cohort.

- Cassady Rosenblum’s Rolling Stone magazine piece from June 202 “These Mormons Have Found a New Faith — in Magic Mushrooms”
- Chris Walker’s 4-part podcast “Ballot Trip” digging into two competing psychedelics ballot initiatives in Colorado
- Kimon de Greef’s story on Sonoran Desert toads for The New Yorker, which he worked into a book proposal and sold to Doubleday in October
- Rachel Nuwer’s story on iboga production in Gabon for National Geographic.
- Olivia Goldhill’s fellowship reporting also led to a book contract at Bloomsbury where she’ll be writing about how emerging psychedelic therapies call into question the very foundations of the mental health industry.

“As the field of psychedelics explodes, we’re going to need sophisticated journalism to provide the public with reliable information and the field with accountability. The Ferriss Fellowship will help the Graduate School of Journalism to support young journalists working in this area, which in turn will hasten the establishment as an important and vibrant journalistic beat.”

Michael Pollan, Best-selling author and Professor, UC Berkeley Graduate School of Journalism
The proposed experiments will provide critical information about the enduring effects of a single psychedelic experience on cognition, emotion, brain activity, and immune system function in both older and younger adults.

The percentage of adults over the age of 60 is projected to double by 2050, rising to 22% of the global population, and this will continue to increase due to declining fertility rates and longer life expectancy. This increase in the elderly population will, in turn, result in greater prevalence of neurodegenerative diseases associated with aging, such as Alzheimer’s disease. We need to develop preventative strategies for healthy aging, extending our healthspan, not just our lifespan.

Psychedelics provide a novel and potentially powerful approach for promoting successful aging in healthy older adults. Remarkably, previous studies show that in both humans and animals, the administration of a single dose of psilocybin produces effects in the brain that are in the opposite direction of those observed in aging.

Although thousands of doses of psilocybin have been administered in controlled scientific settings over the past few decades, very few of these participants have been adults over 60, and there has been no systematic study of the effects of psilocybin on cognitive function and associated brain mechanisms in that population.

This research will measure the effects of 25 mg psilocybin, administered to both older and younger adults to study the impact on cognition and brain structure and determine whether this might be a feasible intervention for older adults. Survey data will determine which aspects of the psychedelic experience best predict enduring beneficial effects on cognition and its neural correlates, emotional regulation, immune function, prosocial behaviors, and healthy stress levels. In particular, we hypothesize that the subjective experience of awe is critical for psychedelics to induce long-lasting improvements in well-being.
Psilocybin and Visual Perceptual Predictions

• Professor Michael Silver, Optometry and Vision Science and Neuroscience

Psychedelics can induce profound personal transformation, including revision of beliefs about the self and perceived reality. So far, few empirical links have been established between measures of neural activity and the subjective effects of psychedelics.

How we experience the world is influenced by how our brain actively constructs conscious perception. One aspect of this is bottom-up processing: using information from our senses to generate our perception of the world. But another aspect is top-down: our brains create predictions based on previous experience that contribute to the creation of our subjective experience of the world.

Psychedelics may alter perception, cognition, and emotions by reducing the strength of those top-down predictions, thus creating new interpretations of the world around us and ourselves. No study yet has directly empirically tested how psychedelics influence neural predictions. This knowledge gap must be closed in order to establish a strong foundation for psychedelic neuroscience and its translation into targeted interventions.

Our research will use fMRI to measure brain activity in volunteers. Our subjects will be viewing an ambiguous visual stimulus which can be perceptually interpreted in more than one way - and we’ll then test how their brain activity changes with the administration of psilocybin to see if that changes the influence of the brain's top-down ‘predictions’.

Our study will advance cognitive neuroscience using psychedelics to discover and characterize connections between the brain and the mind.

Ethnographic Research: A Longitudinal Case Study

• Tina Trujillo, Associate Professor, UC Berkeley School of Education Faculty Director, BCSP Certificate Program

Alongside clinical and other basic scientific research, big philosophical questions about epistemology, or ways of knowing, arise when experiencing or learning about psychedelics. Today, practitioners, academics, and the media are asking questions about the political and societal consequences of psychedelics research and education, particularly for historically underrepresented communities.

BCSP Executive Committee member, Professor Tina Trujillo, serves as the Principal Investigator of an ethnographic study of its Certificate Program in Psychedelic Facilitation, where these and other socio-cultural questions are salient, and where she analyzes the contextual and epistemological aspects of psychedelics education.
In neurological disorders, our ability to move, learn, remember, empathize, or recover from trauma is not limited by will, but also by the capacity of our neurons to synthesize components for cognitive flexibility. Plasticity in the brain counters this rigidity, yet we lack insight into how plasticity windows open in the brain.

Psychedelics have been used in Indigenous healing practices for millennia to engage cognitive connection and open pathways to healing. Our research synthesizes two rapidly evolving fields - RNA biology and psychedelics - to discover novel molecular programs and understand how they coordinate large-scale neural plasticity.

In the Gomez lab, psychedelic research happens on a microscopic scale, on the level of cellular synapses. While most research focuses on the immediate, experiential aspect of psychedelics, our research explores how the enduring effects of psychedelics change the way neurons communicate with each other. Insights from the Gomez lab demonstrate that psychedelics reanimate developmental-like states of neural function. Her group is currently modifying these molecular pathways to treat defective neural plasticity associated with neurodegeneration.

"Educating and training future psychedelic scientists and thinkers using Indigenous research paradigms is a unique aspect of our center. By utilizing these methods, we are able to produce knowledge and innovations that explore the potential of psychedelics beyond their application in treating illnesses, and better understand their role in fostering healthy minds and communities."

Assistant Professor, Andrea Gomez, Member of the BCSP Executive Committee
Educational Evaluation of the BCSP’s Certificate Program

Currently, there is a dearth of empirical evidence about what works in psychedelic facilitation, how best to design and implement a facilitation training program to meet particular contextual needs, and how to measure success. Dr. Tina Trujillo is conducting a longitudinal evaluation of the Berkeley model to systematically answer some of these questions. Lessons from this evaluation will be used to continually refine the development of the Center’s training model, as well as to disseminate knowledge about best practices in programs’ curriculum, instruction, staffing, and organizational design for both practitioner and scholarly communities.

Psychedelic Facilitation Certificate Program

There is a growing demand for professionally trained and deeply educated facilitators that can provide safe, legal, culturally sensitive, and effective psychedelic care. To address this need, BCSP’s Psychedelic Facilitation Certificate Program provides interdisciplinary training for advanced professionals, with an emphasis on spiritual approaches, traditional uses, and equitable access to care.

In May, 2023, the BCSP Certificate Program graduated its first cohort of psychedelic facilitators. Approved by the Oregon Health Authority as a licensed training facility, our professional preparation program goes beyond technical training to provide religious, spiritual-care, and healthcare professionals a platform for social change. Diverse cohorts, including members of historically underrepresented groups, are supported through significant financial assistance and personalized mentoring.

“Working to create a psychedelic facilitation training program that is ethical, equitable, and inclusive, that honors all sources of psychedelic knowledge equally, that does not shy away from questions of body, soul, and community, and that seeks to repair historical and current harms--this is our project.”

Moana Meadow, Program Staff Director, BCSP Certificate Program
**Diversity, Equity, Inclusion and Reciprocity**

In our work, BCSP prioritizes the values of diversity, equity, and inclusion. Thanks to a generous funder, we offer significant scholarships to the Psychedelic Facilitation Certificate Program to ensure access for a diverse cohort. By doing so, we commit to providing historically underserved communities with providers who understand their unique lived experiences.

We also strive to honor the Indigenous principle of reciprocity.

Psychedelics research is undergoing a rapid expansion, but scientific interest in psychedelics often ignores or appropriates millennia of Indigenous practices with these plants, fungi, and compounds. Growing interest from users outside of Indigenous contexts has led to cultural appropriation, cultural destruction, and environmental harm.

We recognize our interconnectedness with multiple social and cultural communities. We aim to give back to the longstanding communities that have served as stewards of plant and fungal medicines.

This commitment includes thirty-five Indigenous Research Student Fellowships over the next five years—to support UC Berkeley graduate and undergraduate students from historically marginalized communities or whose work addresses issues of reciprocity and equity in psychedelic spaces.
Testimonials from the Inaugural Cohort of Students

**Renu Goel, MD: Diversity Scholarship Recipient**

“I’ve been a psychiatrist and psychoanalyst for 20 years. The BCSP delivered the necessary education for all facilitators: the ancestral, shamanic, and Indigenous traditions; the profound impact of set and setting, including an individual’s historical, sociocultural matrix and transgenerational trauma; the import of spiritual chaplaincy and the mystical; the development of an ethical practice specific to altered consciousness; harm reduction; reciprocity in the development of right relationship both to the plant, the patient, and the cultures that provide us this medicine; and the need for the facilitator to be diligent with fostering their own internal mindfulness and awareness.”

**Felisha Thomas, MFT: Diversity Scholarship Recipient**

“The intentionality of this program, its intimacy, didactic intersections and real time practices of equity and accessibility, have renewed my approach and presence to my work. To fund this program is to fund real and actionable change.”

**Christopher Burak, MD**

“This program brought together a small group of culturally, ethnically, and professionally diverse individuals. The opportunities to learn from and understand each other were constant.”

**Melissa Morales, LCSW: Diversity Scholarship Recipient**

“This program provided a safe, supportive, and welcoming environment. Connecting with like-minded people created a sense of belonging, respect, and community.”

**Mai Shimada, MD: Diversity Scholarship Recipient**

“As a physician, this transformative course expanded my understanding of healing and provided a platform to harmoniously merge the two distinct worlds within me - Japan and America.”

**Jyoti Nadhani, MFT**

“This program seamlessly blended scientific and traditional knowledge, fostered a sense of unity with the cosmos, enriched my understanding of symbolic ritual, and revealed the transformative power of psychedelics.”

**Whitney Pinger, CNM, FACNM**

“As a midwife of over 40 years, the innovation, insight, and spirit of this program gave me the skills and capacity to understand the transformative healing that sacred plants offer us.”

**Martin Epson, MD, JD, MTS: Diversity Scholarship Recipient**

“The BCSP program offers a kind of healing and fellowship that is deeper and older than molecules or Western medicine.”
Final Thoughts

**Professor Michael Silver, Faculty Director, BCSP**

“Perhaps the most distinctive aspect of the BCSP is the breadth of the center’s activities and programs across a wide range of disciplines, including journalism, education, neuroscience, molecular biology, and psychology. The members of our center deeply identify with the mission and values of the public university that is UC Berkeley, and we are committed to working to improve health and well-being for all through culturally informed psychedelic research and education.”

**Imran Khan, Executive Director, BCSP**

“The more we learn about psychedelics, the more we appreciate their relevance to health and medicine, science and research, law and policy, culture and media, religion and spirituality, society and identity. That diversity of scope makes for a richness of endeavor, and it’s why the BCSP bridges these different domains through our work.”

**Professor Tina Trujillo, Faculty Director, BCSP Certificate Program, Member of the BCSP Executive Committee**

“One of the most inspiring aspects of the BCSP is our interdisciplinary work. We are a science center that is expanding what we mean to study and enact science. Here, we investigate not only the mechanisms by which psychedelics may work, but the spiritual, mystical, sociocultural, and political aspects of these complex substances. Our Certificate Program offers an elegant model for the field in terms of how to blend these usually disparate ways of knowing.”

**Michael Pollan, Member of the BCSP Executive Committee**

“A couple of things set us apart: Where most university psychedelic centers are working on therapeutics, our research focus is basic science, aiming to understand exactly how psychedelics work. The second thing unique about BCSP is our focus on public education, through programs such as the Ferriss Journalism Fellowship, the Microdose newsletters, the massive online course and, soon, a podcast.”
The BCSP is exclusively funded through the generosity of donors like you. Scan here to make a gift in support of the Center’s overall mission or contact Patrick Gutteridge to learn about specific partnership opportunities across the Center.

Sign up for BCSP updates on our public education, research and certificate programs:

psychedelics.berkeley.edu/contact/

Get the lowdown on the latest psychedelics news with The Microdose:

themicrodose.substack.com/