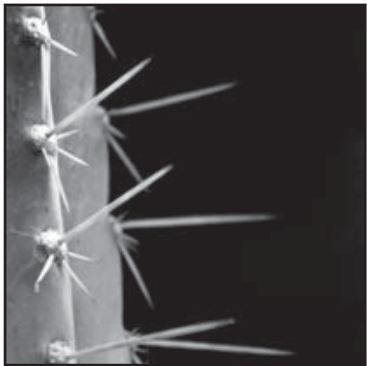


# Erowid Extracts

DOCUMENTING THE COMPLEX RELATIONSHIP BETWEEN HUMANS AND PSYCHOACTIVES

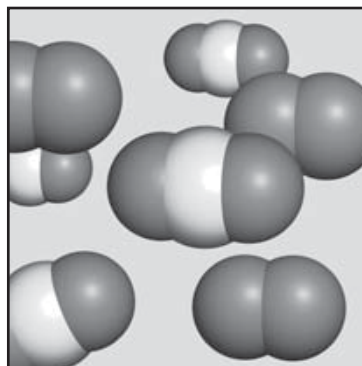
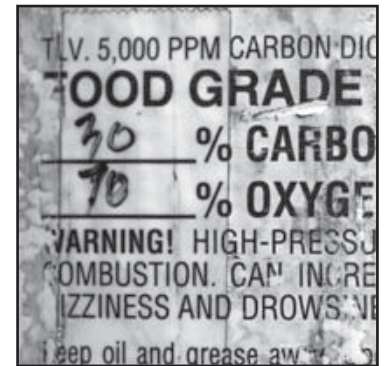
June 2007

Number 12



*"A man has made at least a start on discovering the meaning of human life when he plants shade trees under which he knows full well he will never sit."*

— Elton Trueblood



Carbogen: An Introduction • Carbogen Redux • Drug Web Cites  
Nine Months at Erowid • APHA Conference • MKULTRA

## LETTERS & FEEDBACK

---

I'm a very frequent visitor to the site and have been so for about five years now. I appreciate all the work that everyone at Erowid.org does to help ensure everybody has complete and accurate information about psychoactives they are interested in. I believe in my younger and more experimental days your website helped me to make responsible decisions regarding my use of psychoactive substances, and without the info provided there is a possibility I wouldn't be here today to discuss it. Though I don't use many psychoactives anymore, I still check your site regularly for updates and to stay informed and educated. Once again I would like to take this time to thank you for your hard work and dedication over the years.

— SEAN GLADUE  
*Email*

I am emailing you to thank you for taking the time and effort to create a website with a vast cornucopia of information on any substance I have ever been curious about. You helped me save a friend's life today. With the information you provided I was able to teach them about the drug they were doing and the appropriate dosage. I know maybe you don't condone the use of drugs but you helped me save them. [...] Thank you Erowid for helping me help others and for teaching me more than I could have taught myself.

— D.  
*Email*

I'm a law student very interested in drug law and activism, and so far the Erowid vaults are unparalleled as the launching point for learning the law in this area. Keep up the good work.

— ROBERT LINK  
*Email*

I can't find the words to thank the Vaults. The info I found online saved a friend's life. It has also provided me with endless hours of learning about the drugs that surround us. There's no value that amounts to all the people I'm sure it helped. Infinite thanks from me and my friends.

— KOD  
*Site Feedback*

I work for an organization that advocates alternatives to the failed war on drugs. I personally love Erowid and renewed my membership because you're filling a crucial niche today while giving a glimpse of what a more sensible approach to psychoactive drugs might look like in the future. You promote honesty, open dialogue, and personal responsibility—key elements to ensuring that drugs cause the least possible harm and greatest possible good—and you do it well. Thank you!

— DAVID GLOWKA  
*Drug Policy Alliance*

Thank you very much for the beautiful membership gift—a molecule made of glass—that I received for my donation. Please keep up your excellent work.

— F.  
*Email*

I'm a Ph.D. candidate at Texas Tech University in the Technical Communication & Rhetoric program, and I'm doing archival research for my dissertation—specifically, I'm examining the purported link between LSD and chromosome damage and examining the controversy through the lens of Jürgen Habermas's theories of communication. The Hofmann Archive is an amazing scholarly resource that fits my research to a T. You've made my week. No, my month. Perhaps even my year.

— J. ARNETT  
*Ph.D. Candidate in Technical  
Communication & Rhetoric*

Thank you for everything you do! The hard work of everyone on the Erowid staff has made a difference in so many lives. I wish you all peace and good luck in this new year.

— D. STINSON  
*Member Email*

I am forever in debt to the good people at Erowid. [...] Thanks again for all you have done, the course of my life has been permanently altered, for the better.

— W.  
*Email*

I am profoundly grateful that such sites exist. We need more clarity and more sources of information, not less—especially in the United States. Far too often it appears that our culture is designed to stifle inquiry and devalue the mind and consciousness. It also seems there are those in our society who feel threatened by the people who cheerfully and tirelessly investigate—students, scientists, artists, engineers, etc.

— M.  
*Email*

Send correspondence to:

[extracts@erowid.org](mailto:extracts@erowid.org)

Please include your name, title,  
and city/state/country of origin to be  
published with your letter.

Letters may be edited  
for length and clarity.

## ERRATA

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In the November 2006 issue of *Erowid Extracts*, we published a short description of the Drug Enforcement Administration's proposed redefinition of "positional isomer". In that article, we stated that, "If this new definition becomes the approved legal definition, it would add dozens of previously unlisted chemicals to Schedule I without [the DEA] having to go through the normal process."

After reading this article, Alexander Shulgin commented that he believes the change would actually result in thousands of new scheduled chemicals, most of which have never before been synthesized.

This serves as a good reminder that the proposed definition would completely bypass the Schedule I requirements that a substance have "a high potential for abuse" and "no medical use", since we can't know whether those definitions apply to substances that have never been made.

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EROWID is a member-supported organization working to provide free, reliable and accurate information about psychoactive plants, chemicals, practices, and technologies.

The information on the site is a compilation of the experiences, words, and efforts of thousands of individuals including educators, researchers, doctors and other health professionals, therapists, chemists, parents, lawyers, and others who choose to use psychoactives. Erowid acts as a publisher of new information and as a library archiving documents published elsewhere. The collection spans the spectrum from solid peer-reviewed research to creative writing and fiction.

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## Erowid Extracts

Number 12, June 2007

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Know Your Body  
Know Your Mind  
Know Your Substance  
Know Your Source

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# Recent News & Updates

## U.K. *Trichocereus* Cacti Legal Case

A recent court case in the United Kingdom may be the first to look at the legality of possessing and selling dried mescaline-containing cacti.<sup>1</sup> After being found in possession of 4.69 kg of dried *Trichocereus peruvianus* cactus chips, the defendant, Saul Sette, was arrested and charged with possession with intent to supply the Class A drug mescaline (along with two other related charges).

The U.K. Misuse of Drugs Act (MDA) states that, “Any preparation or other product containing a substance or product” that is listed in Class A (the equivalent of U.S. Schedule I) is also controlled. The defendant did not contest that he was selling the dried cacti, or that it was intended for human consumption.

In pre-trial hearings, the question was raised whether dried mescaline-containing cacti qualify as a “preparation” or “product” under this law. If not, then they are not illegal to possess or sell, even for human consumption. Prior to his arrest, the defendant requested information on the legality of the material from the Home Office Drug Legislation and Enforcement Unit and received a response stating that, “In itself, drying in order to preserve for the purely botanical/horticultural/herbarium purposes—‘mere preservation’—does not in law amount to preparation [...]” This, along with evidence that customs officials have levied a Value Added Tax on *T. peruvianus* cacti sold by other vendors, was used to show that the government does not consistently consider dried mescaline-containing cacti to be illegal.

The defense also pointed out that a similar legal battle was recently fought over the status of psiloc(yb)in-containing mushrooms. In that case, the courts ruled that the same section of the MDA was ambiguous. As a result, the British government added fresh mushrooms to the list of controlled substances, but did not add *Trichocereus* cacti. The defense argued that if the government had meant mescaline-containing cacti to be illegal, it needed to add these cacti to the law as it did with psilo(cy)bin-containing mushrooms. The only plants or fungi currently listed in the MDA are

plants in the genus *Cannabis*, plants of the species *Papaver somniferum* (the opium poppy), leaves from any plant of the genus *Erythroxylon* from which cocaine can be extracted (coca leaves), and the newly-added fungi that contain psiloc(yb)in.

The defense argued that a) the law regarding the terms “preparation” and “product” was insufficiently clear for prosecution to proceed, and b) even if the law was deemed clear enough, the dried cactus material that the defendant was selling was not a “preparation” or “product” since the cacti were not in “a state in which they could be used”.

Both the prosecution and defense quoted from Erowid in court. Mike Jay, author of *Artificial Paradise* and editor of *Emperors of Dreams*, appeared as an expert witness for the defense. He testified that dried cactus is not a “preparation” and that, in fact, the process of drying made it *harder* to digest than fresh cactus material. Apparently much of the prosecution’s cross-examination concerned Erowid, attempting to establish the rationale behind the site and the status of its content. The prosecution then cited experience reports from Erowid in an attempt to show that people do indeed ingest dried mescaline-containing cacti for their psychoactive effects. Jay and the defense countered that further preparation—rehydration, boiling, and filtering—is necessary to make dried cacti ingestible, and that there is no history of people eating enough dried *Trichocereus* cactus chips to achieve effects.

On March 20, 2007, the case was thrown out in pre-trial hearings. The judge agreed with the defense’s argument that the law was not sufficiently clear to proceed with prosecution, stating that it would amount to an “abuse of process”. Because of this, he did not make a determination on the question of whether the defendant’s cacti qualified as a “preparation” or “product”. But the fact remains that for the time being, dried *Trichocereus* cacti have been shown to be legal to possess and sell in the U.K. ●

[Erowid.org/extracts/n12/cactus\\_law](http://Erowid.org/extracts/n12/cactus_law)

1. *Regina v. Saul Sette*. 2007. Kingston Crown Court.

## *Salvia divinorum* Law Update

*Salvia divinorum*, designated a “drug of concern” by the U.S. Drug Enforcement Administration, is currently uncontrolled in the United States at the federal level, but it has been controlled at the state level in Delaware, Louisiana, Missouri, Oklahoma, and Tennessee. Between November 2006 and May 15, 2007, legislation was introduced to ban possession or sale of *Salvia divinorum* in fourteen additional states: Alaska, California, Georgia, Illinois, Iowa, Maine, New York, North Dakota, Ohio, Oregon, Pennsylvania, Texas (two bills), Utah, and Virginia.

The majority of the pending legislation would add the plant “*Salvia divinorum*” to the states’ lists of controlled substances. Salvinorin A, the active principle in salvia, would also be controlled by most of these laws, but is not specifically mentioned in the legislation pending in Illinois, New York, North Dakota, Ohio, or Pennsylvania. Pending Texas bill SB1796 does not mention salvinorin A, and would only make it a crime to sell salvia to minors; Texas bill HB2347 would make both the plant and salvinorin A illegal. While many of the proposed bills are in limbo and some will certainly not make it through the legislative process, at least a few are likely to pass.

Many states allow public comment on proposed bills. California, for example, includes in its formal “bill analysis” a list of groups and individuals (either named or anonymous) who have registered support or opposition for pending legislation. An Erowid crew member registered her opposition to California’s AB 259 earlier this year and the current bill analysis now shows “One private individual” in the list of opponents.<sup>1</sup>

The increase in recent salvia legislation is certainly due in part to the ongoing media frenzy. We have been told that at least one vendor has been repeatedly alerted to new salvia-related media stories by the corresponding spikes in product sales. ●

1. Pagan G. “California AB259: Bill Analysis”. Mar 12, 2007. Accessed May 9, 2007; [http://info.sen.ca.gov/pub/07-08/bill/asm/ab\\_0251-0300/ab\\_259\\_cfa\\_20070326\\_094143\\_asm\\_comm.html](http://info.sen.ca.gov/pub/07-08/bill/asm/ab_0251-0300/ab_259_cfa_20070326_094143_asm_comm.html)

# American Public Health Association 2006

The American Public Health Association (APHA) conference is the oldest, largest gathering of public health professionals in the world and is attended by more than 13,000 physicians, nurses, educators, researchers, and related health specialists.

Years ago I saw an APHA position paper about medical marijuana, and had since associated this public health organization with reasonable opinions on drug-related issues. For the last two years, I'd been thinking about ways to bring Erowid's name and work more attention among this group. In May 2006 I brought up the idea of running an Erowid booth at the APHA's November event in Boston. We decided to go forward with the plan, and I reserved a space, selecting to be positioned across the aisle from the National Institute on Drug Abuse (NIDA).

It turned out to be a good placement. One of the biggest values we can provide to such conferences is to represent alternate viewpoints about the potential benefits and risks of psychoactives. Being near NIDA allowed us to hear how they presented key issues such as MDMA neurotoxicity and to provide a somewhat different point of view on these same issues.

The event hosted hundreds of booths run by government agencies, universities, nonprofits, medical supply companies, etc. The Erowid table, decked out with comfortable furniture from the homes of local supporters, featured a large flatscreen monitor displaying a slide show of plant, chemical, and drug photos, as well as screen shots from the site. We also handed out issues of *Erowid Extracts* and other literature to visitors.

Lux and I ran the booth for four days, assisted by several volunteers. A large percentage of people we encountered had not heard of Erowid, which surprised us. Most people who stopped by were friendly and curious. We answered a lot of questions about what Erowid does and what our agenda is. We spoke with about 150 visitors, giving away literature to them and perhaps another couple dozen people.

## Visitor Comments

We did receive a few comments from people who were clearly familiar with Erowid.

A physician affiliated with a NIDA work group was very complimentary, saying he was "glad to see faces behind the web pages".

A woman said she was surprised that this was our first APHA, and encouraged us to come back since "it's good for this group to become familiar with Erowid".

A woman walked by and called out "I love psychoactive plants, they're fun. I'm a child of the '60s!"

A researcher who studies club drugs and surveys kids about drug use complimented us, remarking, "You'd be surprised how often your site comes up [in my work]."

A young woman appeared puzzled that we were there, saying, "I thought it was just some site some college students put together, I didn't know it was legit!"

A police department captain stopped, shocked, and said, "I've never seen YOU at a conference before!" In the course of conversation he added, "You have great info [...] I recommend you to everyone."

## Analysis

The experience of attending the event and the contacts we made will help inform future work with professionals of all sorts. Examining the response we got from attendees can also help us to elucidate what Erowid's identity is within the realm of public health discourse. Substance use and abuse represents only a small subset of public health concerns, thus Erowid is little known among most people in the field.

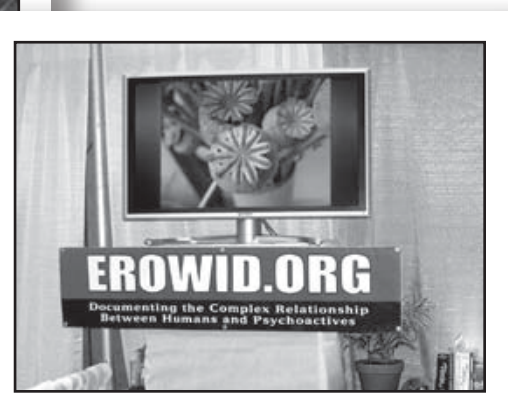
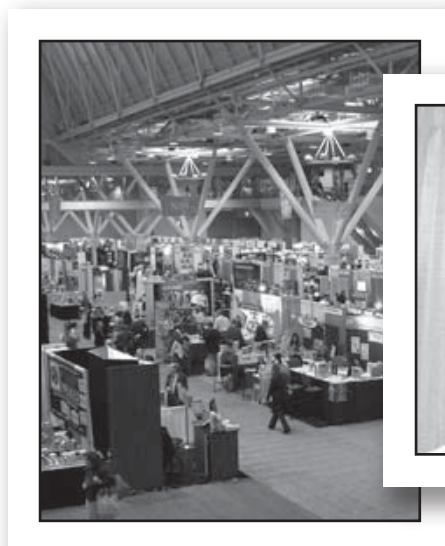
I would only characterize a single interaction as in any way antagonistic. That was a conversation Sylvia and I had with a nurse who was very concerned that her teenage children might gain access to harmful information through sites such as ours. She seemed a little agitated, but was courteous and left on a moderately-positive note, acknowledging that the questions regarding access to information are complex.

— Lux

Submitting an abstract would increase the impact of Erowid's participation in a future APHA, and literature designed for the event would be best aimed at a general audience rather than an audience of informed peers.

Running a booth at the APHA conference was an exploratory mission—an Erowid probe into the world of public health. There are clear benefits both for the attendees and for Erowid, but it was also quite expensive. Because of the cost, it's an activity we can only justify when enough funding is available. ●

*Erowid.org/extracts/n12/apha*





Former MKULTRA Safe House

# MKULTRA

## Psychedelic Mind Control and Its Legacy

by Lux

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### THE HUMAN ELEMENT

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It's a sunny afternoon in a beautiful residential neighborhood on San Francisco's Telegraph Hill, just below Coit Tower. Succulent gardens frame a stunning view of Alcatraz and the bay. It was in an apartment building on this street that the CIA dosed unsuspecting civilians on LSD over the course of a decade.

As I walk beside the high-end condos crowding the block, I try to imagine what it must have been like. I picture myself stumbling through the streets, all the rich reds and blues of the flowering trees kaleidoscoping around me in fractured patterns. Blood pounding in panic, I wouldn't know what was happening—only that I was apparently losing my mind.

The more I learn about the use of psychoactive drugs by the U.S. Intelligence Community and military, the more I feel driven to try to make sense of it on a human level. Two themes consistently emerging in my research are: 1) uncertainty combined with urgency often distorts human conduct, and 2) genuine accountability is vital to constrain the darker impulses of exercising power.

— Lux

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In 1955, on behalf of the Central Intelligence Agency (CIA) project MKULTRA, former Federal Bureau of Narcotics officer George White rented a three-story building on Telegraph Hill in San Francisco. For the next ten years, the CIA paid prostitutes to lure men to this location and surreptitiously dose them with LSD or other psychoactive drugs. Known as “Operation Midnight Climax”, this project was one of several exploring LSD's potential use as a mind control tool by the U.S. Intelligence Community.

### The Cold War Context

The CIA's interest in mind control began in the final days of World War II. With the advent of nuclear weapons, the fear of mutually-assured destruction prohibited military conflict between the United States and the Soviet Union. Future struggles would instead rely heavily on covert operations, intelligence gathering, and propaganda.

In 1945 a U.S. intelligence officer warned that:

[W]e must expect a very marked increase in the importance of “peaceful” methods [in combating the Soviet Union]. Our enemies will be even freer than [ever] to propagandize, subvert, sabotage, and exert pressures upon us, and we ourselves shall be more willing to bear these affronts and ourselves to indulge in such methods—in our eagerness to avoid at all costs the tragedy of open war.<sup>1</sup>

Frances Saunders, author of *The Cultural Cold War*, comments that this “offers a definition of the Cold War as a psychological contest, of the manufacturing of consent by ‘peaceful’ methods, and of the use of propaganda to erode positions.”<sup>1</sup> Just two years later, in 1947, the CIA was created, and the U.S. infrastructure for prosecuting this new conflict was established.

According to most accounts, the CIA's interest in mind control began with the Hungarian show trial of Cardinal Josef Mindszenty. One of the highest-ranking members of the Catholic clergy in Europe, Mindszenty was arrested by Hungarian police and tried for treason in 1949. Before stunned global television audiences, he confessed to crimes he had not committed, while staring off into space and showing other signs of aberrant behavior. The CIA feared that he had been brainwashed.

In 1953 CIA Director Allen Dulles warned the American public that the U.S.S.R. may have developed brainwashing technology. Using language similar to the 1945 report quoted above, Dulles warned that the Cold War was becoming “a battle for men's minds. [...] We might call it in its new form, brain warfare.”<sup>2</sup> That same month

Dulles authorized Project MKULTRA as a counter-offensive to this perceived threat. The purpose of MKULTRA was “to investigate whether and how it was possible to modify an individual’s behavior by covert means.”<sup>3</sup> Sidney Gottlieb, director of the CIA’s Technical Services Staff, was placed in charge, and existing operations in mind and behavior control were transferred to MKULTRA. Sub-projects investigated hypnosis, neurosurgery, electroshock, torture, sexual blackmail, stage magic, and poison, but their primary interest was psychoactive drugs.

## Pseudo-Realities

A CIA behavior control psychologist once said, “The problem of every intelligence operation is how do you remove the human element?”<sup>3</sup> This statement embodies the mentality driving the CIA’s interest in mind control techniques: the desire to eliminate complex human variables in order to achieve certainty and control. But how can someone control another’s mind?

When MKULTRA operative Morse Allen studied hypnosis, he found that he could not persuade people to do things against their will. Subjects in a trance would refuse to shoot their friends. However, Allen found that he could circumvent resistance by convincing people that the friend was actually a deadly enemy. He had to change their perception of reality—create what he called a “pseudo-reality”—and then let them act naturally. If he could create the right reality, he could manipulate people into doing almost anything.<sup>2</sup>

Controlling perception facilitates control of actions, and the CIA developed projects designed to control perception on many scales. Projects ranged from dosing individuals with LSD to influencing entire societies through planting false news stories or covertly shaping art and culture.<sup>1</sup> The perception-altering properties of LSD and other psychoactive drugs fit well with the CIA’s agenda.

The CIA focused on three potential applications for psychoactive drugs: “truth serums” that could be used during interrogation, drugs that could induce amnesia, and brainwashing techniques that could create what is often described as a “Manchurian Candidate” (after the popular 1959 novel). In fiction, a “Manchurian Candidate” is someone who has been brainwashed to carry out covert actions

such as assassinations or sabotage against their will, without having the awareness that anything is amiss.

In pursuit of these goals, MKULTRA scientists investigated dozens of psychoactive agents, including psilocybin, bufotenin, scopolamine, DMT, amphetamines, barbiturates, cannabis, and cocaine. They particularly focused on LSD, funneling hundreds of thousands of dollars through covert channels into LSD studies at clinics and hospitals. Much of the basic research into LSD’s pharmacology conducted in the 1950s was funded by either the military or the CIA. By 1952 Boston Psychopathic Hospital alone was receiving \$40,000 a year for such studies, overseen by LSD researcher Dr. Robert Hyde.

## A Saucerful of Secrets

MKULTRA operatives routinely violated ethical and legal guidelines. For at least a decade, the CIA gave many U.S. citizens LSD without their knowledge, with the most infamous case involving Army officer Frank Olson. After being dosed with LSD on the orders of MKULTRA director Sidney Gottlieb at a joint CIA/Army retreat in 1953, Olson plunged into a deep depression and, according to the official story, committed suicide. Yet in 1994 a forensic pathologist examined Olson’s body and found compelling evidence that Olson was murdered.<sup>4</sup>

Dr. Harris Isbell, director of the Addiction Research Center at the Public Health Service Hospital in Lexington, Kentucky, was paid by MKULTRA to perform basic research on psychoactive drugs, including several psychedelics. He drew test subjects from his captive patient population of opiate addicts, offering them heroin in exchange for “volunteering” for his experiments. Subjects were administered LSD, DMT, mescaline, methamphetamine, psilocybin and other drugs, sometimes in very large doses.<sup>5</sup> In one experiment, Isbell administered LSD to seven men for 77 consecutive days.

Dr. Ewen Cameron of McGill University in Montreal developed experimental techniques to rebuild personalities in his clinic. Cameron became interested in altering the structure of personality as a possible treatment for psychological disorders such as schizophrenia. He

believed that he could cure mental illness by replacing schizophrenic personalities with newly created ones. The CIA had no interest in treating schizophrenia, but it was very interested in the possibility of rebuilding personality; MKULTRA began covertly funding Cameron’s experiments in 1957.

Cameron’s “depatterning” process consisted of two stages. In the first stage, amnesia was induced through an extreme form of “sleep therapy”, where subjects were heavily sedated and given daily electroshock treatments over a period of several weeks. Cameron would next attempt to construct a new personality through “psychic driving” during which subjects were forced to listen to repeating tape loops, designed to restructure their psyches, for as long as sixteen hours a day for another several weeks. They were sometimes restrained in beds, and frequently given doses of LSD.

At least 86 universities or institutions were involved in MKULTRA projects in varying capacities.<sup>6</sup> Many MKULTRA researchers were highly regarded; Cameron

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**“All warfare is based on deception.”**  
— Sun Tzu

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was president of the American Psychiatric Association in 1953, and Isbell’s findings were published in scientific journals and his tolerance studies are cited to this day.

MKULTRA covertly funded the Society for the Investigation for Human Ecology, a think tank that issued grants to leading figures like Carl Rogers, Margaret Mead, and Jean Piaget in exchange for their opinions on key subjects.<sup>7</sup> CIA official David Rhodes recalls, “If we picked up a *Newsweek* one morning and discovered so-and-so was doing something exciting in such-and-such field, I would get on the phone ... and say ‘I’m a rep of the Human Ecology Fund, and I’m excited about what you’re doing. Can I come by and have lunch with you?’—which at the time was a lot easier than saying ‘I’m from the CIA...’”<sup>2</sup>

R. Gordon Wasson’s trip to participate in a second mushroom *velada* (ceremony) with María Sabina was underwritten by MKULTRA. Wasson was contacted “out of the blue” by James Moore, who had heard of Wasson’s discovery of psychoactive mushrooms and asked to accompany him

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on his next expedition. Wasson accepted without knowing that Moore was a CIA agent, who would collect mushroom specimens for government analysis.

While not part of MKULTRA, related psychedelic research was funded by the U.S. Army in its investigation of chemical weapons. George Aghajanian, a respected professor of Psychiatry at Yale, worked with LSD in the 1960s at the Edgewood

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## At least 86 universities or institutions were involved in MKULTRA projects in varying capacities.

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Arsenal, where the Army looked into the use of LSD as an incapacitating agent. Aghajanian was involved with research investigating aerosolized administration of LSD, a technique previously explored by MUKLTRA.<sup>8</sup> Current LSD research still prominently cites his work. Psychiatrist Sidney Cohen, author of important early papers on LSD's effects, also worked at Edgewood.<sup>9</sup>

It is difficult to find researchers of psychedelics in the 1950s and 1960s who were not funded by or involved with Cold War agendas in some capacity, either wittingly or unwittingly. This leads to an uncomfortable conclusion: the history of psychedelic drugs in the United States in the twentieth century is saturated with influence from the intelligence community and military.

### Mixed Results

Of the CIA's three primary objectives for working with psychoactive drugs, the Agency was only successful in finding techniques to induce amnesia through the combination of barbiturates and electroshock therapy. Attempts to develop truth serums and selective brainwashing techniques were largely unsuccessful.

Cameron was unsuccessful in creating new personalities. He found that personality characteristics might become dormant after inducing amnesia, but they would consistently re-emerge. His research suggests that personalities can be temporarily wiped out but not recreated—at least not through “depatterning”.

The hypnosis techniques developed by Morse Allen were deemed insufficient for operational use, because gains in control

were offset by a critical loss of initiative. “If you have one hundred percent control, you have one hundred percent dependency,” an MKULTRA veteran says of Allen's experiments. “If something happens and you haven't programmed it in, you've got a problem. If you try to put flexibility in, you lose control. To the extent that you let the agent choose, you don't have control.”<sup>3</sup>

The CIA investigated dozens of drugs searching for a truth serum, but they were mostly unsuccessful. Their primary candidates, sodium pentothal, LSD, and THC, all worked in roughly the same way—subjects became bewildered and forgot who they were talking to and what they were saying. This technique was successful in getting subjects to lower their guard, but it introduced new problems. Interrogators found that subjects, having lost the ability to distinguish between fantasy and reality, would sometimes confess to things that they clearly had not done. Two truth drug psychiatrists wrote, “In some respects the demands on [the psychiatrist's] skill will be *increased* by the baffling mixture of truth and fantasy in drug-induced output.”<sup>2</sup>

Despite early fears of communist brainwashing, several studies concluded that the use of psychoactive drugs behind the Iron Curtain was negligible. In one prominent 1953 MKULTRA study, psychiatrists Lawrence Hinkle and Harold Wolff concluded that China and the Soviet Union relied on brutality and re-education to change behavior. A 1956 CIA report found that the most reliable technique for converting subjects to new ideologies was a combination of sleep deprivation, repeated interrogation, and isolation. “The prisoner invariably feels that something must be done to find a way out. [...] Ultimately, he finds himself faced with the choice of continuing interminably under the intolerable pressures of his captors or accepting the way out which the interrogator offers.”<sup>10</sup> While brute force achieved impressive results, the surgical precision sought by the Agency was not available through this method.

### Aftermath and Legacy

MKULTRA was discontinued in 1964, and many of its sub-projects—including the San Francisco LSD project—were incorporated into its successor MKSEARCH. Sidney Gottlieb remained in charge. When CIA Director Richard Helms left office in 1972, he and Gottlieb ordered all records of the operation destroyed.

MKULTRA came to light in 1974 following a *New York Times* article written by Seymour Hersh. The article revealed that the CIA had conducted clandestine operations inside the U.S. in violation of its mandate, including the commission of crimes such as opening citizens' mail. Still in the throes of Watergate, the nation was outraged, and the Senate responded by investigating abuses of power by the U.S. Intelligence Community. Committees led by Edward Kennedy<sup>6</sup> and Frank Church<sup>11</sup> issued extensive reports documenting MKULTRA and other illegal operations such as the notorious FBI program COINTELPRO. Frank Olson's death (described at the time as a suicide) became public knowledge, prompting President Gerald Ford to apologize to the Olson family.

Journalist John Marks later located seven boxes of MKULTRA records that had escaped destruction due to a filing error. In 1977 Marks obtained heavily-redacted copies of the documents after filing a Freedom of Information Act request. Those records became the basis for his excellent 1979 book *The Search for the Manchurian Candidate*.

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**“The best safeguard against abuses in the future is a complete public accounting of the abuses of the past.”**

**—Senator Edward Kennedy  
on MKULTRA**

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In response to public outcry, Presidents Ford and Reagan signed executive orders (11905 and 12333) forbidding tests on humans by the intelligence community without informed consent. However, MKULTRA already violated existing policies and laws, which raises troubling questions. Does covert testing on humans continue today?

There is certainly no indication that the CIA experienced a change of heart. In 1954 the Agency found Gottlieb responsible for violations of Agency policy and law that led



to the death of Frank Olson, yet Gottlieb remained in charge of MKULTRA and MKSEARCH until 1972. The CIA's sole response to Olson's death was an internal memo noting that Gottlieb had shown "poor judgment". In 1977 Gottlieb was granted immunity from prosecution in exchange for providing testimony at the Senate hearings. No employee of the CIA was ever terminated for dosing subjects with LSD without their knowledge,<sup>6</sup> and despite the strident tones of the Senate hearings, no criminal charges have ever been filed related to MKULTRA.

There is considerable evidence that the U.S. intelligence community continues to tolerate or even encourage a similar culture of human rights violations in its execution of the "War on Terror".<sup>12</sup> Former CIA Director George Tenet has publicly defended "enhanced interrogation techniques" (e.g.

waterboarding, stress positions) in the wake of 9/11. Former CIA and FBI Director William Webster advocated the use of truth drugs on captives held in Guantanamo Bay, Cuba, in 2002.<sup>13</sup>

The lawyer for Jose Padilla, the detained American accused of planning to detonate a radiological "dirty bomb", has repeatedly insisted that Padilla was given "LSD or some other truth drug" during interrogation.<sup>14</sup> There is no clear way to confirm or deny this claim.

Ultimately, MKULTRA was a small and not-terribly-successful project at the CIA's massive Directorate of Science and Technology. While Gottlieb and Morse were experimenting with LSD and hypnosis, agents down the hall were designing the world's first spy satellites and managing a fleet of U-2 spy planes.<sup>15</sup> But despite its small scope, MKULTRA is central to the history of psychedelics because the project touched so many key figures involved with the early psychedelic movement. Coming to terms with MKULTRA helps illuminate the shadow of psychedelic history, and serves as a valuable reminder that where some people see tools of liberation and insight, others see weapons. ●

[Erowid.org/extracts/n12/mkultra](http://Erowid.org/extracts/n12/mkultra)

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**Coming to terms with MKULTRA helps illuminate the shadow of psychedelic history, and serves as a valuable reminder that where some people see tools of liberation and insight, others see weapons.**

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- 1946 In response to Nazi experiments on concentration camp inmates, the Nuremberg Code is written. It states that researchers must obtain full voluntary consent from all subjects.
- 1947 The Central Intelligence Agency (CIA) is created.
- 1950 The CIA launches MKULTRA predecessor Project BLUEBIRD which investigates forms of mind control including interrogation techniques and brainwashing.
- 1953 Apr 13 - MKULTRA is launched under the direction of Sidney Gottlieb. Its mission is "to investigate whether and how it [is] possible to modify an individual's behavior by covert means".
- 1953 May - MKULTRA operative George White launches Operation Midnight Climax, opening a safe house in New York City in order to surreptitiously drug civilians.
- 1953 Under the support of MKULTRA, Dr. Harris Isbell begins performing drug tests on his hospital population. Addicts are offered heroin in exchange for "volunteering".
- 1953 Nov - Gottlieb dosed several U.S. Army officers without their knowledge, including Frank Olson, who reportedly becomes depressed following the experiment. Nine days later, Olson dies "falling" from a hotel window in what is called a suicide.
- 1955 White opens safe houses in San Francisco and Marin, CA. Prostitutes are paid to drug their customers with LSD, while being monitored by CIA operatives.
- 1956 Dr. Ewen Cameron conducts experiments using psychoactive drugs and electroshock treatments to reprogram personalities. This draws the attention of MKULTRA.
- 1956 Summer - Undercover CIA operative James Moore accompanies R. Gordon Wasson to Mexico and retrieves psilocybin mushrooms for the CIA.
- 1957 The CIA begins covertly issuing grants to Dr. Cameron to support his research.
- 1964 Project MKULTRA becomes Project MKSEARCH.
- 1965 The CIA closes the San Francisco Midnight Climax safe house.
- 1972 Gottlieb ends MKSEARCH, observing, "It has become increasingly obvious over the last several years that this general area has less and less relevance to current clandestine operations".
- 1972 CIA Director Richard Helms and Gottlieb order the destruction of MKULTRA records. Some records are spared due to clerical error.
- 1974 A *New York Times* article by Seymour Hersh creates an uproar by detailing criminal domestic CIA operations. President Ford appoints the Rockefeller commission to investigate.
- 1975 Senator Frank Church heads a Senate committee investigation of CIA malfeasance.
- 1977 Senator Edward Kennedy's Subcommittee on Health and Scientific Research holds public hearings on MKULTRA.
- 1977 Sidney Gottlieb is granted immunity in exchange for Senate testimony.

# Drug Web Cites

## Erowid Mentions in Print and Other Media

by Fire Erowid

Although we've tracked *online* discussions of Erowid for the past eleven years, mentions of Erowid in print, on television, and on the radio have been harder to spot. Still, through our own reading and with the help of members and visitors, we've documented more than 100 references to Erowid published in books, 110 in peer-reviewed journals, and 70 in newspapers, magazines, or other media sources. Erowid has also been mentioned in graduate school theses, patent applications, and government reports.

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**“By drawing on the collective knowledge of its many remote and devoted users, Erowid has compiled one of the world’s most exhaustive and accurate collections of information on recreational drugs and their use...”<sup>1</sup>**

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### Three Types of Mentions

Some mentions of Erowid are about the site itself: they point out, recommend, criticize, or discuss Erowid along with similar websites. The most common type of mention cites content published by Erowid to support factual statements. The third type of mention, the citation of articles *archived* on Erowid, has increased in recent years. This type of mention, often found in patent applications, court cases, and journal articles, cites documents in the Erowid Library that are archived for public use but not authored or published by Erowid, such as government reports, site snapshots, and public domain content.

### Books

It was over seven years ago when we first ran across a book mentioning Erowid. Published in 1999, *Pills-A-Go-Go* by Jim Hogshire included an excerpt from one

of Erowid's flunitrazepam (Rohypnol) experience reports. It was not until years later that we were alerted to two even earlier books (1997 and 1998) that also mention the Erowid website.

Recently, new and expanded full-text book search systems on Google.com and Amazon.com have allowed us to identify a dramatically larger number of mentions. We can now look in books that we are unlikely to ever read and many we might never have heard about. These search systems reveal, for example, that Erowid is mentioned in a 2004 edition of Andrew Weil's *The Marriage of the Sun and Moon* as “suggested reading”. We also discovered that the *Rape Investigation Handbook* (2004) describes Erowid as “an excellent source of information on many drugs and is particularly valuable because it includes many first-hand accounts by users of their subjective experience.”

### Scientific and Medical Journals

The first peer-reviewed journal article we know of that mentioned Erowid was a 2000 case report about a 13-year-old female hospitalized after taking about 20 g of dried nutmeg. While Erowid is simply included as an example of an “easy access” internet resource that discusses nutmeg ingestion, this was the first in a series of articles during that period that we jokingly describe as representative of “doctors and researchers discovering the internet”.

Information about psychoactive drugs has long been available peer-to-peer. Therefore it seemed quaint to find a number of articles in the peer-reviewed medical literature of the early 2000s warning readers that their patients may *now* have access to information about drugs. It seemed that the novelty of the web blinded these professionals to the fact that much of the information available online simply records the same discourse that has been happening between individuals and within social

groups for decades. But doctors can now eavesdrop on those conversations. Wax and the editors of *Pediatrics* clearly thought physicians were entirely unfamiliar with the web: “These drug Web sites are easily reached by anyone with Internet access. If the Web site URL is known, then typing in the address will link directly to the Web site.”<sup>2</sup> When that article was published, Erowid had been operating for seven years, after taking up the baton from previous archivists who had themselves already spent years compiling information online.

Since that time, most journals have become more sophisticated in their view of the internet, treating it as simply another communication system. In an October 2006 issue of *Neuroscience*, Crean, et al. used data gathered by EcstasyData.org to calculate dose ranges for their research. “Relevant dose ranges for MDA and METH were determined initially by reference to MDMA:MDA and MDMA:METH ratios in the pills analyzed by Ecstasydata.org.”<sup>3</sup>

### Anti-Information

Several articles critical of Erowid present inherently anti-information viewpoints, decrying the ease of availability of information to the general public. Such articles often project political motivations onto our work and suggest that access to online information about psychoactives is dangerous. They imply that except for a few bad eggs, the world would be free of information about disapproved psychoactive drugs, the genies would return to their bottles, and problematic drug use would no longer occur. No hard data is ever presented to show that fewer people would come to harm without access to online information. Critics do not take into account that modern culture is not a *tabula rasa*, where no one knows anything about psychoactives; instead we are faced with a chaotic mix of entrenched errors, incomplete data, and misunderstandings.

# Don't Mention It

## EcstasyData Testing Results Form Basis of 2006 Journal Article

In July 2006, an article was published in *Drug and Alcohol Dependence* titled "Pharmacological content of tablets sold as 'ecstasy': Results from an online testing service."<sup>1</sup> The eight page article by Emily Tanner-Smith analysed the results of Erowid's pill testing project (EcstasyData.org), which is co-sponsored by Erowid, MAPS, and DanceSafe.

Strangely, neither Tanner-Smith nor the journal editors contacted us to discuss the project, ask for information, or request permission to publish the results from EcstasyData's testing. Contact information is easy to find on the site. The article mis-cited the source of the data, never mentioning EcstasyData and citing only the copy of the data published on DanceSafe.org. DanceSafe no longer hosts a copy of the lab results, but when it did it was clearly labelled with a note stating "Test results provided by EcstasyData.org" with a link to the original data.

The article also presents EcstasyData's on-site analysis of results as though it had been created and compiled by the author. Data about the number of tablets tested each year, summaries of their contents (by number of tablets and percentage of total tested tablets), number of tablets submitted by state, and a breakdown of results into three categories: "MDMA only", "non-MDMA substances only", and "a mixture of MDMA and non-MDMA substances" are all misleadingly presented in the paper as original data despite appearing on the

EcstasyData Testing Statistics page in an automatically updated chart. Tanner-Smith even goes so far as to state that "this study is one of the first to analyze such a wide variety of ecstasy tablets available from across the United States over a period of six years" without ever acknowledging that the EcstasyData site itself is the source of all of the data used and contains similar analysis and results.

Tanner-Smith comments that the information is "publicly available" and therefore presumably available to use as the data for her paper without appropriate credit. While the EcstasyData project is intended to provide information to the public about the contents of street ecstasy tablets, we had also hoped to submit the results for publication at some time in the future. It was quite frustrating to have this article published without our knowledge or participation and without even crediting those who have put six years of work into collecting and publishing this data.

This article was only recently pointed out to us. We have contacted the editors of *Drug and Alcohol Dependence* and are currently awaiting a reply. ●

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The anti-information bias occurs more often in news media mentions of Erowid, but is also present in some peer-reviewed journal articles. Ironically, this bias seems most present in large-audience media sources, such as television networks. In late 2003, Fox News broadcast and syndicated a truly disturbing anti-Erowid segment, which suggested that, if not for the U.S. Constitution, we would be in jail: "Outrage tonight over websites that actually teach teenagers and kids how to experiment with drugs. Experts say these sites could really endanger impressionable kids. [...] The problem for investigators? Most of these websites are perfectly legal under the First Amendment."

Also in 2003, CBS Evening News carried a segment about a young man hospitalized after using 5-MeO-DMT combined with harmful alkaloids. As with many similar news stories, they implied that the reason this young man took risks was because he had access to the internet: "For the young man who overdosed, and his parents, it's a cautionary tale about the freedom of the Internet. The Web gave him access to

unlimited information, but that included a brand new way to flirt with death."<sup>4</sup>

### Positive Mentions

The small number of negative descriptions of Erowid stand out; most mentions of our work in print literature and other media are neutral or positive. One television news story about DXM reported: "[...] the Poison Control Center [said] they frequently get phone calls from parents with questions or people saying a friend isn't feeling well after taking too much Coricidin. For more information Poison Control recommends the website erowid.org."<sup>5</sup> Other positive mentions highlight the usefulness of the site to a diverse audience:

Constable Harry Lawrenson of the Ontario Provincial Police, and coordinator of the Drug Abuse Resistance Education (DARE) program in Ontario, agrees with Erowid's approach. Lawrenson also supports the website as an educational resource, and commends Erowid on the multiplicity of the perspectives represented. [...] The global

respect that Erowid is earning is underscored by the neutrality of the website.<sup>6</sup>

### Happy to Help

We are pleased with the balance of positive and negative coverage we have received and are heartened that so many authors have included Erowid in their bibliographies and citations. There is a lot to say about Erowid, but one of the things we often say is that we are happy to know that the work we do is useful to so many people. ●

*If you see mentions of Erowid in print or video media, please let us know.*

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# A Sampling of Erowid Mentions

For a more complete list, see:  
Erowid.org/mentions

<b>2007</b>	Journal Articles - 6	News Articles - 4	Books - 4	Patent - 1	Other - 3
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Jun	Article	<b>High Space: An online interactive psycho-pharmacopoeia, <i>Harper's</i></b> • Two-page spread about Erowid including a screenshot. Harper's circulation is over 200,000.
Apr 29	Patent	<b>5-halo-6-aryl[1,2,4]triazolo[1,5-a]pyrimidin-7-amines, U.S. Patent Office</b> • References a DEA document that has disappeared from the DEA website but is archived on Erowid.
Mar	Journal	<b>Hallucinatory and rewarding effect of salvinorin A in zebrafish, <i>Psychopharmacology</i></b> • Uses Ask Erowid as citation about structural similarities of salvinorin A and Delta-9-THC (both terpenoids).

<b>2006</b>	Journal Articles - 21	News Articles - 17	Books - 21	Patent - 1	Other - 4
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Jun	Journal	<b>Response of cluster headache to psilocybin and LSD, <i>Neurology</i></b> • Thanks Erowid for assistance in gathering data from cluster headache sufferers.
Mar 15	News	<b>Feelin' Their Thizzle, <i>East Bay Express</i></b> • Quotes from an interview with Erowid about adulterated street ecstasy tablets and lab analysis.
—	Book	<b>Char Davies' <i>Immersive Virtual Art and the Essence of Spatiality</i></b> • Cites an original Erowid article about the psychoactive technology Transcranial Magnetic Stimulation.

<b>2005</b>	Journal Articles - 26	News Articles - 5	Books - 16	Graffiti - 1	Other - 12
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May 26	News	<b>Dawn raids mark crash of online designer drugs trade, <i>Guardian Unlimited</i></b> • Quotes Erowid's warning about the potential risks of ingesting research chemicals.
Jan	Report	<b>2002–2004 Psychonaut Project, United Nations Health and Consumer Protection Directorate</b> • Discusses the "extensiveness of information provided" by Erowid and details types of information provided.
—	Book	<b>101 Reasons to Avoid Ritalin Like the Plague</b> • Points readers at experience vaults to "provide enlightenment about Ritalin abuse".

<b>2004</b>	Journal Articles - 23	News Articles - 9	Books - 21	Articles - 14	Other - 1
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Apr 30	Article	<b>Erowid.org: Don't Get High Without It, <i>LA Weekly</i></b> • Feature-length article about Erowid including history, goals, interview, etc.
Apr 9	Journal	<b>Sources of information about MDMA, <i>Drug and Alcohol Dependence</i></b> • Reviews previous journal articles about the accuracy of non-governmental, online drug information.
Feb 2	News	<b>Tales From the Salvia Dark Side, <i>Air Force Times</i></b> • This military publication cites Erowid experience reports in describing the intensity of <i>S. divinorum's</i> effects.

<b>2003</b>	Journal Articles - 17	News Articles - 8	Books - 16	Gov. Reports - 1	Other - 3
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Jun	TV News	<b>In an Age of Exploding Information, Toxicology Web Sites Aid in Treatment, <i>Emergency Medicine News</i></b> • "No discussion about street drugs and drugs of abuse is complete without a referral to www.erowid.com."
—	Book	<b>Absolutely American: Four Years at West Point</b> • Describes how cadets at West Point military academy use Erowid to research the recreational drugs they use.

<b>2002</b>	Journal Articles - 7	News Articles - 10	Books - 10	Articles - 9	Other - 0
<b>2001</b>	Journal Articles - 5	News Articles - 3	Books - 4	Album - 1	Other - 3
<b>2000</b>	Journal Articles - 4	News Articles - 3	Books - 4	Articles - 5	Other - 0
<b>1999</b>	Journal Articles - 1	News Articles - 1	Books - 4	Articles - 0	Other - 0
<b>1998</b>	Journal Articles - 0	News Articles - 0	Books - 1	Articles - 0	Other - 0
<b>1997</b>	Journal Articles - 0	News Articles - 0	Books - 1	Articles - 0	Other - 0

# A Funny Thing Happened on the Way to Graduate School

by Lux

## Nine Months at Erowid

In September 2005 I gave six weeks' notice at a small technology company where I'd been working for six years, making a decent living doing something that really didn't interest me. I was haunted by the line in the movie *Ed Wood* where Orson Welles asks, "Why spend your life making someone else's dreams?"

I planned to return to graduate school to study psychology. My academic background is in philosophy, literature, and critical theory, with a side of graduate work in Indo-Tibetan Buddhist studies. I've also done a fair amount of work in cognitive science and systems theory. This might seem a bit eclectic, but I like to think of myself as a generalist. The common thread is my interest in the mind: how we co-create experience, who we are, what we are, and what it all means.

Over the next few months I enrolled in several psychology courses and had an intense couple of semesters getting up to speed in the discipline. I became relatively adept at reading and interpreting journal articles and understanding experimental design.

Even after all of these classes, I still didn't know where to focus. Graduate school would likely require specialization, and I'm a big picture kind of guy. I sometimes thought of my friend Josh, a recovering graduate student in computational neuroscience. Shortly before he dropped out of the program, Josh's advisor told him, in all seriousness, not to spend more than 15 minutes a month thinking about the big picture.

In September 2006 I started looking for a job to hold me over. As a matter of due diligence I sent an email to a community mailing list saying that I was looking for work. I got a reply from Earth asking, "Holy cow, I wonder if you would be interested in working on Erowid?" Minutes later, he received my reply: "Are you kidding?!? I would love to work at Erowid. LOVE it!"

### A Day in the Life of Erowid

First, I met the core Erowid team. They wanted to check me out to see if I seemed

relatively sane, and to make sure that I was actually interested in working and didn't have the wrong idea about what the work would be like. Based on the jokes I hear when I tell people that I work with Erowid, a common impression may be that a lot of personal "research" goes on here. I hope it won't disappoint anyone to learn that the truth is much more prosaic.

The Erowid day typically starts late—most of us aren't morning people. I usually wander into the office I share with Sylvia around 11:00 am. The first thing I do is plug my brain into the computer and download the last twenty-four hours' worth of news. Through a combination of mailing lists and news services I get a pretty thorough daily account of anything big going on in the world of psychoactives. If anything important comes up, I look into it further or add a link to the appropriate page on Erowid.

Then I start digging through our email "ticket" tracking system, looking at submissions, corrections, use requests, and random bits of you-name-it that float into our email addresses. We get a lot. Dozens of colleagues and visitors write in every day asking questions about projects we're working on, pointing out information they think we'd be interested in, or requesting some sort of collaboration. We currently have more than 10,000 experience reports and 23,000 Ask Erowid questions waiting to be processed. If you write in with a question and it takes three months to get a reply, I hope that you won't take it personally and understand that we really do our best.

After this, I go to work on whatever projects are active. The first major project I undertook was an article for *Erowid Extracts* on the Johns Hopkins psilocybin study. I had a lot of interest in that experiment, a background in psychology of religion, and I know one of the authors of the *Psychopharmacology* article, so writing about it was a no-brainer.

At every step of the process of writing an article, whether for the site or for *Erowid Extracts*, I get valuable feedback and

direction from my colleagues. For the most part, each person at Erowid knows what the others are working on, which inspires cooperation. This makes good use of our different, and complementary knowledge and skills.

Earth and Fire work from home a few hours away, and we all communicate via IRC during the work day. We also chat daily with colleagues who have expertise in various areas: law, pharmacology, software applications, etc. Nearly everything we publish is vetted by experts in the appropriate fields, before going live.

The Erowid work day never quite ends. I often come home long after dark, only to find myself picking up a book by Shulgin or Wasson, or attending a local talk by someone whose work is covered on the site. That's the hook for me—my deep love of learning.

### Random Memories

Erowid ran the psychoactive mushroom table at the Mycological Society of San Francisco Fungus Fair in Oakland again this year. At one point a gentleman approached us, hands overflowing with *Psilocybe* mushrooms that he had found on the grounds outside. He offered them to us for display on our table. We politely declined.

At a recent social gathering, I met the author of a book that I had reviewed for Erowid. My review was favorable, but we have a strong difference of opinion on some matters, and I said as much in my writing. This could have led to an awkward meeting, but we ended up talking amiably for over an hour. It quickly became clear that our mutual love of psychopharmacology was stronger than our disagreement.

Perhaps my happiest Erowid memory is from my initial meeting with Earth and Fire, when I volunteered to do whatever degrading drudge-work they might have languishing around, and they told me what they would really like is for me to help produce and process new content for the site. At last, I'd found a place that an autodidact generalist mind-geek could call a home. ●

# Carbogen

## *An Introduction*

by B. James and Earth Erowid

### What is Carbogen?

“Carbogen” refers to a gaseous mixture of carbon dioxide (CO<sub>2</sub>) and oxygen (O<sub>2</sub>), most often administered via a mask attached to a regulator connected to a high-pressure cylinder. The ratio of 30% CO<sub>2</sub> and 70% O<sub>2</sub> is known as “Meduna’s mixture”, after Ladislav J. Meduna, a psychiatrist who pioneered its use as a therapeutic tool in the 1940s and 1950s. Although carbogen—sometimes described in the medical literature as a “panicogen”—is perhaps best known for inducing anxiety, sensations of suffocation, and unconsciousness, this extremely simple gas can cause surprisingly complex psychoactive effects when inhaled for even a few breaths. Reports of discomfort and anxiety experienced while

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**After a few more breaths, effects increase in intensity and awareness of the external world fades away.**

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breathing carbogen may be partially explained by the set and setting of traditional carbogen administration rather than properties inherent in the substance itself. Recent reports of positive, or even glowing experiences suggest carbogen may be more properly described as a unique psychedelic.

Although carbogen has been used safely for over 50 years, prolonged exposure to high levels of carbon dioxide can be fatal. Individuals with weakened respiratory health or any pulmonary disease are at much higher risk of potentially life-threatening responses. Additionally, those suffering from panic or psychotic disorders are more likely to experience adverse reactions (see Carbogen in Psychiatric Research below).

### The Experience

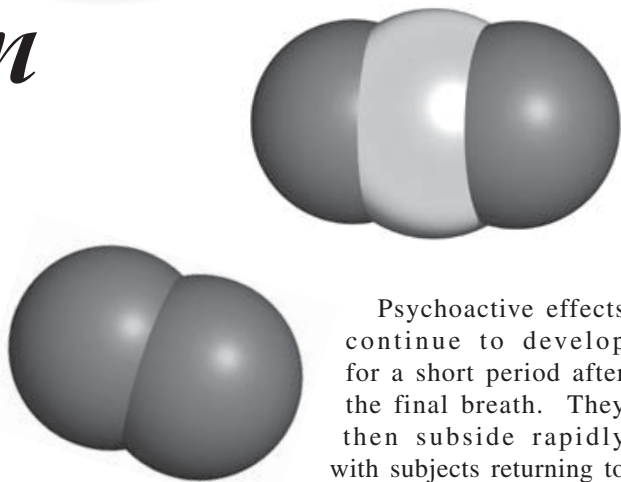
Carbogen doses are typically measured in number of breaths, with a fully immersive experience resulting from 8–20 breaths. The maximum number of breaths administered, even in extreme cases, seems to be 30–50. Inhaling more than 50 breaths of Meduna’s mixture is generally considered unproductive and increasingly dangerous.

Most people remain relatively still for the duration of the experience. As few as 1–5 breaths can cause significant alterations of thought, perception, and mood; rushes of sensation in the body; and disorientation. During these first moments it may require a willful effort to continue inhaling the acidic-tasting gas. After a few more breaths, effects increase in intensity, and awareness of the external world fades away. People often close their eyes and those who keep them open exhibit an unseeing

stare. Breath rate generally increases and breathing becomes somewhat labored.

When inhaled at sufficient doses, carbogen has anaesthetic and dissociative effects, frequently accompanied by both open- and closed-eye visuals. These effects include brightening or darkening of the visual field, kaleidoscopic or swirling changes in color, and geometric patterning.

Some people experience visions of more complex dreamscapes involving recognizable people and objects, or the sensation of being transported to another place or being in another dimension. Reports may include spiritual elements such as ineffable, numinous mental states, or encountering angelic beings.



Psychoactive effects continue to develop for a short period after the final breath. They then subside rapidly with subjects returning to near baseline within 45–180 seconds after the last inhalation.

As the effects fade, the feeling of having experienced more than can be remembered is common. In another parallel with more traditional psychedelics, Meduna noted that a small number of his subjects vividly re-experienced insights or memories that surfaced in carbogen sessions hours later or even the following day.<sup>1</sup>

Although the cognitive component of the experience varies substantially from person to person and from experience to experience (as with many psychedelics), perhaps the most universally accurate descriptor is simply “intense”.

### Physical Effects

Physical symptoms frequently include rapid, deep, or shallow breathing. Even though carbogen contains more oxygen than ambient air, its higher-than-normal levels of carbon dioxide trigger brain reflexes associated with asphyxiation (see Carbogen Pharmacology below).

Meduna reported other physical symptoms, such as eyelid fluttering and body spasms, but more recent carbogen reports do not support these as universal or even particularly common. At 10–30 breaths, some subjects flex their leg and hip muscles, or have carpal spasms (involuntary finger and wrist curling) similar to those sometimes experienced during Holotropic Breathwork. In intense sessions (40 breaths or more), Meduna

reported that some subjects underwent convulsions, seizures, or bicycling of the limbs.<sup>1</sup>

### **Anxiety and Discomfort**

When inhaling carbogen, it is common for subjects to feel that they are not getting enough oxygen. A recent experimenter said, “It’s like feeling like suffocating”.<sup>2</sup> One of Meduna’s patients reported: “In every case, when inhaling the gaseous mixture I experienced a terrifying smothering sensation; and before the moment of narcosis I had to exert every bit of my will power to keep from fighting the mask.”<sup>1</sup>

These feelings of suffocation can cause mild to severe anxiety, fear, or panic, as described by another patient: “After three or four inhalations, the feeling of suffocation becomes intense. And then it becomes necessary to breathe fast. About this time I start praying, ‘Oh, God, please help me to go under this quick,’ and it usually helps. However, there are times when nothing helps, I am so filled with panic.”<sup>1</sup>

In a similar spirit, Dale Pendell captures the flavor of a very unpleasant experience: “It’s bad from the first lungful. It tastes sour. Alarm bells go off immediately. ‘This is bad.’ Will power is required to take even one full inhalation. By the second lungful, if you haven’t ripped the mask off, full panic has set in. You need AIR! People start gasping at this point, faces flushed and sucking in the carbogen furiously.”<sup>3</sup>

This feeling has also been described as generalized anxiety: “I got ‘that scary feeling’, the early tinges of the fear that I might get as I approach the difficult part of a [psychedelic] trip.”<sup>4</sup>

Psychiatric research using carbogen has found that those who have anxiety or panic disorders are more prone to negative reactions than the general population. Some research has also shown that a majority of subjects experience at least some symptoms of increased anxiety during extended “carbon dioxide challenges”.<sup>5</sup> Meduna found that administering carbogen in shorter sessions (no more than 30 breaths) seemed to help. He observed that fear often grew more intense as a session progressed.

Descriptions of carbogen’s unpleasantness abound. A 1992 book by Trevor Trueheart briefly mentions carbogen: “Everybody I have known to inhale carbogen experienced extreme fear

and seemed to confront all the demons stored in his or her unconscious. This is the stuff of nightmares”.<sup>6</sup>

### **Euphoria, Pleasure, and Visions**

In stark contrast to the many negative reactions are the extremely positive, sensual, or euphoric responses. In fact, Yacorzynski, et al. (1962) reported that more of their subjects “enjoyed” the experience than found it frightening. Recent work by B. James (see Carbogen Redux, page 18) involving subjects familiar with psychedelics confirmed that a majority of those who were administered carbogen in a friendly setting did not have fearful reactions, and many found the effects pleasurable. Giggling and laughing were common and “wow” was probably the most frequently uttered word after a person’s first experience.

Immediately following his first experience with carbogen (15 breaths), one person took 4 breaths of normal air and then exclaimed excitedly: “Yeah, this is fucking awesome. This is it, I love this. Fuck, this is so cool! [breathing hard, laughing] That’s wonderful shit. Excuse my language. [breathing calms] It didn’t feel alien to any experience I’ve had; it seems akin to the more euphoric states of nitrous.”<sup>4</sup>

Many people report enjoying the aesthetic effects or visions, as in these 1998 reports: “It was intensely beautiful.”<sup>2</sup> and “Oh my, it was neat. I went to this paradise land: wow! [...] I went through a brightly starry zone, then drifted on past that to a lush, green paradise. It was neat: beauty. It was very good.”<sup>2</sup>

Some subjects immediately comment that they’d like to try it again: “I sure went someplace that I’ve never been before. Yeah, I think that I’d love to go back.”<sup>2</sup> Others comment on the experience with superlatives: “I like that stuff. It could be the best.”<sup>2</sup>

Positive psychedelic effects have also been reported by subjects administered carbogen in medical settings, such as this account from a session administered by Meduna:

After the second breath came an onrush of color, first a predominant sheet of beautiful rosy-red, following which

came successive sheets of brilliant color and designs, some geometric, some fanciful and graceful—purple and rose coloring predominant. As these sheets came towards me they seemed to engulf me and leave me breathless in the mad rushing sensation. Then the colors left and I felt myself being separated; my soul drawing apart from the physical being, was drawn upward seemingly to leave the earth and to go upward where it reached a greater Spirit with Whom there was a communion, producing a remarkable, new relaxation and deep security. Through this communion I seemed to receive assurance that the petit problems or whatever was bothering the human being that was me huddled down on the earth, would work out all right and that I had no need to worry.

In this spirituelle I felt the Greater Spirit even smiling indulgently upon me in my vain little efforts to carry on by myself and I pressed close the warmth and tender strength and felt assurance of enough power to overcome whatever lay ahead for me as a human being.<sup>1</sup>

Meduna commented that, “In this beautiful experience we can discern almost all the constants of the CO<sub>2</sub> experience: (1) Color; (2) Geometric pattern; (3) Movement; (4) Doubleness of personality; and (5) Divination or feeling of esoteric importance.”<sup>1</sup>

**Although the U.S. Food and Drug Administration and other health agencies regulate administration of gases for medical purposes, we are unaware of any laws in the U.S. prohibiting the possession or use of carbon dioxide as a psychoactive.**

### **Expectation and Mindset**

The disparity between panicky, uncomfortable experiences and pleasurable, spiritual ones raises questions about what accounts for these differences. The bias towards negative descriptions may be partially the result of the fact that Meduna administered carbogen primarily to individuals seeking treatment for emotional or mental problems. It may also result from the expectations of researchers and participants.



Image from *Oxygen and Carbon Dioxide Therapy* (1934)

Yacorzynski, et al. (1962) found that the majority of their subjects did not experience feelings of fear, speculating that was due to differences in the briefings given beforehand.<sup>7</sup> After administering carbogen to dozens of participants, B. James came to believe that the quality and type of experience may be as strongly affected by methods, contexts, and expectations as they are with most psychedelics. Set and setting may be critical factors in the experience of carbogen.

Psychiatric research into anxiety using carbogen confirms this, with a number of papers showing that a sense of safety, feeling in control of the administration of the gas, an understanding of carbogen's effects, and having a "professional" present during the session can all lead to reduced anxiety.<sup>8</sup>

Although the literature is dominated by descriptions of anxiety and discomfort, it may actually be that most people who breathe carbogen in an appropriate setting do not experience strong unpleasant effects.

### Carbogen's History in Medicine

Inhaled carbon dioxide has been known to have psychoactive effects since at least 1827, when Henry Hickman demonstrated that a dog exposed to an atmosphere containing carbon dioxide became anaesthetized.<sup>1</sup> In 1856, the author Sir James Simpson stated that, "Carbon dioxide is recognized by toxicologists as a very powerful narcotic poison when inhaled in sufficient quantity."<sup>1</sup> Carbon dioxide was explored as a medical and psychiatric tool in the late nineteenth and early twentieth centuries.

The golden age of carbogen research in psychiatry arrived in the 1940s and 1950s, spearheaded by the work of Ladislav Meduna. Born in 1896, Meduna was a Hungarian psychiatrist who emigrated to Chicago in 1938. He developed a deep interest in psychiatric therapies involving sleep, coma, and related non-ordinary states of consciousness and was an early pioneer in chemical and electroconvulsive therapies.

Meduna began researching carbogen therapy in 1943 and over the course of his career conducted more than 15,000 carbogen "treatments".<sup>1</sup> His standard procedure consisted of administering between 10 and 50 inhalations of the 30% CO<sub>2</sub> / 70% O<sub>2</sub> mixture in short sessions, three times per week.

Meduna reported success in using carbogen to treat several "psychoneurotic conditions" including stuttering, anxiety, spastic colitis, frigidity, and homosexuality. He reported that carbogen frequently induced the surfacing of repressed emotional responses, which he considered unrelated to carbogen's therapeutic effects. Meduna discussed the possibility that the intensity of the experience, coupled with the brief unconsciousness it induced, might help desensitize patients to anxiety or fear, but largely considered carbogen's benefits to be a result of direct physiological action on the brain.<sup>1</sup>

In 1950 Meduna published the first edition of the definitive monograph on carbogen in psychiatry, *Carbon Dioxide Therapy*. In the 1950s carbon dioxide therapy research expanded and was used by other psychiatrists in conjunction with electroconvulsive therapy (also known as "electroshock therapy"). It was also co-administered with psychoactive drugs such as atropine, barbiturates, and antihistamines, although Meduna argued that combining carbogen with depressants could be dangerous.

While Meduna reported successes with carbogen, other researchers ultimately recommended against its use as an adjunct to psychotherapy. For example, Hargrove, et al. reported in 1954 that, "The use of carbon dioxide therapy in our hands added no specific therapeutic effect but did add problems of transference and resistance that retarded or prevented recovery."<sup>9</sup>

Carbogen use was investigated in the mid-twentieth century for a remarkable

breadth of maladies ranging from depression, neuroses, psychoses, and dementias, to rheumatoid arthritis, cerebral palsy, Parkinson's disease, asthma, pneumonia, hiccups, and whooping cough.<sup>7,10,11</sup> In recent years, several studies have indicated that carbogen may help make certain cancerous tumor cells more susceptible to radio- and chemotherapies.<sup>12</sup> Carbon dioxide also continues to be used in medicine for its ability to stimulate breathing and cause vasodilation.

### Carbogen in Psychiatric Research

Interest in carbogen as a psychotherapeutic tool waned in the 1960s. It was then increasingly investigated—for its capacity to *cause* anxiety and panic rather than treat them. In contemporary psychiatric research, carbogen has been "extensively used"<sup>13</sup> in this type of study at concentrations of 5–35% carbon dioxide. It is notable, however, that recent research does not use the strong doses administered by Meduna, instead delivering high concentrations for only brief periods. As Zvolensky, et al. describe in a 2001 review of this field of research: "5% CO<sub>2</sub> typically is administered steadily for 15 min, 20% CO<sub>2</sub> for 20–25 [sec], and 35% CO<sub>2</sub> in a single vital capacity breath."<sup>8</sup>

One typical research protocol, published in 2001, administered 5% CO<sub>2</sub> for twenty minutes to subjects lying in a "respiratory canopy" and rated them for symptoms of panic. They found that 52.0% of those who had previously been diagnosed with panic disorder had a panic reaction, while 8.8% of the "normal comparison subjects" exhibited symptoms of panic.<sup>5</sup> Other researchers have found an even wider disparity.

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### Carbogen's capacity to trigger anxiety has been used to evaluate treatments for anxiety disorders.

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Carbogen's capacity to trigger anxiety has been used to evaluate treatments for anxiety disorders as well as the etiology (source) of panic reactions. In one double-blind study, panic responses triggered by carbogen were dramatically reduced in subjects with panic disorder by pre-treatment with 1 mg alprazolam (Xanax).<sup>5</sup> Several carbogen studies have also shown that the closer one's familial relationship to a panic disorder sufferer, the more likely



one is to experience panic during a carbon dioxide challenge.<sup>14</sup>

## Carbogen and Psychedelics

Alfred “Al” Hubbard, an important early advocate of psychedelics, appears to have been one of the first major proponents of carbogen within the psychedelic subculture. Hubbard traveled the world introducing famous and influential people to LSD and carbogen. As Jay Stevens describes in *Storming Heaven*, “One of Al’s favorite break-the-ice devices was carbogen, a mixture of carbon dioxide and oxygen, which came in a small portable cylinder. Carbogen was what therapists referred to as a potent abreactor: ten or fifteen lungfuls and you tended to relive your childhood traumas. And judging on how well you handled them, Al would either offer to run an LSD session for you, or he wouldn’t.”<sup>15</sup> Carbogen was, literally, Hubbard’s (pre-) acid test.

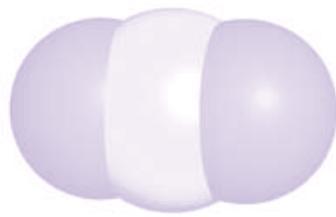
Aldous Huxley, who received his first dose of LSD from Hubbard, recounts in *Heaven and Hell*:

[...] carbon dioxide produces, in those who inhale it, certain physical and psychological changes, which have been exhaustively described by Meduna. Among these changes the most important [...] is a marked enhancement of the ability to ‘see things,’ when the eyes are closed. In some cases only swirls of patterned color are seen. In others there may be vivid recalls of past experiences. (Hence the value of CO<sub>2</sub> as a therapeutic agent.) In yet other cases carbon dioxide transports the subject to the Other World at the antipodes of his everyday consciousness, and he enjoys very briefly visionary experiences entirely unconnected with his own personal history or with the problems of the human race in general.<sup>16</sup>

Huxley and others speculated that spiritual practices involving the breath such as chanting or yogic breathing may induce religious visions through altering CO<sub>2</sub> concentrations in the blood.<sup>16</sup> Stanislaw Grof, a well-known researcher into LSD’s psychotherapeutic effects, and Christina Grof later developed Holotropic Breathwork, a method of hyperventilation designed to legally mimic some of the beneficial effects of LSD. Holotropic Breathwork also produces its effects by directly manipulating CO<sub>2</sub> levels, though by decreasing rather

than increasing CO<sub>2</sub> concentration in the blood.

Hubbard claimed to have conducted 1,700 LSD sessions by 1959, and his reputation piqued the interest of Myron Stolaroff, who went on to become an important figure in research into non-ordinary states of consciousness. Stolaroff writes, “Hubbard made a deeper impression on me than anyone I had ever met. It was an impression that radically altered my whole value-belief system, and completely changed the course of my life.”<sup>17</sup> The first day they met, Hubbard gave Stolaroff a tablet of methedrine and a few inhalations of Meduna’s mixture. “No doubt reading me quite accurately,” Stolaroff recalls, “he gave me only a few breaths, but it was enough to give me a glimpse, and especially a feeling, of another world.”<sup>17</sup> Stolaroff was profoundly impressed, and they arranged an LSD session.



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**“[...] we found that several treatments with [Meduna’s] mixture was an excellent procedure to introduce novices to altered states of consciousness.”**

**— Myron Stolaroff**

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Stolaroff’s LSD session was life-changing. Convinced of its therapeutic potential, he set up the International Foundation for Advanced Study in Menlo Park, California in 1961. Stolaroff continued to work with carbogen: “In our Foundation work with clients, we found that several treatments with [Meduna’s] mixture was an excellent procedure to introduce novices to altered states of consciousness. Many discovered unconscious contents of their mind for the first time. The procedure also cleared away a good deal of repressed material, thus freeing the subject for a smoother, more profound psychedelic experience.”<sup>17</sup> Although he considered carbogen beneficial, he noted “[...] it was such a drastic and dramatic procedure that no one underwent it eagerly.”<sup>17</sup>

As a counterpoint, however, Stolaroff also describes a person who had a positive reaction to carbogen as “a complete standout. [...] Jeffrey was quite an exception. He loved it. He would take an enormous number of breaths—up to 50”.<sup>17</sup> Such positive experiences were considered distant outliers. As legal psychedelic research became

less common, interest in this potentially dysphoric psychoactive outside of research contexts was minimal, and carbogen experimentation largely disappeared.

## Carbogen Pharmacology

The mechanisms of action for carbogen’s psychoactive effects have not been fully established. During the 1950s and 1960s, the primary mechanisms proposed were alterations in blood pH and inhibition of neuronal function by the slowing of cellular metabolism. More recent research paints a complex picture of interconnected systems, including activation of serotonin (5-HT) neurons in the raphe nuclei (located in the mid-brain) where most serotonin neurons have their cell bodies.<sup>18,19,20</sup>

The air we breathe normally contains 20–21% oxygen and 0.02–0.06% carbon dioxide, with nitrogen and trace gases constituting the other 78.9+%. Meduna’s

mixture is 30% CO<sub>2</sub> and 70% O<sub>2</sub>, giving it much higher concentrations of both than normal air. Although some people have reported mildly calming psychoactive effects from breathing pure oxygen, it is the extremely high levels of carbon dioxide (around 1000 times normal levels) to which carbogen’s effects are attributed.

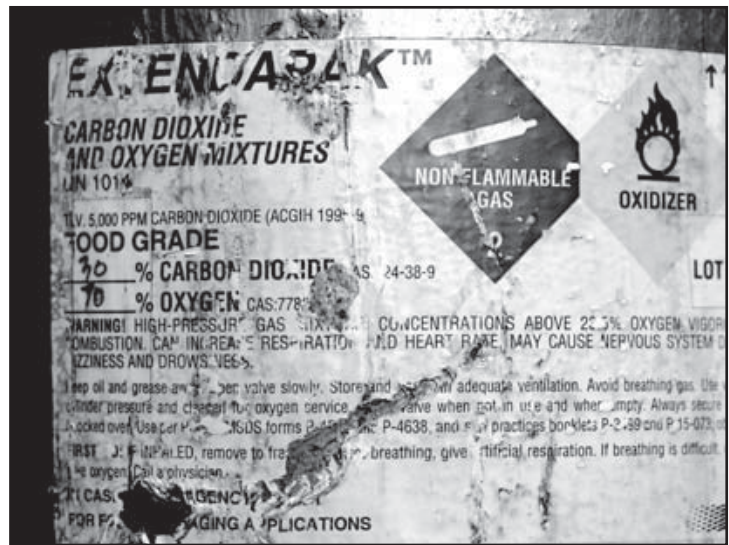
Counterintuitively, the physiological urge to breathe is mostly a response to high levels of CO<sub>2</sub> rather than to low levels of oxygen in the blood. While the body has some oxygen-based triggers, these account for only a small portion of the impulse to breathe. The carbon dioxide-driven breathing reflex explains why taking a lungful of 100% helium or nitrous oxide does not immediately cause the sensation of suffocation. In humans, central and peripheral chemoreceptors (chemical “sensors” inside and outside the brain) constantly monitor carbon dioxide levels in the blood to determine how strongly to breathe. Cells produce carbon dioxide as they use energy. When a person holds his or her breath, carbon dioxide levels rise in the blood and the chemoreceptors send “breathe

more” alerts to the body and brain with increasing urgency. Carbogen triggers this response even though oxygen levels in the lungs and blood are higher than normal.<sup>21</sup> Simply holding one’s breath does not cause carbogen-like effects.

Carbon dioxide dissolved in blood is acidic, just as it is in carbonated soda. Inhalation of carbogen rapidly increases acidity (lowers pH) of the blood, cerebrospinal fluid, and brain, creating a condition called respiratory acidosis or hypercapnia. In 1938 Gibbs and Gibbs repeatedly measured arterial and venous blood pH while administering a 35-breath session with Meduna’s mixture. They found that arterial blood pH dropped from 7.37 at the start of the session to 6.94 after 35 inhalations,<sup>1</sup> a level that could be dangerous if maintained for prolonged periods. Blood pH rapidly returns to normal after carbogen administration ends. Although many researchers believe that lowered pH directly causes reduced brain activity and anaesthesia,<sup>22,23</sup> acidosis alone probably does not explain carbogen’s visual and visionary effects.

Interestingly, high levels of carbon dioxide also lead to rapid dilatation of cerebral vessels and increased cerebral blood flow.<sup>23,24</sup> For brief periods, increases in blood flow in the brain are generally associated with improvements in cognitive performance.

Recent advances in understanding the identity and location of the brain’s carbon dioxide chemoreceptors may provide better explanations for the anxiogenic and visionary effects of carbogen. Over the last decade, a number of researchers have verified that a subset of serotonin neurons in the raphe nuclei respond to hypercapnia.<sup>18</sup> Because of the many brain areas to which they extend, such serotonin neurons are well-placed to not only trigger autonomic responses, such as breath and cerebral blood flow, but also interact with the parts of the brain responsible for cognition and emotions.<sup>19</sup> Severson, et al. proposed in 2003, “that a major role of serotonergic neurons throughout the brainstem is to monitor the acid/base status of blood and to initiate multiple responses aimed at restoring pH to normal, including changes in behavior, breathing, and autonomic control.”<sup>19</sup> The highly-networked serotonin neurons—better known for their involvement with psychedelics, antidepressants, and higher brain function—are also valuable



Carbogen Tank Label, Photo by Erowid

**Carbon dioxide and oxygen are readily available as compressed gases; mixtures of CO<sub>2</sub> and O<sub>2</sub> are sold in cylinders for various industrial, farming, and grocery uses.**

as CO<sub>2</sub> detectors because of their wide connection to many brain systems. When high CO<sub>2</sub> levels are detected, one might not only need to change breathing or increase heart rate, but may also need to be able to make complex, life-preserving decisions about how to get to a safer location.<sup>18,19,25</sup>

Ongoing research into the neurophysiology of anxiety and panic disorder has revealed that carbogen-activated chemoreceptor neurons may directly affect many parts of the brain, triggering several receptor systems, including the adrenergic, cholinergic, and dopaminergic systems. Kaye, et al. (2004) summarize the results of recent brain imaging research showing hypercapnia’s widespread effects: “humans exposed to CO<sub>2</sub> have shown activation of numerous centres, including medullary, limbic and paralimbic (amygdala and periamygdala), cerebellar, insula and prefrontal cortical areas.”<sup>26,27</sup>

Carbogen psychopharmacology is still quite speculative and continues to be actively explored. Although there are thousands of papers listed in PubMed looking at the physiological and mental effects of increased carbon dioxide in the blood, including hundreds from the last few years, as far as we know, as of May 2007, the mechanisms of carbogen’s psychedelic-like effects have not been examined in the scientific literature since the 1950s.

### Carbon Dioxide Safety Questions

Carbogen mixtures have been safely administered in medical and psychiatric procedures many thousands of times. While it appears to be relatively safe when administered in brief sessions, prolonged exposure to high levels of CO<sub>2</sub> is sufficient to cause lethal respiratory or circulatory failure, as evidenced by the fact that CO<sub>2</sub> is used to euthanize lab animals.<sup>28,29,30</sup>

Hypercapnia is initially stimulating, but longer-term exposure to high levels of carbon dioxide leads to “carbon dioxide narcosis”: lethargy, confusion, and sleepiness. Exposure to levels of carbon dioxide around 10% causes dizziness and higher levels cause unconsciousness within minutes.<sup>1</sup> There have been a number of reported deaths where accidental exposure to high carbon dioxide levels caused the victims to black out before they could reach safety.<sup>28</sup>

Complicating the safety picture is the fact that most real-world cases involve not only high levels of carbon dioxide, but hypoxia (low levels of oxygen) as well. Most information provided by governmental agencies about CO<sub>2</sub> dangers is related to oxygen displacement. Serious accidents have been reported related to: dry ice (frozen CO<sub>2</sub>) sublimating into CO<sub>2</sub> gas, beer brewing forming CO<sub>2</sub>, and malfunctioning ventilation systems increasing CO<sub>2</sub> levels

in submarines, among others. All of these involve hypoxia and are not exclusively attributable to CO<sub>2</sub> poisoning.

As Gill, et al. clarify in their 2002 article, it is important to distinguish between “simple asphyxiants” and “toxic gases”. For example, nitrogen is a simple asphyxiant, meaning that if it displaces too much oxygen, it can cause suffocation, but as long as around 20% oxygen is maintained, it is safe to breathe indefinitely. Other gases, like carbon monoxide, hydrogen sulfide, or carbon dioxide can be fatal because of their chemical effects alone.<sup>28</sup>

Research with animals has convincingly shown that adequate concentrations of oxygen do not prevent death from CO<sub>2</sub> poisoning. One research protocol administered 80% CO<sub>2</sub> and 20% O<sub>2</sub> to dogs, causing death in 10–15 minutes. The same researchers also euthanized dogs with 50% CO<sub>2</sub> and 50% O<sub>2</sub>, causing death in 30–90 minutes.<sup>29</sup> Because of differences in metabolism as well as the long durations and high concentrations used, the animal research into CO<sub>2</sub> poisoning is not easily translatable to human health concerns for short-term inhalation of carbogen.

A primary danger of short-term inhalation of carbogen is accidental over-exposure, like the tragic but recurring unsupervised nitrous oxide suffocations caused by masks, garbage bags, or stuck tank valves. People with weakened respiratory systems, such as those with chronic obstructive pulmonary disease or cystic fibrosis, are at much higher risk of life-threatening complications from inhaling carbogen. Further, many heavy smokers have undiagnosed lung dysfunction that would severely weaken their ability to recover from acidosis caused by carbogen, putting them at much higher risk of respiratory failure than healthy individuals.<sup>31</sup> Because carbogen inhalation causes a spike in cerebral blood flow, those with weak cardiovascular systems or health issues related to cranial blood pressure may be at higher risk of problems. Other populations may also be at higher risk, including schizophrenics or those suffering from anemia.

### Ubiquitous Entheogen?

The psychoactive effects produced by a mixture of the common gases carbon dioxide and oxygen remind us that consciousness is a fragile knitwork of body, mind, and environment. Alexander Shulgin, the renowned psychedelic chemist, describes teaching a class in San Francisco after which a young man expressed interest in synthesizing

LSD. Dr. Shulgin replied that LSD chemistry is very complex and that he should start off with something simple, like carbon dioxide. When the young man replied incredulously, Dr. Shulgin led him downstairs to a lab where tubs of dry ice were stored and suggested the student put his head down next to one of the tubs, inhale deeply through his mouth, and see how he felt. After taking two deep breaths and experiencing the psychoactive effects, he said, “Point taken”. ●

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# Carbogen Redux

## Contemporary Exploration of a Ubiquitous Inhalant

by B. James

*See Carbogen: An Introduction (page 12) for information about the health risks, dosage, and history of carbogen.*

### Subjects and Materials

In the last nine years, I have administered carbogen to over fifty people, aged 22 to 65 years old. Nearly all of them were well-acquainted to profound psychedelic states of consciousness, but none had previously experienced carbogen. Most participated in multiple sessions each consisting of 2 to 26 inhalations. I have used three different concentrations: Meduna's mixture (30% CO<sub>2</sub> / 70% O<sub>2</sub>) and two slight variations: 28/72 and 34/66. The 34/66 mixture produced a faster onset of effect, with no other noticeable differences.

All sessions involved pre-mixed gases in a single, high-pressure gas cylinder. For most sessions I used a pressure regulator and a mask with both a demand regulator and an extra exhaust valve. I added the extra exhaust valve to accommodate rapid exhalations (characteristic in carbogen subjects) that the standard valve couldn't handle. In a later setup I replaced the demand regulator with a bladder that was filled before the inhalations began. This

*My investigation of carbogen grew out of my fascination with Al Hubbard and his work, but it was through Myron Stolaroff's warmth and limitless academic generosity that I gained a personal link to the original era of carbogen therapy.*

allowed me to turn off the gas cylinder prior to carbogen administration, eliminating the risk of problems caused by open valves or a stuck demand regulator.

Before administering carbogen to others, I considered it essential to experience it myself. I tried carbogen twice to gain the first-hand experience necessary for administering it to others.

### The Sessions

In my role as sitter, I answered any questions I could, but tried to avoid unduly influencing people's expectations. I warned subjects that the carbon dioxide in the mix could trigger an intense feeling of suffocation, but that they would not be in danger because they would be breathing more oxygen than is in ambient air. Sometimes, I used an analogy of an "idiot light" in the brain that checks for CO<sub>2</sub> concentration but ignores O<sub>2</sub> concentration. I also told them that the gas could taste pretty bad, almost like drinking a Coke and burping through the nose.

I asked each participant to select a maximum number of inhalations for their session, recommending between 10 and 25. I had participants lie down in a comfortable position and told them that I would count each breath out loud until I reached their chosen number. I told them I would then remove the mask, adding that if they made the slightest gesture during the session, I would immediately stop administering the gas. I mentioned that a new sensation could occur at around 7 or 8 breaths, replacing the initial discomfort, making it worthwhile to try to hold on through at least 10 inhalations. (One subject had a

tremendously deep reaction to 2 breaths, so I agreed he could choose a low limit of 6 for his second attempt. At the sixth breath, when I removed the mask, he clutched at it, calling out "more, more . . . the angels!")

I did not measure pulse or blood pressure during sessions, as physiological responses are well described in Meduna's *Carbon Dioxide Therapy*. My primary goal was to gather information about the subjective mental state of the experience, but I will briefly describe carbogen's physical effects. Subjects generally exhibited one of three breathing patterns:

- 1) Deep and desperately rapid breathing starting by the second breath, and lasting into the teens. Somewhere before breath 20 the urgency tapers off and the subject settles into deep, rhythmic breaths.
- 2) Deep, rapid breathing with a gagging pause, as if to swallow, every 3 or 4 breaths into the 20s.
- 3) Calm, deep, slow breathing, through the 20s. One subject displayed this pattern during each session; another adopted it after his second session, and reported that it required quite a bit of will power.

Involuntary eye movements often started in the teens and lasted for 10 to 30 seconds after the last inhalation. If a subject's eyes were open during the session, they were apparently not focusing on anything external. None of the subjects I worked with experienced anything that I would classify as an "abreaction" (release of repressed subconscious material) as described in the literature from the 1950s and 1960s. When I removed the mask after the final breath, people consistently breathed hard for up to a minute, as though they had just run a short sprint.

### Different Set & Settings

As part of the protocol for the first U.S. group I worked with, I decided to direct potential subjects' questions about carbogen's effects to those who had already experienced it. I learned a great deal from listening to these accounts, and was surprised to hear sessions described in increasingly positive terms. The descriptions of ecstatic states were far beyond what I had expected.

I later conducted sessions with a large number of participants in the Netherlands. The setting was a dedicated spiritual space among "seekers" who had gathered for a psychoactives-oriented conference taking place in Amsterdam. I truncated the verbal part of my protocol for this group, since

# IN THEIR OWN WORDS

After completing a session, many subjects attempted to put what they had experienced into words...

- After 26 breaths, subject uttered in a profound tone, "Death is very personal." He later described that he had experienced every cell in his body dying. He said that after the seventeenth inhalation he "could have gone on and on in that state." It was "very peaceful, very serene, kind of like postcards from heaven."
- Subject took 25 fast, deep breaths of carbogen with loud exhalations. His breathing quieted in about a minute and a half, and another minute later he exclaimed, surprised, "The mask's off? How many?" At his fourth inhalation he had seen "something coming on...colors." He and the other subjects in the room agreed, "It's essence-oriented".
- Subject took 13 breaths and then said, "Oh my, it was neat. I went to this paradise land. Wow. [I was in a] brightly starry zone, I drifted past that to lush, green paradise. [...] After about 4 breaths I saw the stars and didn't think much about the breathing discomfort. [...] It was very, very visual once I got past the star land. Then I was coming back and it's like, wait a minute! [...] Similar to but totally different from DMT, even as far as the feeling of being just yanked."
- Subject took 24 inhalations and announced with a wide smile, "Oh, that was wonderful."
- Subject chose to take 13 inhalations, but stopped at 6, saying, "I can't imagine pushing it beyond that. It was incredible! Bright light, brighter than nitrous, and very alive. Impressive color."
- Subject found the entire experience uncomfortable, describing it as "dreadful". At 65 years old, this was the oldest subject. When asked to pick a number of inhalations, he blithely replied, "Why wouldn't I choose 25?". He emitted a low howl on every exhalation for about 30 seconds after the last breath. He described that it felt like he would suffocate and could not get over the discomfort. He said, "Glad I did it, but I'm not ready to do it again." He later explained that he had furiously resisted ether anesthesia as a child, and several doctors and nurses were required to hold him down before he went unconscious. Similarly, he fought his carbogen experience with all his will, in order to avoid giving up control.
- Subject took 10 inhalations, then giggled, "That was great."
- Subject took 25 breaths. During the experience, his body shook, seizure-like, then his left leg went up, then his right hand went into the air and he vocalized something unintelligible. After two minutes, his eyes changed to a look of recognition and his arm lowered and he said, "Wow, that was really intense! There was a whole blast of light and an interaction, that's why I had my hand up... a whole dream sequence like something out of Star Wars."
- Subject took 15 breaths and later wrote, "It was very different from my expectations. I barely even noticed the taste of the gas. I wasn't aware of any feeling of not having enough oxygen. I felt a surprisingly gentle sensation of drifting into a deep place of contentment, like I was floating down under the water, and colors were rising up to receive me. I was floating in a place outside of gravity, outside of boundedness."

the subjects generally did not speak much English. They were asked to pick a number of breaths, but there was little discussion about expectations and potential effects. In this group, no subject stopped before their selected number of breaths. As with the U.S. group, the predominant reaction was "wow". There was no indication that any of these subjects experienced negative effects.

I hosted additional sessions in the United States, one with a small group of "drug geeks" curious about the effects of carbogen. They had researched and discussed carbogen with one another and had a sense of what they might expect. Individuals in this group were fairly conservative in the number of breaths they chose: between 5 and 22. Although I expected this group to choose higher numbers of inhalations, their collective opinion seemed to be that there was no clear benefit in going for more breaths; most thought that over 10 or 15 would not necessarily be more interesting or valuable.

Sometimes I saw what appeared to be terror or deep concern on people's faces, only to have them describe their experiences as wonderfully positive or at least neutral. For example, one subject's eyes shot open immediately after the mask was removed in what looked to observers to be an expression of fright or astonishment, yet he related an extremely positive, numinous mental state.

## Closing Thoughts

In early sessions, I felt it was best to fully disclose the potentially uncomfortable physical sensations often experienced in the first 10 breaths. After administering carbogen dozens of times, I found that most people did not have much trouble with the experience. Because of this, I felt it was less necessary to spend time describing possible negative reactions to later subjects. I wonder what the reactions would be if pre-session preparation focused on positive aspects of the carbogen experience.

Clearly, the profound experiences generated by psychedelics can be highly influenced by suggestion. It seems this is true for carbogen as well. Although some early authors reported frequent negative reactions to carbogen, in my sample of more than 50 subjects, only one exhibited an obvious negative reaction and none appeared to abreact. This may be because my subjects' previous work with psychedelics left them clear of psychic debris. Or they may simply have been accustomed to powerful psychoactive effects, and thus better prepared for the experience. Also, all of the subjects to whom I administered carbogen were specifically interested in having a carbogen experience rather than receiving it as a part of therapy or research. Finally, when carbogen is presented as an extraordinarily powerful but intrinsically neutral or positive experience, it appears to be less likely to produce a negative reaction. ●

*Erowid.org/extracts/n12/carbogen\_redux*

# That Old Familiar Place

## An Experience with *Trichocereus peruvianus*

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by Curious

I am a forty-something-year-old male who used numerous drugs in college: marijuana daily, various forms of hashish, alcohol, caffeine, cocaine, methamphetamine, mushrooms, and a little too much LSD. Thereafter, I used only moderate amounts of marijuana and a little alcohol for the next fifteen years. Some life changes inspired me to resume my work with hallucinogens, this time as a spiritual learning tool rather than as a party device. This led me to the legal-to-possess hallucinogens, including *Salvia divinorum* and the *Trichocereus* cacti, both *T. pachanoi* and *T. peruvianus*. The following report documents my fifth exploration with mescaline-producing cacti in the past three years.

### THE PREPARATION

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After four previous cactus trips, I found that the two I did by myself were very therapeutic and deep, whereas the two I did with a good friend were enjoyable, but not very deep. I've been feeling a need for a therapy session, so the upcoming trip will be solo. I've scheduled this trip for a time when I will be the only one in my house for a few days, and I have followed a restricted diet for the past three days similar to that suggested before ingesting MAOIs (particularly avoiding foods with tyramine, such as aged cheese and avocados). Although there are no strong MAOIs in *Trichocereus* cacti, they do have a high tyramine content, which can cause headaches, so the less in my system, the better. I decided to use 70 g of dried *T. peruvianus* from the same batch that I have used three times before (40, 50, and 65 g trips).

Past experience cooking cacti has taught me to start the oven vent hood first to reduce the lingering odors, which can be a potent nausea trigger even days afterward. Seventy grams of dried cactus with 1.5 qt of water are boiled for an hour in a steel

pot. The now-softened cactus is ground up in a blender, then put back in the pot along with the juice of six lemons, returned to a boil briefly, and left to soak for two hours. It is then returned to a low boil for 2.5 more hours, and then the whole mess is strained through a cotton t-shirt. I note that the strained solids have a slightly sweet taste, but no bitterness. Since the alkaloids are bitter, this is a good indication that they are in the very bitter liquid. The filtered liquid is returned to the pot for two more hours of boiling until the volume is reduced to eight ounces of a brownish green liquid the consistency of maple syrup. The liquid is divided evenly between two Mason jars and refrigerated for the next day.

### THE EXPERIENCE

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**T=0**

First thing in the morning, I prepare for takeoff. I eat a bit of dry cereal to ready my stomach. Assessment of me: no pains, some sinus congestion, mind is calm. It is a clear, beautiful day, predicted to be warm and windy. It takes several minutes to overcome my aversion to drinking this awful, bitter liquid. Now that my body has experienced it several times, I have a Pavlovian gag response when I even think about committing felonious cactophagy. I hold my nose and drink the first container's liquid in three swallows, followed by a shot of straight grapefruit juice to kill the taste. Fortunately, the expectation is worse than the actual consumption.

**T=+0:45**

I'm beginning to feel some queasiness in my stomach and a sense that things are subtly changing. I smoke a bit of marijuana to arrest the nausea and then drink the contents of the second Mason jar. The second jar is much harder to get down

and my body twists and flinches like the mad scientist in a horror film as he drinks "The Potion". I quickly wash the Mason jar to reduce the cooked cactus odor and then immediately walk around outside in the garden, trying to sneak away from my churning stomach.

**T=+1:15**

It's definitely starting to happen. I feel a warmth resonating in me. My hands appear to be ever so slightly larger and time is slowing. Writing requires more effort as my motor skills become rubbery, almost like being drunk on alcohol. I am calm and open, very relaxed and ready for a mescaline adventure. I take another puff of the marijuana anti-nausea medicine.

**T=+1:45**

The walls are vibrating with light colors and hints of geometric patterns. Nothing looks quite level.

**T=+2:15**

The mindscapes are incredible! I'm seeing cities floating in space. Mescaline is appearing in most of my thoughts and beginning the relentless push to enter each cell of my body. The come-up is slow but steady, and I fade in and out of meditation space.

**T=+4:15**

Full blown ON!!! Plus three on the Shulgin scale, and my mind state is in that totally different place I call "tripping", which can't (so far) be felt or described when sober. With open eyes I see the empty spaces in front of me completely filled with pulsating bands of multicolored lights and geometric patterns. My whole body is moving with these pulses. Soon my thoughts become highly erotic, crowding out any hopes I may have had about this

being a “therapeutic” trip. So I go with it, enjoying the sensations my body and mind experience along with the elaborate mental pictures.

### **T=+5:15**

I stagger outside to the hammock and lie there watching the trees dance with each other in the wind. I feel intimate with the trees and notice how each branch moves relative to the others. The wind blows right through me, showing me that I am an infinite being connected to everything. I realize that this is always the case, but that I’m usually not aware of it.

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**The wind blows right through me, showing me that I am an infinite being connected to everything.**

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### **T=+5:45**

I smoke some more weed to settle the angry natives in my stomach. I continue thinking about how mescaline connects me. Just that: connected. Empathy is easy with whatever or whomever I think about or look at. It would be no more possible to weed the garden or do any pruning than it would be to cut off my own fingers.

I wander back to the kitchen to stare at the linoleum floor, which is now filled with fantastical floating cities in three dimensions with clear details as small as the windows on the many tall, silver buildings. It reminds me of looking at those “Magic Eye” pictures when I get into “the space” where things start to appear, although at the moment it takes no such special effort to see—I’m just there. Unfortunately there is just enough lingering cooked cactus odor in the kitchen to keep me from staying very long, so I head out for a walk.

With sunglasses shielding my dilated pupils, wearing a fedora hat and tie-dye shirt, I look the part of what I am—quite fucked up! Crossing streets is anxiety-provoking, as it should be, since I retain an awareness of their danger and am aware that I can’t judge depth or speed very well.

I arrive safely at a five-acre wood filled with walking paths near my home. Here I wander calmly and rhythmically through the woods. My mind is flying while my body

moves on autopilot. The walking is peaceful and purposeful, providing a platform from which my mind leaps and twists and turns; the forest is an extension of my mind and provides structure.

My navigational skills, not being very good when sober, are really bad now and I end up taking a side path that goes a long way in a direction not helpful to my return. Eventually I figure this out and wander back in the correct direction. Much of this wandering back and forth occurs in a low, marshy area. It becomes symbolic of my personal growth and the collection of past life wreckage (lessons learned)—“Every man has his own mangrove swamp to tend to”. Symbolically tramping over healed wounds shows me both how they helped shape me, and how they no longer plague me. I can just walk right over them.

And that is just the part I could put into words.

### **T=+7:45**

Back at home, finally! That was a really long walk and I am exhausted. I hang out with the dog (my universal ground to everything), and munch a little food. I speak with an old trip buddy and babble semi-incoherently for a while about how everything is still vibrating, and why doesn’t that reality just stand still so you can get a good look at it?

### **T=+10:45**

The trip is now in a more introspective, quiet phase. I watch the movie *Satchmo*, a documentary about Louis Armstrong, and it brings me to tears many times. I am moved by how Louis retained his genuine warmth and love for all people despite facing American racism. I feel connected to him through love.

### **T=+12:45**

I’m listening to jazz and drinking tea to soothe my stomach. Food is finally appealing again. While I wait for my eggs to boil, I try to figure out what “it” all meant: the initial erotic surge of energy, the trees dancing with my feelings of connection, the long walking meditation, the phone call to an old friend, and really missing *Satchmo*, a surrogate for the closer people and animals who have left my life. I do some writing, but mostly I just sit and think. My contemplations are gently productive

and reach conclusions rather than racing and looping into a twisted despair as often happened with LSD.

### **T=+18:45**

I’m mostly back down and am finally heading for bed. I take an Ultram (tramadol) and three ibuprofen tablets to fend off a growing headache.

## **THE RECOVERY**

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The next day I wake up late, feeling a bit groggy and tired, with a mild headache. At noon I take another Ultram and three ibuprofens, which work pretty well; no further pain medicine is needed. This is a great relief since some of my cactus trips have resulted in excruciating headaches the next day. My guts, however, are not happy with what they consumed yesterday and I experience mild diarrhea for the next four days. This is the first time for this aftereffect, and I find that acidophilus pills help some.

Though I was concerned early in the trip that it wasn’t turning out to be a “therapy session”, the process of writing down my experience over the following days showed me what I learned. The dedication of such a large block of time to these experiences (each consumes three days between preparation, tripping, and complete return to normal space) continues to be a worthwhile investment in myself. ●

[Erowid.org/experiences/exp.php?ID=61618](http://Erowid.org/experiences/exp.php?ID=61618)



*T. peruvianus*, Photo by C. Butler

# The Distillation

*The Distillation includes updates, statistics, and information that we hope will offer insight into the ongoing site additions, traffic, and projects currently underway at Erowid.*

## Summary

General Content Pages	14,526
Archived Site Pages	4,628
Experience Reports	13,178
References	6,632
Ask Erowid	548
The Erowid Review	167
Content Images	4,748
Visionary Art	1,853
Total	46,280

Erowid Files on Server	440,241
Erowid Disk Footprint	23.0 GB

Current Members	1,321
Daily Visitors	53,124

## General Content

General Content Pages	14,526
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Number of substance vaults	297
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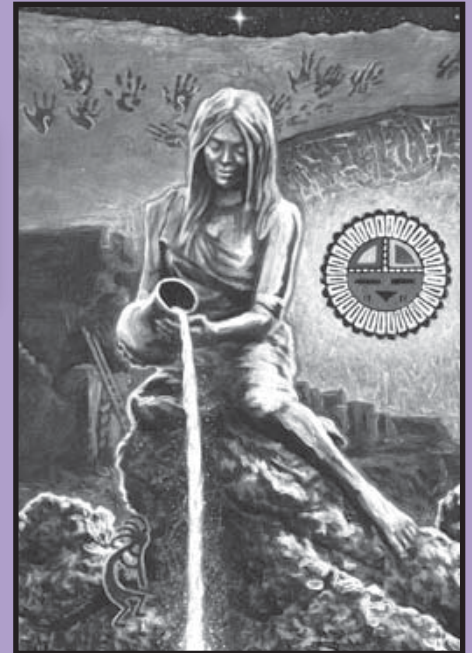
### Most popular substance vaults (with change)

Cannabis (↑); LSD (↑); MDMA (↓); Mushrooms (↓); Cocaine (↔); *Salvia divinorum* (↔); Methamphetamine (↔); Morning Glory (↑); DXM (↑); DMT (↓); Opiates (↔); Oxycodone (↑); Ketamine (↓); Heroin (↓); Peyote (↑); 2C-B (↓); Amphetamine (↑); Nitrous Oxide(↓); Ayahuasca (↔); Amanitas (↔); Datura (↔); Hydrocodone (↑); GHB (↑); Cacti (↑).

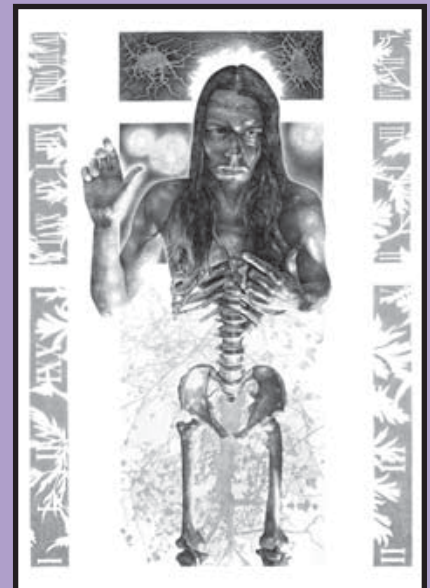
### Most accessed documents

Drug Testing Basics; LSD Effects; Cannabis Effects; Mushroom Effects; MDMA Effects; Cocaine Effects; Salvia Effects; Cannabis Drug Testing; Mushroom Basics; LSD Basics; Cannabis Basics; Mushroom Dosage.

## Visionary Art



*Blue Star Bearer* (Acrylic on Canvas Paper)  
by Adam Scott Miller — CorpusCallosum.cc



*Stings of the Lash* (Artist's Blood)  
by Vincent Castiglia — vincentcastigliaart.com



*In Dreams 3* (Digitally Enhanced Photo)  
by Shannon Henricksen



Published art pieces	1,853	New pieces in last 6 mo.	48
Number of artists	514	New artists in last 6 mo.	10
Viewed per day	7,006	Curated by Christopher Barnaby	

## Experience Reports

Published reports	13,178
Published in last 6 mo.	1,733
Fully triaged reports	18,290
Partially triaged reports	1,295
Un-triaged reports	13,434
Viewed each day	87,273
Submitted each day	30
Substances included	418
Active triagers/reviewers	33



*When Mescalito Spoke to Me* (Pencil and Charcoal on Paper)  
by Dennis Konstantin Gerigk — denniskonstantin.com



*Convergence*  
by Adam Szoke

## Erowid Center

Erowid Center, the new non-profit corporation we formed to take over the majority of Erowid's projects, has moved another step toward launch: we submitted the application for tax deductibility to the Internal Revenue Service on April 19, 2007 (Bicycle Day!).

After forming Erowid Center as a non-profit corporation in July 2005, we began the application process to be designated as an educational public benefit corporation as defined in §501(c)(3) of the IRS Code. This designation will allow Erowid supporters in the U.S. to make tax-deductible contributions to the project.

Because 501(c)(3) status is considered "a privilege, not a right," qualifying as a public benefit corporation requires significant documentation, work, and legal understanding. In addition to other requirements, an educational 501(c)(3) must be "organized and operated for purposes beneficial to the public interest" and must meet an "educational purpose" test.

We'd never before been faced with trying to formally list all of Erowid's sub-projects, let alone describing how they fit into IRS "charitable purpose" definitions. It was a long, but worthwhile process to carefully catalog what the non-profit will do and think about how various projects will fit into the overall evolution of Erowid.

Although we know that Erowid's mission is in the public interest, it felt like exacting work to demonstrate to an unknowable IRS reviewer that we, in fact, provide reliable information and serve such disparate communities as toxicologists, entheogen users, researchers, and the general public. We were told that an IRS reviewer could reject an application if they believe the non-profit takes a position that is either contrary to one advocated by the federal government or is not in the public interest.

With help from our attorneys, friends, and a patient board of directors, we put the finishing touches on the application and submitted it last month. Now we wait.

We expect that it will take somewhere between six and twelve months for the IRS to respond to our application. We'll be sure to keep members up-to-date on our progress, and we thank you for your patience.

# Image Vaults

Published images	4,748	Published in last 6 mo.	187
Image vaults	255	Submitted each day	6
Viewed per day	64,332	Awaiting processing	6,967

Bromo-Dragonfly Blotter, Photo by Darkalan



*Hypericum perforatum*, Photo by Michael Knott



*Amanita muscaria*, Photo by Mitchell McKenzie

## Ongoing Project: Pharmacology Vaults

One of the most common questions Erowid visitors ask is how various psychoactive substances cause their effects. After failing to find any concise, up-to-date resources to direct our members and visitors to, we decided to take the plunge and distill the confusing, widely diffuse data into new Pharmacology Vaults. Over the last few months, we have begun drafting pages that summarize the pharmacological details of a number of psychoactive chemicals.

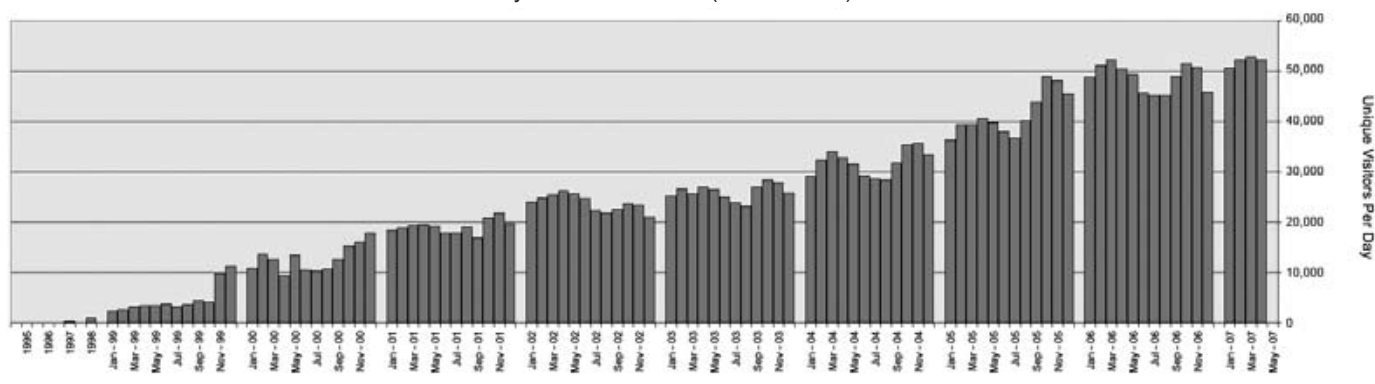
We intend to include well-referenced information describing how the substances are known to act with receptor systems, what their half-lives are, what metabolites are formed as they move through the body, etc. Researchers are still not able to paint a coherent picture of how relatively simple, microscopic molecules interact with the body to cause complex macroscopic effects on the mind. However, enormous progress has been made over the last twenty years towards understanding how these drugs work.

Because they are highly technical, the pharmacology pages require expert review before they are published. The substances that currently have pharmacology information ready for review are: cannabis, cocaine, DMT, DXM, ketamine, LSD, MDMA, mescaline, and salvinorin A. If you have the expertise necessary to help review these pages, please let us know! We'd love help in ensuring that these documents are clear and accurate.

## The Erowid Review

Published reviews	167
Published in last 6 mo.	12
Viewed each day	1135

Daily Erowid Visitors (1995–2007)



## Rhodium Archive Update

Erowid began hosting a historical archive of the Rhodium chemistry and pharmacology site in May 2005, after the site disappeared in November 2004. While we had saved several versions of the downloadable zip archive provided on Rhodium, we had not examined them closely. Unfortunately, a large number of documents were missing from the zip files and thus missing from our online archive version as well.

We found several collections of Rhodium documents on the net, but each used a different file naming convention. This made it slow going to try to assemble the confusing mass of files into one coherent set.

Several Erowid volunteers offered their assistance, but the nature of the problem made it difficult for anyone to jump in to help. In February and March, we finally found the time to dive into our Rhodium archive and sort out the tangle of versions to locate the missing files. We systematically went through the archive and were able to fix perhaps 90% of the broken links.

We are still missing around 200 html pages and PDFs. If you think you have a complete copy, please let us know!

## EcstasyData Summary

2007	Daily Visitors	3,652	Daily Page Hits	27,939
		Tablets Tested	20	Daily File Hits

BY YEAR	Tablets Tested		Testing Results (1999–2007)	
	2006	30	Total Tablets Tested	1,517
	2005	133	MDMA Only	(38%) 581
	2004	151	MDMA + something	(17%) 263
	2003	148	No MDMA	(44%) 673
	2002	301	– Nothing	97
	2001	332	– Unidentified	46



## Membership

Current Members	1,321
Recently Expired Members (0-6 mo.)	515
Older Expired Members (6+ mo.)	2,396
Members in U.S.	981 (74%)
Members in other countries	334 (26%)
Countries with members	37
Top membership countries	
USA (981); Canada (79); UK (64); Australia (44); Germany (23); Norway (16); Netherlands (15); Sweden (13); France (12); Finland (9); Belgium (7); Mexico (6); S. Africa (6); Israel (5); Denmark (4); Switzerland (4); Spain (4); New Zealand (3)	

## Erowid Traffic Statistics

DAILY	Visitors	53,124	File Hits	3,548,160
		Transfer	24.16 GB	Page Hits

BY MONTH		Avg Daily File Hits	Avg Daily Page Hits	Avg Daily Visitors
	Apr 2007	3,551,170	439,074	52,326
	Mar 2007	3,433,123	436,143	52,743
	Feb 2007	2,987,922	447,454	52,321
	Jan 2007	3,376,057	426,749	44,420
	Dec 2006	3,115,268	390,040	45,928

BY YEAR	2007	3,453,012	437,355	51,988
	2006	3,025,185	409,796	48,443
	2005	2,544,202	402,567	41,412
	2004	1,799,694	405,528	31,241
	2003	1,421,815	349,530	25,997
	2002	1,206,855	283,541	23,042

# VERBATIM

**“The morning cup of coffee has an exhilaration about it which the cheering influence of the afternoon or evening cup of tea cannot be expected to reproduce.”**

— Oliver W. Holmes Sr. (1809–1894)

**“Often coffee drinkers, finding the drug to be unpleasant, turn to other narcotics, of which opium and alcohol are most common.”**

— T. D. Crothers (1842–1918)

**“Good communication is just as stimulating as black coffee, and just as hard to sleep after.”**

— Anne Lindbergh (1906–2001)

**“The perception of a problem is always relative. Your headache feels terrific to the druggist.”**

— Ramona E. F. Arnett

**“I have yet to see any problem, however complicated, which, when you looked at it in the right way, did not become still more complicated.”**

— Poul Anderson (1925–2001)

**“Some problems are so complex that you have to be highly intelligent and well informed just to be undecided about them.”**

— Laurence J. Peter (1919–1990)

**“Nothing in the world can take the place of persistence. Talent will not; nothing is more common than unsuccessful people with talent. Genius will not; unrewarded genius is almost a proverb. Education will not; the world is full of educated derelicts. Persistence and determination alone are omnipotent. The slogan ‘press on’ has solved and always will solve the problems of the human race.”**

— Calvin Coolidge (1872–1933)

**“There is no such thing as recreational drug use.”**

— Alan Leshner

**“It is important to use all knowledge ethically, humanely, and lovingly.”**

— Carol Pearson

**“Nothing’s easier than believing we understand experiences we’ve never had.”**

— Gwen Bristow (1903–1980)

**“Librarians are the secret masters of the world. They control information. Don’t ever piss one off.”**

— Spider Robinson (b. 1948)

**“History is a vast early warning system.”**

— Norman Cousins (1915–1990)

**“It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.”**

— Arthur Conan Doyle (1859–1930)

**“Information is the currency of Democracy.”**

— Thomas Jefferson (1743–1826)

**“Bad research is worse than no research, for it takes much tedious repetition to correct it. As ‘research’ it conveys an aura of reliability, and eventually it comes to be quoted and required in publications as established fact. It is the curse of every science, especially the behavioural sciences.”**

— Sidney Cohen (1918–1986)

**“Be less curious about people and more curious about ideas.”**

— Marie Curie (1867–1934)

**“I was brought up to believe that the only thing worth doing was to add to the sum of accurate information in this world.”**

— Margaret Mead (1901–1978)

**“The most beautiful experience we can have is the mysterious—the fundamental emotion which stands at the cradle of true art and true science.”**

— Albert Einstein (1879–1955)

