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# SNARE the Drug Impaired

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**THE OFFICIAL NEWSLETTER OF THE MINNESOTA DRE  
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## ***KRATOM (MITRAGYNA SPECIOSA)***

The DEA Special Testing and Research Laboratory (Dulles, Virginia) recently received a sample of Kratom (*Mitragyna speciosa*) from the Bureau of Customs and Border Protection (Chicago, Illinois), for research purposes (see Photo). *Mitragyna speciosa* is a member of the *Rubiaceae* (coffee) family, and is indigenous to southeast Asia, notably in Thailand and Malaysia. Kratom is the original, common name used in Thailand - which has since become the predominant name used worldwide - but *Mitragyna speciosa* has at least half a dozen other common names (e.g., it is known as "Biak-Biak" in Malaysia).



The Kratom tree can reach over 50 feet in height and over 15 feet in diameter (see Photo). The leaves (see Photo) have been traditionally used by Thai and Malaysian natives for brewing tea, smoking, or chewing, for medicinal purposes, and as a substitute for opium. More than 20 alkaloids have been identified in Kratom by various researchers; the most abundant is mitragynine, an indole alkaloid (see Figure 1, previous page). Takayama reported 66.2 percent mitragynine in the crude base extract of young Kratom leaves from Thailand [1]. Interestingly, mitragynine is not found in any other species of *Mitragyna* [2]. Several analogues of mitragynine, namely paynantheine, speciogynine, speciociliatine, and 7-alpha-hydroxy-7H-mitragynine, are also found in Kratom extracts [1]. Analysis of a methanol extract with GC/MSD identified both mitragynine and another alkaloid, rhynchophylline [3]. Although Kratom is relatively new in the forensic science arena, there are dozens of scientific papers describing the identification, isolation, and pharmacology of its alkaloids. It is interesting to note that the "low dose" effects from the chewing of whole Kratom leaves are described to be stimulating, while "high dose" effects of Kratom extracts are more akin to a narcotic analgesic (i.e., opium-like).

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## ***STUDY TRACKS ALCOHOL, OTHER DRUG USE IN MOVIES***

A study of the most popular movies of the past 20 years found that many included depictions of alcohol and other drug use, and that most that did tended to ignore the negative consequences, the Australian Associated Press reported May 15.

Researchers from the University of Sydney in Australia found that 68 percent of the films showed actors smoking, 32 percent depicted alcohol use, 8 percent showed marijuana use, and 7 percent included scenes of non-injecting drug use. Most showed alcohol, tobacco and other drug use in a positive light, the authors said.

"We know how susceptible to influence adolescents in particular are," said lead author Hasantha Gunasekera.

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## ***BROTHERS ARRESTED FOR DWI AFTER CRASHING INTO EACH OTHER***

BRENTWOOD, N.Y. (AP) — Brothers David and Michael Murphy ran into each other early Saturday morning. Unfortunately, police say, they were behind the wheels of separate cars and both were drunk.

The two vehicles collided at 4:10 a.m. at the intersection of Plunkett Street and Radcliff Drive, where Michael Murphy ran a stop sign in his 1998 Volkswagen and slammed into the passenger side of his brother David's car, Suffolk County police said.

Although both cars had passengers, no injuries were reported. Both Michael Murphy's car and his brother's 2006 Volkswagen were so badly damaged that tow trucks were needed to clear them from the intersection. David Murphy, 22, and Michael Murphy, 21, were both arrested on charges of driving while intoxicated after the crash, police said.

*Courtesy of SiLive.com*

## ***OXYCONTIN MIMIC TABLETS (CONTAINING FENTANYL)***

The Douglas County Sheriff's Department Laboratory (Omaha, Nebraska), recently received eleven apparent Oxycontin tablets from the Cass County Sheriff's Department in Atlantic, Iowa (see Photos). The tablets were part of a polydrug and currency seizure made pursuant to a vehicle stop on westbound I-80 near Atlantic (about 40 miles east of Omaha, Nebraska). The tablets (total net mass 1.56 grams) were light green and approximated the physical dimensions, weight, and logo of 80 milligram Oxycontin (oxycodone) tablets. Analysis by GC/MS, however, indicated not oxycodone but rather fentanyl (not quantitated). This is the first ever submission of fentanyl-containing Oxycontin mimic tablets to the laboratory.



[Editor's Notes: The other items seized from the vehicle included dietary supplement tablets, "personal use" quantities of methamphetamine, oxycodone tablets, and hydrocodone tablets, and \$370,000 in U.S. currency. Intelligence indicated that the vehicle was traveling from Minneapolis, Minnesota to San Francisco, California, and that the driver was a currency smuggling courier. Additional intelligence enabled the San Francisco Police to obtain a search warrant for the suspect's residence, where they seized additional methamphetamine, additional controlled pharmaceuticals, and marijuana cultivation equipment. A seizure of similar fentanyl-containing Oxycontin mimic tablets was recently made by the New York Police Department (no further details available).]

*Source: DEA Microgram Bulletin (www.dea.gov)*

## **TEENS CHEW, BREW MORNING GLORY SEEDS TO GET HIGH**

Ingesting the seeds of the common morning glory plant can cause hallucinations, common knowledge in the 1960s that apparently is being relearned by a new generation of youth.

The Washington Post reports that garden shops in the Washington, D.C., area have reported a spike in sales of morning glory seeds to young buyers, and local poison-control centers have fielded calls about bad "trips" related to morning glory ingestion.

Morning glory seeds contain lysergic acid amide, similar to the active ingredient in LSD; they can be chewed or brewed into a tea to release the substance.

"They are certainly being used," said Chris Holstege of Virginia's Blue Ridge Poison Center. "Kids are getting brighter. Between the Internet and magazines like High Times, they are learning about this ... These kids have a misconception that it's natural, that it's more safe ... They are not. It alters your perception, and that puts you at risk."

Kristy Peterkin, whose family owns Ayers Variety and Hardware in Arlington County, said the problem came to light when a pair of teenage boys were caught stealing about a dozen packs of the seeds. The store is now tracking sales more carefully, but has not restricted access. "We don't sell pocketknives to children under 16, but can I keep them from buying morning glory seeds?" Peterkin asked. "We struggle with this."

Both local law enforcement and the U.S. Drug Enforcement Administration told reporters they were unaware that the seeds could cause intoxication, and few addiction-treatment programs knew about morning glory, either. A National Institute on Drug Abuse spokeswoman said, "We really don't have enough information on it to make comments," referring inquiries to researcher Lloyd Johnston, the principal investigator of the Monitoring the Future study of teen drug use.

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## **FATAL OVERDOSES ON RX MEDS A GROWING PROBLEM**

The rate of accidental, fatal overdoses involving prescription medications is rising faster than those caused by illegal drugs such as cocaine and heroin, according to a 10-year study from New Mexico.

The majority of prescription drug deaths are caused by opioid pain relievers, such as codeine, morphine and Demerol, the researchers noted.

"The increasing role of opioid painkillers in unintentional drug overdose deaths suggests that overdose prevention efforts would be well targeted at this drug class," lead researcher Mark Mueller, an epidemiologist with the U.S. Centers for Disease Control and Prevention, said in a prepared statement.

Reporting in the May *American Journal of Preventive Medicine*, Mueller and his colleagues analyzed statewide New Mexico medical examiner reports and identified 765 prescription drug overdose deaths from 1994 to 2003. Opioid painkillers were involved in more than 75 percent of those deaths, tranquilizers in one third, and antidepressants in 25 percent of the deaths. The total exceeds 100 percent because some deaths were caused by multiple drugs.

In 1994, accidental prescription drug overdoses accounted for 1.9 out of 100,000 deaths. By 2003, that had increased to 5.3 per 100,000 deaths. That's a 179 percent increase, compared to a 121 percent increase in unintentional overdose deaths caused by illegal drugs over the same period.

"While we would all agree on the value of properly prescribed and used opioids, this study illustrates the need to reinforce proper prescribing practices and usage of prescription drugs, particularly opioid painkillers," Mueller said. "It will also be important to find new ways to prevent deaths due to prescription drugs acquired through street diversion."

More information: The Institute for Safe Medication Practices has advice on safe medication use.

## ***CAPSULES CONTAINING APPARENT POWDERED MARIJUANA***

The Nebraska State Patrol Satellite Crime Laboratory (North Platte) recently received 56 clear blister-packed capsules containing a light green, powdery substance, submitted as an unknown/possible narcotic (see Photo 5). The exhibits were seized by the Nebraska State Patrol pursuant to a traffic violation in Lincoln County. The capsules were sealed in a blister package that was marked only as being manufactured by MTS Medication Technologies. Analysis of the capsules by color testing, GC/MS, and FTIR indicated tetrahydrocannabinol, cannabidiol, and cannabitol, cut with sucrose (quantitation not performed). Interestingly, microscopic examination revealed no morphological characteristics of marijuana - probably because the material was so finely ground (see Photo 6). This is the first submission of these type capsules to the laboratory.

[Editor's Notes: MTS Medication Technologies is a legitimate company. According to their website, they "manufacture automated packaging machines and related consumables for prescription medications and nutritional supplements" - including blister packaging. These exhibits are the latest in a growing trend of blister-packaging of controlled substances in an (apparent) effort to make them appear to be legitimate consumer products.]



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## ***MOTHBALL ABUSE COMES OUT OF THE CLOSET***

Some teenagers are using mothballs to get high, a trend that may be underreported, researchers say. Users place mothballs, which contain paradichlorobenzene, in a bag and inhale from it for about 10 minutes. Some users also chew mothballs. The term "bagging" has been used to describe the habit.

Mental impairment, loss of coordination, and scaly skin may be symptoms of mothball abuse. Paradichlorobenzene, also found in air fresheners and insect repellents, can cause anemia and liver and kidney failure.

One French teen found sniffing mothball fumes took six months to recover; a twin sister took three months. Researchers noted that only three such cases have been reported but said the habit may be more widespread.

*The report appears in the July 27, 2006 issue of the New England Journal of Medicine.*

## ***STUDY TRACKS ALCOHOL, DRUG USE IN MOVIES (continued)***

"That's why tobacco companies are spending millions of dollars ... just to have their product placed in a one-second shot in a movie. I think it's ridiculous to assume this is having no influence on behavior." "I'm not saying there should be no sex or drugs in movies," he added.

"We want movies to be a reflection on life, but if it's a reflection on life, people have consequences when they use drugs. There are overdoses ... Why aren't the true depictions and the true consequences of these activities actually demonstrated and then people can make up their own mind what they want to do."

*Source: Join Together Online [www.jointogether.org](http://www.jointogether.org)*

## ***APPLE VALLEY POLICE DEPT CONTACTS REPEAT DWI OFFENDER 3 TIMES IN 6 MONTHS***

10/7/05 @ 1600 hours: "Denise" rear-ended a vehicle after driving on a flat for more than 2 miles. Officer Horazuk believed she was impaired but did not smell alcohol. Sgt Francis was summoned and completed a DRE evaluation. He believed she was impaired by a narcotic. A urine test showed the presence of Methadone. She was charged with DWI

12/25/05 @ 1710 hours: "Denise" was in a department store acting strangely. Employees felt she may be impaired. She left in a vehicle and officers located it a short distance away. There was also a child in the vehicle. Officer Wolf observed poor driving conduct and initiated a traffic stop. He believed she was impaired but there was no presence of alcohol. Sgt Francis was summoned and completed a DRE evaluation. He believed she was impaired by a narcotic and CNS depressant. A urine test showed the presence of Methadone and Lorazepam. She was charged with GM DWI/ child endangerment

4/17/06 @ 1119 hours: A complainant reported a vehicle swerving, sitting through green lights, and "all over the road" Officer Plantz located the vehicle and observed that it had partially left the roadway. The vehicle began moving and ran a stop sign. Officer Plantz conducted a stop and believed "Denise" was impaired. He ruled out alcohol and a medical condition then placed "Denise" under arrest. DRE Pat Hogan (Eagan PD) was summoned and completed a DRE evaluation. He believed she was impaired by a narcotic. A urine test showed the presence of Methadone. She was AGAIN charged with GM DWI.

"Denise" was scheduled for court on 8/8/06 for the first DWI charge.

*Thanks to Sergeant Nick Francis – Apple Valley Police Department*

## ***MORNING GLORY SEEDS USED TO GET HIGH (continued)***

"I am afraid kids are ahead of me in that case," Johnston said. "Over time, the regulatory agencies and Congress begin to catch up with these things, but there's usually a pretty long lag."

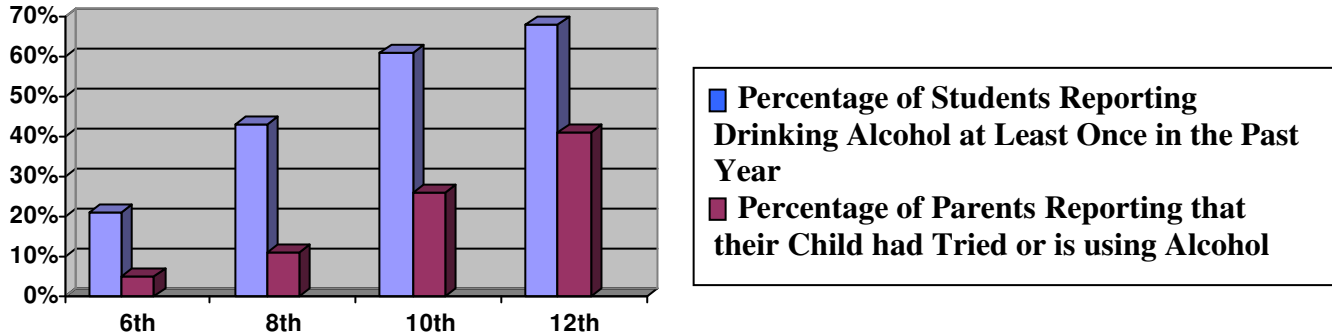
Action has begun in some states, however. The Ohio Early Warning Network recently issued an alert about morning glory, and the Louisiana legislature included the seeds in a law banning the use of a number of common plants for purposes of intoxication.

"It is more for kids that want to be druggies but aren't really. It is sort of them dipping their toe into the waters of drug use with something that is legal and easily accessible," said drug counselor Mary Ellen Ruff. "These are bright kids. They are getting information and they are like, 'Ooh, I could do that.'"

*Source: Join Together Online [www.jointogether.org](http://www.jointogether.org)*

## ***PARENTS UNDERESTIMATE ALCOHOL AND ILLICIT DRUG USE BY YOUTH***

Parents dramatically underestimate alcohol and illicit drug use by youth, according to data from the Most recent Pride surveys of parents and students. One-fifth (21%) of students in 6<sup>th</sup> grade reported that they had drunk alcohol at least once in the past year. Yet only 5% of parents said that their 6<sup>th</sup> grade child has tried or is using alcohol. While the gap between students' self-reported use and parents' perceptions of their own child's use narrows with age, parents continually underestimate alcohol use by youth.



Similar results were found for illicit drug use (not shown). For example, 36% of 12<sup>th</sup> graders reported using illicit drugs at least once in the past year, while 15% of parents reported that their 12<sup>th</sup> grade child used drugs.

*Source: Center for Substance Abuse Research (CESAR) – University of Maryland, College Park*

### ***KRATOM (continued)***

In the study of the analgesic activity of Kratom and its constituents, Takayama concluded that the crude extract of the leaves has an opioid agonistic effect [1]. Mitragynine itself is documented to be a depressant [2]. The United Nations published a report in 1975 about the addictive nature of Kratom alkaloids; the researcher studied 30 Thai users for the article [4]. Jansen and Prast described mitragynine as a drug with a highly unusual but well documented history as both a depressant and a stimulant while possessing the chemical structure of a suspected psychedelic [5].

As of March 2006, Kratom is not a controlled substance in the United States. However, it is controlled in Thailand, Malaysia, and Myanmar (Burma). In 2004, mitragynine and Kratom were both placed in Schedule 9 (the most restrictive level) of the Australian National Drugs and Poisons Schedule.



An Internet search confirmed a large number of Kratom vendors in the United States. Kratom is delivered to the U.S. both from Asia and from western European countries, and shipments commonly pass undetected through U.S. Customs. It is sold in various forms, including leaves, extracts, and powders. Vendors also promote the use of Kratom and provide detailed instructions on its preparation, use, and effects. A large and growing number of personal testimonials are also available on the Internet, describing the various effects of the different Kratom based products.

*Source: DEA Microgram Bulletin (www.dea.gov)*