

Assessment of Kratom under the CSA Eight Factors and Scheduling Recommendation

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List of Abbreviations

Abbreviation	Definition
7-OH-MG	7-Hydroxymitragynine
8FA	Summary Analysis of the 8 Factors
AAPCC-NPDS	American Association of Poison Control Centers' National Poison Data System
AKA	American Kratom Association
APA	American Psychiatric Association
CA ²⁺	Calcium
CDC	Centers for Disease Control and Prevention
CFR	Code of Federal Regulations
CNS	Central Nervous System
CPP	Conditioned Place Preference
CSA	Controlled Substances Act
DAWN	Drug Abuse Warning Network
DEA	Drug Enforcement Administration
DHHS	Department of Health and Human Services
DSM-5	The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
EC ₅₀	Median Effective Concentration
E _{max}	Maximal Efficacy
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
FDA	Food and Drug Administration
FDCA	Federal Food, Drug, and Cosmetic Act
FOIA	Freedom of Information Act
g	Gram
GI	Gastrointestinal

Abbreviation	Definition
h	Hour
i.p.	Intraperitoneal
IC ₅₀	Inhibitory Concentration of 50%
kg	Kilogram
MeOH	Methanol
mg	Milligram
MG	Mitragnine
MTF	Monitoring the Future
N	Number
N/A	Not Applicable
NEISS-CADES	National Electronic Injury Surveillance System-Cooperative Adverse Drug Event Surveillance
NFLIS	National Forensic Laboratory Information System
NIDA	National Institute on Drug Abuse
nM	Nanomolar
NSAIDS	Nonsteroidal Anti-Inflammatory Drugs
NSDUH	National Survey on Drug Use and Health
p.o.	By Mouth, Orally
s.c.	Subcutaneously
SAE	Serious Adverse Event
SE	Southeast
SG	Surgeon General
SR	Sustained Release
TEDS	Treatment Episode Datasets
THC	Tetrahydrocannabinol
US or U.S.	United States

Abbreviation	Definition
USC	United States Code
δ	Delta
κ	Kappa
μ	Mu
μM	Micromolar

Definitions

Term	Definition
Abuse potential (liability)	<p>Abuse potential, often referred to as abuse liability, is the term used to describe the risk that a substance carries for sustaining self-administration due to central nervous system effects that are typically reinforcing and often pleasant, yet associated with harm. From a regulatory perspective abuse potential is evaluated by 8 factors listed in the Controlled Substances Act (CSA) for the purpose of determining if a substance or drug meets criteria for placement in the CSA and regulation as a controlled substance. In that case, the level or severity of abuse potential is a factor in determining how restrictively a substance or new drug should be regulated. Many substances that are not placed in the CSA have noteworthy levels of abuse potential, e.g. caffeine, nicotine, nutmeg, various antihistamines, glues, whipped-cream aerosols, salvia, and dextromethorphan (active ingredient in many cough suppressants) (Hanson, 2014; See discussion in FDA 2010b and NIDA, https://www.drugabuse.gov/publications/finder/t/160/DrugFacts).</p>
Addiction	<p>Addiction is often used interchangeably with terms such as dependence and substance use disorder (see further on in definitions). Addiction is generally defined as a primary, chronic, neurobiologic disease, with genetic, psychosocial, and environmental factors influencing its development and manifestations. It is characterized by behaviors that include one or more of the following: impaired control over drug use, compulsive use, continued use despite harm, and craving. This definition of addiction has been accepted by the American Academy of Pain Medicine, the American Pain Society and the American Society of Addiction Medicine. See also O'Brien, 2011.</p> <p>The National Institute on Drug Abuse (NIDA) focuses more on the research and mechanisms of addiction in its definition. It defines addiction as a chronic, relapsing brain disease that is characterized by compulsive drug seeking and use, despite harmful consequences. It is considered a brain disease because drugs change the brain—they change its structure and function. These brain changes can be long-lasting, and can lead to the harmful behaviors seen in people who abuse drugs.</p>

Term	Definition
	NIDA, and many others, consider addiction to be equivalent to a severe substance use disorder as defined in the APA DSM-5 (see https://www.drugabuse.gov/publications/media-guide/science-drug-abuse-addiction-basics).
Eight Factors of the CSA which must be analyzed for scheduling recommendations	<ol style="list-style-type: none"> (1) Actual and relative potential for abuse (2) Scientific evidence of its pharmacological effects (3) State of the current scientific knowledge regarding the drug (4) History and current pattern of abuse (5) Scope, duration, and significance of abuse (6) Public health risk (7) Psychic or physiologic dependence potential (8) Whether the drug is an immediate precursor of a controlled substance
Controlled Substances Act Drug Schedules	<p>Placement of a substance in the CSA is often referred to as being “scheduled” because it must be placed in one of the five drug schedules based on the 8-Factor Analysis of the CSA.</p> <p>Schedule I (C-I): Substances that do not have an accepted medical use and have a high abuse potential and/or were designated for C-I in the 1970 CSA, e.g., heroin, LSD, GHB, “bath salts,” cannabis. Special DEA license and other requirements are required for research.</p> <p>Schedules II-V: For substances (drugs) that have an accepted medical use (typically approved for medical use by the FDA). C-II is for substances with the highest abuse and physical dependence potential and overall risk characterization; C-V is for substances with the lowest abuse potential and lowest dependence potential and risk.</p> <p>C-II includes morphine, amphetamine, pentobarbital, methadone, oxycodone, nabilone, phencyclidine. C-III includes buprenorphine, ketamine, secobarbital, Xyrem, dronabinol, chlorphentermine. C-IV includes tramadol, diazepam, phenobarbital, mazindol, pentazocine, sibutramine, butorphanol. C-V includes low dose codeine, lacosamide, pregabalin.</p>
Kratom	A plant of the species <i>Mitragyna speciosa</i> , including its leaves, and any product derived solely from this plant, including kratom powder and tea brewed from kratom. Two alkaloid components of kratom are MG and 7-OH-MG. Scheduling either or both of these alkaloids under CSA would also have the effect of

Term	Definition
	controlling kratom and kratom products. In this analysis, the term “kratom” will be used as the umbrella term to refer to the plant product, its extracts, MG, 7-OH-MG, and/or manufactured products that include any of the foregoing, unless more specific terms (e.g., “MG” or “leaves”) are used.
Substance Use Disorder (Drug Dependence)	“Substance Use Disorder” formerly termed “Dependence” by the APA is a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues use of the substance despite significant substance-related problems. Substance Use Disorder requires a pattern of repeated self-administration that can result in tolerance, withdrawal, and compulsive drug taking behavior. Specific diagnostic criteria are listed in the DSM-5 (APA, 2013). DSM-III and DSM-IV had included a less severe form of dependence termed abuse (APA, 1980, 1994) which was discarded in DSM-5.
Overdose or drug poisoning death	<p>At a general level, the term overdose can and is loosely used by individuals, the media, and often health care professionals any time that a substance was used in greater than intended amounts and/or produced undesirable effects attributed to the amount of the substance. Use of the term overdose as a cause of death is unfortunately also often loosely used, and this is not helpful in efforts to document actual cause of death, analyze trends, or guide efforts to control and prevent such effects, particularly if the attribution was incorrect. Many substance-related overdose deaths involve combinations of substances such as alcohol, sedatives, and opioids and it is often not clear which substance should be listed as the primary cause of death (Gudin et al., 2013; Rudd et al., 2016; Ossiander, 2014). Furthermore, other physical conditions and disease states may contribute to death associated with drug administration.</p> <p>Thus, many factors contribute to determining whether a death resulted from sufficient drug exposure to justify considering the death a drug poisoning death, and to which drug or substance the death should be attributed if it is plausible that more than one substance was taken. Forensic toxicology experts and medical examiners recommend a variety of criteria to determine the most appropriate description of the involvement of a substance in the death, but these are not always followed. Thus, deaths attributed in the media as an overdose due to one</p>

Term	Definition
	<p>specific substance on the basis that the substance was present may be incorrectly attributed to overdose. The following categorizations of the nature or level of involvement of a substance in a death are used in many medical examiner and emergency medicine reports:</p> <p>Causative: The substance is unequivocally responsible for illness or death.</p> <p>Probable cause of death: Death is a known complication of the administered substance and the clinical picture is in keeping with previous experience and reports, provided other causes of death have been reasonably eliminated.</p> <p>Possible cause of death: The clinicopathologic picture could be caused by the drug in question, but it could just as easily be caused by some other process found in the decedent; assigning the drug in question as the cause of death would be unique and warrant publication in the medical literature.</p> <p>Coincidental: The substance happens to be present but has no bearing on illness or death.</p> <p>Negative: The substance is not detected.</p> <p>(See discussion in http://emedicine.medscape.com/article/1680257-overview#a9; Cone et al., 2003, 2004; FDA, 2010a).</p>
Tolerance	<p>Tolerance is defined for diagnostic purposes by the APA (2013) as the need for greatly increased amounts of the substance to achieve intoxication (or the desired effect) or a markedly diminished effect with continued use of the same amount of the substance (FDA, 2010a).</p>

Term	Definition
Withdrawal	<p>Withdrawal is defined for diagnostic purposes by the APA (2013) as follows: The essential feature is the development of a substance-specific problematic behavioral change, with physiological and cognitive concomitants, that is due to the cessation or reduction in heavy and prolonged substance use.</p> <p>Withdrawal symptoms, which are generally opposite of the acute effects of the substance, vary greatly across the classes of substance, and separate criteria sets for withdrawal are provide for most classes (FDA, 2010a).</p> <p>Note that pharmacologists generally consider withdrawal signs and symptoms to be the consequence of physical dependence and a measure of physical dependence. Physical dependence is the state of adaptation or neuroadaptation (tolerance) in which relatively normal functioning has come to be dependent upon continued drug administration. This is sometimes described as “the resetting of homeostatic mechanisms in response to chronic drug exposure” (e.g., O’Brien, 1996, 2011).</p> <p>The presence of withdrawal does not necessarily mean that the person was addicted as defined earlier or had a diagnosable substance use disorder by APA DSM-5 criteria. For example, many opioid treated pain patients develop tolerance and physical dependence and must be gradually tapered off their medication to minimize withdrawal discomfort yet show no evidence of craving, drug seeking, or behaviors indicative of substance use disorder or addiction. Furthermore, individuals can become physically dependent on the effects of a drug used for lowering blood pressure (FDA, 2010a) but which do not cause substance use disorders or addiction. Caffeine may cause APA DSM-5 diagnosable intoxication and withdrawal disorders, but the DSM-5 does not include substance use disorder category for caffeine because the clinical significance of chronic caffeine use and diagnostic criteria have not been established (Hasin et al., 2013) as would be needed to distinguish a substance use disorder from a common life-style and or life enhancing behavior.</p>

1 Summary, Interpretation, and Discussion of Abuse Potential Data

We have developed this summary analysis of the eight factors (8FA) of the Controlled Substances Act (CSA) to determine if placement of kratom or its alkaloids, mitragynine (MG) or 7- Hydroxymitragynine (7-OH-MG) in the CSA is warranted, and the impact such placement would have on the public health. Equally importantly, we are developing this review to assist the Food and Drug Administration (FDA), National Institute on Drug Abuse (NIDA), Department of Health and Human Services (DHHS), and Drug Enforcement Administration (DEA) in their efforts to find the most appropriate regulatory framework to permit appropriate use, minimize unintended effects, encourage research, and contribute to the enhancement of public health.

Although MG and 7-OH-MG have sometimes been referred to as “opioids,” in this document the term “opioid” will only be used to refer to molecules and products that are opioids as defined by the CSA, which identifies opioids as substances with addiction-forming or addiction-sustaining liability similar to morphine, or substances capable of conversion into drugs with such liability. See 21 USC 802(18); see also 21 USC 812(c) (scheduling opium, opium derivatives, and opiates, including opium extracts and derivatives of thebaine); 21 CFR 1308.12 (same). This definition excludes kratom and its alkaloids.¹ It is clear that the abuse potential and harmfulness of kratom and its alkaloids are substantially lower than that of morphine and other opioids and differ in other ways as well, such as physiologic manifestations. In fact, as discussed in this review and in other authoritative reviews, the mitragynines have unique and mixed actions that include mild or “caffeine-like” stimulant effects at low to moderate levels of consumption, and are more likely to enhance occupational performance and social interactions than to interfere with such. In this analysis, the term “kratom” will be used as the umbrella term to refer to the plant product, its extracts, MG, 7-OH-MG, and/or manufactured products that include any of the foregoing, unless more specific terms (e.g., “MG” or “leaves”) are used.

Mitragyna speciosa is a tropical deciduous tree within the coffee family (*Rubiaceae*) that is indigenous to Southeast Asia, particularly Thailand, Malaysia, Indonesia, Philippines, and Vietnam. Traditionally Southeast Asia laborers have used small quantities of kratom throughout the workday for the energizing and minor pain-relieving (minor aches and pains) effects. Kratom has been safely consumed as a dietary supplement, a natural remedy, and in food preparation in Southeast Asia for centuries (Tanguay,

¹ This is also consistent with DEA’s prior determination that emergency scheduling, reserved for substances other than those already controlled in the CSA, including those defined as opioids, was an available statutory pathway for control of kratom, including MG and 7-OH-MG.

2011). It generally is consumed orally in the form of consumer brewed tea-like preparations and powdered kratom leaves that are placed in the mouth or on other foods and are washed down with a liquid. In Southeast Asia, chewing fresh leaves and sometimes dried leaves is also very common, and there are many variants on liquid preparations and some swallowable semisolid preparations made by consumers and various vendors. There is very little evidence demonstrating kratom use through other routes of administration that predominate for opioids in Southeast Asia (e.g., smoking and injecting) despite the long history of wide-spread consumption of kratom. Similarly, in the US, there is little evidence of kratom consumption in forms other than liquid preparations or powdered leaf material that is swallowed with food or liquids. This is in striking contrast to what has been observed for opioids, stimulants, cannabis, nicotine, and other substances of abuse. In fact, for opioids in particular, FDA has actively sought to incentivize the development of products resistant to tampering due to the common and dangerous practice of tampering with oral opioid medications for abuse by nasal insufflation, smoking, and injecting (FDA, 2015; Schnoll and Henningfield, 2016).

The scientific and ethnographic literature often describes consumption as primarily motivated by the “useful,” “beneficial,” “labor sustaining,” “therapeutic,” “mood” and “well-being” enhancing, and “instrumental” benefits, as well as dependence (Aziz, 2014; Hassan et al., 2013; Ward et al., 2011; Warner et al., 2016). The rates of dependence among kratom users in Southeast Asia are not known; however, as discussed in Factor 5, kratom consumers and others regard the practice as more benign and more likely to enhance occupational demands and social functioning in contrast to opioid use which is generally regarded as impairing occupational and social functions (Aziz, 2014; Hassan et al., 2013; Ward et al., 2011; Warner et al., 2016). There are parallels in reported motivation between consumption of kratom and consumption of coffee, tea, and other caffeinated beverages, which are often reportedly used for sustaining performance and for alerting effects, mood enhancement, weight control, relief of headaches, and other benefits (Addicott, 2014; Borota et al., 2014; Cappelletti et al., 2015; Goldstein et al., 2010; Meredith et al., 2013). As with caffeinated beverages, high dose chronic kratom consumption can lead to use consistent with dependence with difficulty abstaining, as well as apparent withdrawal symptoms. Such high dose chronic consumption of kratom appears to be mostly limited to Southeast Asia and relatively uncommon in the US (e.g., Aziz, 2014; Hassan et al., 2013; Ward et al., 2011; Warner et al., 2016; Goldstein et al., 2010; Meredith et al., 2013).

The intertwining of factors that include consumption for benefit and life-style enhancement along with varying degrees of dependence, whether for caffeinated beverage consumption or kratom consumption, demonstrates the importance of distinguishing between volitional lifestyle and life enhancing consumption, and “dependence” or “addiction.” As is the case with consumption of caffeinated beverages, kratom consumption is not commonly associated with adverse health effects (other than minor gastrointestinal discomfort that serves to limit pleasure and consumption), and thus consumption appears rarely to be occurring “in the face of harm or personal or recurrent social problems,” which is a common defining feature of substance use disorders as defined by the American Psychiatric Association (2013) or by other

definitions of drug dependence or addiction (American Psychiatric Association 1994; World Health Organization, 1992; American Society for Addiction Medicine, 2016; National Institute on Drug Abuse, 2016).

These factors taken together for caffeine contribute to the reason that the DSM-5, as in earlier editions, does not formally recognize caffeine substance use disorder even though it includes criteria for diagnosis of caffeine intoxication and withdrawal disorders (APA, 2013). Similarly, whereas the opinion of the authors of this analysis is that kratom, like caffeine, can cause dependence if taken in very large quantities (Henningfield, 2015; Aziz, 2014; Hassan et al., 2013; Lanier et al., 2016; Ward et al., 2011; Warner et al., 2016) and “it also carries some abuse liability” (Ward et al., 2011, p. 1001), at least in the US, consumption is generally considered volitional and for the general and/or specific desired effects associated with consumption, as is the case with caffeinated products (Henningfield, 2015).

Serious substance abusers seem to agree that kratom is not a preferred drug of abuse. Evaluations posted on websites and discussion groups where persons who abuse drugs share information report mild and relatively slowly onsetting effects. Their experiences often include both desired and undesired effects that fall far short of what can be readily produced by prototypic drugs of abuse as discussed in Factor 5 of this report. Consistent with this is the virtual absence of evidence that kratom consumption is a significant or serious public health problem or has emerged as a form of substance abuse on any major national US drug monitoring surveillance system, as summarized in Factors 4 and 6 of this report. The lack of public health problems or abuse is despite the fact that there has been widespread consumption of kratom by consumers for more than two decades in the US, and likely consumption among some populations for decades longer.

After an analysis of available data and information, it is clear that kratom, like caffeine, nicotine, dextromethorphan, many antihistamines, antidepressants, and other substances² sold as consumer products and/or as medicines, not to mention various solvents, inhalants, and glues, share limited evidence of characteristics that could be used to support placement in the CSA if that was a predetermined objective. However, such a conclusion would require an extremely selective reading of the evidence that discounts the many mitigating factors in their use patterns. Moreover, whether such substances, including kratom, *should* be so controlled is a more complicated issue and

² Including alcohol and tobacco, but tobacco products and alcoholic beverages are exempted from CSA scheduling by the 1970 CSA itself. 21 USC 802(6) (“The term ‘controlled substance’ means a drug or other substance, or immediate precursor, included in schedule I, II, III, IV, or V of part B of this subchapter. The term does not include distilled spirits, wine, malt beverages, or tobacco, as those terms are defined or used in subtitle E of the Internal Revenue Code of 1986.”).

one that must consider the overall public health assessment that is part of the CSA eight factor analysis. There is ample precedent from many other substances and products that share characteristics with certain controlled substances, but have not been placed under the CSA and which are regulated through other statutory and regulatory authorities to promote safe and appropriate consumption and to minimize unintended and harmful effects. These include dextromethorphan, nicotine smoking cessation aids, and caffeine (e.g., Consumer Healthcare Products Association, 2010; Food and Drug Administration, 1995, 1996, 2010b; Henningfield, 2015; Lanier, Fant, Cone, and Henningfield, 2016; Meredith, Juliano, Hughes, and Griffiths, 2013; National Institute on Drug Abuse, 2016a).

This analysis also recognizes that the present situation is different from a typical scheduling analysis for a product developed as a drug for FDA approval. Rather, this analysis must address the evidence concerning various kratom preparations and products that have been used for centuries in Southeast Asia and decades in the US. In the US, there are an estimated several million users purchasing products from more than 10,000 retail outlets with an estimated annual market of 207 million dollars (Botanical Education Alliance, 2016). Consumers include immigrants and their families from Southeast Asia where consumption is widespread as a natural remedy and in traditional food preparation. Anecdotal evidence suggests that such consumption has existed in the US for several decades. The more general consumption across the US has largely developed in the past two decades.

The purpose of this document is to review the data related to the abuse potential and toxicity of *Mitragyna speciosa* (also known as kratom) and its primary alkaloids, mitragynine (MG) and 7-hydroxy-mitragynine (7-OH-MG), and the relevance of those data to the doses found in kratom.

Following is a summary of the main conclusions of this analysis and recommendation:

- 1) Placement of kratom in the CSA is not warranted from a public health perspective and is more likely to cause public health problems that do not presently exist.
- 2) Kratom consumption has not emerged as a public health or medical problem for adults or children despite more than two decades of rapidly increasing consumption by millions of Americans served by approximately 10,000 vendors. Specifically, among the 3-4 publicly documented deaths that have ever been suspected to possibly have involved the consumption of kratom, none have been shown to merit designation as a kratom overdose death and all have involved either other substances or physical or mental health conditions that may have been the primary causes of, or significant contributors to, the death. Remarkably, no deaths, serious adverse effects, or emergency department

exposures have been reported in children. It is important to understand that this conclusion does not mean that such events have never or will never occur, but the signal for a public health problem associated with kratom marketing and consumption is very weak.

- 3) Appropriate regulation of kratom products, whether natural or processed leaves, or manufactured derivatives marketed as dietary supplements, is as important for kratom as it is for products such as coffee, tea, and related extracts that are currently regulated under existing Food, Drug, and Cosmetic Act (FDCA) authority.
- 4) Kratom consumption is widespread across the US and spans more than two decades, but kratom consumption has not emerged as a substance abuse problem in the US as measured by any of the US national substance abuse monitoring surveillance systems or by our nation's networks of substance abuse treatment programs that are constantly adapting to the challenges posed by those seeking treatment for emerging forms of abuse and dependence.
- 5) Current kratom users report being likely to be adversely affected and possibly motivated to seek illicit sources if lawfully marketed kratom were no longer available. This would seem likely to include many Southeast Asian immigrants who are believed to have brought kratom consumption customs with them to the US; however, there has been very little documentation and characterization of kratom use patterns in the US by such populations.
- 6) Kratom consumption appears to be primarily motivated by its perceived effects that enhance well-being, occupational performance, and social interactions, as well as serving as a natural "home remedy" that is preferred by millions of Americans to conventional medicines.
- 7) The foregoing is consistent with the pharmacology of kratom and more specifically its alkaloids (MG and 7-OH-MG), which produce mixed pharmacological effects that are generally mild and caffeine stimulant-like at lower dosages. Consumption does not typically interfere with work or social activities and commitments, and in fact kratom is widely reported in the US, as in Southeast Asia, to contribute to work productivity, quality of life, and social relationships.
- 8) The primary effects of kratom are likely predominantly produced by MG with possible contribution of 7-OH-MG. These two alkaloids have been characterized as including partial mu opioid receptor activity including anti-nociception (pain relief), mild pleasurable effects, and constipation at high doses but an apparent lower risk of constipation at typical levels of consumption as compared to opioids. Respiratory depressant effects appear substantially lower than those produced by opioids – a finding that would be consistent with the absence of verified

kratom caused overdose deaths. Future research should study the respiratory effects of kratom in combination with known respiratory depressants because the absence, or at least very low apparent risk, of kratom overdose poisoning suggests that the effects of such depressants are not substantially enhanced by kratom.

- 9) Injection of very high doses of MG can produce discriminative stimulant and opioid-type reinforcement in rodents; however, these effects only occur at doses that appear far higher than those that could be ingested in a single sitting by humans, and the relevance of such findings to human oral kratom consumption is not clear. In fact, the doses of MG required to produce discriminative stimulant effects and reinforcement in rodents are much higher than the doses that could be easily ingested from kratom. This is in contrast to many other consumer products, including dextromethorphan and nutmeg, in which it is relatively easy to consume enough doses to achieve a reinforcing and/or intoxicating effect.
- 10) In contrast to the effects of increasing the dose of substances of high abuse potential (e.g., opioids, stimulants, and sedatives), increasing the dose of kratom is more likely to produce undesirable gastrointestinal effects, constipation, and lethargy, and little additional mood enhancement. More research is needed to better characterize the profile and understand the mechanisms of action of kratom.
- 11) Animal studies have demonstrated some signs consistent with physical dependence and withdrawal at what appear to be extraordinarily high dosages of MG. Specifically, laboratory rats were given 30 mg/kg/day i.p., equating to an oral dose of about 990 mg/kg (Yusoff et al., 2016). Humans would need to consume over 800 oral doses of kratom in a single sitting to achieve the same dose of MG. In fact, no evidence has demonstrated production of physical dependence and withdrawal at levels consistent with human use. However, the modest desirability of the effects would seem to make such a heroic effort extremely unlikely because the pleasure derived from consumption does not appear similar in magnitude to that produced by far less costly and readily available doses of typical substances of abuse including marijuana, alcohol, stimulants, sedatives, and opioids. More research is needed to understand the relevance of such findings to human consumption and better characterize kratom among other substances.
- 12) MG and kratom have very low toxicity, and thus a favorable safety profile. There have been few reports of serious adverse events or deaths associated with kratom and for most, the contribution of kratom is not clear. For example, in Sweden in about 2008-2009, a blend of herbals including kratom along with the opioid analgesic O-desmethyltramadol, and possibly co-administration of other drug substances was associated with nine deaths. Tramadol (including O-desmethyltramadol), in contrast to kratom, has been documented to carry a risk

of severe respiratory depression and overdose death. To date, in the US, there have been no confirmed reports of death that can be considered “causatively” due to kratom overdose. How many, if any deaths, are “probably” classified as kratom poisoning deaths is not clear. This is consistent with the far larger and longer Southeast Asian experience of very few serious adverse events. In both the US and Southeast Asia, the low toxicity of kratom is in striking contrast to the experience with opioids.

- 13) With respect to safety, the absence of reports of adverse effects associated with pediatric exposure to kratom is striking given that children under six years of age are considered highly vulnerable and account for many poison control center calls and emergency department visits from exposure to a broad range of household products, over the counter drugs, and prescription drugs including opioids. The total absence of reports of adverse effects in children likely seems due to a combination of the low toxicity of kratom, the distastefulness of the products, and the relatively low concentrations of alkaloids in personal and commercial preparations.
- 14) Taking together basic research findings, available epidemiology, clinical observations, and anecdotal self-reports, very high levels of chronic intake of kratom can cause signs consistent with physiological dependence and withdrawal and some degree of psychological dependence, although any signs consistent with dependence have not been accompanied by use through harm or social detriment. However, in many respects, the factors that appear important in sustaining kratom consumption appear more similar to those that sustain dietary caffeine consumption, namely to better manage fatigue and daily life demands and provide mild effects considered enhancing to quality of life. Further research should help to better characterize kratom as it compares to other substances that affect behavioral and physiological function and the contribution of such effects to consumption and safety.
- 15) There has been little study of the rates, risk, or nature of what might be categorized as a substance use disorder involving kratom in the United States. Anecdotal data, including the testimonials appended to this report, suggest that most use is for life-style enhancement and as a natural remedy for various ailments. Thus, rather than consumption to sustain addiction or to get high, and with little apparent harm to self or others, consumption appears largely to the benefit of individuals. This suggests a similarity with caffeine containing products that certainly can produce dependence and withdrawal but which have not been recognized for a disorder category of dependence or substance use disorder category by the American Psychiatric Association (APA, 2013) because there has not been sufficient documentation of clinical impairment or use despite harmful effects.

- 16) In addition, the partial mu agonist activity of two alkaloids, MG and 7-OH-MG, likely confers some degree of relief of at least minor pain, diarrhea, and coughing, and it is plausible, predicting from what is known of the pharmacology, that high dosages could provide some relief of symptoms of opioid withdrawal; however there has been little systematic study of such potential benefits.
- 17) There appear to be remarkably low risk of serious adverse effects from kratom consumption as compared to opioids and other common drugs of abuse. Further, there is little evidence that kratom products are used by routes other than oral beverage or food consumption. In contrast, opioids and many other drugs of abuse are frequently used by high impact routes such as nasal insufflation, smoking, and injecting. Graduation from oral consumption to such other routes is common for opioids and other substances of abuse but not for kratom.
- 18) Although the primary alkaloids of kratom, MG and 7-OH-MG, may demonstrate some characteristics considered for controlled substance scheduling, as do many other products including caffeine, nicotine, some antihistamines, and alcohol, despite decades of wide-spread consumption, there does not appear to be a public health risk that would warrant their scheduling.
- 19) Consumption of kratom products appears to provide positive benefits such as relief of pain and fatigue without the adverse consequences produced by other products that are used for similar purposes as reported in the appended testimonials and over a century or more of documented consumption in Southeast Asia. For example, liver disease caused deaths associated with the use of acetaminophen is a serious problem in the US, and there are problems of serious GI side effects and cardiovascular problems associated with the use of nonsteroidal anti-inflammatory drugs (NSAIDs). At the far extreme, there is the inherent risk of overdose and serious addiction associated with the use of opioids. For those who manage various ailments with kratom instead of such products, the benefit to risk ratio appears favorable.
- 20) Banning or restricting access to kratom products would not only deny current kratom consumers of the benefits they obtain from kratom, but would likely serve to create a substantial illicit market to meet those demands. This illicit market would not be subject to regulation such as by the FDCA and would be more likely to harm public health than to maintain appropriate access through the lawfully regulated marketplace. Schedule I placement would not only restrict access to consumers, it would also severely impede the willingness and ability of researchers to conduct the research that is vital to more thoroughly characterizing the effects, mechanisms of action, and safety of kratom. Keeping appropriately regulated kratom products available in the US appears to be in the interests of public health.

2 Analysis of Kratom under the CSA 8 Factors

The present 8-factor analysis has been developed to determine the appropriateness of CSA scheduling of kratom and/or its alkaloids and derivative products, and if so, the most appropriate schedule for kratom.

Based on all lines of evidence considered in the 8-factor analysis, kratom's potential for abuse, tolerance, and dependence is lower than that of many schedule IV and V drugs and is well within the range of many nonscheduled drugs and substances (e.g., caffeine, nasal nicotine spray, fluoxetine, bupropion, dextromethorphan). Although kratom and its primary alkaloids MG and 7-OH-MG share certain characteristics with controlled substances, as do many nonscheduled substances, there does not appear to be a public health risk that would warrant control of kratom products or their alkaloids under the CSA. Rather, regulation under the FDCA by the FDA would seem the most effective mechanism to ensure continued access to kratom products that are marketed with appropriate oversight.

3 Review of the Eight Factors of the Controlled Substances Act

3.1 Factor 1: Its actual or relative potential for abuse

Definitions of addiction, abuse potential, and other terms, which are provided at the beginning of this report, are important to understand the following analysis. There is no question that consumption of kratom can produce effects that, at least at some doses, people can feel and which are important in their decision to consume kratom. Analysis of Factor 1 will provide part of the basis for characterizing its effect profile with respect to the nature and strength of the effects and the relevance of this for a scheduling recommendation.

Perhaps the most prevailing observations in clinical, scientific, and ethnographic reports from 1930 to 2016 about the reasons for kratom consumption are the functional benefits of kratom consumption to enhance and sustain, if not enable occupational work demands, and as a social interaction enhancer when used together with family and friends. Hassan et al. (2013) attribute most kratom consumption as at least initially motivated by what they, and others, term "instrumental" or "instrumentalized" consumption as a means of achieving work goals and not withdrawing from such obligations.

There is also agreement that at least in Southeast Asia, abuse, dependence, and/or addiction may develop with heavy daily consumption, at least among hard laborers, as seems historically more prevalent there than in the United States, but with the recurrent explanation that this seems heavily driven by work and environmental demands and that, in contrast to daily opioid use (when such comparisons are made), such consumption is more likely associated with beneficial occupational and social outcomes.

More specifically, the scientific and ethnographic literature often describes kratom consumption as primarily motivated by the "useful," "beneficial," "labor sustaining," "therapeutic," "mood" and "well-being" enhancing, and "instrumental" benefits, as well as

dependence (Aziz, 2014; Hassan et al., 2013; Ward et al., 2011; Warner et al., 2016). There are parallels in reported motivation for consumption of coffee and tea and other caffeinated beverages which are often reported as used for sustaining performance, alerting effects and enhancing mood (Addicott, 2014; Borota et al., 2014; Cappelletti et al., 2015; Goldstein et al., 2010; Meredith et al., 2013). As is the case with caffeinated beverages, at least high dose chronic kratom consumption, as appears more common in Southeast Asia than the US, can lead to signs consistent with dependence with difficulty abstaining, as well as apparent withdrawal symptoms (e.g., Aziz, 2014; Hassan et al., 2013; Ward et al., 2011; Warner et al., 2016; Goldstein et al., 2010; Meredith et al., 2013). The intertwining of these factors, for caffeinated product consumption as for kratom product consumption, requires close attention to detail in distinguishing “dependence” without harm or negative social effects from “addiction.” In both, only the former has been observed. Another parallel with caffeinated beverages is the fact that common levels of kratom consumption are not commonly associated with adverse health effects. Thus, consumption is not typically “in the face of harm or personal or recurrent social problems” as is a common defining feature of dependence disorders (i.e., “addictive” or “substance use” disorders) as discussed further in this review.

These factors taken together contribute to the reason that the APA DSM-5, as in earlier editions, does not formally recognize caffeine substance use disorder even though it includes criteria for diagnosis of caffeine intoxication and withdrawal disorders (APA, 2013). Similarly, whereas the opinion of the authors of this analysis is that kratom can cause signs consistent with dependence without harm or social problems (Henningfield, 2015; Aziz, 2014; Hassan et al., 2013; Lanier et al., 2016; Ward et al., 2011; Warner et al., 2016) and “it also carries some abuse liability” at very high doses (Ward et al., 2011, p. 1001), at least in the US, consumption is generally considered volitional and for the general and/or specific desired effects associated with consumption as is the case with caffeinated products (Henningfield, 2015). Both products’ volitional use is not consistent with abuse of the product or a dependence disorder.

The apparent worst case scenario conditions for very heavy consumption appears to have been in Southeast Asia among laborers who were required to work at heavy labor tasks for long hours and often in extremely high heat conditions. Kratom leaves were plentiful and heavily relied upon to enable such work. This was described in 1930, in *The Chemist and the Druggist*, in a short article titled, “Kratom Eaters” that described the effects of chewing 10-30 kratom leaves three times per day by laborers to prolong their ability to be capable of “arduous work” including improved tolerance to endure fatigue and “torrid heat” (Available at https://archive.org/stream/b19974760M2738/b19974760M2738_djvu.txt, accessed November 28, 2016). Note that this quantity of kratom appears extremely high compared to typical kratom consumption, however, the article included no estimate of alkaloid content or nature of the leaves that would permit quantitative comparison to today’s products and practices. Nonetheless, these kratom consumers were considered to be “addicted” by the author, but that definition is not consistent with the contemporary use of the term because, as noted by the author, “the habit is stated not to be harmful since the kratom eater does not change his character.”

Aziz (2014) also credited kratom consumption primarily by workers to increased endurance and stamina, as well as for social reasons. Singh et al. (2014), in a review of dependence and potential withdrawal, also described very heavy consumption among workers but also by many people as a social enhancer with family and friends, with about 79% of such consumers using daily. They stated that “Most users share the belief that it is better to consum[e] Kratom in order to improve work performance than using illicit stimulant-drugs which could also be more expensive.” It was observed that in contrast to the view of opioid users, kratom users were seen as “diligent” and “hardworking” despite the view that they were dependent and many experienced mild symptoms consistent with withdrawal upon termination of use. Similarly, Suwanlert (1975) described “regular kratom users” as having an increased tolerance for work and “increased calm.”

Taken together these observations suggest that consumption is more analogous to the consumption of caffeinated products that makes daily caffeinated beverage consumption so common in the US and globally. These observations are not the pattern of the adverse effects of prototypic addictive drug use on life, health, and society.

3.1.1 Animal Data on Drug Discrimination and Reinforcement

3.1.1.1 Discrimination

Drug discrimination procedures have often been used to help characterize the central nervous system (CNS) effects and predict the abuse potential of new drugs (Ator and Griffiths, 2003), and there is a strong positive relationship between discriminative stimulus effects of drugs in non-humans and the subjective effects of the same drugs in humans (Lelas et al., 2000; McMahan et al., 2002). However, generalization with an active substance known to cause dependence in itself is not necessarily indicative of dependence potential (Ator and Griffiths, 2003). Rather, the results should indicate whether or not kratom and/or its constituent compounds are likely to have subjective effects that are qualitatively similar to that of prototypic drugs of abuse.

There have been no studies of the discriminative stimulus effects of kratom as an herbal product. However, as discussed below, there has been a study of the discriminative stimulus effects of injected MG which showed that doses that would appear extremely large (e.g., an equivalent of over 500 2-ounce bottles of one widely marketed product (VivaZen[®]) if taken orally (Henningfield, 2015)) can provide morphine-like effects in rats. The relevance of the findings for human consumption and regulation are extremely limited because, as discussed below, there are virtually no reports of extraction or injection of its alkaloids or consumption by any other route at this level. The research is solely helpful in better understanding the mechanism of kratom’s constituents.

Harun et al. (2015) investigated the discriminative stimulus effects of MG in rats. The pharmacological mechanism of MG action and its derivative, 7-OH-MG, with a specific focus on opioid receptor involvement was examined in rats trained to discriminate morphine from vehicle. Rats acquired the MG discrimination (15.0 mg/kg, i.p.);

however, approximately 100 trials of training (50 MG and 50 vehicle sessions) were required before the rats could discriminate MG from vehicle. The group of rats trained to discriminate morphine (5.0 mg/kg, i.p.) from vehicle required fewer training trials, i.e. approximately 60 training sessions in total (30 morphine and 30 vehicle). In stimulus generalization tests with a range of MG doses, 3.0 mg/kg, i.p. produced partial generalization to the 15.0 mg/kg, i.p. dose (around 60% MG-appropriate responding), and full generalization to the training dose was found at the 10.0 mg/kg, i.p. dose. MG substituted fully to the morphine discriminative stimulus in a dose-dependent manner, suggesting pharmacological similarities between the two drugs. However, generalization to morphine occurred at the MG dose of 15.0 mg/kg, i.p., and was not seen at the 1 or 3 mg/kg, i.p. dose. This 15 mg/kg i.p. dose would thus equate to an oral dose of about 495 mg/kg³ in rats to produce an effect that resembles 5 mg of injected morphine. Converting this to a human equivalent dose based on body surface area, this would equate to 79.84 mg/kg in humans, or almost 5.6 grams of MG taken orally by a 70 kg human. The total alkaloid content in kratom leaves ranges from 0.5 to 1.5% (Hassan et al., 2013). Mitragynine makes up approximately 60% of this extract (Prozialeck et al., 2012; Philipp et al., 2010; Kapp et al., 2011). Based on this, 1 gram of kratom leaves would contain around 15 mg of alkaloids (based on the 1.5% figure), about 9 mg of which would be MG. This would suggest that a human would need to consume 630 grams of kratom leaves (or extract) to obtain a subjective effect that would fully substitute for morphine – the equivalent of over 500 2-ounce bottles commonly sold in stores. Although kratom leaves also contain smaller quantities of other alkaloids including 7-OH-MG, which is more potent at the mu opioid receptor, impractically large quantities of kratom would have to be consumed, even assuming some subjective effects of these other alkaloids.

As previously noted, generalization with an active substance known to cause dependence in itself is not necessarily indicative of dependence potential (Ator and Griffiths, 2003). The finding that MG substituted to the morphine discriminative stimulus when injected at very high dosages in rats supports the conclusion that the effects of kratom are mediated at least in part by opioid receptors; however, the relevance of these findings to human effects and consumption are limited.

3.1.1.2 Reinforcement

Centrally-acting drugs that produce highly pleasurable (rewarding) or psychologically reinforcing subjective effects in animals and man can lead to craving or addiction and also to diversion and nonmedical abuse, if the effect is strong enough. Many drugs that

³ Based on the calculated absolute oral bioavailability value of 3.03% (Parthasarathy et al., 2010)

are powerful reinforcers in man are also reliably self-administered by various animal species (e.g., rats, dogs, monkeys or baboons; Ator and Griffiths, 2003).

There have been no studies of the reinforcing effects of kratom as an herbal product. However, as discussed below, there has been a study of the reinforcing value of a kratom extract, and studies have examined the reinforcing value of MG when given by injection to animals. The reinforcing value of the extract was less than that of MG. In studies of MG, doses of 5 mg/kg to 10 mg/kg, i.p. were shown to increase conditioned place preference (CPP) relative to placebo. As is the case with the discrimination study, the relevance of this to human consumption is not clear, having involved injections of extremely high doses, far beyond what could reasonably be consumed by a human from current products. Nonetheless, such research is important in helping to understand the mechanisms of action of kratom.

Sufka et al. (2014) also used the CPP model to characterize the psychoactive properties of *Mitragyna speciosa* MeOH extract (50, 100, 300 mg/kg, i.p.), *Mitragyna speciosa* alkaloid-enriched fraction (12.5, 25, 75 mg/kg, i.p.), and MG (5, 10, 30 mg/kg, i.p.) in rats. Rats were given eight counter-balanced drug versus vehicle conditioning trials followed by a preference test conducted under drug-free states. S(+)-amphetamine (1 mg/kg) served as the positive control and haloperidol (0.8, 1.0 mg/kg) served as the negative control in both studies. Rats showed place preference to MG that was similar to that of S(+)-amphetamine. This CPP effect was much less pronounced with the *Mitragyna speciosa* extract and its fraction. The preference scores for the 5 and 30 mg/kg MG groups, but not the 10 mg/kg group, were significantly higher than those for the vehicle.

Yusoff et al. (2016) examined the potential rewarding properties of injected MG using the CPP model. Rats that were conditioned with morphine (10 mg/kg, i.p.) and methamphetamine (1 mg/kg, i.p.) established a significant CPP for the drug-paired chamber. MG induced a significant CPP at doses of 10 mg/kg, i.p. and 30 mg/kg, i.p., but MG doses of 1 mg, i.p. and 5 mg, i.p. did not produce a significant effect.

Taken together, these studies suggest that an injected dose of 5 mg/kg was required to produce conditioned place preference in rats, which would equate to an oral dose of 165 mg/kg. Converting this to a human equivalent dose based on body surface area, this would equate to 26.6 mg/kg in humans, or over 1.8 grams of MG taken orally by a 70 kg human. The total alkaloid content in kratom leaves ranges from 0.5 to 1.5% (Hassan et al., 2013). Mitragynine makes up approximately 60% of this extract (Prozialeck et al., 2012; Philipp et al., 2010; Kapp et al., 2011). Based on this, 1 gram of kratom leaves would contain around 15 mg of alkaloids (based on the 1.5% figure), about 9 mg of which would be MG. This would suggest that a human would need to consume around 200 grams of kratom leaves (or extract) to obtain a reinforcing effect – over 150 2-ounce doses. Although kratom leaves also contain smaller quantities of other alkaloids including 7-OH-MG, which is more potent at the mu opioid receptor, impractically large quantities of kratom would have to be consumed even assuming some subjective effects of these other alkaloids.

3.1.1.3 Relevance of Doses to Humans, and Equivalencies with Other Unscheduled Drugs

In assessing the abuse potential of a particular product, it is important to consider the dose and route of administration. Reports of kratom consumption show that kratom is virtually exclusively consumed via the oral route, and it is likely that it would be very difficult to extract MG from the leaf or powder without extensive experience in chemistry and access to laboratory equipment. In contrast, the rodent research cited in the section above administered the drug via the i.p. route. Oral absorption of MG is slow, prolonged, and was incomplete, with a calculated absolute oral bioavailability value of 3.03% (Parthasarathy et al., 2010). The table below compares the number of units that would be required to achieve discrimination and reinforcement from several over-the-counter products that are currently not controlled.

Table 1. Number of units that would be required to achieve discrimination and reinforcement from several over-the-counter products.

Drug	Discriminable Dose	Reinforcing Dose	Dose in Common Products
Mitragynine	10 mg/kg, i.p. (Harun et al., 2015)	5 mg/kg, i.p. (Sufka et al., 2014)	Around 200 grams of kratom leaves (or extract) to obtain a reinforcing effect – over 150 2-ounce doses
Caffeine	(N=7)- Three subjects discriminated 56 mg, three discriminated 18 mg and one discriminated 10 mg (Griffiths et al., 1990)	At the two lowest doses (100 and 200 mg) 5 of the 12 subjects demonstrated significant caffeine positive reinforcement at one or both doses (Griffiths & Woodson, 1988)	Excedrin Extra Strength Caplets – 65 mg/caplet 10 Hour Energy Shot- 422 mg 5 Hour Energy- 200 mg Brewed coffee- 163 mg/8 oz Monster energy drink- 160 mg/16 oz Coca Cola- 34 mg/12 oz (http://www.caffeineinformer.com/the-caffeine-database)
Dextromethorphan	No human studies 30 mg/kg, i.p. in rats (Gavend et	Doses of 400 and 800 mg/70 kg increased drug liking scores. 92%	Robitussin Maximum Strength 10 mg//5 ml – 480 mg/8 oz bottle Mucinex DM Max Strength – 60 mg/tablet. 840 mg/14 count package

Drug	Discriminable Dose	Reinforcing Dose	Dose in Common Products
	al., 1995)	of subjects reported 400 mg/70 kg as feeling like they had received a “classic hallucinogen” (Reissig et al., 2012)	
Diphenhydramine	In rats, partial generalization to cocaine (78%) at 17.8 mg/kg (Gauvin, 1995)	400 mg increased end of day scores on liking and take drug again (Preston et al., 1992)	Sleep aid liquidcaps – 50 mg/cap, package of 32 (1600 mg total) Equate nighttime sleep aid – 25 mg-100 capsules per box (2500 mg)
Non-Alcoholic Beer	55% of subjects could be trained to discriminate 0.2 g/kg alcohol from placebo (Jackson et al., 2001)	Self-administration of ethanol at doses of 5-7 grams (Bigelow et al., 1977)	In the United States, one "standard" drink contains roughly 14 grams of pure alcohol, which is found in: <ul style="list-style-type: none"> • 12 ounces of regular beer, which is usually about 5% alcohol • 5 ounces of wine, which is typically about 12% alcohol • 1.5 ounces of distilled spirits, which is about 40% alcohol O'Douls- 0.4%- 1.12g
Nicotine	<1 mg by smoked, oral “chew”, or intravenous in humans	<1 mg by smoked, oral “chew”, or intravenous in humans (Henningfield et al., 2005; US DHHS, 2010)	All common tobacco products contain and deliver substantially higher doses but are typically used only as much as necessary to produce the desired effects. Former Surgeon General Koop, the first SG to conclude that nicotine met all criteria as an addictive drug, testified on behalf of allowing then prescription nicotine gum and patches to be

Drug	Discriminable Dose	Reinforcing Dose	Dose in Common Products
			approved for over the counter sales to make it more readily available for consumers to use as they desired to quit smoking.

It should also be noted that there are a variety of other herbal and consumer products that likely have some reinforcing effects, but are not controlled substances. For example, nutmeg contains myristicin, a natural compound that can produce hallucinogenic effects if taken in doses of around five teaspoons. When taking large amounts of nutmeg, it may take hours for auditory hallucinations to occur. This could result in increased overdose risk if the user thinks they haven't taken enough.

There are a variety of herbs and products with sedative effects, including the following:

- Chamomile
- Passionflower
- Ashwagandha
- Schisandra
- California Poppy
- Hops
- Kava
- Lavender
- Lemon Balm
- St. John's Wort
- Red Clover
- Catnip
- Valerian
- Motherwort
- Skullcap
- Poppy seeds
- Hemp seeds/oil

Herbs that are commonly used and sometimes abused for energy bursts include guarana and kola nut, both of which contain caffeine.

Poppy seeds are harvested from the opium poppy and contain a mixture of opium alkaloids (e.g., morphine, codeine, thebaine). Poppy seeds are used as foodstuffs in many parts of the world. Depending upon the seed source, harvesting practices, and washing procedures, the content of opium alkaloids in poppy seed is widely variable. A serving of poppy seeds (e.g., poppy seed bagel) may contain a few micrograms to a few milligrams of opium alkaloids. Some foodstuffs contain larger amounts of poppy seeds (strudel prepared with poppy seeds). Due to the variable alkaloid content in poppy seeds, it is not possible to estimate what a standard serving of poppy seeds contains in terms of morphine content, but according to reports, the content has been high enough to trigger workplace drug testing for some workers who consumed foods with poppy seeds (Thevis et al., 2003; Lachenmeier et al., 2010; Moeller et al., 2004; U.S. Anti Doping Agency, 2014).

Hemp seeds and oil are harvested from the cannabis plant and may contain tetrahydrocannabinol (THC), the psychoactive ingredient in cannabis material. Normally, the THC in these products are quite low, but some individuals have tested positive for THC metabolites following ingestion of these products, most notably, with hemp oil products. DEA regulation was recently instituted that exempted hemp oil containing any amount of THC from the CSA if the hemp oil was not used or intended for human consumption. 21 CFR 1308.35.

3.1.2 Summary of Factor 1

The findings above suggest that the main alkaloid in kratom, MG, provides some evidence of abuse potential when injected at extremely high dosages in animals. Specifically, the data suggest that MG shares some discriminative stimulus effects with morphine in rats when injected at very high doses, and that the substance produces reinforcing effects. However, as noted elsewhere in this report, it would be extremely difficult to isolate the MG from kratom leaves to make an injectable preparation of MG. Further, the amount of MG in kratom leaves is only about 9 mg per gram, and the oral bioavailability of MG is quite low (3.03%). This would suggest that huge quantities of kratom would need to be consumed to obtain the effects seen after taking a pure mu opioid such as morphine. Thus, although important as basic research, the relevance to human oral consumption is limited. Furthermore, in contrast to the effects of increasing the dose of substances of high abuse potential (e.g., prototypic opioids, stimulants, and sedatives), increasing the dose of kratom is more likely to produce undesirable gastrointestinal effects, constipation, and lethargy, and little additional mood enhancement.⁴

In addition, as discussed in this section and elsewhere in this report, it appears that the vast majority of kratom consumption is for perceived benefits and social/occupational enhancement, and not for the euphoric effects of the product.

3.2 Factor 2: Scientific evidence of its pharmacological effect, if known

The pharmacology of kratom was reviewed recently by Warner et al. (2016) and some of this discussion was drawn from that review as well as Henningfield (2015). Over 40

⁴ These observations are limited by the absence of classic human abuse potential studies, such as the ones in which the authors of this report are expert (e.g., FDA, 2010; Schuster and Henningfield, 2003), but are consistent with clinical, ethnographic, and internet reports, as well as the pharmacology as known to date and discussed further on this this report (Raffa, 2015; Henningfield, 2015; Ward et al., 2011; Warner et al., 2016).

different constituents have been isolated from kratom (EMCDDA, 2015; Gogineni et al., 2014), and kratom leaves have been found to contain over 25 alkaloids (Tanguay, 2011; Hassan et al., 2013). The alkaloids MG and 7-OH-MG are believed to be the primary active alkaloids in the plant (Tanguay, 2011; Warner, 2016). The total alkaloid content in kratom leaves ranges from 0.5 to 1.5% (Hassan et al., 2013). Mitragynine makes up approximately 60% of this extract with 7-OH-MG accounting for only up to 2% (Prozialeck et al., 2012; Philipp et al., 2010; Kapp et al., 2011). In a recent study by Kruegel et al. (2016), the authors found only trace quantities of 7-OH-MG (by mass spectrometry) in their extractions of the raw plant material, and concluded that it is doubtful that 7-OH-MG is a universal constituent of all *Mitragyna speciosa* preparations and is unlikely to generally account for the psychoactive properties of this plant.

Mitragynine is an indole-containing alkaloid, structurally similar to yohimbine, a component of the common dietary supplement yohimbe (Hassan et al., 2013; Prozialeck et al., 2012; Rosenbaum et al., 2012). Both mitragynine and 7-OH exhibit nanomolar binding affinities for the μ -opioid receptors and possess functional activity in tissue assays (Takayama et al., 2002; Matsumoto et al., 2004). In addition, the antinociceptive effects of mitragynine and 7-OH-MG in several rodent models are also inhibited by naloxone (Takayama et al., 2002; Matsumoto et al., 2004; Matsumoto et al., 1996). However, mitragynine was found to produce markedly less respiratory depression than codeine (Macko et al., 1972).

In animal models, mitragynine exhibits activity on supraspinal μ - and δ -opioid receptors causing its characteristic analgesic effects (Rosenbaum et al., 2012; Hassan et al., 2013; EMCDDA, 2015; Prozialeck, 2012). With consideration to the interactions at the cellular level, studies suggest that neurotransmitter release from the nerve endings at the vas deferens is inhibited (Prozialeck, 2012). This inhibition is suggested to occur through the obstruction of neuronal calcium (Ca^{2+}) channels (Hassan et al., 2013; Philipp, 2010). Blocked stimulation of serotonergic 5-HT_{2A} receptors and stimulation of postsynaptic alpha-2 adrenergic receptors are thought to contribute to stimulant activity (Rosenbaum et al., 2012; EMCDDA, 2015).

In animal models, additional psychoactivity is said to exist as a consequence of binding affinities exceeding that of morphine at the δ - and κ -opioid central receptors (Prozialeck, 2012). Moreover, 7-OH-MG provides high opioid receptor affinity with agonist properties (EMCDDA, 2015; Prozialeck, 2012). While polarity is increased due to the additional hydroxyl group on 7-OH-MG as compared to mitragynine, increased activity of 7-OH-MG is otherwise not well understood (Prozialeck, 2012).

Unlike the preclinical models, Kruegel et al. (2016) showed that at the human opioid receptors (human μ -, δ -, and κ -opioid receptors), mitragynine acted as a partial agonist at human μ -opioid receptors ($\text{EC}_{50} = 339 \pm 178$ nM; maximal efficacy (E_{max}) = 34%). In contrast, at human κ -opioid receptors, mitragynine was a competitive antagonist ($\text{IC}_{50} = 8.5 \pm 7.6$ μM ; $\text{pA}_2 = 1.4 \pm 0.40$ μM), fully inhibiting the activity of the reference agonist U-50,488. Similarly, mitragynine acted as an antagonist at human δ -opioid receptors, but with very low potency. The other major natural alkaloids paynantheine, speciogynine,

and speciociliatine, showed no measurable agonist activity at any of the human opioid receptors at concentrations up to 100 μ M, and only weak antagonist effects were observed. This partial agonist activity is consistent with the observation that mitragynine was found to produce markedly less respiratory depression than codeine (Macko et al., 1972), as well as the lack of respiratory depression-related deaths discussed elsewhere in this report.

7-OH-MG was also characterized and found to be a potent, partial agonist at human μ -opioid receptors ($EC_{50} = 34.5 \pm 4.5$ nM; $E_{max} = 47\%$). Further, it acted as a competitive antagonist at both human κ -opioid receptors ($IC_{50} = 7.9 \pm 3.7$ μ M; $pA_2 = 490 \pm 131$ nM) and human δ -opioid receptors ($IC_{50} > 10$ μ M). The partial agonist activity of mitragynine and 7-OH-MG at the human receptors was further confirmed in antagonist experiments, as both compounds were able to partially inhibit the response elicited by the full agonist [D -Ala₂, N-Me-Phe₄, Gly-ol₅]-enkephalin (DAMGO). As with MG, the partial agonist activity of 7-OH-MG is consistent with the lack of respiratory depression-related deaths discussed elsewhere in this report.

Although MG (Warner et al., 2016; Hassan et al., 2013) and sometimes 7-OH-MG (Matsumoto et al., 2005) have been reported as 13 times more potent than morphine, many of the references to support this figure appear to not actually report this finding. In fact, a wide range of findings have been reported for MG and 7-OH-MG related to relative potency (the amount needed to produce an effect) and strength (the maximal effect, e.g. guinea pig ileum muscle twitch, or analgesic effect on mice placed on an uncomfortably but not burning hot plate). These are often reported in article abstracts and in turn by the media as “morphine” or “opioid” like effects with little context for what was actually studied, what was found, and its relevance or lack thereof to human use and effects.

For example, Warner et al. (2016) cites Rosenbaum et al. (2012) to support the statement that MG has “approximately 13 times the potency of morphine in regards to its opioid-like effects”. In turn, Rosenbaum et al. (2012) cite Vicknasingam (2010) and Matsumoto et al. (2005). Vicknasingam (2010) states “Two alkaloids in kratom—mitragynine and alkaloid 7-hydroxymitragynine—act as agonists to supraspinal μ - and δ -opioid receptors and produce effects similar to morphine. In fact, the latter [i.e., 7-OH-MG] exhibited about 13 times higher potency than morphine...” Matsumoto’s only discussion of the 13-times figure says “7-hydroxymitragynine inhibited electrically induced contraction through the opioid receptors, and its effect was about 13-fold more potent than morphine.” Thus it appears that 7-OH-MG (not MG) may exhibit effects 13 times greater than morphine on some effects, but the relative potency of MG appears less than that of morphine. For example, Watanabe et al (1997) states “Mitragynine was 10 fold less potent than morphine.” It is also reported to be 5-fold weaker than morphine in analgesic tests in mice and had a potency ratio of inhibitory effect on ileum contraction that was 6-fold less potent than that of morphine (Watanabe et al., 1997). Taken together these studies confirm that these molecules, which the investigators note are structurally distinct from opioids, do produce some opioid like effects. Furthermore, their relative potency and strength are far from fully characterized

in laboratory models and is need of further research. Research is also need to assess the generality of such laboratory findings to human use and effect.

It should be noted that potency is often improperly equated with strength with respect to abuse potential and toxicity when all it really means is the relative quantity of a substance that is required to produce a specific effect, and not the strength of the effect. Thus, for example, nicotine appears to be at least 5-10 times more potent than cocaine in producing certain cocaine-like effects in animals and humans, including reinforcement (Goldberg et al., 1983). However, pure nicotine, despite its ready over the counter and commercial availability over most of the 20th century and presently, has never emerged as a substance of abuse or a public health threat in its own right. This is consistent with the fact that the strength of nicotine as a euphoriant and the generality of conditions in which it serves as a strong reinforcer is less than for cocaine (Goldberg et al., 1983; Henningfield & Goldberg, 1985; Henningfield et al., 2016). Moreover, despite tens of millions of users of nicotine and everyday exposures to nicotine-containing products by children and infants in the US, and many reports to poison control centers and emergency departments, there have been only a few deaths in children or adults that were attributed primarily to nicotine. For example, between January 2012 and April 2015, there was only one death associated with a nicotine or tobacco product among children under 6 years reported to the National Poison Data System (Kamboj et al., 2016).

Taken together, although progress has been made in understanding the pharmacology of kratom and MG and 7-OH-MG in particular, more research is needed to fully characterize the mechanisms of action that contribute to a novel profile of some opioid-like and stimulant-like effects that may be important in the consumption of kratom products. In the absence of clarity about the pharmacological mode of action, observed effects are the most reliable guide to the impact of kratom.

3.3 Factor 3: The state of current scientific knowledge regarding the drug or other substance

Kratom leaves and crushed or powdered leaves are readily available on the internet and in stores in most states, but this material is not reported to be used by nasal insufflation, smoking, or intravenously (in contrast to opioids and stimulants that are commonly used by such diverse routes to speed absorption and intensify their effects). In addition to the apparently low potential to produce strong effects sought by persons who abuse drugs, the physical nature of the leaf material with its high ratio of cellulose fiber likely deters use by such routes because large amounts of material would need to be placed in the nose or smoked to produce effects. By analogy, caffeinated products are also not reportedly used by injection, smoking, or snorting likely in part because of relatively low potential to produce strong euphoriant effects as compared to cocaine (Garrett and Griffiths, 2001).

It would not likely be simple or inexpensive to extract and concentrate the MG or 7-OH-MG from kratom leaves, and it would require sophisticated equipment and chemistry training, but it would be theoretically possible. In Southeast Asia where the raw material is plentiful and there are many clandestine laboratories for synthesizing substances for abuse, kratom-derived products have not been a target, likely due to the apparently low abuse liability of mitragynine and limited euphoriant-like effects produced by the product. Furthermore, in contrast to the effects of increasing the dose of substances of high abuse potential (e.g., prototypic opioids, stimulants and sedatives), increasing the dose of kratom is more likely to produce undesirable gastrointestinal effects, constipation, and lethargy, and little additional mood enhancement.

In rodents, the analgesic effects of mitragynine have been evaluated in hot plate and tail-pinch tests. Administration of mitragynine (35 mg/kg) increased the pain threshold in hot plate tests, and its effects were inhibited by naloxone (1 mg/kg, i.p.) (Shamima et al., 2012). 7-OH-MG has also been reported to produce analgesia when evaluated in *in vivo* pharmacological studies. For example, Matsumoto et al. (2006) reported that when 7-OH-MG was administered subcutaneously (s.c.) in mice, there was an increase in the pain threshold for both the tail-flick (ED₅₀ = 0.80 mg/kg, s.c.) and hot plate (ED₅₀ = 0.93 mg/kg, s.c.) tests, and its effects were inhibited by naloxone. Comparatively, the ED₅₀ of morphine (s.c.) in tail-flick and hot-plate tests are 4.57 mg/kg and 4.08 mg/kg, respectively (Matsumoto et al., 2006; Matsumoto and Horie, 2014).

The pharmacodynamic effects of kratom have been summarized in reviews (see Warner et al., 2016; Prozialeck, 2012). Kratom users can expect to experience full effects in about 30–60 min after ingestion, although onset can be noticeable within about 10–20 min. The half-lives of mitragynine and 7-OH-MG are about 3.5 and 2.5 h, respectively. Both are eliminated from the body primarily with the urine (Prozialeck, 2012; Neerman et al., 2013). The pharmacokinetics following oral administration of mitragynine in humans has been proposed as a two-compartment model based on the observed kinetics in ten healthy human male volunteers (Trakulsrichai et al., 2015). Certain conditions such as prior food consumption or taking kratom in capsule form can delay the initial response. The effects of kratom typically last about 5–7 h, with the strongest effects at about 2–4 h after ingestion, although weak aftereffects can be felt as late as the next day (Rosenbaum et al., 2012; Prozialeck, 2012; Scott et al., 2014; Maruyama et al., 2009). Current pharmacokinetic data in both animals and humans is limited, and there appears to be a significant variability within each species and differences between species in terms of mitragynine pharmacokinetics.

Approximately 1–5 g of raw leaves, which is defined as a low to moderate dose, will yield mild stimulant effects (EMCDDA, 2015; Prozialeck, 2012). The onset of effects begins to be experienced about 10 min or more after using a few grams of dried leaves (EMCDDA, 2015). This dosage amount is often related to the stimulant effects commonly used by labor workers in Southeast Asia to fight fatigue (Prozialeck, 2012). Not only has increased work capacity been reported by users, but alertness, sociability, and increased sexual desire are said to occur (EMCDDA, 2015). At this dose, the user

may also possess normal to slightly contracted pupils and blushing. Unwanted side effects are generally minimal; however, anxiety and internal agitation have been described (Prozialeck, 2012).

Using from 5 to 15 g of kratom leaves may provide the user with pain and opioid withdrawal symptom relief (EMCDDA, 2015; Prozialeck, 2012). Both mitragynine and 7-OH-MG yield analgesic and antinociceptive effects. Euphoria is more often achieved at this higher level, but these effects tend to be less intense as compared with opioid drugs (Prozialeck, 2012).

When exceeding 15 g of kratom leaves, one would expect to experience stupor, mimicking the effects associated with opioids (EMCDDA, 2015; Prozialeck, 2012). Initially, sweating, dizziness, nausea, and dysphoria will often result. These effects quickly subside and are followed by calmness and a dreamlike state (EMCDDA, 2015).

Frequent users of kratom, primarily in Southeast Asia, have displayed instances of the atypical symptoms tremor, anorexia, weight loss, seizures, and psychosis (Hassan et al., 2013; Prozialeck, 2012). Such individuals are likely using high doses of kratom for a prolonged period of time (Hassan et al., 2013; Prozialeck, 2012). The relevance of these potential effects from a public health perspective appears low as suggested in the analysis of Factor 5 and 6; however, research on this issue should be continued and extended.

This analysis is consistent with the conclusions of other recent reviews of the state of kratom science, which reveal a novel substance in need of further research to better understand its mechanisms of action as well as effects, particularly in dosage forms relevant to oral consumption by humans.

3.4 Factor 4: Its history and current pattern of abuse

3.4.1 History

The history of kratom presence and consumption in the US is recent, compared to Southeast Asia, and not well documented. Anecdotal reports, e.g., by Hmong immigrants in the 1980s and 1990, suggest that the Hmong and other immigrants from the Southeast Asia region likely brought kratom consumption practices to the US, and discussions with some have suggested availability in some Asian food product stores for many years (JEH discussions with Hmong community members in Minnesota). However, there has been little documentation of this in the literature other than anecdotal reports (see an anecdote reported in Axelrod and Windell, 2012, p.56). Broader commercial marketing of kratom products in the US by internet and in various health and natural food stores apparently began to increase in the early 2000s. A kratom industry survey estimated that by 2016, there were approximately 10,000 vendors selling kratom products in the US (Botanical Education Alliance, 2016).

Frequency of consumption of kratom, whether by consumption of home brewed liquids or commercial products, appears largely determined by individual preferences and reasons for consumption. For example, United Naturals reported that its average customer purchased and/or reported approximately 2-3 2oz (i.e., two “dose”) bottles per week, whereas other consumers make their own tea-like preparations on a daily basis. See the Appended testimonials collected by the American Kratom Association, which include descriptions of a range of patterns from daily to a few times per week to fit the needs and desires of the respondents. None of the users described consuming massive amounts of tea or hundreds of bottles in a single setting, as would apparently be required to produce the effects seen in the rodent studies described above.

Typical mode of kratom consumption

The most common mode of consumption in the US is in the form of liquids that are either prepared by consumers or purchased as manufactured products, often in small, 2 ounce containers as have become increasingly popular for caffeinated energy based “shot” drinks and other supplements. Consumers who prepare their own liquids use both hot and cold water extraction methods similar to making tea or coffee. Leaf material, which may be whole leaf but more commonly chopped or powdered, can be steeped or boiled, or cold water extracted. Lemon juice or other acids may be added to facilitate extraction. Sugar, honey, and other sweeteners and flavoring ingredients are often added to mask the generally perceived unpleasant and bitter taste of the liquids. A public health benefit of the general distasteful nature of the liquids is probably the discouragement of consumption by children. In fact, given the millions of preparations made in homes and sold by 10,000 vendors throughout the US, this may help contribute to apparently infrequent inadvertent consumption by children and reporting to emergency departments and poison centers in addition to the apparent intrinsic low acute toxicity of the mitragynines as discussed further on.

In Southeast Asia, leaf chewing is common as would be expected given the ready access to trees or inexpensive marketed harvested leaves. There have been some reports of leaf smoking in Southeast Asia but this does not appear common in Southeast Asia where product is readily available or in the US. This is in striking contrast to opioids which are rarely consumed as beverages or in foods and for which the preferred routes of use are smoking, injecting, and by nasal insufflation (“snorting”). There is a striking parallel in fact with respect to the stimulant caffeine, which is almost exclusively consumed in the form of beverages, also used in many foods, but rarely consumed by routes that are typical of other stimulants such as cocaine and amphetamine which are often used by smoking, injecting, and by nasal insufflation. For further comparison, the kratom tree and the coffee tree are both tropical, deciduous, evergreens in the coffee family (Rubiaceae) native to Southeast Asia.

3.4.2 Federal Surveys

Monitoring the Future Survey (MTF) and Treatment Episodes Datasets (TEDS)

Among federal surveys, the youth and young adult targeted MTF survey and the TEDS were evaluated. MTF data are available through 2015 and TEDS through 2013. Neither of these surveys have reported kratom consumption or treatment seeking for kratom dependence, respectively. That does not mean there has been no abuse or kratom dependence treatment seeking; however, it does reflect the absence of signals and the lack of recommendations from affiliate researchers and treatment clinics that kratom abuse or dependence treatment should be added to the surveys at this time. Those systems, like most other such drug use and abuse-related surveillance systems, are designed and implemented so as to capture the emergence in trends of use, abuse and treatment needs. There may be a few years' lag time unless such problems are emerging rapidly and/or are considered public health priorities; however, given that kratom has been used in the US for decades, one would predict that, if kratom were emerging as a public health or abuse problem, it would have been evident from these surveys.

National Survey on Drug Use and Health (NSDUH)

The NSDUH is generally considered to be a sensitive indicator of emerging trends in substance abuse, including adoption of new substances, and it includes collection of self-reported new and novel products and substances by its open-ended questions. Thus, although it does not yet include kratom/mitragynine-specific questions, since 2010 through the most recently published data release that covered 2014, there were a total of two (2) kratom mentions (unweighted – not nationally representative). By contrast, and over the same time frame, mentions of oxycodone, heroin, cocaine, amphetamine, marijuana, and other prototypic substances of abuse were in the many thousands. Aspirin mentions ranged from 17 to 22 per year, while diphenhydramine mentions ranged from 12 to 29 per year. See Table 2.

Table 2. Number of Unweighted Cases of Kratom, Aspirin, Diphenhydramine, and Other Substances Reported to the National Survey on Drug Use and Health, 2010-2014.

	NSDUH – Number of Unweighted Cases				
	2010	2011	2012	2013	2014
Kratom/Mitragynine [†]	1	0	0	0	1
Oxycodone [§]	2,068	2,097	2,017	1,877	1,835
Heroin [§]	771	826	829	842	946
Cocaine [§]	6,464	6,260	6,009	5,653	6,636
Amphetamine [§]	3,916	4,136	4,113	4,171	4,179
Marijuana [§]	22,842	22,994	22,238	22,163	23,462
Aspirin (acetylsalicylic acid) [†]	3	5	9	7	3
Diphenhydramine [†]	37	36	23	28	16

[†] unweighted non-medical use case mentions from open-ended response items only

[§] unweighted non-medical use case mentions from drug-specific and open-ended response items

3.4.3 Other Federal Data Sources Drug Abuse Warning Network (DAWN)

There have been no reports of kratom or mitragynines in the DAWN system; however, since DAWN monitoring ended as of December 31, 2011, all that can be concluded is that DAWN-detected signals were not occurring before 2012. It is telling, however, that when clearly high risk products such as fentanyl emerged even in small geographic areas, DAWN quickly picked up associated problems. Kratom likely had at least a decade of widespread use without generating any reports in the DAWN system.

National Forensic Laboratory Information System (NFLIS)

The NFLIS is a monitoring system of the Diversion Control Division of the DEA. It systematically collects and reports findings from drug chemistry analyses from law enforcement seizures (see <https://www.deadiversion.usdoj.gov/nflis/>). The materials collected in seizures (e.g., during “drug busts” and drug dealer arrest operations) are analyzed by more than 300 state and local forensic laboratories nationwide. It thus provides a means of geographic tracking of what sorts of substances are being recovered, including diverted legally manufactured drugs, illicitly manufactured products (e.g., heroin and crack cocaine), and other substances and products.

Nearly two million analyses of drugs and other substances are tested annually. These include findings on opioids, depressants and tranquilizers, hallucinogens, anabolic steroids, and stimulants. These assessments thus provide statistically representative national and regional drug item estimates for the likelihood that a given substance will be found together with the most frequently identified drugs, and thereby some sense of

the mix of substances that have been collected in seizure operations. These reports are measures of seizures, not measures of actual use, abuse, adverse reactions, or overdose deaths.

Mitragynine was first reported in the NFLIS system in 2010. From 2013 to 2015, mitragynine reports accounted for approximately 0.01% of total reports. Specifically, 181 mitragynine reports were recorded in 2013 (out of 1,540,647 total reports), 137 in 2014 (out of 1,511,313 total reports), and 129 in 2015 (out of 1,549,466 total reports). The fact that these identifications were a new category, albeit at very low rates, led the DEA to place mitragynine on its “watch list,” meaning essentially that laboratories and investigators are encouraged to be alert for products potentially containing mitragynine and to be testing for mitragynine.

To provide some perspective of how mitragynine reports compare to opioids, Table 1 from the NFLIS July, 2015 special report on “Opiates and Related Drugs Reported in NFLIS, 2009-2014 (NFLIS, July, 2015)⁵ is shown below (See Table 3). Among these substances, heroin accounted for 699,847 (48.64%), followed by oxycodone at 285,381 (19.83%), and hydrocodone at 235,417 (16.36%), together accounting for approximately 85% of the 1,438,933 reports. Mitragynine reports totaled 42 (0.03%) in the second six months of 2011 and 88 (0.06%) in the first six months of 2014, and totaled 458 (0.03% overall) through June, 2014.

As confirmed by NFLIS, kratom is available to persons who have been found with substances of abuse, yet kratom has not emerged as a substance of abuse by any of the federal surveillance systems. This is not the profile of a substance with intrinsic activity indicative of a high risk of abuse, dependence, or addiction. It is more the profile of any number of substances including caffeinated products and over the counter medicines that are consumed and used by many people for the benefits that they provide, regardless of whether those individuals use, abuse, or distribute substances of abuse.

⁵ https://www.dea diversion.usdoj.gov/nflis/spec_rpt_opioids_2014.pdf.

Table 3. National Semiannual Estimates of Selected Opiate and Related Drug Reports in NFLIS, 2009-2014.

Selected Drug	2009				2010				2011			
	Jan-Jun		Jul-Dec		Jan-Jun		Jul-Dec		Jan-Jun		Jul-Dec	
	Number	Percent										
Heroin	53,584	45.94%	55,194	46.11%	57,969	42.94%	52,361	42.60%	56,892	43.57%	58,444	46.37%
Oxycodone	22,483	19.27%	24,058	20.10%	31,050	23.00%	29,681	24.15%	30,406	23.29%	26,769	21.24%
Hydrocodone	23,444	20.10%	23,027	19.24%	25,885	19.17%	22,631	18.41%	23,144	17.72%	21,398	16.98%
Buprenorphine	3,313	2.84%	3,911	3.27%	5,422	4.02%	5,107	4.15%	5,427	4.16%	4,831	3.83%
Methadone	4,925	4.22%	4,898	4.09%	5,007	3.71%	4,295	3.49%	4,460	3.42%	4,136	3.28%
Morphine	3,519	3.02%	3,631	3.03%	3,898	2.89%	3,548	2.89%	3,973	3.04%	4,017	3.19%
Codeine	2,194	1.88%	1,848	1.54%	2,110	1.56%	1,771	1.44%	2,007	1.54%	1,970	1.56%
Hydromorphone	1,157	0.99%	1,109	0.93%	1,332	0.99%	1,205	0.98%	1,503	1.15%	1,421	1.13%
Tramadol	635	0.54%	728	0.61%	887	0.66%	807	0.66%	842	0.64%	885	0.70%
Oxymorphone	189	0.16%	172	0.14%	359	0.27%	473	0.38%	1,176	0.90%	1,551	1.23%
Fentanyl	270	0.23%	314	0.26%	320	0.24%	320	0.26%	324	0.25%	300	0.24%
Propoxyphene	751	0.64%	698	0.58%	636	0.47%	641	0.52%	336	0.26%	203	0.16%
Meperidine	184	0.16%	100	0.08%	136	0.10%	74	0.06%	83	0.06%	83	0.07%
Mitragynine	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	42	0.03%
Acetyl fentanyl	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Sufentanil	0	0.00%	0	0.00%	1	0.00%	0	0.00%	0	0.00%	0	0.00%
Total²	116,647	100.00%	119,689	100.00%	135,012	100.00%	122,915	100.00%	130,574	100.00%	126,049	100.00%

Selected Drug	2012				2013				2014		Total	
	Jan-Jun		Jul-Dec		Jan-Jun		Jul-Dec		Jan-Jun		Number Percent	
	Number	Percent	Number	Percent								
Heroin	65,510	48.17%	65,453	49.83%	74,049	54.04%	75,430	56.31%	79,937	56.73%	694,822	48.58%
Oxycodone	27,053	19.89%	25,695	19.56%	23,854	17.41%	21,199	15.82%	21,507	15.26%	283,756	19.84%
Hydrocodone	21,901	16.10%	20,042	15.26%	18,834	13.75%	17,389	12.98%	16,951	12.03%	234,647	16.41%
Buprenorphine	5,614	4.13%	5,672	4.32%	5,635	4.11%	6,281	4.69%	7,261	5.15%	58,474	4.09%
Methadone	4,199	3.09%	3,657	2.78%	3,539	2.58%	3,014	2.25%	2,931	2.08%	45,062	3.15%
Morphine	4,467	3.28%	4,336	3.30%	4,123	3.01%	3,743	2.79%	3,976	2.82%	43,231	3.02%
Codeine	1,908	1.40%	1,729	1.32%	1,628	1.19%	1,715	1.28%	1,520	1.08%	20,400	1.43%
Hydromorphone	1,988	1.46%	2,273	1.73%	2,600	1.90%	2,383	1.78%	2,351	1.67%	19,321	1.35%
Tramadol	1,134	0.83%	977	0.74%	1,279	0.93%	1,135	0.85%	1,346	0.96%	10,653	0.74%
Oxymorphone	1,591	1.17%	889	0.68%	823	0.60%	904	0.67%	901	0.64%	9,029	0.63%
Fentanyl	316	0.23%	328	0.25%	380	0.28%	554	0.41%	1,989	1.41%	5,414	0.38%
Propoxyphene	198	0.15%	127	0.10%	105	0.08%	102	0.08%	77	0.05%	3,874	0.27%
Meperidine	76	0.06%	55	0.04%	63	0.05%	44	0.03%	41	0.03%	940	0.07%
Mitragynine	46	0.03%	110	0.08%	105	0.08%	68	0.05%	77	0.05%	448	0.03%
Acetyl fentanyl	0	0.00%	0	0.00%	0	0.00%	6	0.00%	43	0.03%	49	0.00%
Sufentanil	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	0.00%
Total²	136,002	100.00%	131,342	100.00%	137,015	100.00%	133,966	100.00%	140,909	100.00%	1,430,120	100.00%

¹ Includes drug reports submitted to laboratories from January 1, 2009, through June 30, 2014, that were analyzed within three months of the end of each six-month period.

² Numbers and percentages may not sum to totals because of rounding.

3.5 Factor 5: The scope, duration, and significance of abuse

As discussed in Factor 4 above, there appears to be little, if any, abuse of kratom in the US. To the extent to which benefits are provided by consumption of kratom-derived products, these appear possible with remarkably low risks of serious adverse effects as compared to opioids and there is little evidence or apparent risk that kratom products are used by routes other than oral beverage or food consumption, even though it is certainly theoretically possible to smoke, snort, or inject kratom extracts.

3.5.1 Internet monitoring

The dramatic growth of the Internet in the past 20 years has substantially changed the dissemination of ideas, contributed to trends in product use and misuse, and added new means of monitoring emerging substances. There are many websites that focus specifically on drug misuse and abuse, some intended to discourage such use as well as those that appear dedicated to providing information in support of, if not to encourage, misuse and abuse of drugs. An important limitation of the data is that they do not necessarily relate to incidence, prevalence, or to increases or decreases in population trends. For example, a single provocative posting might precipitate a series of postings (known as a “thread”) thereby creating a “bump” in the number of postings on a given topic which may not necessarily be related to population trends. Also, as is apparent by even a casual review of such websites, they including postings that can strain credulity. Thus, teams such as our group at PinneyAssociates led by Dr. Edward Cone, and the FDA’s Controlled Substances Staff, have learned to be careful in relying on such information for more than qualitative insights concerning the diversity of opinion and responses related to substances. Nonetheless, such insights, when compared against known pharmacology and epidemiology, can be useful in guiding policy including risk management efforts.

With the foregoing caveats in mind, and understanding that PinneyAssociates has not conducted an extensive evaluation of internet postings, the following provides representative examples of serious substance abusing persons who appear to have made efforts to compare kratom to their preferred substances.

Taken together, most of the postings involve what appear to be extremely high dosages of kratom substances and extracts, and self-made extracts from a variety of kratom sources: for example, users may combine several grams of kratom powder, several ounces of kratom leaves, and indeterminate forms of this or other substances. Some people have reported experiencing intoxication, euphoria, and other effects at these very high dosages, though typically, their comparisons to other drugs provide a basis for understanding why kratom and kratom products apparently are rarely the substance of choice among people who seek abused drugs and are in search of better ways to get better highs and euphoria. There are self-reports of dependence and withdrawal, but these tended to involve extremely high intakes of kratom, apparently along with other substances.

Table 4 provides what PinneyAssociates’ experience offers as a reasonable representation of kratom experiences.

Table 4. Verbatim accounts from Internet reports from a website that typically attracts people with histories of diverse substance use and abuse to describe their experiences

<http://www.bluelight.org/vb/threads/398307-Kratom-experiences>.

27-09-2008 03:28: Here's my personal opinion, others have had better experiences: Kratom offers a pleasing buzz, but it only lasts about an hour. Then it's gone and I can't redose for another 12 or so hours. It just won't work again if I try to dose sooner. When I use it every day, the buzz gets less and less until it's practically worthless. Kratom just didn't do me very well. I hope you have a better experience with it.

27-09-2008 04:28: Kratom is somewhat self limiting when it comes to abuse, or daily recreational use, yes. Each day you use it, it becomes a bit less warm and less euphoric. But its pain relieving properties continue after those effects fade. Even after continued daily use there will always be noticeable anxiety relieving, and pain relieving properties. You can avoid losing some of the glow and euphoria by switching to different strains every so often.

27-09-2008 08:15: After LOVING oxy to death and losing my source, I sought out some Kratom to act as a substitute. If you're expecting something amazing, you will definitely be disappointed. It DOES feel like an opiate, kind of, but it's very very limited. I tried several strains in several different dosages, and yeah, it doesn't have that much to offer. Doing too much is awful - I felt nauseous for DAYS. Doing too little is just boring. There IS somewhat of a sweet spot but it just doesn't scratch where I itch, compared to oxy (and I never did that much oxy that frequently, and I hadn't in weeks before kratom, and so it's not just an addiction thing).

28-09-2008 05:49: Personally I like the taste of pod tea, the stronger the better. It's preferable to the odd taste of kratom (even though I will drink kratom tea straight as well). But Kratom has a numbing sensation on my mouth when I drink it, like pins and needles on the tongue. I've never really felt too much from kratom. I've had the so-called 10x extracts and the leaves, with the extracts I'd just down them with a lot of water, and with the leaves just make some tea. I'd say that the effects were a bit stronger from the leaves, however. I had to use about 1/4 an ounce, which (if I remember correctly) was a few cups of tea...a french press would probably be even more effective, though. Subjectively the effects felt similar to a moderate dose of tramadol...especially the serotonergic wakefulness type of feeling. It was great for staving off withdrawals, but I couldn't see it being my drug of choice. After a certain point taking more kratom doesn't seem to increase or prolong the euphoria much. I'm willing to bet though that people who have never been addicted to opiates would enjoy this drug much more than those who are or have been.

28-09-2008 06:00: "Yes the taste of Kratom tea is disgusting. That's why tea is no longer the preferred method of ingestion by Kratom users. We use TNW= puddle on tongue, plop kratom in, swallow, follow with water. You won't feel too much from kratom. It's very subtle for most. The extracts are usually unbalanced and stimulative, rather than relaxing and euphoric. You took far too many leaves. I did the same thing when I first tried Kratom. You only need 2-3 tea spoons. Taking too much will make you sick, or could even ruin the effects all together. I guess you can't really take it and then just forget you took it. You need to recognize the effects and focus on them to feel nice. And

yes, Re-dosing Kratom is useless, you will feel nothing more. It may make the aroma last longer, but it wont increase the potency of the smell.”

Similarly, Swogger et al. (2015) conducted a qualitative analysis of first-hand descriptions of human kratom consumption that were submitted to, and published by, a psychoactive substance information website (Erowid.org) as “experience reports.” For such participation in the Erowid system people are asked to self-administer the substance, often at high dosage levels, and then report their effects over the next 8 hours. A caveat, based on the experience of the authors of this report, is that Erowid site participants would seem more likely than people in the general population to be heavy users and poly drug users and abusers, including many in this survey with self-reported use and dependence to prototypic opioids, cocaine, and other drugs.

Four general themes emerged as associated with kratom product consumption (see Swogger et al., 2015 for greater detail):

1. Positive experiences was the most prominent theme with euphoria occurring in 30.4% of the respondents especially at high dosages, relaxation in 23.6%, and increased energy in 8.7%.
2. Negative experiences including nausea, stomachache, and cramping occurred in 16.1%. This included alternating chills and sweats in 9.3%, dizziness and unsteadiness in 6.8%, and vomiting in 3.1%.
3. Neutral experiences occurred in about 10% of the respondents, which included numbness of the throat and mouth, visual alterations, and sedation.
4. Substitution occurred in 10.6%, meaning that 10.6% used kratom as a substitute for an unwanted substance. This included 9.9% who used kratom to relieve symptoms of withdrawal from another substance.

Themes that emerged from these experience reports indicate that kratom may be useful for analgesia, mood elevation, and anxiety reduction, and may aid opioid withdrawal management. Negative response themes also emerged, indicating potential problems and unfavorable "side" effects, especially stomach upset and vomiting.

A number (10.6%) of individuals reported successfully using kratom as a substitute to help abstain from the use of other substances perceived as addictive and/or causing harm. These substances were primarily opioids, such as oxycodone and heroin, but also included benzodiazepines and antidepressants. In addition to substitution, 9.9% of the sample reported withdrawal symptoms after using kratom. The consumers generally perceived their withdrawal symptoms to be milder than, but similar to, those

caused by withdrawal from opiates. Only five percent of the sample reported tolerance to kratom, including a willingness to take higher doses in order to achieve the same effect. Finally, 4.3% of experience reports referenced hangover-like symptoms such as headache and nausea on the day after ingestion of kratom.

3.5.2 Dr. Oliver Grundmann Preliminary Report on Kratom Use and the Health Impact of Kratom Consumption – An online anonymous survey

Concluding our analysis of CSA Factor 5 is a summary of a few of the particularly relevant findings from the most comprehensive, relevant, and well-designed systematic internet survey of kratom users that has been done. It includes information from more than 9550 kratom users collected in October of 2016. The survey was designed “to provide [data for] stakeholders involved in kratom regulation, consumption, and current availability to better understand the current users statistics and the impact of kratom on health and specific conditions” in the US.

This survey was conducted by Oliver Grundmann, PhD, Department of Medicinal Chemistry, College of Pharmacy, University of Florida. Dr. Grundmann is Clinical Associate Professor of Medicinal Chemistry, and co-author of the Warner et al. review relied on in this 8 Factor Analysis. The study was conducted with the approval of the University of Florida Institutional Review Board. These findings have been extracted from a preliminary analysis of the report that is in preparation for publication by Dr. Grundmann, and the following summary was approved by Dr. Grundmann for inclusion in this 8 Factor Analysis. It is the opinion of the authors of this analysis that these findings and many other findings in the Grundmann study are highly relevant to consideration of the appropriateness of kratom for CSA scheduling, and that the findings would also be invaluable to FDA in its potential consideration of kratom’s profile of consumption, effects, and health impact in the community. We encourage FDA, NIDA, and DEA to consult with Dr. Grundmann for a more extensive presentation of these findings if actions are considered prior to their publication.

Dr. Grundmann describes the general nature and intent of the study as follows: *“It is intended to provide stakeholders involved in Kratom regulation, consumption, and current availability to better understand the current user statistics and the impact of Kratom on health and specific conditions. It is not meant to be comprehensive or necessarily reflect the breadth of specific beneficial and adverse effects of Kratom. Rather, it serves as a basis for further research and to provide all stakeholders with a current snapshot of Kratom use in the US.”*

Total # of respondents who consented to participate: 9,550

Age range: 54.17% were between the ages of 31-50, 29% younger than 30

Gender: 42.75% of respondents were female

Marital status: 1/3 were single/never married, 53.37% are married or partnered

Race: predominantly (89%) white

Employment: 57% employed for wages, 15% self-employed, 6% homemakers, 3.5% retired

Insurance coverage: 47% insurance through employer, 14% insurance through self-employment, 14.4% no insurance, 15.5% Medicare or Medicaid

Education: 82% at least some college (AA) or higher

Household income: 15% 35K-49K, 18.8% 50K-74K, 28.2% 75K and higher

The following findings are considered by Henningfield and Fant, and other PinneyAssociates experts to be particularly important in helping FDA in its evaluation of kratom given the size, scope, and design of the study and the fact that these variables are highly relevant to understanding reasons for consumption, consequences of consumption, and the consequences of a regulatory action that would prevent such individuals from obtaining kratom products. The Grundmann survey provides additional and complimentary information to the American Kratom Association's collection of testimonials from Kratom users (Attachment A), and would seem to provide an important quantitative basis for understanding the representativeness of those testimonials and for projecting to the broader population of perhaps 2 million or more American kratom users.

About 84% of the respondents self-reported good to very good health.

About 98% reported "currently" using kratom-containing products.

About 61% reported consumption in the form of powdered kratom consumed with a beverage or self-prepared kratom tea.

Less than 1% used store-bought liquid kratom (shot).

About 21% experienced some negative effects and these were predominantly nausea, constipation and other GI related.

Less than 1% reported needing health care treatment "because of your kratom use."

About 98% reported that a ban on kratom would negatively affect them.

Whereas most would support "regulating the quality of kratom products on the US market" about 90% answered "no" to the question: "Would you support categorizing Kratom as a medication that requires consultation with a pharmacist before purchase?"

Taken together, these and other findings reported by Grundmann provide a recent and informative characterization of kratom use and effects in the community, with the vast majority of the nearly 10,000 respondents reporting consumption for varied benefits,

intake likely limited by undesired but apparently mild and tolerable GI and other effects, and little evidence of effects of medical or public health concern. The reports support the conclusion that removal of kratom from the market would be viewed highly negatively and the demand would likely drive many to illicit sources of kratom.

3.5.3 Testimonials Regarding Benefits

Consistent with the survey cited above, Attachment A provides a number of testimonials from kratom users regarding the perceived benefits of kratom.

The testimonials provide qualitative and personal insights that complement the quantitative and qualitative survey of Dr. Grundmann. The profile that emerges is that kratom is consumed primarily for general and specific life and life-style enhancing reasons. For many, the reasons include its value as a natural remedy for ailments. These consumers believe that kratom is more satisfactory than conventional medicines with respect to apparent effectiveness and has fewer undesirable side-effects than conventional medicines. Interestingly, this is not because kratom is devoid of any side effects. Indeed, many consumers report apparently readily tolerable gastrointestinal effects including some “stomach upset,” mild nausea, and constipation that apparently function to limit intake but are acceptable and tolerated in a natural therapy. From the perspective of abuse potential, to the extent to which such effects serve to mitigate the dose escalation that is so prominent with many known substances of abuse, including opioids, this is a highly favorable profile that may be part of the reason that abuse and abuse potential in the community appears very low.

3.6 Factor 6: What, if any, risk there is to the public health

As mentioned earlier, kratom products have been widely marketed and consumed as dietary supplements and natural remedies since at least the early 2000s. In collaboration, the Centers for Disease Control and Prevention (CDC) and the FDA “estimated the number of emergency department visits for adverse events associated with dietary supplements in the United States using 10 years of data (from January 1, 2004, through December 3, 2013) from the 63 hospitals participating in the National Electronic Injury Surveillance System-Cooperative Adverse Drug Event Surveillance (NEISS-CADES) project conducted by the CDC, the FDA, and the Consumer Product Safety Commission” (Geller et al., 2015). Projecting from 3667 cases, they estimated an average of 23,005 such emergency department visits annually, with 2154 hospitalizations annually. One fifth of the supplement-related visits involved unsupervised ingestion by children. The vast majority of the emergency visits involved products used for weight loss, energy, and sexual enhancement involving substance such as kava, hydroxytryptophan, caffeine, ephedra, ginseng, and yohimbine root. Less than 2% involved products used for pain or arthritis relief and these included substances such as arnica, glucosamine, and pokeweed. None were reported to have involved kratom or mitragynines. This does not mean that there actually had been none

involving kratom or mitragynines, but certainly the public health signal through this major reporting system was very small and not indicative of a major public health problem.

In a recent review of the toxicology of mitragynine and analogs, Ramanathan and Mansor (2015, p. 282) concluded as follows: “To date there have been no reports of fatal overdose of kratom *per se*. If there are such occurrences, they are probably the result of kratom products contaminated with synthetic adulterants.” This is consistent with other reviews of kratom pharmacology, toxicology, and epidemiology (Warner et al. 2016). In fact, if kratom products were banned from the market, it appears likely that many users would turn to the illicit market that would immediately expand to meet the demand. In that marketplace, there would be no oversight by FDA and no basis for consumers to be assured of product purity and contents. Moreover, the illicit market is also a competitive marketplace. It is reasonable to assume that many illicit product manufacturers and distributors would be likely to spike their products with various other substances in order to support their claims such as “Special Product X” (possibly with added synthetic cannabinoids to provide claimed increased mood altering effects); “Special Product Relief” (possibly with added synthetic opioids to increase pain relief); “Special Product S” (possibly with added synthetic stimulants to increase the stimulant effects) and so on. Replacement of the licit market (and a licit market that would hopefully thrive with increased FDA oversight) with the illicit market would invariably precipitate public health problems, serious adverse events, and associated overdose deaths that would pose far greater risks to the public health.

Despite the availability of more concentrated kratom based solutions, the production of some swallowable products, and some smoking in Southeast Asia, consumption of oral liquids and leaf chewing appears to vastly predominate. In fact, use by injection of extracted and concentrated alkaloids and nasal insufflation are not reported in Southeast Asia despite the fact that such routes (as well as smoking) are common in the same regions for opioids. This is another similarity with caffeine, which theoretically could be concentrated and injected, as has been done in human research (Garrett and Griffiths, 2001), yet globally the oral liquid consumption overwhelmingly predominates. Efforts to intensify the effects of kratom products by the approaches typical of opioids and stimulants, namely by injecting and snorting, have not been reported. Although there have been some reports of leaf smoking in Southeast Asia, this does not appear to be a common practice and consumption by smoking has not been reported in the US. This is consistent with the relatively low apparent intrinsic attractiveness of the alkaloids to persons who abuse drugs and are typically seeking strong stimulation, intoxication, sedation, and/or euphoria as can be produced by prototypical drugs of abuse such as amphetamine and cocaine types of stimulants, alcohol and controlled sedatives, and scheduled opioids, but are not found with kratom.

3.6.1 American Association of Poison Control Centers' National Poison Data System (AAPCC-NPDS)

The AAPCC-NPDS is considered a timely and sensitive system for tracking the emergence of trends in use-related effects and for capturing relatively low frequency events. From 2000 to 2005, a total of two (2) kratom-related exposures were reported to AAPCC; however, from 2010 to 2015, a total of 660 kratom-related calls were received (increasing from 26 in 2010 to 263 in 2015).⁶ Kratom has not yet reached the threshold for inclusion as a separate product in annual AAPCC reports. The most recent report currently available is 2014. While the number of kratom calls for 2014 is not known, a reasonable proxy would be the 263 known kratom-related calls from 2015. In comparison, there were 55,151 diphenhydramine⁷-related calls, 18,470 aspirin⁸-related calls, and 1,355 nicotine pharmaceutical-related calls in 2014 (e.g., nicotine gum, patch, and lozenge).

3.6.2 Pediatric/Child (less than 6 years of age) exposure related adverse events and deaths.

An important consideration in public health and safety is the risks to children. Simply stated, we have been unable to document any deaths related to kratom exposure in children, or even evidence of serious adverse events or emergency department admissions for children attributed to kratom product exposure. This has included a review of federal surveillance systems including the AAPCC-NPDS described above, and internet searches for local and national media that typically report such events as news stories. This does not mean that no such events have occurred, but it does suggest that the signal is very weak and that any exposures that have occurred have not been associated with severe consequences. The rates of exposures and adverse events in children, which are apparently below the threshold of detection, are particularly striking in that they do not reflect a dearth of marketed and sold products. To the contrary, kratom products are sold by an estimated 10,000 vendors, and purchased, prepared, and used by millions of Americans in a wide variety of products constituting an approximately 200 million dollar market. Furthermore, to date there has been minimal guidance from FDA concerning packaging, allowable alkaloid content of manufactured products, labeling, and other guidance to minimize risks and promote safe storage and disposal. This is not an argument against such FDA oversight. To the

⁶ <http://www.cdc.gov/mmwr/volumes/65/wr/mm6529a4.htm>.

⁷ Diphenhydramine alone or in combination

⁸ Aspirin only; does not include combination products

contrary, appropriate guidance and regulation would be expected to help sustain low rates of inappropriate exposures and to minimize unintended consequences in children and adults. Nonetheless, the absence of adverse events in children and low prevalence of serious adverse events in adults is testament to the apparently intrinsic low hazard potential of kratom as marketed and used in the US.

The following figures are from the National Capital Poison Center (2016). These are provided to illustrate the importance of considering children under age 6 as a crucial population in evaluating the safety of opioids, and to provide in this report a context for the evaluation of the health impact and safety of kratom.

This figure does not reflect or include any kratom-related poisonings since none had been reported by publication of these data.

What Ages are Affected?

While young children (younger than 6 years) comprise a disproportionate percentage of the cases, poisoning affects ALL age groups, from infants to seniors. Peak poisoning frequency occurs in one and two year olds, but poisonings in teens and adults are more serious. Notice that the greater proportion of males in poison exposures occurring in children younger than 13 years switches to a female predominance in teens and adults.

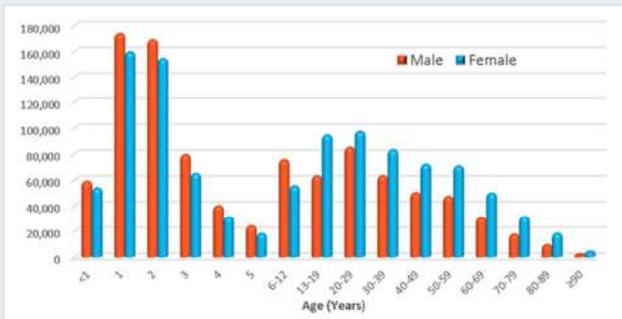


Figure 1. Age and Gender, Human Poison Exposures Reported to NPDS, 2014

Across all ages, there were 671 poison exposures reported per 100,000 population. The highest incidence occurred in one and two year olds (8,327 and 8,085 exposures/100,000 children in the respective age groups). Adults aged 50 years or older averaged fewer than 300 exposures/100,000 population.¹

Most Common Substances Implicated in Poison Exposures?

Cosmetics and personal care products lead the list of the most common substances implicated in pediatric exposures (children younger than 6 years, NPDS, 2014). Cleaning substances and pain medications follow. These exposures are nearly always unintentional.

	No.	%
Cosmetics & Personal Care Products	150,530	14.0
Cleaning Substances	118,207	11.0
Analgesics	100,399	9.3
Foreign Bodies/Toys/Miscellaneous	72,099	6.7
Topical Preparations	62,053	5.8
Vitamins	48,214	4.5
Antihistamines	45,915	4.3
Pesticides	35,152	3.3
GI preparations	28,460	2.7
Plants	27,941	2.6

Pain medications are the single most frequent cause of pediatric fatalities reported to Poison Control. That's a skewed picture, because carbon monoxide deaths are under-reported. The table below shows poisoning fatalities in children younger than 6 years reported to US Poison Control from 2010 through 2014.

	No.	%
Analgesics	133	19.2
Fumes/Gases/Vapors	86	12.4
Cold and Cough Preparations	49	7.1
Antihistamines	38	5.5
Hydrocarbons	29	4.2
Sedative/Hypnotics/Antipsychotic	29	4.2
Cleaning Substances (Household)	28	4.0
Antidepressants	26	3.8
Cardiovascular Drugs	23	3.3
Alcohols	19	2.7
Stimulants and Street Drugs	18	2.6
Batteries	17	2.5
Pesticides	17	2.5

The substance categories with the largest number of deaths across all ages (and including intentional exposures) include acetaminophen-containing medications, sedatives and sleeping medications, cardiovascular drugs, opioids, stimulants and street drugs, and alcohols (NPDS, 2014).

As summarized above, many types of products are routinely reported as child exposures to poison control centers. Kratom-related poisonings had not been reported to the NPDS at the time of publication of these data. The foregoing does not guarantee that exposure and adverse events will not occur in the future, even if they have not yet occurred. Despite efforts to minimize the risks and consequences of such exposures, across the nation, many children do and likely will continue to be able to ingest all nature of household and industrial products including cleaning products, agricultural products, glues, solvents, plants, chemicals, drugs, tobacco, nicotine liquids, and other potentially harmful substances. Minimizing such risks is a benefit of product regulation that ensures child resistant packaging as appropriate to the product, education, and

labeling to ensure safe use, handling, and storage. Kratom products will presumably be evaluated by FDA to ensure appropriate packaging, labeling, and education; in that way, FDA can be confident that current and future kratom products pose minimal risks to children.

The following three plausible factors contribute to the apparent very low risk that kratom products pose to children, as well as to adults:

1. Low toxicity and harm potential of kratom and its alkaloids
2. Poor taste of even commercially marketed products with a commonly described “yuck” factor that would be expected to discourage consumption by children
3. Relatively low concentrations of alkaloids apparent in most marketed products and in raw leaf material

3.6.3 Ex-US Safety/Toxicity Data

Kratom consumption is quite high in Southeast Asia, with likely over 1 million regular adult users in Thailand alone. Heavy use by laborers, plentiful and inexpensive supplies of raw material, and hundreds of years of history of use have provided both experience in consumption as well as countless millions of exposures and opportunities for overdose deaths and other serious adverse health consequences if there were a high risk of such. Yet fewer than 100 serious adverse events associated with kratom consumption have been reported from Southeast Asia. A limitation of safety data from Southeast Asia is that much kratom consumption likely occurs in rural areas with limited reporting systems. Nonetheless, in contrast to opioid abuse and dependence, kratom consumption is not considered a major public health problem.

In an exploratory ethnographic survey of 149 long-term regular users of kratom (who chewed the leaves) in Thailand, the percentage of users reporting the negative effects of using kratom was relatively low (4–14% of all users) (Assanangkornchai et al., 2007). The negative effects included a perception of less productivity, a decreased sexual drive, fatigue, poor health, wasteful spending habits, dizziness, poor concentration and distractedness, difficulty sleeping, wasting working time, irritability, poor thinking ability, impaired memory, laziness, and social withdrawal. The perceived benefits of kratom consumption included helping users work longer and harder, feeling happy/sprightly, maintaining a good mood, sleeping soundly, and being healthy. In Thailand, the benefits of consumption, as reported by users and nonusers alike, appear to predominate over the negative effects, although these conclusions come from research that is more ethnographic characterization than clinical trial type research.

The safety of low doses of MG has also been evaluated in animal toxicology studies. Hassan and colleagues (2013) reviewed the data on the toxicology of MG as follows: In animal models, the toxicity of MG was claimed to be relatively low. Macko and

colleagues (1972) found no evidence of toxicity, measured as tremors or convulsions, at doses as high as 920 mg/kg in dogs. A more recent study in rats reported lethal effects of 200 mg/kg total alkaloid extract of *M. speciosa* given intragastrically (Azizi et al., 2010). The actual amounts of MG as compared to other alkaloids were not reported by Azizi, and the specific relevance to human safety is limited, because humans consume far less than 200 mg/kg. Janchawee and colleagues (2007) reported lethal effects after an oral dose of 200 mg MG in rats.

Sabetghadam and colleagues (2013) administered three doses of MG (1, 10, 100mg/kg, p.o.) to rats for 28 days respectively. The groups of rats treated with the lower and intermediate doses showed no toxic effects during the study. Only relative liver weight increased after treatment with the high dose of MG (100mg/kg) in both the male and female treatment groups of rats. Biochemical and hematological parameters were also altered, especially in the high dose treatment group, which corresponds to the histopathological changes. Another study, also mentioned below in a summary of addiction potential studies is relevant to safety although it was designed to assess physical dependence and withdrawal at very high dosage relative to typical human consumption (Yusoff et al., 2016). Laboratory rats were given 30 mg/kg/day i.p., equating to an oral dose of about 990 mg/kg – equivalent to over 800 human 2-ounce doses. Some evidence of dependence and withdrawal were demonstrated but not lethality.

3.6.4 Deaths Possibly Involving Kratom

To date, there have been no reports of fatal overdose from kratom *per se* (Raffa, 2015, and references cited therein). Although there has been little systematic study of the pharmacodynamic effects of kratom, there is little clinical or scientific evidence of respiratory depression, and this would be consistent with the absence of documented overdose deaths attributable to kratom. Fourteen deaths potentially related to kratom had been reported globally until the DEA August posting in the Federal Register (see below). Of these, nine occurred in Sweden and appeared to have been related to consumption of an herbal blend called Krypton that was adulterated with O-desmethyltramadol, an active metabolite of the analgesic drug tramadol, which has been documented to carry a risk of severe respiratory depression and overdose death (Backstrom et al., 2010). The other five, three in the US, one in Norway, and one in Thailand, included co-administration of other drug substances. As a result, the actual cause of death is not clear.

In its analysis, DEA reported the following regarding deaths related to kratom in its Factor 6 analysis:

Deaths related to kratom exposure have been reported in the scientific literature beginning in 2009-2010, with a cluster of nine deaths in Sweden from use of the kratom product “Krypton” (Kronstrand et al, 2011). Since then, five more deaths related to kratom exposure were reported in the scientific literature (Holler et al., 2011, Neerman et al., 2013, Karinen et al., 2014, McIntyre, 2015, Anwar et al.,

2016), and at least 16 additional deaths connected to kratom exposure, have been confirmed by autopsy/medical examiner reports (mitragynine and/or 7-hydroxymitragynine were identified in biological samples). Of these deaths, 15 occurred between 2014 and 2016 (citing Autopsy/Medical Examiner (ME) reports on file with DEA).

DEA has not made available information that would enable assessment of the basis for concluding that kratom was “connected” to the “16 additional deaths” (beyond the 14 discussed above and elsewhere (Henningfield, 2015; Warner et al., 2016)). As demonstrated by the referenced sources in the DEA document, there has never been a published report in the literature of a death solely attributable to kratom, but rather these reported cases involved the ingestion of kratom along with pharmaceuticals or controlled substances known to present risk of death. These reports as summarized by the FDA document seem to agree with the general finding that these deaths were not solely attributable to kratom and generally leave the potential role of kratom unclear. For example, in the case of the nine deaths in Sweden occurring late 2009 to early 2010, the product ingested was not pure kratom, but rather a product called “Krypton.” Laboratory analyses identified mitragynine and O-desmethyltramadol (known substances in Krypton blend) and other substances in blood samples of the deceased (Kronstrand et al., 2011). Several other cases of deaths involving multiple drugs are described in the DEA review as described in the table below. The contributing role of kratom, if any, cannot be ascertained, and interpreting these as “kratom-caused” or “Kratom overdoses” is certainly beyond the evidence.

Source	Drugs Involved
Neerman et al. (2013)	Mitragynine and therapeutic levels of dextromethorphan, temazepam, 7-aminoclonazepam, and a slightly elevated level of diphenhydramine in blood samples
Karinen et al. (2014)	Mitragynine and 7-hydroxymitragynine, zipiclone, citalopram, and lamotrigine in blood samples
McIntyre et al. (2015)	Mitragynine, along with therapeutic levels of venlafaxine, diphenhydramine, mirtazapine, and ethanol
Medical Examiner for Palm Beach, Florida (2014)	Mitragynine along with venlafaxine, fentanyl, amphetamine, and caffeine
Medical Examiner for DeKalb County, GA (2015)	Mitragynine, along with fentanyl, benzodiazepines, and cannabinoids
Medical Examiner for San Diego, CA (2015)	Mitragynine, along with methadone and alprazolam
Medical Examiner for San Diego, CA (2015)	Mitragynine, fentanyl, alprazolam, and an active clonazepam metabolite
Medical Examiner for San Diego, CA (2015)	Mitragynine, along with alcohol, benzodiazepines, and opiates

There was also a case of suicide in 2016, in which a 56-year old man was found with a self-inflicted gunshot wound to the head. The decedent had a history of alcohol and drug abuse. Laboratory analyses identified mitragynine and caffeine in blood samples. The cause of death, as determined by the Medical Examiner, was gunshot wound to the head. It is doubtful that consumption of kratom was in any way related to this death.

There were, however, three cases reported in the DEA analysis (DEA, 2016) in which kratom appeared to contribute to the death, though the mechanisms are not clear and the nature of the deaths seemed widely varied, possibly reflecting chronic heavy consumption of kratom and possibly other substances, as opposed to overdose death caused by opioid respiratory depression. One was a case of severe hypoxic encephalopathy complicating apparent mitragynine toxicity. The second case was determined by the Medical Examiner to be acute mitragynine (kratom) intoxication. The amount of mitragynine found in the liver was 200 times more than reported by McIntyre et al. (2015), where mitragynine intoxication was concluded to be the primary cause of death. In the third case, kratom products (“Green Malaysian”, “Yellow Vein Maeng Da”, and “Red Borneo”), and vials labeled U-47700 were found at the scene of the death. Laboratory analyses of blood samples identified the presence of mitragynine and the opioid antagonist naloxone. The cause of death, as determined by the Medical Examiner, was probable polypharmacy overdose.

A recently published, peer-reviewed article outlines well the position of the published studies: “Although death has been attributed to kratom consumption, there is no solid evidence that kratom was the sole contributor to an individual’s death” (Warner et al., 2016). We do not rule out the possibility that there have been overdose deaths involving extremely high doses of kratom; however, to date, we have been unable to document a single death in which kratom overdose can reasonably be concluded to have been “causal” in the death. By any measure this is in stark contrast with what has been documented for most recognized drugs and substances of abuse. For example, CDC reported data for 2014, with limitations acknowledged, in which deaths were reasonably concluded to have been categorized substantially, if not exclusively, to an opioid (28,647 in 2014 or nearly 80 per day) or other drugs most notably including sedatives, alcohol, and stimulants (18,408 or about 50 per day) for a total of 47,055 or about 129 per day (Rudd et al., 2016).

As mentioned earlier the very low risk of overdose poisoning and serious adverse events does not mean that they have not and will not occur. However, given the two decades during which consumption has increased to an estimated two or more million consumers in the US, in addition to far more extensive consumption in Southeast Asia, this is a substance and category of product with a remarkable safety record. It is not the profile of a serious or emerging public health problem that warrants drastic actions that would prohibit kratom consumers from continuing to lawfully purchase kratom. The safety record is all the more impressive given that kratom products have been marketed, prepared, and consumed without the level of regulatory oversight that is

present for many other dietary supplements and natural products under the FDCA. Balanced and appropriate regulation seems vital to maintain the safety record. This should be accompanied by increased surveillance to better guide kratom regulation going into the future.

3.7 Factor 7: Its psychic or physiological dependence liability

There have not been adequate studies of physical or psychological dependence or abuse potential in humans caused by kratom. MG in high doses has been shown to produce physical dependence in rats. Yusoff et al. (2016) tested rats that received MG (30 mg/kg; i.p.) for 14 days and observed increased locomotor activity after withdrawal. MG induced a sensitized locomotor activation, which was significant after 7 and 14 days of treatment. There were no effects on locomotor activity during the subsequent three days of withdrawal. On measures of anxiety during withdrawal, the authors found no effects on anxiety after 12 hours of abstinence. However, after 24 hours and 48 hours, there was a significant decline in open arm time suggesting withdrawal-induced anxiety. MG withdrawal induced a paw tremor, body tremor, wet-dog shakes, ptosis, piloerection, teeth chattering, and grooming 12 hours after withdrawal. Except paw tremor and grooming, all effects were still present 48 hours after withdrawal. Most of the effects disappeared after 72 hours. The 30 mg/kg injected dose in this study would equate to an oral dose of 990 mg/kg. Converting this to a human equivalent dose based on body surface area, this would equate to approximately 160 mg/kg in humans, or over 11 grams of MG taken orally by a 70 kg human. The total alkaloid content in kratom leaves ranges from 0.5 to 1.5% (Hassan et al., 2013). Mitragynine makes up approximately 60% of this extract (Prozialeck et al., 2012; Philipp, et al., 2010; Kapp et al., 2011). Based on this, 1 gram of kratom leaves would contain around 15 mg of alkaloids (based on the 1.5% figure), about 9 mg of which would be MG. This would suggest that a human would need to consume over 1,200 grams of kratom leaves (or extract) to obtain a reinforcing effect – equivalent to over 1,000 2-ounce doses. Although kratom leaves also contain smaller quantities of other alkaloids including 7-OH-MG, which is more potent at the mu opioid receptor, very large quantities of kratom would have to be consumed to even see the levels of withdrawal seen in rats in this study.

Suwanlert (1975) reported that the chronic exposure to *M. speciosa* preparations can be followed by withdrawal symptoms in humans. Typical withdrawal symptoms include hostility, aggression, excessive tearing, inability to work, aching of muscle or bones, and jerky limb movements. Anxiety, restlessness, tremor, sweating, and craving for *M. speciosa* were some of the withdrawal symptoms caused by *M. speciosa* dependence in an elderly man with an additional history of alcohol and anxiety disorder (McWhirter and Morris, 2010). Given mitragynine affinity to μ -opioid receptors, it is tempting to speculate that dependence and withdrawal syndromes may be mediated via this pathway. Although descriptive reports suggest that *M. speciosa* users might become addicted (Suwanlert, 1975), scientific reports on the rewarding properties of the plant or its active compounds are scarce at present.

Clearly there is a need for more clinical and nonclinical research on the behavioral and physiologic effects and abuse/dependence liability of kratom. It is not completely devoid of signs that could be consistent with abuse or dependence, but neither is there evidence of high abuse/dependence potential that would support the conclusion that CSA scheduling is indicated.

3.8 Factor 8: Whether the substance is an immediate precursor of a substance already controlled under this subchapter

Neither kratom nor any of the constituents in kratom or its alkaloids are controlled substances or are precursors of a controlled substance.

4 Recommendation

After consideration of the eight factors indicative of control in the CSA, a substance must be found to meet three findings “required” for placing the substance in a particular schedule. 21 USC 812(b). These findings relate to the substance’s abuse potential, its physical or psychological dependence liability, and its accepted medical use in the United States.

4.1 Kratom’s potential for abuse is consistent with unscheduled substances

In evaluating the potential for abuse of kratom and its alkaloids, the history of consumption in Southeast Asia spanning centuries in addition to the decades of use in the U.S. reveals a pattern of volitional use with very little evidence of actual abuse. The history of use is consistent with the pharmacology of kratom and more specifically its alkaloids (MG and 7-OH MG), which produce mixed pharmacological effects that are generally mild and consistent with the stimulant-like effect of caffeine. The combination of pharmacology and pattern of actual use demonstrate that kratom’s abuse potential is consistent with that of other unscheduled substances.

Mitragynine is an indole-containing alkaloid that is structurally similar to yohimbine, the primary component of yohimbe extract, which is legally marketed in the United States as a dietary supplement. Although the pharmacology of mitragynine and 7-OH-MG are still being studied, the most recent analysis gives significant reason to think that the pharmacology would predict low potential for abuse. In particular, analysis by Kruegel et al. (2016) shows that mitragynine is only a partial agonist of the human μ -opioid receptor, and in fact acts as an antagonist to the δ - and κ -opioid receptors. Kratom’s only partial agonist activity, specificity to the human μ -opioid receptor, antagonist activity to the δ - and κ -opioid receptors, and mechanism of action are all consistent with other partial agonists that “display less respiratory depression, tolerance development, and constipation” (Kruegel et al., 2016). Indeed, an absence of reports of respiratory depression or dose escalation characterizes the observed use patterns of kratom, as

detailed below. Although 7-OH-MG appears to have some stronger agonist characteristics, it is less than 2% of the crude base and “is unlikely to generally account for the psychoactive properties of this plant” (*Id.*). Nor could either MG or 7-OH-MG be extracted from kratom without sophisticated equipment and chemistry training. As a result, the pharmacology predicts a potential for abuse on par with other unscheduled substances.

The observed patterns of use in the United States confirm the prediction of the pharmacology: kratom’s use patterns in the United States reflect volitional use for desired effects and are inconsistent with abuse. In assessing kratom’s potential for abuse, the history of use stretching back decades in the United States, and centuries in Southeast Asia, provide ample data to establish the patterns of use of the product. That history is notable for the absence of many indicia of abuse, such as impaired control over use, compulsive use, and continued use despite harm. Federal surveys on drug abuse have not detected a significant signal regarding abuse of kratom. This reflects not only a dearth of abusive use, but also a lack of individuals seeking treatment or therapy for addiction. Reports of poisonings and deaths remain very rare and are complicated by comorbidities and exposure to other substances; remarkably, no deaths, serious adverse effects, or emergency department exposures have been reported in children. Accordingly, the patterns of use do not reflect significant actual or potential for abuse.

In contrast, kratom consumers describe mild effects characterized by alertness and mood enhancement, comparable to the effects of coffee and other caffeine containing beverages and dietary supplements. Consumers also sometimes report increased sociability, again comparable to that experienced with caffeinated beverages. Kratom consumers have not been observed to engage in intravenous, intranasal, or inhalation abuse of the substance,⁹ nor have there been significant reports of binging. Instead, kratom consumers commonly consume kratom as a tea or else sprinkle the substance on foods. The actual patterns of use and effects are comparable to those of other unscheduled substances, including coffee, tea, and other dietary supplements.

The assessment of a substance’s potential for abuse is an inherently comparative assessment and requires consideration in the context of other comparable substances.

⁹ FDA has previously concluded a substance has a lower potential for abuse when it is only consumed orally and is not abused by “other routes of administration, either intravenously, intranasally, or by inhalation of the smoked drug substance.” FDA, *Basis for the Recommendation to Reschedule Nabilone from Schedule II to III of the Controlled Substances Act (CSA)* at 10 (Sept. 11, 1998). FDA recommended rescheduling Nabilone to schedule III, despite finding “an adverse reaction profile similar to delta⁹-THC” and “delayed onset and longer duration of action of marijuana.”

In this regard, kratom's potential for abuse is equivalent to, or lower than, that of a variety of unscheduled substances. For example, the FDA-approved drug Contrave® contains the substance bupropion, which has been shown to have properties consistent with "feelings of euphoria and drug desirability" (Contrave Prescribing Information (PI) at § 9.2). In a section labeled "Abuse," the FDA-approved PI for Contrave states that bupropion caused agitation/excitement, "produced mild amphetamine-like activity," and scored between placebo and amphetamine on a liking scale (*Id.*). Nevertheless, FDA did not recommend scheduling bupropion – as the substance's mild characteristics of abuse potential can be sufficiently managed through regulation under the FDCA.

Likewise, FDA declined to recommend scheduling of dextromethorphan, despite multiple characteristics of a drug of abuse that appear to far exceed kratom's potential for abuse. Dextromethorphan is a substance chemically related to the opioid codeine and is used as an ingredient in many cough suppressants available as over-the-counter (OTC) drugs. In that way, dextromethorphan, like kratom, is readily available for consumer purchase. DEA has determined that dextromethorphan is associated with "[e]uphoria and hallucinations" and significant intoxicating effects, including "hyperexcitability, lethargy, ataxia, slurred speech, sweating, hypertension, and/or nystagmus" (DEA Office of Diversion Control, *Dextromethorphan*, Mar. 2014).¹⁰ According to the 2014 DEA factsheet, dextromethorphan has been the subject of 45,748 Poison Control Center case mentions, 33,811 single exposures, and six deaths. *Id.* Likewise, analysis by FDA found that although the drug was not "widely abused," it demonstrated a propensity for abuse and "intentional misuse for abusive purposes." See Briefing Package for FDA Drug Safety and Risk Management Advisory Committee, Sept. 14, 2010.¹¹ Yet the recommendation of the Drug Safety and Risk Management Advisory Committee against scheduling,¹² and its continued absence from CSA scheduling, appears to reflect the understanding that the drug may be appropriately managed through FDCA regulation.

¹⁰ The DEA factsheet is available at https://www.deadiversion.usdoj.gov/drug_chem_info/dextro_m.pdf.

¹¹ The package is available at <http://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/Drugs/DrugSafetyandRiskManagementAdvisoryCommittee/UCM224446.pdf>.

¹² See, e.g., Kerri Wachter, *FDA Panel Recommends That Dextromethorphan Not Be a Scheduled Drug*, Internal Medicine News (Sept. 14, 2010), available at <http://www.mdedge.com/internalmedicineneeds/article/17801/adolescent-medicine/fda-panel-recommends-dextromethorphan-not-be>.

Nicotine is another example of a broadly marketed and used substance that meets criteria for CSA scheduling, and was determined by FDA to merit potential appropriate placement in Schedule III (e.g., Klein report of FDA analysis of CSA 8 Factors, 1994). It is present in many over the counter and prescription medicines for smoking cessation, which are used by millions of consumers in the U.S. The process of approval of a nicotine nasal spray for smoking cessation precipitated the convening of the FDA's Drug Abuse Advisory Committee and subsequently an evaluation by the Associate Commissioner for Health Affairs Dr. Stuart Nightingale and the Interagency Committee on Drug Control to consider whether or not nicotine nasal spray should be placed in the Controlled Substances Act (FDA, 1995, 1996). In brief, the Interagency Committee recommended, and FDA and NIDA concurred, that public health would be better served by not placing nicotine in the CSA.

There are many such examples of substances and products that may meet technical criteria for placement in CSA; however, the dextromethorphan and nicotine experiences are noteworthy for the deliberations in which it was clear that the more important questions were not *'could they be so placed?' (they clearly could) but rather 'should they be so placed?'* In other words, was public health better served by not scheduling them, but rather ensuring surveillance and oversight and appropriate regulation under the FDCA? In these cases and many others involving prescription and over the counter medicines and dietary supplements the answer has been that public health is often better served by not scheduling substances and products that could be scheduled. In other words, public health is often best served by applying the most appropriate regulatory tools.¹³

Similarly, the botanical dietary supplements St. John's Wort, Valerian, and Kava Kava have not been scheduled, despite the fact that all three are known to have "reinforcing effects," act as sedatives, and have been the subject of hundreds or thousands of calls to Poison Control Centers in the past six years. Nor have guarana or kola nut been placed into a schedule under the CSA, despite the fact that both are used for increased energy and have certain characteristics of a drug of abuse. The inevitable conclusion from the decisions not to control these substances is that not every substance with

¹³ By disclosure and way of experience, Dr. Henningfield participated in the nicotine considerations representing NIDA and serving on Commissioner Kessler's interagency tobacco and nicotine working group, and Dr. Nightingale's committee, on the nicotine scheduling issues in 1994-1996, as well as in NIDA's recommendations against scheduling nicotine gum and patch products. Dr. Henningfield and other members of PinneyAssociates developed the 8-Factor Analysis of dextromethorphan for the Consumer Healthcare Products Association that supported its position that although dextromethorphan met criteria for scheduling, public health would be better served by more appropriate regulation, and surveillance, and efforts by product manufactures to discourage inappropriate use, and this position was supported by FDA's advisory committees and ultimately FDA itself.

characteristics potentially indicative of mild abuse potential merit scheduling, but rather that these substances can be adequately regulated through the existing authority of the FDCA.

The long history of use of kratom demonstrates a pattern of use consistent with other consumer products such as coffee and botanical dietary supplements. The history of use combined with the pharmacology of kratom lead to the conclusion that kratom has a very low potential for abuse, and that its abuse potential is on par with, or lower than, other unscheduled substances.

4.2 Kratom has a dependence liability consistent with unscheduled substances

As described in this 8-Factor Analysis, kratom overall has a low potential for abuse, dependence, and public health harm, and consideration of all 8 factors does not provide a compelling case that kratom should be placed in the CSA. The data show little tendency among kratom consumers to increase their dose to their personal detriment or to the point of addiction, as is indicative of growing dependence. Furthermore, the data demonstrate that increasing the dose of kratom is more likely to produce undesirable gastrointestinal effects, constipation, and lethargy, with little additional mood enhancement. There have been no reports in TEDS of consumers seeking treatment for dependence, nor have treatment clinics recommended monitoring such reports. These typical indicators of dependence – increased dosing and dependence treatment – are not present with kratom, which strongly suggests that its dependence potential is low or even negligible.

Nor are observed reinforcing effects indicative of physical or psychological dependence. The reinforcing effects are described as mild and comparable to caffeinated beverages such as coffee or tea. These mild reinforcing effects are unrelated to physical dependence, and do not rise to the level of even limited psychological dependence. In addition, due to the very low bioavailability of MG and 7-OH-MG (only 3.03% bioavailable in kratom), huge quantities of kratom would need to be consumed to obtain the effects seen after taking a pure mu opioid such as morphine. The result is that kratom shows a very low dependence profile comparable to or lower than that of other unscheduled substances.¹⁴

¹⁴ See, e.g., Memorandum from Dr. Catherine Dormitzer et al., FDA Epidemiologist, to Dr. Michael Klein, Controlled Substance Staff, regarding Abuse, Misuse, and Overdose of Dextromethorphan-Containing Products at 9 (Dec. 1, 2009) (describing 14 counts of “Drug Dependence” for dextromethorphan-containing products).

Notably, the dependence liability finding necessary for control under CSA does not direct an analysis of dependence generally, but rather dependence liability based on “abuse” of the product. See 21 USC 812(b). As discussed above and demonstrated by this analysis, there is very little actual or potential abuse of kratom. Not only does consumer use of the product not cause dependence, but it also does not rise to abuse, which is the focus of the CSA in assessing dependence liability.

4.3 As a Matter of Law, Kratom Should Not Be Scheduled

The final finding for scheduling a drug or substance relates to its currently accepted medical use. 21 USC 812(b). The currently accepted medical use of a pharmaceutical drug is often straightforward, and FDA (or DEA) can easily establish whether a pharmaceutical drug has a currently accepted use in treatment of patients. Less clear is how this criterion may be applied to a non-pharmaceutical substance, such as a dietary supplement. A dietary supplement is a product intended to supplement the diet that contains certain types of ingredients, including botanical ingredients, and is not approved or authorized for investigation as a drug. 21 USC 321(ff). Consistent with the regulatory scheme of the FDCA, a dietary supplement is not marketed with claims of efficacy for medical use – indeed, if a dietary supplement included such claims it would likely meet the standards for regulation as a drug product under the FDCA. See 21 USC 321(g)(1), 355(a). Accordingly, as a dietary supplement, while kratom has a long history of use in the US consistent with other well-known dietary supplements, it, like all other dietary supplements and a broad range of consumer products, does not have a currently accepted medical use as that term has come to be defined under the CSA.

The CSA is specific in defining the three findings required to place a substance in each schedule, and except as required by international agreements and except for immediate precursors, “a drug or other substance may not be placed in any schedule unless the findings required for such schedule are made with respect to such drug or other substance.” 21 USC 812(b). Schedules II through V all require a finding that the substance has a “currently accepted medical use in treatment in the United States.” *Id.* In contrast, only Schedule I permits the scheduling of a drug without a currently accepted medical use, but Schedule I also requires a finding that the drug or substance has a “high potential for abuse” and a “lack of accepted safety for use of the drug or other substance under medical supervision.” 21 USC 812(b)(1).

As written, the CSA requires that all three findings must be made to place a substance in a schedule; therefore, a substance that does not fit all three findings for any schedule

cannot be placed in any schedule. 21 USC 812(b).¹⁵ The Federal Circuit Courts of Appeals have applied this requirement. In *Americans for Safe Access v. DEA*, 706 F.3d 438, 442 (D.C. Cir. 2013), the DC Circuit stated that marijuana could not be rescheduled to Schedules III, IV, or V without a currently accepted medical use, because a currently accepted medical use is a requirement of those schedules. Likewise, in *Grinspoon v. DEA*, 828 F.2d 881 (1st Cir. 1987), the First Circuit found that all three findings are necessary before a substance maybe be scheduled. The court held that “[t]he CSA clearly provides that a substance may not be placed in Schedule I unless it lacks *both* a ‘currently accepted medical use in treatment in the United States’ *and* ‘accepted safety for use... under medical supervision,’” *Grinspoon* at 887, and also found that “the CSA also requires substances identified for placement in Schedule I to have a ‘high potential for abuse,’” *id.* at 892.¹⁶

A plain reading of the CSA language that “a drug or other substance may not be placed in any schedule unless the findings required for such schedule are made with respect to such drug or other substance” is also consistent with the purposes of the statute. The CSA was not intended to control every substance with any indicia that may indicate a potential for abuse, regardless of the nature of the substance. Instead, Congress was focused on certain kinds of substances, with others appropriately regulated by other federal and state statutory schemes. In fact, Congress expressly stated that the CSA is to be used to control substances that “have a *substantial* and detrimental effect on the health and general welfare of the American people.” 21 USC 801(2) (emphasis added). Consistent with this approach, FDA and DEA have never scheduled consumer products with some characteristics in common with drugs of abuse, such as caffeine, herbs and other natural products, and solvents or household cleaners. Kratom, as a dietary substance, does not have an accepted medical use as that term is defined under the CSA, but it also does not have a high potential for abuse or a substantial and

¹⁵ A federal agency is bound by the plain language of a statute if that language is unambiguous or capable of only one interpretation. “If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.” *Chevron v. Natural Res. Defense Council, Inc.*, 467 U.S. 837, 842-43 (1984).

¹⁶ While courts have discussed an alternative interpretation of the required findings for scheduling under the CSA, those cases have not resolved the issue as the ultimate ruling was on other grounds. See *Nat’l Org. for Reform of Marijuana Laws (NORML) v. DEA*, 559 F.2d 735 (D.C. Cir. 1977) (considering the notion that a substance that lacks an acceptable medical use may be placed in Schedules II-V, contemplating that the findings required by the CSA function more as considerations than findings); *NORML v. DEA*, 559 F.2d at 747-48 (citing a discussion in *United States v. Maiden*, 355 F. Supp. 743, 748-49 n.4 (D. Conn. 1973), in which the district court stated that the three findings could not be “cumulative” and that a drug with no currently accepted medical use should be placed in Schedule I, “whether or not the potential for abuse is higher than for other drugs, so long as the abuse potential is not minimal.”); *NORML v. Bell*, 488 F. Supp. 123, 140 (D.D.C. 1980) (same).

detrimental effect on the health or general welfare of the American people. It is another example of a substance that is outside the intended coverage of the CSA.

As reflected by the analysis of the 8 factors above demonstrating that kratom has an abuse potential and a dependence liability similar to other unscheduled substances, it is not necessary to diverge from the CSA requirement that all three findings must be made to place a substance in a schedule, because kratom's low potential for abuse, low risk for dependence, and impact on the public health demonstrate that it is not appropriate for control under the CSA and can be appropriately regulated comparably to other unscheduled substances outside of the CSA.

4.4 As a Matter of Public Policy, Kratom Should Not Be Scheduled

There are significant costs and tenuous benefits to scheduling kratom. The decision to schedule a drug commits significant governmental resources (including personnel for enforcement) at a great cost to be ultimately borne by the public. These resources are ultimately diverted from enforcing the CSA against the illicit use of other controlled substances – substances that, when compared to kratom, pose a far greater threat to the public health. Consumers of kratom will also bear the social costs of scheduling, and the consequences of enforcement or noncompliance are likely to fall at least in equal measure on the kratom users with the longest history of use, namely, immigrant families from Southeast Asia (JEH discussions with Hmong community members in Minnesota; Axelrod and Windell, 2012, p. 56). Like other kratom consumers who have safely integrated kratom use into their daily habits with no negative consequences to health, family, or work obligations, these communities may have difficulty accepting the scheduling of a substance with a long history of safe use among community members, and scheduling may contribute to a spike in illegality and attendant social ills. If kratom is scheduled, some consumers will inevitably turn to other products, including narcotic drugs, or underground sources of kratom that are not regulated for purity, quality, or accuracy of labeling claims. See Section 3.6. Other individuals may try to continue to use kratom despite scheduling, and ultimately end up in the criminal justice system because of the use of a product with very low risk to the individuals, their families, or their communities.

In exchange, no public health crisis is solved by scheduling kratom. As demonstrated in the analysis above, kratom use has not promoted crime or violence. It does not sap the productivity of consumers or jeopardize their health. Its effects are mild and are generally reported to involve alertness and mood enhancement, comparable to the effects of coffee. The product has low intrinsic attractiveness and has not been associated in published literature with single-substance deaths. The significant and detrimental impact of scheduling on government resources and, more importantly, consumers is not justified by kratom's effects.

Permitting kratom and its constituents to remain unscheduled does not abrogate all control over these products. Current FDA authority under the FDCA can be used to

better ensure the purity and safety of the product available in the US marketplace, while scheduling under the CSA would divert resources from more critical initiatives, have a significant negative impact on kratom consumers, and do little to improve the public health. The FDCA provides FDA the authority to ensure that labeling of kratom products is not false or misleading in any particular. See 21 USC 343. This includes the requirement to accurately identify the product and any additional ingredients and to not misrepresent the MG or 7-OH-MG content of the product. FDA can also regulate misbranding of the product through claims made in labeling, including promotional advertising. Specifically, FDA retains the authority to take action against promotional claims that imply therapeutic use without sufficient supporting evidence. See 21 USC 352, 355. Nor is FDA alone in this endeavor. States may also take steps to appropriately regulate kratom, as they have done with a wide variety of other products not placed into a schedule under CSA. For example, some states have already set a minimum age to purchase or consume kratom,¹⁷ and others are studying its effects to educate citizens and guide future policy.¹⁸

5 Conclusion

We do not recommend scheduling of kratom or any of its specific alkaloids under the Controlled Substances Act. Kratom has a low potential for abuse and a low dependence liability and there is insufficient evidence of personal harm, adverse health effects or detriment to the public health to warrant control under the CSA. Effectively banning the availability of kratom through scheduling could precipitate public health problems that do not presently exist or are at very low levels, because this would shift the market place from a largely lawful retail market to illicit manufacturers and distributors with no regulated labeling, purity or content standards, or effective ability to remove adulterated products from the market. Appropriate regulation of kratom under the FDCA is the most effective way to protect the public health by ensuring appropriate access and oversight and to sustain the overall very low adverse personal and public health effects associated with kratom consumption.

¹⁷ Currently Illinois and Louisiana restrict the sale of kratom to people over the age of 18. See 720 Ill. Comp. Stat. 642/5; La. Stat. § 40:989.3. New York is considering restricting its sale to people over the age of 21, see N.Y. Assembly Bill A9121, and North Carolina is considering restricting its sale to people over the age of 18, see N.C. S.B.830.

¹⁸ AB 4431 is pending in New Jersey to restrict the sale of kratom. SB830 is pending in North Carolina and would require a study of kratom by state authorities. Neither state had taken final action on either bill at the time of writing.

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Attachment A: Testimonies of Kratom Consumers

This document contains the testimonies of responsible kratom users, as compiled by the American Kratom Association between September 19th and September 21st, 2016

My name's [REDACTED], I'm 32 years old and I was diagnosed with Multiple Sclerosis and Degenerative Disc Disease. For the past ten years I have undergone exhausting physical therapy sessions and counseling to deal with this illness and pain. Over the years my tolerance to opioid prescriptions has climbed and I made the decision, with the help of my doctors, to lower my doses as much as possible. In Spring 2016, a family member asked me if I had tried an herbal supplement called Kratom. I decided to give it a try as I was at a point where I'd be willing to try almost anything to get rid of the pain. After a week I noticed my energy levels were back to where they were four or five years ago, and in six weeks my pain had subsided enough to let me work 8 hours a day up from only two or three before. Kratom has helped me to become a productive member of society again.

My Name is [REDACTED]. I am a 39 yr-old PR & marketing consultant. I have never been arrested. I have never been "into drugs". I am a business owner & productive member of society. I graduated magna cum laude from my university. I speak three languages fluently. I am the furthest thing from a "felon" or a "junkie", yet I have suffered from depression and suicidal thoughts since adolescence. At one point I was on three different antidepressants. I felt like a ZOMBIE. I became listless, tired all of the time. A shell of a person. I have been taking Kratom for the past year and I can tell you without a doubt that the United States & the world gets way more out of me as a member of society in terms of productivity, positivity & contribution than if I had not discovered this incredible herb. I take very small amounts every day. Since I started taking it, I frequently go days at a time without it, and I do not suffer any withdrawals, but yes, the depression does come back. But the feeling is NOT like an "addiction" feeling (I've tried to quit coffee, I know what addiction feels like). It's more like my symptoms of depression come back within a few days. If the DEA bans this substance, honest, hard-working people who are MUCH more productive members of society thanks to Kratom will be unjustly turned into felons, just because they want a better life for themselves and the people around them. So if this passes, you then leave people like us with three choices: 1) suicidal depression 2) zombie listlessness on prescriptions meds that don't work for us or 3) become a felon because we responsibly use a safe herb that is an incredible quality-of-life enhancer. If anybody in the DEA uses any sort of prescription drugs for any physical or mental ailment, I would like them to look in the mirror and ask themselves: how would you feel if by tomorrow you were considered a "felon" for taking that prescription? Feels unjust doesn't it? More than that, it feels like a huge step back for society as a whole. I understand there are people out there who overdose on everything. There are people overdosing on paint thinner & "whipits" from whipped cream cans, for crying out loud! But those of us using Kratom responsibly deserve to have access to a safe herb that helps our quality of life like NO other supplement or medication does. For us, for this country, for society, and for people productively contributing to this economy...Please keep Kratom legal.

My name is [REDACTED], I'm a 35 year old (returning) nursing student that has been married for ten years with two kids under the age of 15. I have MS and degenerative disc disease.(Black Disk disease to be specific) While being treated for my disc degeneration, I was prescribed massive amounts of painkillers. This line of treatment made it impossible for me to care for my daughter (who was three at the time), and my blind veteran father. I will never forget the conversation with my doctor; he told me I had no choice in treatment options and that horrid unresponsive state was my new reality. To quote him "You need to have a conversation with God if you want to get better." Then, by chance, I found Kratom. Once I started using this miraculous plant, I was able to come off the painkillers completely. I have since been diagnosed with MS and carpal tunnel syndrome. I have not missed a single day of work other than maternity leave because of the properties of kratom. During my maternity leave and for several days of testing a year, I intentionally miss my daily doses. The pain is excruciating. I can barely walk, the depression and anxiety that has come because of the MS is so fierce I am almost mentally paralyzed. To be sentenced back to

that almost comatose state would be a fate akin to death. I am who I am, a mother, student, wife, daughter, money earning member of society, because of kratom.

My name is [REDACTED] [REDACTED]. I am a 44 year old female and up until March 2013 was employed as a federal police officer with the Federal Bureau of Investigation for 23 years. In 1996, I was diagnosed with systemic lupus and fibromyalgia, two chronic, life-long illnesses for which there is no cure. Lupus causes severe pain, stiffness, swelling, tenderness and warmth in your joints. Fibromyalgia symptoms are: deep muscle pain causes painful tender points, morning stiffness, sleep problems, fatigue and anxiety. For twenty years I have suffered daily with severe pain throughout my joints and muscles. In the fall of 2014, after being on eleven medications (prednisone, Flexeril, Zanaflex, Nucynta, Lyrica, triamcinolone, Lortab, gabapentin, synthroid, Tramadol, and nortriptyline) that really didn't help and prescribed to me by my rheumatologist and pain management doctors, I started to suffer serious side effects (blurry vision, short term memory problems, dizziness, headaches, weight gain, and leg cramps) from the combination of the medications. At this point in my life, I decided to taper down off of all prescribed medications. Shortly thereafter, and still suffering from severe joint pain, a friend suggested that I try kratom. I immediately researched and learned as much as I could about it. After a month long quest to learn as much as I could, I finally got up the nerve to try it. That was the day that I got my life back prior to being sick. The joint pain was gone. I felt like a new person. I am a wife, sister, friend, aunt, and best of all, a mother to my twelve year old daughter again.

My name is [REDACTED] and I am 57 years old, I have been married for 36 years. I am the mother of three sons and grandmother of 3 beautiful granddaughters. I earned a college degree while working a full time job and raising our children. I have worked for the same company for over 35 years and currently hold the position of Senior Production Planner. I go to church every Sunday and I am a member of the choir. I am in good physical condition but have had arthritis in my knees for several years that I have treated with ibuprofen, Meloxicam, Tramadol for flare ups, and cortisone injections 2-3 times a year. A little over a year ago a family member suggested that I try kratom and I was amazed at how well it controls my pain without making me feel drugged - just completely normal and pain free! Since I started taking kratom I have stopped taking both ibuprofen and Tramadol, and have only had one cortisone injection in the last year.

My 59 year old husband retired in 2008 with 30 years of law enforcement at the rank of lieutenant. He was injured on duty in 1991 and as a result has had two fusion surgeries on his back. He has been in constant pain since then but has always resisted taking prescription pain medication because he does not like the way they make him feel. Since taking kratom he is also feeling and functioning much better now, working two part time jobs and is happy to be able to be productive with reduced pain. I really can't say enough about this wonderful plant. I am now exercising regularly and I am about 15 pounds lighter than I was a year ago. I can now sit at my desk and work all day without hurting, and come home at the end of the day and take walks and play with my granddaughters instead of falling into my recliner until bedtime. I can work in my yard on the weekends and not be a burden to my children. I am much more active now than I was before taking kratom. I know that our quality of life as productive members of society will not be the same without kratom. We have been hard working, tax-paying, law abiding citizens our whole lives and now the DEA wants to deprive us of the best option that we have found to treat our pain!

My name is [REDACTED] [REDACTED], I'm a 36 year old, father of two with one on the way. I am the sole provider for my family. I take Kratom to help with the pain and spasms associated with crohn's disease. It's helped me tremendously with managing the pain and some of the other symptoms that I have to deal with. I've been taking it for about 6 months now. It's a great alternative to the percocet prescribed by my Doctor. No ill effects from the Kratom and no dependency. I only have positive things to say about it. Pain pills make me tired, depressed and they take me out of focus and they make you dependant. None of this

is true about Kratom. I can now manage the symptoms associated with crohn's without the side effects of prescription medications. Prior to Kratom, I haven't had a solid stool in years, I didn't know I had crohn's until it got real bad and I had to have surgery to have a large section of my colon removed. Kratom has changed all that. A solid stool may not sound like something to get excited about, but to me, it means my gut is getting better! I think anyone dealing with this disease would want to know about it.

██████████ ██████████
██████████ FL

I am a 45 year old business owner who has been using kratom for 8 years. In 2001 I was diagnosed with atrial fibrillation and prescribed a plethora of pills in an effort to control it. I struggled with the side effects of those medications and the anxiety of dealing with a cardiac ailment that could cause problems in a moment's notice...there were many trips to the ER over the years. It affected my personal life as well as my professional life in the worst ways imaginable. Since using kratom regularly, I have not had a single issue with my heart rhythm. And best of all, not a single trip to the ER. I have no more of the negative side effects I experienced with drugs like beta blockers, digoxin and blood thinners. I am no longer terrified of leaving the house, no longer afraid of passing out (my blood pressure was dangerously low on betapace). I have a greater quality of life now more than I did. I am healthier, happier, more productive, and this plant has saved my life as far as I am concerned.

I am a law abiding citizen with zero criminal record, I volunteer my time and efforts to help others and kratom has given me a new lease on life. It also helps with intestinal inflammation that I struggled with, and anxiety - which is a big part of atrial fibrillation. Those are bonuses from using this plant regularly. I do NOT use this plant recreationally and I can guarantee you that I get more of a 'high' from cold medication at normal doses than I get from kratom. Banning this plant will take me back to square one: dealing with powerful, dangerous meds like digoxin and struggling to manage the dangerous side effects from the other meds that I will likely have to begin taking again. Please do not sentence me to have to deal with that struggle again. I solved it! Kratom allowed me to have my life again. Not being able to use it will literally be like turning the clock back on my health.

I am 38 years old, and I take kratom to help me manage depression, anxiety and menstrual cramps. I have tried Rx and OTC drugs, but the Rxs have horrific side effects and are not nearly as effective as kratom. The OTC meds also sometimes do not really reduce the pain I feel from cramps. Sometimes I feel so unwell I have to call off work. I do not like having to call off work. If this ban goes through, I know that my depression and anxiety will be so powerful and this is so scary. I see myself becoming weighed down with depression and anxiety and having to be in horrible pain once a month for cramps. It will be much more difficult to work each day, and I am sure I will have many more sick days if this ban goes through, maybe even having my job put at risk. I have an advanced degree with a professional job. I also see the quality of my life plummeting even outside of work. When I am depressed, anxious, or in pain, I don't want to go out, run errands, and I lose interest in hobbies, exercise, etc. Kratom helps me take on the day, so to speak. I have been using it for about 6 years and have found it to have such a positive effects on my physical and mental health. -██████████, ██████████ ██████████, CA

My name is ██████████. I am now 44 but started taking Kratom at age 39 to help ease my debilitating headaches after working as a nurse. I suffered a brain injury. I found that not only did the herbal supplement help my headaches, it helped with my cognitive impairment as well. I injured my back during the initial fall and multiple times during seizures. Kratom helps ease that pain as well. If the Kratom ban goes through I would be forced to rely on opiates for my pain control and be faced with the very certainty of becoming dependent on these medications. It's bad enough that my career and driving ability was ripped away from me. Now I just fall into an even deeper depression over the little choices I have, also

being taken away. Before I found Kratom I had attempted suicide 4 times, but haven't thought of it since. Thank you for hearing my story, [REDACTED], [REDACTED] [REDACTED] California

My name is [REDACTED] [REDACTED]. I am 49 years old, I am a dad of four, married, a teacher and an ordained pastor with a Masters of Divinity from [REDACTED] Seminary. I graduated Magna Cum Laude from the University [REDACTED] [REDACTED] in 1989, and with Honors from [REDACTED] Seminary in 2001. I've been teaching and preaching since 1989.

I also have used kratom for the past 3 years. I had a bad accident that damaged both my skull/brain, spine and my pelvis about 15 years ago--I fell on the ice outside my home. As a result of the TBI and spinal cord injury, plus the pelvic damage, I was in terrible pain and prescribed opioids which gave me horrible side effects. I was also diagnosed with fibromyalgia and got sleep apnea through all this. I was no longer able to work as a full time pastor or substitute teach anymore as I had been. After finding a doctor who was able to help me, I started using kratom for the remaining pain that was not alleviated by therapy, and also used it as a direct means to get me off ALL the opioid medications the other doctors had prescribed. In one year I was back both in my pulpit, and now am finishing up my Masters in Special Education. I would not be teaching and working without having access to kratom.

Bottom line: Do my degrees and graduating with honors mean a thing if I can't go to work? Does having a family, a spouse who loves me and a home mean a thing if you can't enjoy it? I went back to coaching my son's baseball team. That wouldn't have happened without the kratom. I teach. I preach. I'm active. It's from being well for the first time in years that I am able to be a productive part of society.

Sincerely,
Reverend [REDACTED] [REDACTED], B.A., M.Div.

My name is [REDACTED] [REDACTED]. I am 48 years old, married with two grown children. I work in the mental health field and I have for almost 30 years. For many years I have had trouble with degenerative disk disease, arthritis and spinal stenosis. I took multiple analgesics for many years. I do not like the way that narcotics make me feel. I did a lot of reading trying to find alternatives. I became very ill 2 years ago and was diagnosed with multiple autoimmune illnesses. I have Lupus, Sjogren's Syndrome and celiac disease. The fatigue and body aches from autoimmune can only be understood by someone else with the disease. I had never found a way out of pain with prescription medications. I kept reading. There was a time when I took almost 30 pills a day between prescription medications, vitamins and supplements. I felt ridiculous taking these handfuls of pills. I went to doctor's appointments all the time. They were at a loss and I could tell that they were tired of me. I kept reading. I found out about kratom from another person with autoimmune. I tried it and have not looked back. All I have wanted for these past several years is to participate in life and function normally. This is the first time in many years that I have functioned like a normal person. I have not taken any of those prescriptions for months. I have also not cancelled any plans, haven't missed any work and haven't slept around the clock. I have never been high from kratom. I am not sure how I would even do that - never tried! I found a minimal dose to live my life and I have never been happier. I love life. I love my family, my dogs, my job, my friends and my community. I refuse to be a criminal so I don't know what I will do if I can no longer have kratom, I have not really thought about it because it seems so unreal to me. Please help us. Please don't ban kratom.

My name is [REDACTED]. I am 35 years old and married with two teenage boys. I have suffered from social anxiety, severe depression, and chronic pain for fifteen years. I've been prescribed many different types of medications for those disorders. All of the medications I've tried always caused me more problems than they solved. On prescription medications I was unable to work, and I couldn't take care of my family. Two years ago I found kratom. I've been taking kratom, one to two teaspoons in morning and at night when needed for two years. I am able to have quality relationships with my wife children and actually have friends now. My social anxiety would not allow that before. I am more balanced and put together than I've ever been. I have been working in the same job now for two years, and was recently promoted.

My life was a terrible mess when I had to use Pharmaceuticals. I don't want to go back to that mess. Please don't ban kratom.

My name is [REDACTED] [REDACTED]. I am 35 years old. I found kratom 9 years ago and it saved me from a terrible addiction to opiate pain pills. I have many issues including insomnia, anxiety, depression, scoliosis, two slipped discs in my back, and a bad hip. Because of kratom I don't need any prescriptions. It helps me with all my ailments. I'm afraid of what will happen to me if kratom becomes a schedule 1. I will be forced back into my addiction with pills. This is life or death for me. Kratom is a miracle plant for me where no pill ever helped the way Kratom does. It's safe and effective with no side effects. Save our beloved plant.

My name is [REDACTED] [REDACTED]. I am only 32, and already medically retired from the Army. I take kratom for PTSD and OCD, after my doctor mentioned it. Before kratom, I was on over 17 different medications. All made my life worse. Caused me to become pre-diabetic, zoned out, worse mood swings, and didn't come close to touching anxiety enough to allow me to go to therapy. Now, with kratom, I am able to hold down a job as a veterinarian technician, and am able to be a part of my family. I can now make it to my daughter's recitals and games without being nervous or on edge. I can even talk in therapy without my anger and anxiety getting in the way. If kratom is taken from me, I will be taken away from my family. Either by the law taking me away because I refuse to stop taking kratom, or by death.

My name is [REDACTED] [REDACTED]. I am a 53-year-old mother of three and grandmother to one with one on the way! Before Kratom I was riddled with pain, had become reclusive, and didn't see much of a future. I was depressed, drugged and miserable having to endure the amount of pain I was in. Pain medications made my existence lonely and dependant. It just didn't seem like life was worth living with so much pain until a medical professional friend of mine suggested I try Kratom. Since taking Kratom, I no longer need pain medications (such as Percocet, Dilaudid, and tramadol), anti-anxiety medications, and anti-depression medications!! ALL GONE! My life has turned completely around and I feel alive again. I now feel I have a future to look forward to and can be the wife, mother, and grandmother I've always wanted to be. Kratom has taken away my pain, my anxiety and the depression resulting from so much pain. I have my life back! I'm healthy, clear headed, happy, and look forward to my future again! When I'm asked what will I do if the DEA succeeds? I can honestly say that I have only two choices to consider; continue taking Kratom illegally, or I go back on narcotics in full time pain management thereby ruining my life and the lives around me! THERE IS NO OPTION here! I don't want to die but I don't want a life on narcotics either!

My name is [REDACTED] [REDACTED]. I am a responsible 50 year old man and use kratom every evening to treat my restless leg syndrome. I have been using Kratom for 2 years. Prior to using Kratom, I treated my RLS with Oxycodone and Tramadol. After 4 years I became tolerant and addicted to the oxycodone and Tramadol. Those medications were hurting me, not helping me. I found kratom online and used it to detox. It took away 90 percent of my withdrawals. I continued to use it every night for the last 2 years and it eliminates this horrible condition. If kratom is made illegal, I will die on the oxycodone again. Please don't make me go down that dark road again. I am happy and productive again and have no ill side effects from kratom. It has proven very safe and effective for me when all the other medications failed me. [REDACTED].

I am a 40 year old mother of 6. I was diagnosed with lupus, Sjögren's syndrome, fibromyalgia, hypothyroidism and chronic fatigue shortly after my twins were born in 2010. I spent 2 years trying medication after medication, looking for relief. The drugs I was put on caused a 70 pound weight gain in 2 months. The steroids made me blow up like a balloon. One of the medications was causing me to go

blind. I couldn't lift my babies most days without crying out in pain. The fatigue kept me from playing and having fun with my children. I would lay in the floor and just cry some days because I was so miserable. I found out about kratom on a chronic pain forum and started researching. Within two months of trying it, I was weaning off the medications that were making me miserable. I was playing with my kids. I was cooking and cleaning and being the wife my husband deserved. My husband suffers from terrible disc degeneration. He is a mechanic and has to bend and twist all day long at his job. He tried kratom and he is now able to work through the day with minimal pain. Kratom has changed our lives and made us better parents. We aren't quite sure what we are going to do without it. - [REDACTED] Texas

I am a 42 year old self-employed businessman. I have never been addicted to drugs or alcohol. I have however, suffered from anxiety and a herniated disc between my L4-L5 lumbar vertebrae. For years I had been taking prescribed Lexapro for my anxiety. When I started consuming Kratom, I was able to quit taking Lexapro. It was more effective and had no side effects. The biggest thing in which Kratom helped me with was my back. I was scheduled to have a microdiscectomy 1.5 years ago when I re-injured my disc. The pain I was experiencing was excruciating. I was prescribed high power pain killers which had horrible side effects, such as extreme fatigue, mental cloudiness, and upset my stomach. I decided to try Kratom instead and it was a miracle. The pain was severely reduced and there were no ill side effects. I was able to take Kratom in my work day and stay focused mentally without feeling tired. Because of Kratom I was able to take my doctor's advice and wait 4 month to see if the herniation would heal itself enough to avoid surgery...and because of Kratom, I was able to do exactly that! Keep Kratom Legal! - [REDACTED] FL

I am a responsible adult working as a General Manager at a restaurant, work 70+ hours a week and at the same company for 7 years and have been a part of the top 10% of my company for 2 of those years. I am a responsible user of Kratom, I use it for an energy boost for my long work shifts, as well as depression issues, and back pain. My life would be detrimental without it. I feel that if I am able to drink caffeine, alcohol, or smoke cigarettes, all of which are far more detrimental to my health and kill millions of people a year, I should be able to use this tea in my daily life without question. I feel the DEA has overstepped their bounds, and we should have checks and balances in place for them. They shouldn't be able to make federal laws without going through the public, or the other branches of government first. Not to mention this is a perfect way to start a black market for this product which would increase crime. Canada, Mexico, and the origin countries of this plant are all legal, which means easy entrance to the USA. I am not a criminal or an irresponsible drug addict, I am a hardworking American who takes care of his family any way possible. Please sign on to the letter, there will be millions of people suffering because of this. [REDACTED] Tx

I came to use kratom because I needed something that helped me focus on my schoolwork as well as help me reduce stress and relax on a daily basis. Kratom allows me to be more effective at school and I continue be more relaxed as I use kratom. Nothing else has been effective in my life to reduce stress or other anxiety issues without being on prescription medication. I prefer kratom because it is simple and doesn't have any negative effects on people. Kratom is safer than pharmaceutical drugs, with important medicinal uses and has changed my life. [REDACTED] NC

I am the mother of an incredible young woman who recently found Kratom and has been so much improved thanks to this wonderful plant. My daughter has been chronically ill since she was in elementary school. She was diagnosed with ulcerative colitis at that time. Since then, she's had many years of suffering through multiple surgeries and the side effects of having an autoimmune disease. To make matters worse, she has a permanent ileostomy, and eventually developed diabetes and arthritis. In spite

of her illnesses, through the years she somehow managed to fight for a "normal life" with a husband and two beautiful children. But every year, the battle gets harder and she gets more tired and discouraged. For the last few years, the only thing that has kept her going was an Rx narcotic, but with the "war on prescription drugs" raging, she was one of the people who truly needed her meds, but was forced by the "pain management center" to be taken off the med that kept her functioning in the world. In desperation, she searched the internet for something that could help and found Kratom. She got immediate relief from pain, stress and insomnia by using this tea only a few times weekly. Just when things finally were looking up and she was able to get out of bed, cook for her family, go to her kid's school activities, etc., the DEA announces that they are going to put this TEA on the same list as dangerous drugs! I'm begging the reconsideration of the decision. Since hearing about Kratom (I was very skeptical) I have learned about many other people who are getting their lives back from chronic pain, insomnia, depression and many other terrible ailments without having to use narcotics or dangerous drugs. This is a miracle for many Americans, please, don't take it away.

Sincerely,
██████████, Kentucky

I am a 36 year old male with a degree in Marine Biology that suffers from OCD, Depression, and ADD. I currently work as a lumber associate and thanks to Mitragyna, I am able to get through many painful days due to my conditions. I absolutely am for educating the public.

██████, ██████████, FL

I am a mother that suffered from fibromyalgia and lupus but now that I found Kratom I am free of my pain and I could live a happy life.

██████████, TX

I am a 37 year old female and have dealt with severe social anxiety for all my life. After numerous highly addictive anxiety medication prescriptions, that did me far more harm than good, I researched herbal remedies for anxiety and came across Kratom. Kratom has saved me from a life controlled by severe anxiety that was so bad that at times I could not leave my house, work, or even drive. I am now a productive member of society. I am not an addict. I do not get "high." I do not even drink alcohol or smoke cigarettes. If this ban goes through, my life will return to a living hell.

I am a 57 year old male diagnosed with clinical depression and PTSD. Since discovering kratom 2 years ago, an occasional cup of kratom tea, approximately six times a week has dramatically reduced the anxiety/panic attacks associated with my PTSD. My doctor was very supportive. Because of kratom, I no longer have to take Xanax every four hours to keep the attacks at bay. The kratom also eliminated any withdrawal symptoms associated with the cessation of the Xanax. Furthermore, I find that I can go for several days to a week between consuming my kratom tea with no cravings. Truly a remarkable plant.

I have been on prescription pain meds for 15 years with little relief. I have fibromyalgia, lupus, osteoarthritis, rheumatoid arthritis, degenerative disc disease, and mixed connective tissue disease. I have suffered for years in pain and am currently on permanent disability at age 46. Within 2 days of starting kratom (mostly red strains) I had no pain. I have not been pain free in 30 years! Kratom is my miracle.

██████████, NE

I'm 63 years old, a writer and retiree. I first learned about kratom online as I was searching for a legal alternative for chronic arthritis pain. My MD wouldn't prescribe the narcotic Vicodin even though I'd taken

this medication for more than three years with no ill effect. The kratom I now use is called red vein Bali in capsule form. It doesn't make me "loopy" and has a mild stimulant effect like a good strong cup of coffee. What's more, my arthritis pain is hardly noticeable. I often go up stairs without having to hang on. With some changes in my diet I've lost about thirty pounds and while I wouldn't say kratom is an appetite suppressant it does seem to help me a little bit in that way. Like anything else it needs to be treated with respect and the potential for abuse is pretty small compared to a lot of other things.

██████████ ██████████, CA

am 50 years old and suffer with chronic Lyme disease. Before I started using kratom I wasn't able to hardly get out of bed. Kratom has given me the ability to live my life again. If it gets banned I don't know what I will do. I don't want to be on prescription drugs the rest of my life.

██████████ ██████████, VA

I am a 48 yr old female who uses Kratom for severe menstrual cramps and PMS, and occasional back and neck pain. It works better than anything else. I have been prescribed opiates and they don't work and they make you feel fuzzy. I have been using it as needed for several years, I feel no addiction to it, coffee is more addicting. It's safe and it works. Kratom makes me functional and productive on days where with the pain, I would be non-functional and miserable.

I am a 45 yr old female from NC, who has been using Kratom responsibly for several years for severe depression & anxiety. I was finally able to stop taking my antidepressants, which were causing me ill side effects. - ██████████ ██████████.

I am a 36 year old female (mother of 4 and grandmother to 1) who has been responsibly using Kratom for 2 years. I use it for fibromyalgia, anxiety, acute gastritis, IBS and immunity. I take ½ teaspoon once a day, sometimes twice if it's really necessary. I've never upped my dose and I take regular breaks (one week a month and sometimes an entire month at a time) without experiencing withdrawal symptoms. My fibro is manageable, my anxiety, most of the time is under control, my acute gastritis attacks are basically null. I used to have these very painful attacks as often as several times a week or as little as once every couple months. Six ER visits in 20 years for attacks that were so severe, I feared something was horribly wrong. I've had only one gastritis attack in the last two years. I haven't been sick with so much as a cold in the last two years. The ONLY prescription I have is for ½ mg of Ativan for an emergency panic attack, and I might take that once every 3 or 4 months. The only side effects I experience with kratom are nausea if I take kratom on an empty stomach and don't eat within an hour, and constipation if I don't drink enough water. My biggest fear without kratom is going back to the painful digestive issues, and having to rely more on prescriptions to control my anxiety. I will never take a script for my fibro. I will also go back to spending less time out and about with my husband and children as kratom has helped me to the point where I can get back into the swing of things and not worry about the pain I might be in if I do this, or the anxiety I'll have if I do that. - ██████████ ██████████ PA.

I am a 33 year old female who has been using Kratom for approximately 2 years now. I have severe, chronic back pain that 12 doctors and specialists have been unable to diagnose. Through those 12 doctors, I have been prescribed every painkiller and muscle relaxant out there. None of them worked for too long, as I developed tolerances and the doctors would not alter the Rx. That sent me into awful withdrawal episodes that could last weeks. A friend recommended Kratom as a way to deal with the withdrawals. Not only did they help with that, but it completely ridded me of the back pain all those doctors can't figure out. I honestly cannot get out of bed and be a taxpaying, working member of society without Kratom.

██████████ ██████████, MO

I am a 31-year-old graduate student, freelance writer, and psychotherapist. I've lived with chronic myofascial pain since I was 19. For the last four years, I have suffered from a severe and intractable iliopsoas spasm; when it flares up, it's so bad that I've cried myself to sleep and woken up screaming in pain. I used to be on a variety of prescription medications, none of which fully helped and nearly all of which interfered with my daily functioning. Almost five years ago, I began using kratom. Within months, I had phased out almost all prescription drugs. My pain management provider has marveled at the fact that I almost never need to take narcotic pain meds. In addition, kratom has helped me with depression and anxiety, as well as with seasonal allergies. Without kratom, I will almost certainly have to go back on prescription drugs. The quality of life that kratom has afforded me is immeasurable.

- [REDACTED], Massachusetts

I am a 41 year old mother of 4 children. I have suffered from pain for 18 years. My pain is so severe that I feel like I am getting stabbed over and over again. A pain so intense that I feel like I am dying. I have endometriosis, arthritis and chronic kidney stones. I pass a stone once a month. Two years ago I found kratom and my life has changed forever. I am now able to function, I can now work, cook, clean and care for my 10 year old that suffers from type 1 diabetes. I am no longer bedridden, I am now happy. If kratom is banned, I fear for my future. A future of pain. I can not go back to that life of pain, I just can not. My life will be ruined if the ban goes through. - [REDACTED] Colorado

I am a 28 year old female that has been taking Kratom for going on 7 years. I suffered with horrible depression after the loss of my son [REDACTED], back pain, and recently found out I have Hidradenitis Skin Disease - for which there is no cure. My pain levels were so bad some days, I was unable to get out of bed. Now that I have found and take Kratom my depression is completely gone and my pain is under control. I am a Mom of 3 children and Kratom helps me be able to do all the normal everyday things! Kratom has gave me my life back and helps make each day easier. - [REDACTED], SC

I am housebound and mostly bedbound due to illness. I am immunocompromised and battling 12 systemic infections and have CFS. Kratom gives me a quality of life. I found Kratom while desperately seeking pain control in 2014. At the time I could not walk, I was 95lbs, and had no insurance. I began taking Kratom for pain that later had me in the hospital for 6 days. Once I got into a doctor, I was prescribed hydrocodone, tramadol, flexeril, oxycodone, dicyclomine, and buspar for pain and anxiety. I took these drugs for several months but the side effects were intense. I began to have rebound pain from the opiates and had to wean off. I used kratom to get through the physical withdrawal and then dropped those other medications as well. I have been using Kratom to control my pain ever since. - [REDACTED]

[REDACTED], KS

I am a 44 year old mother and homemaker. I have been ill for most of my adult life with Fibromyalgia, Chronic Fatigue and autoimmune like diseases with Neuropathy. Conditions that forced me to give up furthering my education after I earned a B.S. in Biology from the University of [REDACTED]. I have been on many allopathic medications. The majority of which, had such horrendous side effects that I could no longer take them. Kratom has been a Godsend. It has helped increase my energy. It helps me get out of bed everyday and enables me to exercise more than I thought possible. Kratom reduces my pain and allows me to clean my house, and take care of myself and my family. I don't want to even think what my life will be like if Kratom is made a Schedule 1 drug. I had been on opiates for 5 years, when all the doctors began to stop filling prescriptions and pharmacies began to deny prescriptions. It is terrifying to be dependent on a medication that may be denied to you at any time for any reason. It is also terrifying to have to use medications that may cause your premature death. I was forced to quit working due to my pain and then I found Kratom. If it is taken away, I will have nowhere to turn. The frequently prescribed antidepressants given for my diagnosis have always given me side effects worse than my disease. I will

not return to Western Medicine as it has not been a good fit for me. My pain is so great that at times I wonder how I am still alive. If Kratom is made illegal I will be relegated to a hellish life of constant severe chronic pain. This herbal has given me my life and hope back. Please do not take it away
- ██████████ ██████████ WY

I am a 34 year old father and husband and have suffered from severe food allergies. When I turned 28, I quickly discovered something was wrong as I was getting awful gastrointestinal distress, including diarrhea, gas and bloating when eating certain foods. I could not eat many of the major foods most people take for granted today, including dairy, gluten, beef, nuts, chocolate and bananas. I tried everything to cure my distress; from enzymes, to probiotics, to prescription medication as well as other natural remedies. Nothing worked. I spoke with multiple medical professionals, including a Naturopathic Doctor, nutritionists and dieticians. Nothing worked. My distress would become miserable and debilitating, and any little bit of dairy or wheat could set off my stomach. Many days I was spent bent over and curled up in the fetal position due to extreme gas and bloating. Many hours I spent suffering on the toilet with no relief. I could not live a normal life. The proteins my body was sensitive to, were in almost everything. My quality of life had been severely degraded. So I began to scour the internet and do my own research to look for something that could relieve the issues I suffered from. After some time researching, I stumbled up Kratom. People with colitis and other intestinal diseases said that Kratom took the edge off, both pain wise, and intestinally. So I gave it a shot. From the moment I started using Kratom, I was able to eat whatever I wanted with almost no ill-effect. I have been taking Kratom successfully for 3 years. I do not know what I would do if Kratom became illegal and I was unable to use it. I know my quality of life would degrade severely. I know I would have to go back to reading every single ingredient in everything I bought. I know I would not be able to eat nearly anything that is served at a restaurant. My job and career depend on me taking customers to lunch or dinner at restaurants. This would be a severe hit to me and my family as our food bill would increase due to having to use substitutes. I hope the DEA or other government entity would reconsider making Kratom Schedule 1 or my life and my families life will forever change for the worse. - ██████████ ██████████

I am a 27-year-old honors student, single mother, and community volunteer. I suffer with Ankylosing spondylitis, fibromyalgia, and PTSD. Before I started taking kratom, I was considering dropping out of college and applying for disability assistance because I no longer could tolerate the pain and side effects of my many medications. I was becoming depressed as I could not be physically active with my daughter. I found kratom while asking other chronic illness patients for suggestions on alternative, natural supplements. Kratom helped ease the joint stiffness, muscle spasms, and panic attacks I was constantly experiencing. I completed last semester with a 4.0 GPA, won a prestigious scholarship, and felt well enough to mentor at-risk youth. I also now do yoga, participate in an honors society at school, and enjoy outdoor activities with my daughter. I have never experienced adverse side effects from kratom, and I have been able to stop taking muscle relaxers, narcotic pain medication, and antidepressants. My quality of life has drastically improved because of kratom, and there will be dire consequences if I can no longer use it as part of my health and wellness routine. ██████████ ██████████ ██████████, NC

I am a 55 year old mother of 4 and grandmother of 6. I was a legal assistant/ paralegal for years for a large law firm. In 1995 I fell and hurt my back and had back surgery. I later, in 2006 had a large deep vein thrombosis in my left leg, from my groin to my foot. I now have permanent nerve damage and neuropathy. I was on methadone through pain management for 6 years. I tried the blocks, a neuro-stimulator, physical therapies and of course the methadone. I lived my life in a constant fog, unable to care for myself or my daughter. I stopped taking methadone in 2010 and just suffered. I spent most of my time in bed, avoiding family functions because the pain was so severe. I looked into natural pain relief and found Kratom. I have been using Kratom now for about 7 months. I function and find myself able to do more things, such as buying my own groceries due to the pain relief. I am able to think clearly and enjoy my grandkids (I missed so much time with them). Kratom gave me my life back. I love my life now. The

thought of losing something natural, an herb, that is safe and effective scares me. What will my choices be then? Am I doomed to a life of severe pain, or opiates that slowly take my life away? Do I go back to just existing because it hurts to bad to live? - ██████████ Kentucky

I'm 35 years old. I started using kratom after many failed prescription medications and jail visits. At 18, I was prescribed oxytocin, then later Xanax, Wellbutrin, Zoloft, Methadone, Klonopin, Adderall, and Suboxone. I couldn't stay clean or keep a job. I was always relying on the state for food stamps and welfare to provide for my kids. Today I've been clean 3 years and I have a full-time job. I don't rely on the state for anything. If kratom is banned I could die or be a felon!!! Thanks ██████████

When I was 17 years old my mother was shot and killed by my stepfather in the front yard of my house. I witnessed everything. I tried to kill him before he drove off to his apartment to later commit suicide. I witnessed my mother's death at an age where my brain was in need of maturing. I developed severe PTSD. My senior year of high school was mostly sleeping through classes and getting involved with the wrong crowd. Before this, I was a great student and never missed a day of school. At one point the PTSD was so bad I wouldn't come out of the bathroom after a shower due the fact that I thought someone was waiting to kill me on the other side of the door. I would wait for hours and cry. Completely turned my family away and shut them out of my life. I ran off to college to escape everyone I knew. I turned to drugs to get away from the severe depression and anxiety from the PTSD. My life was a train wreck for about 8 years. I found Kratom and sobered up. I don't drink but once every 2 months thanks to kratom. I'm happy to say that I consider myself sober thanks to this plant. It has truly saved my life and helped me from killing myself. I finally have my life back and am happy for the first time in 9 years. I turn 27 in december, and I have a positive outlook on my life for the first time in years. I work out 5 days a week and am in the best shape of my life. To add to my wonderful life i have an amazing 3 year old son. If you want more details, feel free to message me. I am scared for my life for this ban. I CANNOT go back to my old life without a fight. I truly and honestly witnessed hell at such a young age. I would not wish this card of life on anyone, not even my worst enemies. I beg you to reconsider for my life, my son's future, and so many others lives.

- ██████████ ██████████

I'm 55 years old. I'm gainfully employed, a homeowner, a grandmother, a National Merit Scholar (way back in my school days). I'm the farthest thing from a drug addict, but prescription painkillers nearly made me one. I had an accident a few years ago and was very slow to heal. Before I realized it, I'd been taking the Vicodin my doctor prescribed for 4 months and I'd become entirely too fond of it. I started researching for a way to give up the painkillers but still manage the pain. I opted to try kratom and it did just what I needed it to. It got me off the pain pills and back to a healthy and productive work & social life. Kratom is now my go-to when I need pain treatment, because I don't ever want to tempt fate with prescription painkillers again. I also have a family member who prefers it to the Prozac that he'd been taking for 20+ years. Kratom provides him with anti-anxiety benefits without the unpleasant side-effects of the pills. I would hate to see a safe and natural alternative to dangerous opiates and chemical mood enhancers taken away by this ill-advised scheduling - ██████████ ██████████

I'm 44 years old. When I was about 22, I was diagnosed with depression, OCD and Anxiety Disorders. The doctor put me on 20 mg of Prozac and over the years has increased the dosage to 60 mg. But over the years, I realized it wasn't working well anymore, because those feelings of anxiety were coming back and I couldn't shake them off. About 4 years ago, I decided to try kratom for my mood disorders and it works so much better. I don't have to take the Prozac anymore and I don't have the undesirable side-effects from the prescription drug. I've lost close to 50 excess pounds, because I'm much more alert and active on kratom. I used to come home and sleep for 15 hours a day. Now I sleep about 6 to 8 hours, like normal people do. Not to get too personal, but the Prozac also had a negative effect on my sex drive and

my wife is much happier now that I've found a better anti-anxiety treatment. I've been taking kratom daily for over 4 years now. It doesn't get me high – it makes me feel like a normal human being again. I get things done and my judgment doesn't get clouded by anxiety and paranoia like it used to. Please do not ban kratom – I don't want to have to go back to a less effective choice with unpleasant side-effects. --

██████████, ██████████

My name is ██████████ ██████████ ██████████. I'm a 41 year old stay at home mom to a 4 year old boy. I have suffered for many years from late stage Lyme disease, which is notoriously difficult to treat. My symptoms include deep fatigue and a lot of varied pain, among many others. Kratom has been more useful to manage my pain and fatigue than any other pharmaceutical or herbal remedy I have tried. I have been taking it regularly for well over a year with no signs of building up a tolerance, or any other negative side effect apart from some occasional thirst or constipation which is easily managed. Kratom truly has become instrumental and indispensable to me being able to lead a semblance of a normal life while fighting this insidious disease. If it were banned, not only would I personally suffer, but it would also strongly impact the kind of mother I can be to my son, and wife to my husband. - ██████████ ██████████

██████████, ██████████ CA

I'm a 56 yr old wife, mother, mother of an angel (my ██████████, age 11 1/2, to CF in 2000), grandmother, and former PI (specialties: Reuniting families and assisting in the search for the missing, primarily children) who was forced to retire too soon due to; Chronic Migraine (15+/mo), Pancreatitis, IBS, Fibromyalgia and more recently, MS. I am unable to take any type of OTC or prescribed pain medications; my system simply treats them as poison and I wind up admitted to the hospital w/migraine, uncontrolled projectile vomiting and life threatening extremely low blood pressure. For the past 15 years, I have dealt with the extreme pain of my various illnesses myself, w/no meds, which caused even more health issues, extremely high blood pressure and depression amongst them.

I honestly didn't realize how much pain I was in on a daily basis, until I tried Kratom and within minutes, 80% of the pain disappeared. In addition, I was not dizzy, "high", buzzed - none of that. All I felt other than the lessening of pain, was total relief. It's been a year now and Kratom continues to be a God-send. I am not addicted to it, take when needed, and with this miracle, have begun to take up the dropped reins of my life. The migraines are not completely eased, but all other painful symptoms are, and I am now advocating for the missing again; reuniting families again. Kratom has helped hundreds of thousands of folks, with pain, and to recover from addiction. To ban this natural miracle would cause us all including myself, to return to a dark life full of pain. I cannot even imagine how that will be possible, to return to my housebound, bedridden pain-filled self. I just can't. I just cannot comprehend how we're expected to do that. How are we to explain to our families and children who are so thrilled to have the old "us" back? How? - Kind Regards, ██████████ ██████████, ██████████ ██████████, MO

I am a fifty-six year old woman who has been partially disabled and in pain for most of my life, due to scoliosis and lordosis, two kinds of spinal curvature. I now also suffer from debilitating arthritis, fibromyalgia, sciatica, migraine and pain-related sleep disorder. The herb kratom helps enormously with all of these conditions. Pharmaceutical medications do not address these illnesses sufficiently. Without the herb kratom I would be mostly immobile, unable to do the limited work I can now do. I wouldn't be able to contribute to our local economy as I do now. I might not be able to live independently, as I do now. The pharmaceutical medications that I'd likely be prescribed are very addictive and also very harmful to the body. This is widely documented. Forced to rely only on prescription medication, I would be dealing with issues associated with those medications on top of my illnesses, resulting in decreased well being overall. Because of a lack of independence and decreased well being and health, I would likely suffer depression, necessitating treatment for that issue also. Pharmaceutical treatments for depression have their own very serious risks, also widely documented. Basically, I see a future of needless suffering & a downward spiral if the herb kratom is banned. I have been using kratom for two years. The sense that I

have the power to determine my own health is extremely important to my well being also. ~ [REDACTED], N.Y.

I'm a 32 year old responsible woman who is also a single mother to two little boys. I have a B.A. In Psychology and am a domestic abuse survivor. I've been using Kratom responsibly for the past 6-9 months as a supplement to my Dr. Prescribed medications for Narcolepsy... I was diagnosed in May 2015. I have depended on stimulant medication prescribed by my doctor (in doses well above the FDA recommendations) for the better part of 6 years now. I have also depended on anxiety medications (benzos) to combat the anxiety that the stimulants were giving me. I have tried every single stimulant on the market and almost every single antidepressant on the market. The stimulants came with a lot of side effects and I hated how up and down they make you feel. Nothing was ever consistent and I was always tired. It was a disaster. The pharmaceutical drugs helped minimally but did not get me anywhere near being a functional member of society (let alone a mommy). I haven't been able to work for the past 2 years thanks to my condition. My ex husband's child support, food stamps and parents have been my only source of income for quite a while now. When I started looking into Kratom I was at a point physically where I didn't think pharmaceuticals could help me much more, so I needed another option. Narcolepsy can quite literally destroy your life and body, and at my worst I was sleeping 18-20 hours a day... I could not accept that as my reality because of my two children. I did all my research and decided to give Kratom a try- crossing my fingers it would help me.

Kratom in low amounts is stimulating and so I found that just a very small amount (1-2 teaspoons) a few times a day helped me tremendously. Not only did it decrease my extreme daytime fatigue, it almost completely eliminated my anxiety. When I first started using Kratom I had no idea just how much it would change my life- not only was I able to stop taking Anxiety medications (benzos) I was also able to stop taking stimulants. 1 teaspoon of Kratom three times a day did more for me than 120mg of Adderall and 3mg of Ativan. I am feeling better than I have in a really long time and Kratom is a really big part of the reason why. My health is completely consistent and because of that, life is so much easier. I've been thinking about getting a part time job in the next 2-3 months. I will not be able to do that if Kratom becomes a schedule 1. Honestly, I fear for what my life will go back to if I am no longer able to use Kratom. I love being healthy and I'm going to be honest- I'm very upset that this is happening. What did I do to deserve this? I'm just a single mother trying to raise my babies in my small town, and I got a stupid thing called Narcolepsy. I fought like hell to get better and to where I am now, life without Kratom will be terrible.

My life with no Kratom will be one I never thought I would have to go back to. When I have gone 30 days without it, I will be back to relying on just prescription medications to manage the symptoms of Narcolepsy. Adderall and Ativan, because there is nothing more helpful than Adderall and with that comes a lot of anxiety as a side effect. I will be ok one day and not the next, and when I say not ok I mean I'm literally not able to wake up and function outside of my bed. Within a month I will become tolerant to the Adderall and will have zero good days anymore. I will most likely have to get in touch with my doctor and have her switch me to a different stimulant in the hopes that it works. It won't, I've been through this cycle many times. I will have no option but to deal with the fatigue and will not be able to look for part time work like I was anticipating doing in the next few months.

This ban will not only impact me, it will impact my children as well. They have long forgotten the Mommy who was always too tired to play with them, cook for them and enjoy life with them. I will lose so much more than just energy as I will not be able to spend nearly as much time with them due to sleeping all day. They deserve to have me at my best to take them to school, cook healthy meals for them, teach them how to play soccer- all things I can do now, but will not be able to do after September 30. It breaks my heart for them, for me, and for everyone else who will be affected by this scheduling. It is unnecessary and not fair- and I hope the people responsible for this know how much they are hurting people like me- you're hurting my children too.

My name is [REDACTED] and I am a mother of 4 children. I work in the medical field in a high up position. I am involved in my kids school and after school activities. I run a non-profit group for kids with cancer. I have never been an alcoholic or misused drugs. I googled something natural for anxiety and came across this plant. All those things listed above, I wasn't able to do for a few years due to horrible anxiety. I wasn't able to handle the social interaction. I could barely make a phone call. Now I am back out in the world. My anxiety is under control for the first time in years and I am afraid of going backwards. This plant has changed my life for the better.

My name is [REDACTED]. I am a 42 yr old chronic pain patient. Before I found Kratom I had become totally bedridden and dependent on prescription pain meds. After suffering horrible withdrawals, I vowed never to go back to pills but the pain was too much for me to handle. I eventually attempted suicide to end the unbearable physical pain. When I was released from the psych ward, I started looking for a natural way to relieve my pain and heard about kratom. Kratom has given me my life back. I am no longer bedridden. I can enjoy playing with my son and granddaughter. I no longer want to die but I am frightened. I am afraid that if kratom is taken from me, I will not be strong enough. I am worried that it will push me back to the pills or even worse. I cannot handle going through withdrawal again. I JUST CAN'T. If I do not go back to those horrible pills, I fear that I may once again become suicidal. And next time I may not be so lucky. I am literally afraid for my life.

My name is [REDACTED] [REDACTED]. I have suffered from endometriosis since I was 14 years old. Endometriosis is a chronic, incurable condition that causes intense pain on an intermittent basis. When I was 21, I underwent surgery to remove the endometrial adhesions, but the adhesions quickly returned, which is extremely common. I tried a variety of medications to manage the condition, including NSAIDs, but by the time I was 25, my doctor told me that my only remaining options were to take opioid painkillers or undergo a hysterectomy. Everything changed when I learned about kratom. Kratom helps to ease the endometriosis "flare-ups" without the use of opiate painkillers. I have been using Kratom for several years with no ill effects. It has helped me tremendously with my symptoms, allowing me to be an engaged wife, mother, and contributing member of my community. My health has never been better. Without kratom, I will be forced to use opiate pain medications or undergo a hysterectomy at the age of 34. I am hoping for an opportunity to have a second child, and I am not exaggerating at all when I say that kratom is what is preserving my fertility. -- [REDACTED] [REDACTED], Age 34, [REDACTED], WA

I am a 32 year old stay at home parent. I take care of my one year old and I am fostering my seven year old nephew who has complex medical conditions. I have been taking Kratom for over 6 months for my fibromyalgia, back pain and endometriosis. I was able to get off my prescribed narcotic medication thanks to Kratom. Kratom helps manage my daily pain, mood and gives me energy that I have been lacking for years. Kratom makes me feel normal, unlike the narcotics that made me feel like a zombie. I can only hope that this plant stays legal, so I can continue giving 110% to my family and live a drug free and clear headed life.

I am a 38-year-old single mother of two with fibromyalgia and kratom has been a GODSEND in my life. Kratom makes me feel well and energetic again. It relieves my pain and gives a boost to my mood. My children need me and I am scared to death that the ban will leave me exhausted, in pain and unable to work or care for them.

I'm a 34 year old Ohio native and I used kratom to get off of heroin. Full stop. No suboxone, no methadone, just plain leaf Kratom and a bed. I found that it also helped with my anxiety, so I asked my doctor to taper me off of Klonopin. Kratom is also a wonderful antidepressant and I've asked my doctor to lower my dose of Effexor. She was doubtful and didn't want to do it, but she did, and I'm in better shape than ever. Once this scheduling happens, I honestly don't know what's going to happen to me.

I am 57 and have been nearly bedridden for 12 years due to a wreck that has left me with a severe case of occipital neuralgia. Nothing, including narcotics, has given me any consistent relief until now. I just found Kratom about 6 weeks ago and the difference has been amazing with no side effects. Please don't take away the life I have just been able to start living again. [REDACTED], [REDACTED], [REDACTED] Oklahoma.

I'm a 42 year old female with several health problems which cause chronic pain. Kratom has by far exceeded previous contemporary treatments and medications. Before this DEA intent was filed, I believed that with the help of kratom I would quite possibly be able to work again. Now my life is on hold again. I'm terrified of the possibility that I may not only lose 'my miracle', but that should I need to go back into pain management, I may not even have access to my previous medicines due to the sweeping changes made in the few months since I voluntarily left. What particular type of evil is in play when one is persecuted for trying to make healthier, safer, more responsible choices? I'm at a loss to understand this. - [REDACTED]. ID

My name is [REDACTED]. I'm a 41 year old woman who lives with CRPS, the most painful disease known to man, Multiple Sclerosis, and Fibromyalgia. For 16+ years I've dealt with debilitating chronic pain, depression, and anxiety as a result. I've tried almost every therapy and medication offered to me over the years, with very little positive effects. The pain was very poorly controlled and the depression had me in a place emotionally, that I was suicidal. I saw myself as nothing but a burden to the people around me and the world as a whole. I heard about Kratom in a social media group for chronic pain. I researched, and with the blessing of my doctors, who all felt it was a safer alternative to the opiates and narcotics I'd been reliant on to that point, I gave it a chance. 11 months later I have found some pain relief and find that it's enough to allow me to be an active participant in the world around me, as opposed to a sobbing lump on the sofa or in bed. I am able to do basic household chores again, and to get out into the world for short periods. Things that weren't possible before kratom. I literally fear for my life without the help of this herb. - [REDACTED]

I'm a college student studying computer science and I've long been a musician, which has kept my hands and arms extremely busy for most of my waking hours. During my senior year of high school I started to notice pain creeping up in my arms and this grew to be debilitating. I was made to choose between completing my school work or practicing my french horn enough to be ready for my weekly lesson (I attended an arts school so much playing was demanded of me). I took measures to reduce performance anxiety so I wouldn't be squeezing the instrument unnecessarily intensely which helped a bit, but the pain didn't cease entirely. Going to a doctor was unattractive to me as I don't trust myself to handle messing with opioid medications, and turning to NSAIDs actually ended up giving me a stomach ulcer after using ibuprofen daily for a long time period. Finally during my freshman year of college I was introduced to kratom at a local kava bar and found that it helped immensely with my symptoms. Ever since, I've used it on days when my arms are in high demand and I no longer had to worry about putting myself in immense pain just to maintain basic function in my life. I've never been anywhere close to addicted to kratom, and from what I understand it has many pharmacological targets not shared with traditional opioids that may mediate its more mild dependence liability (antiglutamatergic activity, specifically, unless I'm not remembering correctly). So now with the DEA's knee-jerk banning of kratom, the only two medicinal herbs

I know of that helped me with my symptoms are deemed to have "no accepted medical use" and attempting to use them will deem me a serious criminal to polite society.

I am [REDACTED] [REDACTED] age 44. I took Kratom to get away from Opiates. Kratom helped address the four things that always made me relapse; depression, anxiety, fatigue and pain. Kratom brought me back from the brink. I would likely have overdosed, died or been thrown in jail if not for kratom. I know that I am not the only one for which this is true. If kratom is taken away, I can't say what would happen. I would lose my drive to live and be a better person. I will be sorely tempted every day to give in and give up. God knows what will happen. I can only hope that the DEA or congress will see how kratom has saved my life and not make me a criminal. This is all too real. This is my life. I don't want to be a criminal, relapse or die. Please don't take away what allowed me to be a productive member of society after I just got my life back in order. Please don't do this to so many people. We want to live normal lives within just laws of society. This ban is a grave and a destructive tragedy.

My name is [REDACTED] [REDACTED], 44, father of one, and I am a disabled professional with 15 years of print production experience for large fortune 500 companies. I got injured in 1990 and was in a car accident in 2011 that brought my previous injury to the breaking point. After 2 major back surgeries and the loss of my job, I am waiting for my Social Security hearing (29 months to date) and have no health insurance. I have been taking Kratom for pain (about 2 years), and have no way to get any other medicines. Kratom helps me to feel a little better, and if the DEA pushes this ban through, I will lose access to the only pain control I have. If this ban goes through, I am horrified at the pain I will again feel. Kratom allows me to move around the house and to do simple things in my everyday life, that others take for granted. Kratom allows me a little relief I cannot get elsewhere. Thank you - [REDACTED]

My name is [REDACTED] [REDACTED] and I am a 54 year old female. 20 plus years ago I was in an auto accident. I had a lot of soft tissue damage. Since the accident I have been diagnosed with more than 20 diagnoses. Everything from Fibromyalgia to occipital neuralgia. My life became one of pain at the moment of impact. I was told for the first 6 months I would get better, but I didn't, I got worse. I am intolerant to most (almost all) pain medications. I made a number of attempts to take them but they just made me too sick. I then tried every therapy possible. I started getting trigger point injections and cervical epidural injections, but they just never did anything positive for me (although I went in for dozens of these out of desperation). I even considered having my nerves burned until I was told the risks and the possibility that the pain would get a whole lot worse before it MIGHT get better (and the fact that the nerves could come back so to speak). In the last 2 years I have had to have 4 surgeries, 2 on my right knee and one on each shoulder. I made it exactly one day for 3 of the surgeries on pain meds before I switched to Kratom. (The last surgery, I was on pain meds a lot longer than I thought I would be due to surgery failure. I questioned the entire time if the vomiting induced by the medications was worth it and decided no, and switched back to Kratom 2 weeks later. The pain from the last surgery continues to this day but I only use Kratom for it). I simply cannot tolerate opiates or even the synthetics (Tramadol). Kratom has given me my life back better than anything else ever could. I still have days that are not so good, but I am no longer lying there waiting impatiently for death. Now I find myself living in fear (and my family has fears as well) that come the end of September I will have to stop the Kratom due to DEA's decision. I feel like I have 11 days at the time of this writing for relief and then I am not sure what is going to happen. KRATOM SAVES LIVES! Please save so many of us from a possible horrendous fate and keep this plant legal and accessible.

My name is [REDACTED] [REDACTED] from Massachusetts. I am 46 years old. I lost my daughter, [REDACTED], to this opioid epidemic, over one year ago. She got addicted to oxycontin that was flooding the streets before anyone was knowledgeable of the dangers. I never had a chance to warn her. She battled until

she was 28. If I knew then what I know now about kratom, I'm confident she would still be here. I now use kratom for the emotional pain I will have for the rest of my life. I have been using kratom for about 9 months. I use it all day long. It gets me through each day without feeling so lost. I get no side effects, and I use a lot. I'm distraught at the thought of not having this wonderful, god-given plant for my pain.

My name is [REDACTED] [REDACTED]. I am 37 years old, I work as a customer service manager, I am a mother of four, a wife, a daughter, and soon to be grandmother. Two years ago I was on the verge of losing my job due to poor attendance because of the pain and fatigue associated with Ehlers-Danlos syndrome, fibromyalgia, and neuropathy. The pain would keep me in bed for days unable to function. I joined a couple Facebook support groups, because I was to the point that I prayed to go to sleep and not wake up. Someone had shared an article on kratom, so I did a lot of research and listened to a lot of testimony. I decided to try it, because I had already tried everything else. Two years later, I am back to working full time, and am no longer at any risk of losing my job. I carry my own medical insurance, and pay my own medical bills. My quality of life has improved to where I enjoy waking up and facing each new day. To take away something mild without side effects is inhumane. We are adults who have a right to choose what we put into our bodies. My frame of mind greatly improved after tapering off of the prescriptions that had such harsh side effects. How is this a bad thing? If they make kratom a schedule 1, it will confirm my belief that the government doesn't care about the people anymore, that all they care about is money. Let us live our lives in peace, in the land of the free that America was supposed to stand for.

My name is [REDACTED] [REDACTED]. I am a 34 year old Innovation and Experience Designer specializing in the research and development of natural gestures for human-computer interfaces in cognitive systems engineering. I have been sick for 25 years with invisible illnesses and autoimmune conditions. So somehow I've managed to grow up with crippling symptoms and yet manage to succeed. But lately my symptoms have degenerated to the point of disability. On good days, I can shuffle-walk. I can barely sit up and have a conversation. I can chew. On bad days, my eyes swell shut, my fever confines me to lying down, I'm nauseated and have no strength to walk or sit up, and intense burning neuropathy pours like hot lava throughout my back. Many people with invisible illnesses suffer in silence. Our doctors call us liars; they say it's "something the mind makes up to get attention"; they tell us our problems are weight-gain/loss related while refusing to believe that the weight issues are the result—not the cause—of our pain and fatigue. I was a child the first time a specialist, I had traveled 3 hours to see, told me to "stop making up the symptoms." I was a preteen struggling to breathe when a pain specialist accused me of coming to him "just for narcotics." Very recently, I finally discovered the source for all my autoimmune responses—Lyme Disease and co-infections. These bacterial infections have burrowed deep into my joints, my organs, my bone tissue, even my brain—into crevices where white blood cells have no access, far beyond the reach of antibiotics, even where palliative pain medications give me no comfort. Like all late-stage autoimmune Lyme patients, the treatments I undergo are experimental, cutting edge, involving new medical technology at the forefront of a poorly understood disease. I travel far to seek treatments. And in order to do so, I require at least some relief from symptoms to give me the sleep and the energy I need to do what is necessary for my treatments. I have never taken narcotics in my life; I have never taken nor been addicted to opiates. Yet I take Kratom because it gives me long lasting pain relief from symptoms that are otherwise entirely crippling, without the nauseating and dizzying side effects I get from prescription pain drugs. I have never felt it to have any addictive hold over me; when I don't need it, I don't need it and that is a surprising and wonderful feeling. But when I do, I most certainly do. It is not a cure; but it is the only thing that allows me to get to my doctor appointments, to sleep without painful tremors, to meet with Lyme specialists, and to aid me in my journey for a cure. If you take away this means for pain relief, you are making it impossible for me to seek the care and treatments I need. If you seek to regulate it, then do so without scheduling it in the same category as heroin, and do it in a way that lets those of us in legitimate pain access it as the tool that it is, a medicine.

I am a 50yr old mother and grandma that suffers from chronic pain. Diagnosed with several ailments, my lower back is what puts me down on a daily basis. The pain takes away my sleep and has me tossing and turning most nights which led to depression. It was awful until I found kratom 3+ years ago. My daughters introduced me to this natural plant that has since changed my life. I can sleep. I can move around more easily. I laugh and smile again. What was once a bitter woman that people hated to be around, because I was miserable, has turned into a friendly, happy, caring, loving person that has become a great mother and grandmother. Kratom has gave me life back. I use it daily to help reduce pain and lift my mood.

I feel if kratom is banned, it will send me back into the doctor's office trying to get painkillers. I feel like my life as I know it, will change back to where I once was. Depressed, in pain, miserable, sleepless and hopeless. I don't want to become a criminal for using a plant that is illegal. I need kratom in my life daily. I've tried other plants and most medicines made today, and none of them work for me. I love that kratom gave me a freedom of choice. I don't have doctors degrading me, thinking it's all about the drugs when it wasn't. It was, and always has been about the pain relief. Kratom helps with that. It's given me so much more than I ever thought possible. My dignity, self esteem, worth, happiness, joy, family, friends, all came back to me. Please don't take it away.

I am a 44 year old mother of a college student. I work in the corporate world and am a Vice President of Sales for a successful software company, have a successful career, and I am college educated. I pay my taxes. I have never been arrested. I have never even had a speeding ticket. I don't drink much and I don't do recreational drugs. I grew up with parents who did believe that conventional medicine is a last resort to use only when natural medicine has failed or is not helpful enough. We drank a lot of yucky herbs and learned to take horse pill sized vitamins at a very young age.

About 7 years ago I was in an auto accident, where I suffered two herniated discs and several torn muscles. Since then, additional discs have herniated at random due to gravity. One of the discs is literally pressing 20% into my spinal cord. Doctors and Chiropractors alike recommend surgery (I don't trust the neck surgeries, as I have seen too many failed). The last Osteopath (about a year and a half ago) I saw couldn't believe I was even functioning and immediately prescribed me a bottle of Percocet. I still have them, and hold them for emergencies. He said that if I didn't want surgery now, that he would gladly send me to pain management. My regular doctor will prescribe Vicodin if I ask, because my pain and ailment is quite well documented. The drugs are not hard to get when you have proof of pain like mine. Here are two pictures that are MRI's of MY NECK:



The 2nd picture is a top down view. The white spot in the middle is my spinal cord. The dark part protruding into it is my disc, stuck into my spinal cord. This is what pain looks like on film. What it feels

like is a constant pinch in my neck, that runs down to my upper trapezius and down the back of my shoulder. At times when inflammation is present, the pain can go all the way down my arm and even make me lose all feeling, except for pain and numbness in my fingertips. My right hand has permanent weakness, and this is documented by both doctors and chiropractors. This injury means that I can't open a jar or do anything that requires hand strength. Besides a college degree, I also have a massage therapy license. I do not practice any longer because I am not able.

I do have chronic pain. I do have in my possession, Percocet. The same bottle the Osteopath prescribed over a year ago. In the past year, I have taken 3 of them. The year the accident occurred, I spent about two weeks taking full doses of Vicodin every day. I started to feel a craving for them as they exited my system. I knew about Kratom, but had only tried it once. Someone suggested I try it for pain. To my surprise, it worked and that's why I don't use the Percocet.

I drink one or two cups of Kratom tea daily (most days). I have been for several years. Sometimes I travel for work and don't have it for several days. It does not bother me. I don't seem to have any form of withdrawal. I make the tea at home from leaf purchased on the internet. I drink it in the afternoon, when sitting in the chair at my desk has started to wear on my neck and shoulders. It enables me to keep working with a clear mind and reduces my pain. If I am still in pain at the end of the day, I have a second cup. Never has my boss or coworkers asked if I am messed up, on drugs or thought I was not ok. I function completely normally with Kratom. The pain is reduced enough that I can continue working and remain productive. I can even do gentle yoga a few times a week. Without it, I would need to resort to the Percocets that I keep in my purse for fear of having a bad pain episode. I don't know what I would do if the Kratom ban goes through. Live in pain? Live with a foggy mind and end up losing my job due to real drugs and what they call "pain management?" Those are the only options available, neither of which I want.

I have annual check ups from my doctor. All of my blood work is normal, everything shows that I am a healthy individual. If you want to see copies, I will send them to you. Kratom has not harmed my organs, my cholesterol is perfect, my vitamin levels are also perfect. All is well! Please don't take it away! I'm so scared to have to make a choice between constant pain and losing my mind on hard, dangerous Opioid drugs. If Kratom is banned, will the DEA compensate me in salary, since the ban may cost me my job? Sincerely, [REDACTED], [REDACTED], [REDACTED] FL

I am a 42 year old mother of 2 suffering from bulging and torn disc at L4 and L5. I suffer from chronic pain daily as a result. I spent 7 years allowing a doctor to prescribe me opiates as the answer. My breaking point was when I came down with the flu and couldn't keep anything down including my meds. Sadly my body had become addicted to the medication and I was hospitalized as a result of the withdrawal. That was my breaking point in deciding I would not allow my body to be controlled by a pharmaceutical. I found Kratom and it provided more relief than I ever had taking the morphine. I no longer have to worry about being addicted to a medication and I can once again function and participate with my family. Taking Kratom away will leave me no choice but to return to pharmaceuticals to ease my pain. This world has enough of an opiate problem without adding me as another victim to that number.

About two years ago I was going through a very difficult period in my life. My wife and I had separated, and not long after, the resulting depression that set in started to take a toll on my work and my personal life. My doctor put me on antidepressants. Within a few weeks things got better. My wife returned and my work and personal life improved. About a year later though, something happened. The medications stopped working. Literally just STOPPED. It was like a light switch had been turned off. My doctor and I tried different dosages and medications but none of them worked. However, because of the dosage changes, my body and mind started going through withdrawal symptoms. I don't know if you've ever experienced these symptoms, but I pray you haven't and that you NEVER have to go through them. One of the symptoms can only be described as a "brain zap". It's literally the feeling of an electric current

going through your head. Every few seconds...zap...zap...zap. Couple that with migraines, inability to sleep, and mood swings like you wouldn't believe. There was only one drug that mitigated the symptoms. I found that Tramadol stopped the brain zaps which allowed me to sleep which allowed me to regain my strength and keep everything under control. Then the FDA/DEA reclassified Tramadol. My doctor couldn't prescribe it to me. I started to spiral down again, but then a miracle happened. A friend of mine suggested I try an herbal remedy called Kratom. I did some quick research and decided to go for it. I was looking for any relief. My order arrived a few days later from a company in Austin. I can't adequately put into words what happened other than to say it was a GOD SEND. A TRUE MIRACLE FROM HEAVEN. I found relief within 20 minutes. In fact, not ONLY did the brain zaps stop, but over the next few days and weeks, I found it had an analgesic effect on my back and provided me with an energy boost.

I have been using kratom now for a little over a year and it's helped me get my life back. I'm no longer on antidepressants or any kind of pain medication for my back. I have energy again and I no longer have the mood swings that plagued me for so long.

Please help me and countless others. - [REDACTED], TX

I am a 51 year old male from [REDACTED] Florida. I was prescribed narcotic pain medication in 2001 for degenerative spine injuries from working full-time as a plumber since 1980. Two of my lower disc in my spine are squished out from the front of my spine and they are in-operable. I currently still work 70 hours a week. Narcotic pain medication which consists of an opiate, worked for the first few months of the 15 years. It started off with a simple prescription. A decade later I was on the strongest dose allowable, taking a synthetic opiate called Methadone eight times a day the highest milligram tablet. With this narcotic pain medication, I had to get prescription opiates of different types for breakthrough pain. Those prescriptions lead to asthma and I needed prescriptions for that. All of the above led to prescriptions for depression. At the end of the decade I was taking six prescriptions costing \$800 a month. My health was so poor I was only working 10 hours a week. On the verge of losing my business and all I owned, my son introduced me to KRATOM. Within months I stopped taking all of the prescriptions and within two days I was not taking Methadone and only KRATOM tea. Five years later I only make a cup of tea for my chronic pain. This plant which is in the coffee family has no tolerance build up and no dependency. I cannot go back to taking pharmaceutical opiates or any synthesized drug. Today I am free from side effects from the prescriptions I used to take, and I feel like I am 19 years old again, back to working 70 hours. If you ban this plant which you do not have any constitutional right to do so according to the 9th and 10th amendment you will see tens of thousands of people die from drug overdose and suicides and crime to pay for prescriptions they can't afford. No one has ever died from taking KRATOM! You already know this. Stop working for big Pharma. The research you did to get this ban, you surely realized that Kratom is the only remedy for many illnesses and had no side effects. Do the right thing and lift the ban because thirty days after its banned, those who had to stop using pharmaceutical prescriptions, which is everybody who's using this plant, will get very active and boisterous about government corruption and relationships that should not exist between bureaucrats and corporations. We don't need anymore problems with trust in government and we don't need any of nature's plants banned. You don't have the right or the authority to ban a plant!

I am a 56 year old grandma raising 2 grandchildren. 13 years ago I was struck head on by a drunk driver. Prior to that I was a hospital technician and on my way to finally getting my RN license. Since that day I have been a chronic pain sufferer. 13 surgeries, hip replacement, MRSA, 2 ankle replacements still pending, fibromyalgia, and hypothyroidism. I have been on pain meds with all their nasty side effects since. The pain doesn't go away. My doc's answer is to prescribe more. Prescribe stronger meds. More side effects, less living. I found Kratom through a website for fibro pain sufferers, did some research and very hesitantly ordered some. Luckily I found a wonderful vender and to my surprise Kratom worked. It

helped with my pain, depression, and anxiety. Because believe me when you are a chronic pain sufferer, depression and anxiety are both part of it! Kratom does not take away all of my pain.but makes it livable.It improves my attitude and makes me look forward to life again. There is no high from Kratom. If there was, I would not use it. I have used it for months and then stopped with no problems.This plant has helped so many. Regulate, please do not ban. - [REDACTED] [REDACTED] [REDACTED] Arkansas

My name is [REDACTED] [REDACTED], and I am a 41 year old woman with mild cerebral palsy (from brain injury at birth), and an autoimmune disorder which is on the Lupus spectrum. I am married, work in construction management and am a professional musician and photographer. Kratom helps me manage my chronic pain and fatigue symptoms. Before Kratom, I took a number of painkillers and muscle relaxants, but they left me very groggy and dizzy. I also developed gastritis from the overuse of painkillers, so I had to stop. It was difficult to be fully functional at work, at home and socially. I felt as though I was in too much pain to be engaged with the world. I became increasingly depressed and withdrawn. But fortunately, a friend introduced me to Kratom. It is a supplement that eased my chronic pain and fatigue to a level where I can now be more active and involved. It has made a tremendous difference in my life. I recently started going to the gym to make my body even stronger now that the pain has been lifted enough for me to do physical activity. I have increased my work hours and my outlook on life has brightened. I am much happier and healthier overall. Please do not ban this supplement that allows me, and so many people like me, to function in a fuller, more productive way. - [REDACTED] [REDACTED] [REDACTED] [REDACTED], FL

My name is [REDACTED] and I have been using kratom for four years now for a lot of reasons. Ptsd ,bipolar depression,restless limb,and back pain. This plant has helped so many people for so many different reasons. I was able to stop taking a few of my prescription meds when i started taking kratom. I still take a few but not as many. People addicted to heroin and various pain meds are able to use this harmless plant to get free of their addiction. Thousands and thousands of lives will be negatively affected by this ban.

I am a 42 year old man with a wife and 2 sons. I have a bachelor's degree and work as a network engineer. I'm a musician and artist. In 2002 I was suffering with chronic back pain. It was so bad that I couldn't exercise and it affected my work life where I spent large parts of my day sitting. I gained 60lbs and was eventually diagnosed with a degenerative disc disease and sent to a spine specialist. They gave me narcotic pain killers. A LOT of them. They helped the pain but made me groggy, drowsy, constipated, etc. I was never an addict but I was headed that way when I found kratom. After starting kratom I was off of all narcotic pain killers. I was able to get back to soccer and lost 70 lbs. I started coaching soccer for my kids and volunteering to help kids w special needs play soccer. I wasn't groggy or drowsy at work and in the 5 years I've been using kratom, I've had no side-effects. Stopping it suddenly will cause me some fatigue and an upset stomach. Hardly anything compared to stopping narcotics. If this ban goes through I will be faced with either suffering in pain daily or going back to doctors who are reluctant and judgemental about prescribing narcotic painkillers. I have a lot to lose if kratom is made illegal. Taking narcotic painkillers makes you feel euphoric. Taking more than you should gets you high. Kratom does not make a person high.

My name is [REDACTED] and I am a 34 year old married women and a mom of two little boys. I have an MBA degree but I currently have decided to stay at home with my kids. I am also a person who has greatly struggled with depression and anxiety, and chronic debilitating tmj pain. Those issues resulted in me drinking a lot, and I became a very dangerous alcoholic. According to the doctor back then I was ruining my liver, I was also ruining my life. I could not hold relationships and felt totally isolated. Thank God I quit drinking before I had the kids. Alcohol is truly the most dangerous drug out there, legal or not. It kills more than the opiate epidemic does each year. The fact that I can walk right next door to get deadly alcohol makes me scared, If they succeed in banning Kratom. Kratom has helped me remain sober for almost six years now. It helps greatly with my depression and anxiety so that I was happy

again and could form relationships and got married. It also helps tremendously with my severe tmj. I was supposed to have surgery over 20 years ago but my dad didn't want to pay for it, so now my teeth don't fit together and my jaw hurts so bad I don't like to talk or eat. Kratom has also helped me greatly with that pain. I can now live my life in less emotional and physical pain. It is also imperative that I stay off alcohol, because it will probably kill me if I drank again. I am a great wife and mom now. I am a productive member of society, and I even work out everyday. Kratom greatly helps my quality of life in many ways. If it is taken away from me all the problems stated above will come back to me because I definitely can not go back on those pharmaceuticals that were dangerous and put me in a fog. I have family that needs me so this ban will affect them negatively as well.

My name is [REDACTED] and I am a 39-year-old mother and computer science student. This wonderful leaf has helped me greatly. I sometimes have small amounts in a tea and it really helps with my treatment-resistant depression and anxiety as well as pain. I have a history of extreme trauma and have developed PTSD from many negative life experiences such as severe peer bullying, child abuse, the murder of my father and other unfortunate events. I've tried many pharmaceuticals since I was a teen, and I developed a terrible alcohol problem while trying to get some relief from my unbearable feelings of sadness and fear. Thanks to Kratom, I am 18 months sober from alcohol. Kratom helps not only my physical pain, but my mental pain, and the lack of motivation that causes a cycle of more depression and immobility. I can't go back to that life. It is not living at all. I want to be a productive member of society, I want to be a good mother, and I want to be law-abiding. Please do not make me a criminal. I am not a bad person, I am not looking to get high, I am just in pain.

I am a 27 year old male student who has been in the workforce since I was 15. I have no arrests, traffic tickets, or criminal history whatsoever in my life including as a juvenile. I was a 4.0 student and member of my high school Key Club where I logged 100+ hours volunteering. I have been employed full time in the construction industry, as a retail sales manager, and as a solar installer. I own multiple houses and have clear titles on all of them. I am self taught in two foreign languages which I speak with high degrees of fluency. I aspire to continue my college education and ultimately work in the healthcare industry as an ARNP or MD.

I am a diagnosed bipolar with an anxiety disorder. I use kratom as a supplement for my depressive symptoms and anxiety as a substitute for prescribed drugs such as xanax, valproate, valium, and lamictal. If this ban takes place I will be faced with a barrage of prescription medications with a myriad of potentially dangerous side effects to manage my condition. The prescription medications I will be required to take are highly addictive and also make me feel 'high' which causes me issues with concentration, work performance, and academic pursuits. With access to kratom, I brew a tea which I drink twice daily and have no issues or need for prescription medications and their side effects. - [REDACTED], [REDACTED], Florida

My name is [REDACTED] and I'm 52 years old. I've been a chronic pain sufferer since the first car accident in 2004. My first pain relief was hydrocodone. I was also injured in a 2nd car accident in 2007 one year after the spinal fusion to repair the damage from the first. I was also physically assaulted in 2009 which threw all the rehabilitation out the window and began my journey in Dilaudid, Morphine and Percocets. I've never abused these drugs but was treated as such. The medical community began pulling the rug and tapering me very quickly due to the heroin overdose epidemic. I was led to Kratom which as been a God send. If the DEA take this away the ONLY choice will be suicide as I've decided I will not live the rest of my life in agony. - [REDACTED]. Rochester, NY

My name is [REDACTED] [REDACTED] and I am a mother of three, with an undergrad degree in Finance and Masters in Education. I have used kratom tea over the past year, after searching for herbal remedies for

my mild anxiety. I also run half marathons, and running has proved to be an outlet for stress relief as well. Kratom tea has also helped manage pain with injuries that I have sustained from running, including five knee surgeries to date. I also use other herbal supplements and plants to treat ailments. I feel as though the Government, in particular the DEA, is taking away my rights to live a healthy and happy life. Why do they get to choose what I put in my body if it is causing no harm to others or myself? I feel healthier and happier than I did a year ago. I have never felt “addicted” to this plant or felt as though it was dangerous in any way. I will continue to fight for this freedom, for myself and others, and because I want my children to learn that you fight for what is right. If the ban takes place, I will be forced to find an alternative to aid in managing my anxiety, and most likely it will be more harmful and less effective. I pray the DEA does the right thing, and pursues regulation over prohibition. - ██████████ ██████████, 34 ██████████, PA

For ten years, I have suffered with the consequences of Lupus, which include chronic pain, sleep issues, stress, and fatigue. Medical professionals prescribed several types of medications for these issues including barbiturates, benzodiazepines, hypnotics, muscle relaxants, SSRIs, and strongly suggested I try opiates for pain management. At this encouragement, I sought healthier alternatives. The interactions and side effects from these drugs required constant experimentation, new prescriptions to counter adverse effects, and general discomfort. With a condition as unreasonable as lupus, stability and health become precious resources.

In 2015, I researched Kratom as an alternative. Luckily it has been able to replace the unstable drug regimens strongly suggested and provided reliable results and stability in treatment. It allows me to take several less pills with highly undesirable side effects and varying effects, pills not safe for long term use which is necessary from chronic health conditions. The DEA Kratom ban will upend my effort to manage my chronic symptoms safely. Rather than put my health in a further precarious state, I am inclined continue to live internationally to avoid federal prison for my healthcare needs. Kratom mitigates the majority of these extraneous lupus issues while providing consistent energy. - ██████████ ██████████ ██████████, TN (Currently, international resident). Age 28

My name is ██████████ ██████████ and I am a Senior Software Engineer. I have Chronic Fatigue, Fibromyalgia and multiple spinal disorders. I used to be on Vicodin, Gabapentin and other prescription medications for pain management. Kratom helps me manage my pain and fatigue without any need for other medications. Unlike prescription pain medications, kratom allows me to have mental clarity so that I am able and keep my full time job as a software engineer. If kratom is made illegal I will have no choice but to go back to the prescription opioids that aren't as effective and have side effects that affect my logical thinking and make my chronic fatigue worse. I will loose my job because opioids impair my ability to think. Also, due to my constant debilitating pain, I am at risk for opiate overdose.

Kratom has helped me cope with pain, severe fatigue, and anxiety due to chronic illness, including fibromyalgia. I'm ██████████ ██████████, a 52-year-old mother of two teenagers. I'm no slouch: I've earned a Ph.D. and two master's degrees at Stanford and Cornell. I work as a professor. I was high school valedictorian. I won a host of prestigious scholarships and awards. But illness doesn't spare the high achievers of the world. When I got sick in 2008, and stayed sick, I could barely function.

Several months ago, I tried kratom. I'm a scholar and a skeptic, but I decided it was worth a try. Kratom changed my life. My pain has become far more manageable, and I've regained the energy I need. Yet my mind is clear enough to teach complicated at the university level. The “psychoactive” effects of kratom are limited to a mild mood boost; they don't make me stupid, interfere with reflexes, or otherwise impair me. I no longer fear that I will have to retire early, and I'm able to resume volunteering in my community. My life has become richly meaningful, thanks to my renewed ability to be of service. Not least: I smile and laugh

more, and I'm more available to my teenaged boys. I have hope that I can live, not just exist – all thanks to a plant that is closely related to my morning cup of coffee.

My name is [REDACTED] [REDACTED]. I discovered Kratom over a year ago. I am a resident of Alabama and have been very afraid of what the government will do to me. I was a responsible user of Kratom, I have an Associates Degree in Medical Assisting. I have been working in the private sector for over 20 years. With all the tugging and pulling and moving of patients I developed degenerative disc disease, L5 disc is completely destroyed and a crack in my spine right above it. When Alabama decided they knew better what I needed than I did, I did the only thing I could, I suffer. Once in awhile we go out of state just so I can have relief for the weekend or a couple day, otherwise I suffer through it. I will never put my family or home in jeopardy having it here, but it has hurt my ability to work like I used too. I had the ability to make over \$700 a week working while I was taking Kratom. Now I barely can get up to move and make \$100 a week. We are in jeopardy of losing our home, (which is a tiny house) that we built ourselves from a shell of a storage building and our vehicles, we are dependent on my husbands income alone now because the State of Alabama chose to ban this plant that absolutely helped me in every way. I am praying this ban does not go through and it will help get Kratom back in Alabama so it can again let me be able to go back to work full time and be the person I once was while taking it.

My name is [REDACTED] [REDACTED]. I am a 44 year old Catholic School teacher and the Director of Technology for the largest parish in [REDACTED], NY. I live in [REDACTED], NY. I was diagnosed with degenerative disk disease and spinal stenosis in 2000. I was 28 years old and was offered either oxycontin or spinal surgery. With one option I would have become dependant on opiates for life, or go the other route, and risk paralysis. I chose neither, so I chose to suffer. For 11 years I used Advil and Aleve. Advil did liver damage and Aleve caused wicked bleeding ulcers. I gained 100 lbs. I found Kratom through a Google search, for "natural pain relief" and tons of Kratom articles and success stories came up. I read, I researched, I purchased. On December 16, 2011, the chronic pain in my back was eliminated within a half hour of drinking my first cup of Kratom tea. Since then I became active, focused and motivated. I hit the gym again, and I lost the 100 pounds plus more. I am the healthiest I've ever been with a very physically demanding job.

If Kratom were to become illegal, I would be forced to stop it. Considering I am refusing synthetic pills and surgery, and I refuse to break the law, I guess I will end up on disability by the time I turn 45. I'm sure the weight will begin to add on, and I will eventually become homebound. On the days I don't use Kratom, my pain comes back with a vengeance and it would be impossible to continue my career. As of now, I am a healthy productive teacher. Please do not ban Kratom. I do not deserve to suffer for the next 30-40 years. It will destroy my family. I'd lose my home because I would not be able to afford my mortgage. I would lose everything. I refuse to take chemicals. I deserve to choose what I want to put in my body. Thank you for listening.

My name is [REDACTED] [REDACTED], I'm a 39 yr old wife and mother to 4. I have fought severe scoliosis since I was 13 and was diagnosed with Fibromyalgia, major depressive disorder, neuropathy and CFS to name a few. I was on meds for 10 yrs including narcotics, and was sleeping my life and my kids life away and was a zombie. I was looking for natural remedies and came across Kratom, I ordered some and never looked back!! In 3 years Kratom has given me my life back. I'm finally able to work after not working for 10 yrs, can run and play with my kids and have my life back!! Please keep Kratom legal and don't take my life away!!

[REDACTED] [REDACTED], age 57. Medical pain management for spinal, hip and knee pain from an accident when I was 13 years old. Before and after recent surgery I was on prescription opiates for several months which were absolutely debilitating and habit forming. Since I started drinking an occasional cup

of Kratom tea I haven't touched opiates. If Kratom is banned I will have no choice but to go back to opiates.

My name is [REDACTED]. As many others have, I found relief from several ailments using kratom. Ever since I found kratom, my quality of life has went up drastically. I am a 27 year-old who suffers from severe anxiety, depression, and chronic pain, and found solace shortly after discovering kratom 4 years ago. While my legal prescriptions to pharmaceutical SSRIs, painkillers and anxiety medications have somewhat helped, all of them concluded to actual danger to my health and mental state, along with harmful side effects. They did not compare to the safety of using the kratom tea to ease chronic pain, depression, and anxiety. This natural remedy is certainly the optimal solution in this case, as many others have found. I have since been able to rebuild my life, get off harmful prescription medications, and have once again become a positive member to society. The inability to use kratom would certainly regress my lifestyle and do real harm to my well-being. I could not imagine having to go back to a life without kratom.

My name is [REDACTED] [REDACTED]. I was diagnosed with generalized anxiety disorder, RLS and related pain in 2012. I have been prescribed benzodiazepines, SSRI drugs and muscle relaxers. I am currently taking none of those horrible medications. Before my diagnosis I abused alcohol to sleep and deal with the anxiety. Honestly, while I was not anxious and could sleep on these substances, they stole my life. I was depressed, uninterested in anything that gave me joy and stalled out in my Doctoral program. Kratom has replaced all of these dangerous and addictive substances. It is a miracle herb and has given me my life back. I am currently working in Kazakhstan as an Assistant Professor of Media and Communication. I would have not been able to do this without Kratom. I have my Ph.D. and a variety of publications in my field. I do not feel addicted and have gone without the herb for extended periods of time. These periods are miserable not because of any withdrawals, but because my symptoms return.

I am sad to report that living here in Kazakhstan, I now feel more free than if I were in the United States. Also, I will not be able to return because I am about to be turned into a criminal. If I do return, then I will either be forced to submit unwillingly to medical treatment that I do not find productive or I will be forced to break the law in order to treat myself as I see fit. This is undue burden--forced to choose between something bad (dangerous medications) and something worse (jail) based on a unilateral decision made by regulatory agencies without any legislation or proof. The Alabama disaster will be repeated, with a 20% spike in overdoses and thousands of new opiate and benzo prescriptions issued. These drugs are the health threat, and this legislation will criminalize those of us avoiding this threat. Kratom is invaluable and it is of great importance to those of us who want to have options beyond what is peddled by big pharmaceutical companies. - [REDACTED] [REDACTED], Ph.D. [REDACTED], Kazakhstan & [REDACTED], Tennessee

My name is [REDACTED] [REDACTED], I'm a 48-year old teacher, mom and grandmother from Oklahoma. I heard about Kratom through an on-line pain support group. I suffer from Depression, Neuropathy, severe anxiety, Sjogren's Syndrome, fibromyalgia and arthritis. I have tried every prescription drug available. I was taking so much medication, I had to take medication, to deal with side effects of medication. I still had so much pain and the same symptoms I had begun with. Nothing worked. I have been dealing with my conditions for over 20 years. Before kratom, I was beginning the process to get on disability. I had no hope and no life. After kratom, I can work, play with my grandchildren, go for a walk and be a contributing member of society. I still have pain and anxiety every day but it is a lot less with kratom. If kratom is taken away I will be on disability, not able to work, not able to play with my grandchildren and I won't have any hope. I don't want addictive pain medicine that makes me feel high and that have other horrible side effects. Kratom is a plant that doesn't have horrible side effects and doesn't make you high. If kratom is taken from me I will wish I were dead because the pain will be so great. I don't want to go back there to that darkness of constant pain. I thought I lived in America where we were free to choose a plant to help our health if we wanted to??

I'm a 61-year old mother of three sons & one daughter-all of whom I have raised to be caring, law-abiding, hardworking, productive citizens of this great country. I have a beautiful 2-year old granddaughter & a grandson on the way. I have a great accounting job at a small company. Thanks to kratom, I rarely, if ever miss a day of work and I'm able to play with my grandchild, take her for walks to the park, and care for her 2 days a week. You see, I also suffer from debilitating knee pain along with severe neck pain from an injury. I use kratom leaf for my pain. I take about 1 teaspoon in the morning & another one at night. It's not a miracle cure, but it works very well for my pain and allows me to live my life fully and give myself to the people I love. I have been using this wonderful plant for a little over a year now. It never leaves me feeling "drugged" like I felt on pain medication. I never need more than my 1 teaspoon and I never crave more. I've never robbed a convenience store to get it and no one has ever found me passed out in my vehicle because of it! I just had my annual physical and I'm in great health. My husband and I bicycle often, sometimes 40 miles on a Saturday. I couldn't do that without kratom. I really believe this plant has helped me get my life back. To ban it not only makes NO sense, it's absolutely ludicrous. Turning many thousands of decent, good & law-abiding people--the many grandmas, grandpas, veterans, thousands of women suffering from endometriosis, & countless others who use this herb to improve their quality of life--into felons is a sad commentary on how low our misguided war on drugs has sunk. Not to mention the hypocrisy of banning a plant that helps so many people get off of the dangerous drugs that this very war is about!! - [REDACTED], [REDACTED], [REDACTED], MN

I'm a 47 yr old high school teacher and mother of two. I've always been really active on my own and with my kids. As years went by my fatigue and widespread pain got worse until I barely got out of bed. I was diagnosed with osteoarthritis, psoriatic arthritis, and Fibromyalgia. All of this on top of the IBS, displaced cervical discs, degenerated discs, TMJ Disorder, and migraines that I had been being diagnosed with since the 8th grade. We tried the Cymbalta, Lyrica, and gabapentin (Norco for only the worst of days). With each, I got worse instead of better. Within six months I had packed on 60lbs and could barely function through the basic necessities of daily living. I seriously gave thought to removing myself from this planet. I ran across someone who told me about Kratom for pain and fatigue. I researched it and eventually gave it a try. I was amazed at the pain relief, energy boost, anxiety relief, and mood boost that it gave me. I used it to take myself off of one pharmaceutical at a time. It took months and the withdrawals from Cymbalta, Lyrica, and Gabapentin were horrid. The only pharmaceuticals that I still use are Enbrel injections, muscle relaxers, and the very rare Norco. Kratom has given me my life back. I'm a functioning interactive mom and high school teacher again. I gain no "euphoria" or "high" with Kratom. There's no intellectual muddiness, like with opiates or the antidepressants previously prescribed. The only side effect, if I take too much, is nausea. I switch strains each dose to keep my tolerance low, at 3-6 grams. I take it only when I have to, in order to be able to move. I still feel pain 24/7 but it's tolerable most days and I gladly smile again. We MUST keep Kratom legal so that I can keep my life. - [REDACTED] Texas

I'm a 31 year old mother of three. We homeschool and have a small homestead. Kratom is an awesome supplement that really helps with my chronic pain caused by spinal problems. I've been diagnosed with DDD, scoliosis, spondylosis, arthrosis, a fused SI joint, a bulging disc, torn spinal tendons, myositis, fibromyalgia and carpal tunnel. I've been taking kratom for two years now with no adverse effects. It helps with both my pain and the depression caused by chronic pain. I've never gotten any type of high from kratom and I've never had any of the side effects that go along with opioid use such as dizziness, nausea, confusion or respiratory depression. I would much rather use kratom to help my pain and depression than take lots of pills that affect your mood and ability to function. God gave us plants to help with the problems that arrive in life and I would be greatly disappointed if it was taken away. Many people use kratom to help with chronic pain, anxiety, depression, ptsd, etc. Not one death has ever been attributed to kratom alone and it isn't a danger to anyone, even in high doses. It doesn't cause dependency, side effects or any kind of altered state of mind. Please don't take away this herb that is so helpful to so many. Thousands of people have successfully used kratom to permanently stop taking prescription opioids or

using street drugs. I would say with today's opioid and street drug abuse epidemic kratom would be very helpful in preventing further overdose when used to wean off of other drugs. It doesn't treat or cure any illnesses but can certainly help with the symptoms of pain, depression or withdrawal. Please don't take it away from us! - [REDACTED], Texas

My name is [REDACTED] and I am 45 years old! I suffer from chronic pain due to DDD, herniated and bulging discs in my neck with bone spurs, dehydrated bulging discs in my lower back with a fracture, fibro, migraines, severe nerve root lesions, and crippling sciatica! When faced with all of this pain I am not able to perform my daily tasks, I end up bedridden for days at a time, and this causes depression! I have been to Pain Mngmnt and I ended up addicted and abusing the meds! I went to the methadone clinic and I ended up addicted and abusing that also! I stopped it all cold turkey and thought I would die! I began drinking heavily to numb the pain! In December 2015 I was introduced to Kratom and there has been no looking back! I have no desire or need for pills or alcohol! My quality of life has improved 110% with Kratom! Just when I seen the light at the end of the tunnel I feel like the rug is being jerked out from under my feet! PLEASE do not take this plant away and force me back to pharmaceuticals and/or alcohol! It will ruin everything that I have worked so hard to repair in my life! - [REDACTED], Ga.

I am 50 years old and use Kratom to ease the pain and fatigue of rheumatoid arthritis and neuropathy. Before Kratom I could barely get through my work week and I would just sleep through the weekends. Since I have been using Kratom I am thriving at work, still have energy after work to exercise and enjoy activities on the weekends. I even earned a Master's Degree because I finally had the energy I needed to study after work and on weekends - [REDACTED]@[REDACTED].com [REDACTED]

My name is [REDACTED], I'm a 43-year old male from Wyoming. In 2009 I suffered an injury at work. I have a herniated disc in my neck that causes me daily headaches, problems with my vision, painful muscle spasms in my neck, head, back, and shoulder. For 6 years I took harsh and addictive prescription painkillers and muscle relaxers. This year I was fortunate enough to find kratom. I have not had one sick day from work since starting to take kratom.

I can't imagine going back to life without kratom. The thought makes me tearful and scared. Please don't take kratom away from me! My professional career and home life will suffer again for sure!
[REDACTED] from Wyoming

[REDACTED], 30, [REDACTED], TX

I first learned of Kratom in 2013. I was an alcoholic and in a very difficult time in my life. I literally used Kratom to end my addiction to alcohol over several months. It provided immediate relief from my cravings and put me in a state where I was more motivated to focus on doing things positive for myself. I have continued using it regularly to this day, on a daily basis. In 2015 I suffered a back and leg injury that caused chronic inflammation and pain. I had no health insurance. To this day I still maintain a highly active and productive lifestyle thanks to this natural compound. I can manage my pain and stay in a great positive mood at my 60+ hour/week job with no prescription medications or abuse of any other substances like alcohol. Kratom has changed my life literally. I have recommended it to friends and family, some who have adopted it in their lives with great enthusiasm. For me, Kratom is primarily a safe and highly effective pain reliever and aid for any all forms of fatigue.

My name is [REDACTED]. I am a 34 years old. My husband and I have been married 11 years and we have a 9 year old son. My husband is one of the most amazing people I have ever met. He holds multiple

advanced degrees in Physics, Education, and Engineering. He plays 5 instruments, writes music and poetry, has a black belt in Jujitsu, builds furniture, blows glass, makes pottery, loves camping and hiking, and can fix my car. Seven years ago he began suffering from muscle spasms and debilitating migraines. After several MRIs, the doctors found that due to sports injuries sustained as a teen, my husband's shoulder blade and upper spine are wrapped in a mass of scar tissue that can not be operated on. He spent the next 3 years in physical therapy, having injections, and prescribed every painkiller, muscle relaxer and pill his doctors thought might help. Although the medications alleviated pain, they left him just a shadow of his former self. He could not work or participate in activities he enjoyed because his medications made him disoriented and dazed. He became depressed, slept most of the day, lost interest in family, and we ended up in marriage counseling. However 4 years ago a family friend suggested my husband try Kratom and it literally changed our lives. Today along with Kratom, he is prescribed only one medication to prevent migraines and one muscle relaxer that he takes occasionally if he has muscle spasms from too much physical activity. He no longer has to have injections or physical therapy. He works full-time, has been able to return to his hobbies, and even coaches our son's little-league team. Kratom gave my husband his life back and in turn gave me back my husband and my son his father.

My name is [REDACTED] and I am 35 years old and live in [REDACTED], Oregon. I am a [REDACTED] [REDACTED] at the Department of Human Services. I have used kratom for Restless Legs Syndrome and Irritable Bowel Syndrome since 2008. Before finding kratom I tried every prescription drug that is on the market for both of my chronic conditions. Every single medicine I tried was ineffective, or the side effects were so bad I was unable to continue treatment. In fact, the anti-Parkinson's medication my doctor prescribed for my Restless Legs Syndrome actually made my symptoms worse (this is a common side effect called "augmentation").

I am a law-abiding citizen (I had to pass a background check to be employed at my current job), and I respect the law greatly, and one of the main reasons I chose kratom (like the hundreds of other people I have talked to in the kratom community), is because it is LEGAL, and because it does not alter who I am as a person like some of the medications I used to take for my chronic health conditions. It does not impair me, alter my thinking or behavior, or affect my judgment.

The DEA may think it's as simple as choosing not to use kratom anymore if the ban goes into effect. But I have two serious chronic illnesses that have been successfully managed with kratom for more than 8 years now. I can sleep at night and not crash my car when I'm driving because an RLS flare up happens all of a sudden, because my RLS is helped greatly by kratom. I can focus at work because my RLS symptoms are under control. I can not wake up every morning sick to my stomach and throw up every day before I go to work, because my Irritable Bowel Syndrome disappears completely when I take kratom.

What does the DEA expect us to do? They have put us between a rock and a hard place. Most kratom users respect the law like I do, and are not criminals. We don't abuse illegal drugs, most of us don't even drink alcohol or use other prescription drugs. We are moral, ethical people by and large. But we also have chronic illnesses that require treatment, and kratom is the only thing we have found that works. It has given us our lives back. That is why you will find such passion among us. We are literally fighting for our lives.

I am a 54 yr old wife, mother of 4 and grandma to 3. Raised in an abusive home, I went on to an abusive relationship that lasted 4 very long years. I have suffered 31 breaks, including multiple facial trauma, cervical & spinal fractures, seizures, tremors, was in a coma for 9 days from a beating and hospitalized for several days from being stabbed repeatedly. As a result, I had migraines that could not be treated successfully, nerve damage that affects my arms and hands which forced me to leave my job as a hair stylist, was diagnosed with fibro, CFS, a/r. Fifteen years ago I was rear ended by a large van and pushed into oncoming traffic that put me in therapy for over a year, I never re-gained all my movement or strength

and added to my chronic pain. I went from Dr to Dr, to several specialists and each told me there was no hope for recovery and all they could do was try to manage my pain. I have been on Fentanyl, oxycontin, Methotrexate, percocet, percodine, codeine, Tylenol 3, Flexeral, Antivert, Dilantin, Cymbalta, Lyrica and others plus multiple shots of cortizone, steroids and nerve blocks in an effort to relieve my pain. None of them really worked; they either left me sleepy, unable to concentrate, feeling "out of myself" or just plain made me sick. To add insult to injury, I also found myself on other Rx's to combat the side effects of high blood pressure, nausea, IBS, body rash, mouth blisters, blurry vision and more caused by the Rx's meant to help. Then, about 4 years ago I found kratom. To be honest, I didn't expect much but I did want to get off ALL the meds or at least as many as possible. Kratom has changed my life; all by itself. I am clean of any Rx drugs and rely solely on Kratom now and even though I am not 100% pain free, I am 100% chemical free and that alone thrills me. The best part of Kratom is that I control my dosage, how much and when I take it and it is affordable--even though it is not covered by insurance. If Kratom becomes illegal, my life is over. I am happy now, I can sleep almost through the night; most nights anyway and even though I still have to space out my activities, at least now I can still consider going places. Before Kratom, I felt like a home bound prisoner. Please do not take away my only lifeline to family, friends and a future.

My name is [REDACTED] [REDACTED]. I am a 48 year old mom of 6. I used to work in a RCFE and in schools as well as at the juvenile hall! I suffered Herniated discs in lumbar and cervical spine! I also was diagnosed with carpal tunnel syndrome and had the surgery to release the nerves in both hands as well as a rotator cuff surgery. I am unable to do the work I used to do and when taking prescription opioids I developed high blood pressure and other unwanted side effects. Kratom has made it so I have energy and very little pain! I can keep my house clean again and keep up with my two younger children one 13, and the other 10. I don't have to stay in bed any longer during the day and I can be a better parent and spouse to help my husband. I am afraid without Kratom and the vitamins I take, I will go back to the excruciating pain I was in before that opiates don't take care of because you start needing more for them to work! I want to keep being a good Mom and also get a job again and Kratom gave me that hope again! Please don't take this hope away from me and the countless others that take it! I know they are saying negative things about Kratom but I know I have found none of those things to be true. The benefits far outweigh the risks. My blood pressure is now under control and I can live again for years I felt like a useless lump of pain laying in a bed waiting to die and I no longer feel that way. - [REDACTED] [REDACTED], CA

I am a 43 year old woman who was a teller during a bank robbery in 1999. Since that incident, I have suffered extreme anxiety, including panic attacks, and have had too many occasions of being unable to leave my home due to pure terror at the thought of coming into contact with others. I had received prescriptions for Xanax and Seroquel, but hated the numbness and missing days both caused in me. After being introduced to Kratom in tea form (by a very intuitive friend) approximately five (5) years ago, these attacks and bad days are down to maybe two or three a year, rather than being a weekly occurrence. As an additional 'bonus' during this same time period, I have noticed a huge reduction in the pain from menstrual cramps and associated migraines. I fear that if this plant is banned, I will revert to my previous state of pain and fear, and I would like to avoid this at all costs. [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED], FL

I am a 57 year old woman with no kids, who is the sole caretaker of my 87 yr old widowed mom. I was diagnosed at 13 w/double curve scoliosis but since we were Jehovah's Witnesses, bloodless surgery was out of the question. The pain, as I age, takes my breath away. I'm on disability because the damage being done to my nerves from the decompressing vertebrae is amazing! Doctors prescribed vicodin and oxycodone for pain. 13 years of taking it and then they couldn't give me oxycodone anymore so they started making me take oxymorphone. It was the only thing that they would prescribe because I'd gotten used to such a huge opiate load. Last Feb 2016, I'd had enough of driving an hour each way to the pain

clinic to pee in a jar. Enough of the stigma and feeling like a criminal for being on pain meds. I had read about the herb KRATOM and decided to try it. I'm not going to sugarcoat it. Cold turkey was like living in a Hyronomous Bosch painting but I did it with the help of Kratom! I've been off ALL pain meds since, and using Kratom when the pain takes my breath away. I have my life back. I am of use to society and can care for my mom and home, where before I'd just lie in bed all day, and count pills, wondering how I was going to make them last because there were never enough. Pain varies day to day. What works one day might not be enough the next. Or too much! I knew I had to stop. KRATOM gave me my life back. PLEASE DON'T LET THIS HERB BE BANNED!! It would be a mistake unless the aim is to have the pharms get all opiate users addicted to another drug. I only have to use Kratom a few times a week. Please! Just this once? Let it NOT be about the money for the Pharms? Please?

Hello, my name is [REDACTED] [REDACTED]. I am a mother to a blended family with eight children, a grandma to four little ones, a wife, and a full time college student. I also have lupus and degenerative joint and disc disease. I was under a doctor's care for several years, but seemed to just get sicker and sicker. I was to the point I could barely walk, I certainly could not run and play with my children. I was merely dragging myself through the days, trying to make it for my kids--not living, just surviving. As my pain level rose, so did my tolerance for the medications I was prescribed. First it was oxycodone and xanax, then dilaudid and klonopin. But I was not getting any better. If anything I was getting worse. Then I realized I was dependent on the medications, and decided to self-withdraw, with only my husband's and children's support. My husband even tried to convince me that it would be okay to use a suboxone program, and was even willing to take me out of state if necessary, but I refused. I had trusted the medical system and it had failed me. I knew I had to do this on my own. After 14 days of hell that I would wish on no one, I was free of the dependence on the medications, but back to square one with my pain, fatigue, and overall malaise. I began researching for natural alternatives to improve my health and quality of life. That is how I came upon kratom. I decided I had nothing to lose, it was worth a shot. From my first cup of tea made from this precious plant, my life began to improve. I found I could move again, and not that fake energy you get from pharmaceutical painkillers. I slowly started to get stronger, healthier. I could play with my kids again. I could work in the yard. My husband still tried to baby me a bit, but as I got stronger physically, I got stronger mentally and emotionally, and soon he had his tough little woman back. Everything has changed. I have a better life overall. I tossed out the microwave, cook all our food from scratch, try to avoid processed foods (as much as we can afford!), I stopped taking all over the counter medicines, and now only consume safe herbal remedies and alternative medicines that come from nature! God truly has provided us with all that we need; we just have to be willing to take the time and patience to find it! My only bad habit really remaining is that I still smoke, but I went from three packs of mainstream raunchy tobacco to less than a pack of organic tobacco cigarettes a day, and I hope to give those up one day as well. I have had four grandchildren born in this time period since I discovered the benefits of kratom. My oldest two grandchildren are almost two years old (yes, both, one from each oldest grown child!), and they both think Grandma can do anything! I never tire of chasing them through the house, taking them out to swing, or having them help me in the garden. If we go out as a family, I am the one who carries them piggy-back for hours--they are my best little friends! My youngest children are six year old twin boys, and it is the same with them. We were out last weekend playing freeze tag, jumping over their toys in the yard, shrieking and running for base like nobody's business. Please, please, I do not often beg, if ever. But I am damned well begging now. Please do not take this away from me, or from them. I cannot bear the thought of my little ones or my grandbabies reaching for me and me having to tell them Grandma or Moma cannot pick them up. That is absolutely more than I can bear. I do not want to ever let them down. My older children are beginning to forget those dark years of sickness and doctors' offices and Moma laying in bed, exhausted, or crying; it has already begun to fade, and they believe they can count on me for everything once more. My little boys have no memory of that sad, sick broken woman, and my grandbabies never had to meet her, ever! Please, don't re-introduce her now. Thank you.

I am 45 years old and a 27 year veteran of the military. I suffer from chronic back pain (Vertebrae Degeneration). I also suffer from PTSD. I was on an Opioid painkiller for the chronic pain. About 8 months

ago I was searching for a natural alternative to RX pain medicine. I found Kratom and it has worked wonders for me. I have not taken a pain pill since. Before the kratom it was hard to function due to the intense pain, now I can do almost anything with very little pain. After taking the Kratom for a while I noticed the effects of my PTSD were noticeably less. I do not have the anxiety like I use to and my sleep is so much better. I pray they do not ban Kratom. I do NOT want to go back to the chronic pain I suffered and I do not want to go back onto pain medication. I am leading an active life and my quality of life is much better with the Kratom. I have also introduced Kratom to many veteran friends of mine and it has also helped them tremendously! So please keep Kratom legal for those of us who need it.

My name is [REDACTED] [REDACTED], I'm 36 years old, a father of two and one on the way. I am the sole provider for my family.

I was diagnosed with Crohn's disease back in February 2015 after having a large section of my colon surgically removed. In the months leading up to this I was in excruciating pain because my intestines were completely blocked from inflammation caused by what I later learned was crohn's disease.

I still have frequent flare ups that cause me a lot of pain and discomfort. I am prescribed narcotic painkillers to help cope with that. I take them regretfully, when I do take them. I understand the damage they do to the liver with all the acetaminophen. They are highly addictive, I can't focus when I take them and they make you feel miserable.

When I realized that I was actually becoming dependent on prescription painkillers, that's when I started looking for an alternative. I lost a brother to an overdose on prescription pain pills, I've lost several friends as well. We're not talking about your everyday addict either. I'm talking about good hardworking people that had a legit reason for taking the very medications that cost them their lives.

Again, regretfully I still take the pills I'm prescribed when I have a bad flare up. The only reason for that is the cost. I have insurance, so it's a lot cheaper to get a prescription under my insurance that it is to buy Kratom but for someone without insurance, it would be a lot cheaper for them to buy Kratom.

Money aside, my plan was/is to get off the prescription medication all together with Kratom. In the meantime, it has allowed me to take the pain pills a lot less frequently and I have been able to transition from pain pills to Kratom without any side effects. I'm not an addict, never have been, I have to give Kratom a lot of credit there. Without having this amazing plant to fall back on.... who knows. I like to think I'm stronger than that but so was my brother.

Aside from the pain, Kratom has also helped with slowing down spasms in my intestines. When I have these spasms, you can see my abdomen contracting, Kratom seems to slow that down within 20 or 30 minutes after a glass of Kratom tea. It also help with regularity, I hate to go here, but it's an important issue and I think this could really help a lot of people.

My father has also benefited tremendously from Kratom. He is 76 years old and has been on pain pills for about 9 years! Well.... not anymore. He has not had a pain pill in over a month and his withdrawal symptoms have been almost non existent. Before we found Kratom, you couldn't even get him out of bed if he didn't have his pain pills. The symptoms were so bad for him, I couldn't bear watching him go through it! Vomiting, diarrhea, sweats, nausea and then there's the depression! Wow, it was bad. Not anymore. He actually asked me to pick him up and bring him to buy a car!! He hasn't been out of the house in months, let alone had a desire to drive anywhere or do anything.

I have a few other testimonials that I could share with you but for one, they're not mine to tell and two, I am a responsible adult with a family to provide for and a job to go to early in the morning and yet, here I am sitting here at midnight writing this letter to plead with you to help us fight for this amazing tea leaf that provides miraculous relief & benefits for myself and countless others.

My name is [REDACTED] and I am 34 years old. I am a successful business owner and a regular, tax-paying citizen with a great family. Through no fault of my own, I suffered a bad accident and live with the pain every day. I took narcotics for years and had to stop because I realized that they were doing much more harm than good. My family said that I was a different person, and I was. I found Kratom a year ago and it was like a curtain was lifted. It is not a cure for anything, but it's indispensable for me. It simply makes life more manageable for me with less side effects than narcotics. What people who have never had chronic pain before don't understand, is that taking nothing is not an option. If this ban goes through I will have to choose between going back to dangerous pills, living my life in pain again, or keep taking kratom and be labeled a criminal. Just when I finally feel like my life is under control and I am happy again, the very people who are supposed to protect my rights are stripping them from me. I honestly don't feel free anymore. All this ban will do is cause people who have suffered all their lives to suffer even more. People will die because of this, and it is inhumane and immoral. What we need is more information and regulation. Please do not take this choice away from us.

My name is [REDACTED] [REDACTED]. I am a 37 year old and I suffer from sacroiliac dysfunction, degenerative disc disease and have two torn annular fibers in my lower back. The doctors currently can do nothing to heal me and have told me directly that the best they can do for me is keep me "comfortable" by prescribing medication. The surgery that they could do is only 40% effective and could potentially lead to more pain not less. I've had this pain for 4 years now and it's sad to know that it is something I will deal with all my life. Kratom allows me to avoid being a haze all the time due to the Vicodin/tramadol/Lortab and other meds I was prescribed. I can function again. I find that kratom is more effective than any of those pills. If the ban goes through I will be forced to return again to the pain doctors and to have painful injections in my spine. I don't believe they help but they appease the pain doctor so that he feels he is at least trying to take steps outside of just prescribing meds. Truth is they hurt like hell and don't work and sometimes actually do more harm than good as they make me aggressive and I am in pain for weeks after getting them. I will have a life of addiction and pain doctors in my future if this ban goes through.

My name is [REDACTED]. I am 31 years old and have been using kratom daily for the past few years. I have struggled with depression and anxiety for most of my life, and am recovering from past traumatic experiences. I take prescription medication for my symptoms. Though the medication does help somewhat, I remain symptomatic, and kratom is the only thing that has made me feel truly happy and optimistic. It has helped me to become more productive and socially engaged. I was miserable for years prior to incorporating kratom into my lifestyle, and since I began preparing this herbal tea on a daily basis, I have felt happier and more fulfilled than I have in a long time. The great thing about kratom is that it makes you feel good enough to make you want to do OTHER things that make you feel good, like live a full life without fear, worry, self-doubt, misery, or regret. By becoming more socially engaged and productive, depressive symptoms become even less likely. Without kratom, I will be in very real danger of resuming past self-anaesthetizing behavior, including excessive drinking. Obviously, alcohol consumption is NOT conducive to productivity, and problem drinking is not conducive to positive social engagement. I do not wish to return to those dark days, but in the absence of a reliable substitute to treat my symptoms, I fear I will have no choice. I fear I will become chemically dependent again, my life will fall apart, and my health will fail, just as it happened before. I am a college-educated professional trying to start my own business, and I have served my country in the Peace Corps. I am generally a good, kind, responsible person, who is simply in pain. I had limited options for properly dealing with this pain, especially during times when I could not afford health insurance. Even when I can, prescription meds can only do so much. Discovering kratom was nothing short of miraculous to me. After so much trial and error, I found a sustainable way to manage my symptoms, and just as I get my life together, that miracle is being taken away as a result of misinformation. Kratom is not a dangerous drug. It is an incredibly helpful herb with enormous potential to help people with chronic pain, whether physical or mental, live a happier, healthier, better life. Please don't take this miracle away from me and turn me into a criminal with this ban. Kratom gave me my life back, as it has for so many others. For that, it is something to be celebrated, not banned.

My Name is [REDACTED], I am 36 years old, a father of two and one on the way. I've been taking Kratom for over 6 months now. It helps tremendously in relieving the pain associated with crohn's disease. As the pattern goes, I'm prescribed percocet to help manage that pain but I've found that Kratom is a much better alternative.

My name is [REDACTED]. I am a veteran of foreign wars, have been employed in the engineering field for 37 years, and now retired at age 65. My aging process has brought on chronic arteritis - causing me to have to rely on aspirin and other NSAID pain medications related to causing heart problems and or gastric problems if taken for too long. While looking for alternative pain medication, I ran across Kratom. Kratom has given me the ability to function most of the day, basically pain free while taking care of the day's work/tasks. Taking the right amount of Kratom to relieve the pain has an effect of taking approximately (2) cups of coffee, and that's it! Would hate to have to revert to the more dangerous pain medications!

[REDACTED] TESTIMONY - I am the face of a chronic pain sufferer. In 2001 I was diagnosed with Fibromyalgia and immediately placed on the pharmaceutical superhighway. With each new side effect of a previously prescribed drug, I was given yet another drug to take. After being on the strongest pain med available (fentanyl patch) along with antidepressants, muscle relaxants, and various other meds I had finally had enough. No person should have to live their life around the schedule of taking 15 different medications! So I decided to go a more holistic route and discovered a miracle herb called Kratom. With this wonderful plant I was able to wean off many of the prescriptions, therefore reducing the many side effects of those drugs. In addition, my quality of life improved tremendously. I was able to get out of bed, take a shower, go to the grocery store, cook dinner and visit with family and friends. I also no longer had to depend on alcohol to self medicate what pain the pharmaceutical drugs didn't touch. Using this God given natural medication allowed me to focus again on something other than my pain. It gave me energy where before I had none. And I began to live life again. Now the government intends to ban Kratom turning all those benefiting from its healing powers into criminals overnight! Well I say no more! Where are my unalienable rights that are guaranteed in the Declaration of Independence upon which the government is supposed to protect? Why don't I have the right to pursue happiness? Where is my liberty, my FREEDOM TO CHOOSE? It should be illegal to criminalize nature! We Americans should not be mere pawns in the DEA and big pharma's game of chess. Many chronic pain sufferers will have no choice but to be bedridden again. Many will go back to being drug addicts as well. Not by choice, but by necessity. If Kratom does indeed become illegal, some of us will not even survive. I know of many military vets whose lives have been saved due to Kratom. Those who fought for our freedom, why is our government now taking away theirs? And mine. I don't want to go back to that place, that place of being a non-functioning, unproductive, bedridden sick person, instead of the vibrant person I've become thanks to Kratom. It is not a road I want to go down again. When the greed of our government overrules quality of life there is no justice and all is lost. When you can't live life free from pain by using what nature provides, so others can line their own pockets, there is no freedom, only pain.

My name is [REDACTED], and I'd like to share a little bit about the role kratom plays in my life. I am a 44 year old educator for a world renowned science institution, an artist, and a father and husband. I consider myself to be an upstanding citizen and a positive contributor to our society. For the past 25 years I have struggled with a variety of mental illnesses including Major depression, Generalized anxiety disorder, Panic disorder without agoraphobia, and alcohol abuse disorder. The symptoms of these conditions are sometimes debilitating. Even on a good day I am operating at 40% of my potential capacity. Through some miracle, I have managed my life despite these challenges but, once again, not to the best of my ability. I discovered kratom 2 years ago, and the transformation has been almost unbelievable. I have tried so many different medications. Antidepressants, anxiolytics, mood stabilizers and antiepileptics. I

have taken part in CBT, MBCBT, DBT, group therapies, and twelve step programs. All of these traditional therapies have been effective in one way or another but none alone, or in combination has provided complete relief, and the medications come with assorted side effects that are, sometimes, worse than the conditions they are meant to treat. I turned to alcohol for temporary relief and quickly descended into active alcoholism. After hospitalization and rehab, I have managed to achieve and maintain sobriety for 7 years but that comes with challenges of its own. Kratom, a simple leaf from southeast asia, has completely changed the quality of my life. Not only has it caused almost complete abatement of my symptoms (I'd put my function at 90% as of this moment, it is after all not a complete panacea) but promoted wellness in other areas of my life too numerous to detail here. I am a better father and a better husband, a better teacher, a better contributor to society as a result of this leaf and, finally, I have found contentment that I once thought impossible. All of these changes have come with nearly zero unwanted side effects. I consider this a gift from god, this leaf. Created as a benevolent aid to a life of wellness. It is no mystery to me that Buddhists consider this plant sacred and use it as an aid themselves. To take this gift from we Americans who through its assistance have found broken lives and bodies made whole again would be, in my opinion, an act of violence against god and nature. A destructive act that would cause irreparable harm to those who use this botanical. The results would be a return to sickness, addiction, and detrimental effects on the economy through loss of jobs and income and the added strain on the American health care system. People will die as a result of the DEA's rash and unconstitutional actions. This my perspective and this is my story. I thank you for listening and beg you to consider these words and those of the others who join me in sharing them. May god have mercy on our souls.

Hello, my name is [REDACTED]. I'm 49 years old, and have been drinking Kratom for 6 years. I spent all of my career with the exception of the last 5 years, working as an automotive painter. I'm currently an internationally published commercial photographer, having had my images published in The Grammy's Program, NBA Finals Program, Major League Baseball All-Star Game Program, and Paula Deen Magazine, just to name a few. Having crawled around on my knees on concrete floors in body shops for the better part of 30 years, and the last 5 years, spending long days on my feet and carrying heavy gear all day, I now suffer from chronic knee and lower back pain. The pain is so intense that standing up in the middle of the night to walk the bathroom is excruciating. My doctor has tried prescribing different mild pain relievers (I won't take the heavy narcotics, because I refuse to get addicted to them), and nothing has even remotely helped. Then I was introduced to Kratom Tea by a friend who was in a similar situation due to intense pain. Since that evening, my life has been changed. Now I can exercise again, run with my dogs at the park, ride my bicycle, bowl, and an entire host of other things that I thought I would never be able to enjoy again!! I'm even going out with my camera to shoot landscapes and bands, just for fun. I'm so excited because photography has been my passion since the 8th grade, but the intense pain, turned into a miserable day at work! Kratom Tea has saved my life, and made it a life worth "living" again!!!

Hundreds of thousands of people are experiencing this every day due to this amazing plant, with no side effects. Please don't take that away from us. There's nothing wrong with Kratom, and there's no reason Kratom cannot exist alongside the poisons provided by pharmaceutical companies. A lot of good people will suffer, and those fighting addiction using Kratom may even die, and for what? So big companies get richer than they already are? When do "We the People" start to matter again?!! How much money is enough? It's time for someone to step up and tell the pharmaceutical companies that they refuse to be bought out, and what they want isn't good for the people of our great nation. Everyone on these pages are begging you to "Please stop this ridiculous ban on Kratom!!" Our quality of life is in your hands, don't let us down!!!!

[REDACTED] in Florida

Hello, my name is [REDACTED]. I'm 49 years old and have been taking Kratom for 2 years. I broke my back when I was 19 years old. Two back surgeries. I managed without anything for about 10 years and then felt I needed something to deal with the pain. I went back to orthopedic and they suggested another

surgery. I couldn't deal with another surgery. They sent me to their pain management doctor. I really didn't know what I was getting into but trusted the doctor had my best interest. Was prescribed hydrocodone. I said wow, I think I can deal with the pain now. Well like a lot of people, all the doctor gave me was an addiction that would define the next 15 years of my life. In the end I turned into an animal an eventually turned to heroin. Then went to treatment inpatient. Detoxed but still couldn't deal with the pain and turned back to pain pills. I then found suboxone, thought this was the answer. Just another trap. Finally found Kratom! I was able to get off the suboxone and I take a total of 2 teaspoons a day of Kratom. My life is totally transformed. Now you're trying to take that away from me. I really don't know what I'm going to do if this happens. I can't go back to that other life, I will die for sure. Anything that can keep Kratom available I am all in!! I was able to save a marriage of 28 years, I have two grown children and hope to see my grandchildren grow up. Kratom works!!

Hello my name is [REDACTED] and after a serious car accident I was prescribed Vicodin. It didn't take long to go from 2 a day to 2 an hour. Once my doctor stopped prescribing them to me, I was hooked and needed to continue my habit. I switched to buying them illegally for two years. I lost everything because the pills were my only focus. Not family, not work, not anything. When I finally decided to kick the habit, I was told about kratom. I believe without Kratom, I would be dead right now. It not only manages the constant pain I still have because of my accident, but I am no longer a slave to the pills.

My name is [REDACTED]. I am 39 years old. I am a mother of two. I teach martial arts and am currently in a program to receive my certification in personal training. I love playing sports and am extremely athletic. In the past two years I have had to have three surgeries from injuries I have sustained from my extremely active lifestyle. As a result of my many injuries, I have arthritis and bones spurs in my knees. I wake up every morning barely able to walk. I drink my kratom tea in the morning and I am able to walk pain free and am able to live the quality of life we all deserve. I have no desire to be prescribed pain medication.

My name is [REDACTED] and this is how kratom has changed my life. In 2008 at the age of 30 I was told I had a giant Tarlov cyst. I had a spinal surgery to try to drain my cyst that was on my spine in my sacral area, this did not work and I developed a spinal fluid leak. Again I went for surgery to stop the leaking, again no luck. I then was transferred to a third surgery three hours away. This did fix my leaking but unfortunately I had leaked too long and ended up with another very painful condition called Adhesive Arachnoiditis. This condition causes me pain to the point where I can't sit on my tailbone very long at all, which left me in bed almost 24/7. I was prescribed fentanyl and was miserable on it for 7 yrs. I was foggy and not aware of what I was doing while on that medicine. I met a special lady who told me about Kratom and what good it was doing for her. I started slow and read a lot. I found myself, that it was changing so many lives of my friends. I too became brave enough to attempt to come off the fentanyl. Today one year later I'm off fentanyl and out of bed. I'm clear minded and actually have times that I'm out of bed by 50% out of my day. I'm more stable than I have been in eight years. PLEASE Don't make kratom a schedule 1 herb. I would like to keep getting the most out of life naturally. Thanks for reading [REDACTED] [REDACTED]

My name is [REDACTED]. I'm 31 years old. I've been a regular consumer of Kratom for about a year and a half now. My main reason for using the plant is to combat consistent depression that has been affecting me for much of my adult life. I also have been addicted to opiates in the past (from about 2006-2015 off an on) and Kratom helped me get off of them and live a normal life. I do not have cravings for opiates, and it provides me with a little bit of energy, mood-lift, and motivation--much in the same way coffee does, without the edge. I make tea out of the powdered leaves. I do not get "high" off of Kratom. I am an average working class American who uses an herbal supplement because it helps me with very few side effects. Antidepressants have not helped me. If this is taken away from me, I am extremely worried about my mental health, in addition to the possibility I might relapse back into opiate addiction. I am extremely

upset that I have to justify my usage of tea to my government, especially when the reasoning was factually skewed and done without public comment or research. It feels like a violation of my god-given right to help myself live a normal productive life, with a plant that has shown to be extremely effective and safe.

██████████ ██████████ ██████████, NC

I am a 32-year-old female who works as an Assistant Professor at a state university. About a year ago, I was crossing the street as a pedestrian and was struck by a car travelling approximately 25 miles per hour. The accident resulted in serious soft tissue damage to my knees and back, including several herniated discs in my cervical, thoracic, and lumbar spine. The cervical disc herniations caused compression of my spinal nerves in the neck area. These injuries resulted in weakness, numbness, and sometimes debilitating bouts of pain. My back pain has been so significant as to force me to spend huge portions of my life on the couch and to prevent me from eating normally due to the excruciating pain associated with even minor movements such as opening and closing the jaw. Without forming an addiction, I have used kratom as an effective pain treatment for these symptoms, one that is less harmful, in a number of dimensions, than the prescription pain medication I have also been intermittently prescribed. I am concerned that this step by the DEA would either lead to more individuals with reduced quality of life due to chronic and significant pain or to reduced quality of life due to addiction to prescription pain medication. In the latter case, people also risk side effects, including death, associated with prescription pain medication as well as the social and medical consequences associated with maintaining an addiction.

My name is ██████████. I am a 58 year old male. Kratom stopped me from drinking. I got much healthier with kratom. Now I have to go back to alcohol which is much worse. The DEA's decision will cause the deaths of thousands and will cause great human suffering.

My name is ██████████. I am a married father of three school age children. I am former NYC firefighter. I am a collapse survivor of both towers on 9/11/01. I suffer from PTSD due to my experiences and efforts on 9/11 and during the rescue and recovery in the aftermath. I have been prescribed anti anxiety and anti depression medications which I do not feel are helpful. I also DO NOT like to take prescription meds of this or ANY type. I Do NOT take illegal substances or drugs. I DO NOT drink alcohol. I DO NOT seek any type of "high or euphoria". That is NOT what Kratom is. That is NOT what Kratom does. I use Kratom as a tea or with orange juice. I find it helps relieve PTSD symptoms. It does not erase these extreme symptoms but helps to make them more manageable and less debilitating and this helps me to lead a life that is more manageable and fulfilling. The proposed Kratom ban is an unfair rush to judgement based on a total mischaracterization and misunderstanding of this natural herbal supplement that is being used to help so many people. A Ban like this will surely make my life much more difficult and my daily struggle to manage symptoms much more debilitating. My life will certainly become infinitely more difficult. Why would the DEA or the Government rush to judgement on this based on what can only be described as a lack of information and research. This is an unjustifiable overreach and an unfair rush to judgment that will surely impact many good people in a very drastic and negative way. Good people are trying very hard to manage their illnesses and conditions and this Kratom Ban will surely increase their suffering. Isn't that exactly the opposite of what the mission should be? Please take a closer look at this before letting this ban go into effect.

My name is ██████████ ██████████, I am a 30 year old mother of 2. I suffer from chronic back pain due to DDD and sciatica, anxiety and depression. I began consuming kratom on day 7 of opiate withdrawal from Dr prescribed opiates. When they stopped working and I asked for something different I was immediately cut off and fired as a patient. He has since quit practicing. I found kratom and it helped me get through the worse of the withdrawals. I continue to use it for my many diagnoses. I have found a quality of life I never

knew existed. I am not high. I am not impaired. I am terrified of going back to opiates, anti anxiety meds and antidepressants. I will likely be bed ridden most days with a feeling of dread for each day. My anxiety was debilitating even on benzos .What will become of my children mother? What will become of me?

My name is [REDACTED] and I have used kratom for anxiety, depression, and fibromyalgia. It has eased my issues in a natural way without the need of prescription drugs which cause even worse issues in themselves! We deserve a natural option to treat our health issues. Please help keep kratom legal and help the states where it's been banned make it legal again !

My name is [REDACTED], I am a mother, wife and a systems engineer. I have worked since college (a Bachelors in Computer Science) and have never been a burden on anyone. I don't smoke or drink, nor have i ever done illicit drugs and never looked for a high or any kind of euphoria. I suffer from painful injuries sustained from my days riding horses and competing in jumping events. I also fell down some hardwood stairs when i was pregnant, and to save my baby, i took the brunt of the impact in my back. I have also suffered PTSD and depression from a childhood trauma. I have taken regular pharmaceuticals prescribed to me without much effect, and with terrible side-effects. I discovered Kratom 3 years ago via a herbalist and I have never looked back since. This plant has given me back my quality of life that every person has a right to live. This proposed ban is cutting a lifeline for so many people, this does not suggest an agency working for the benefit of the people, but very much against them.

My name is [REDACTED]. I'm an award-winning author and a grandmother. I am also bipolar, so using common pharmaceuticals is not an option for me. Any prescription med that warns of mood changes or suicidal thoughts is like kryptonite and dangerous for me, so I must use alternative medicines for most things. I deal with chronic pain from fibromyalgia and a back injury, and opiates are not an option, either. Kratom has been a godsend! Not only does it help with the chronic pain, it helps me sleep and helps me moderate my moods. Placing Kratom on the Schedule 1 list will diminish the quality of my life by an order of magnitude. Please, reconsider and don't make me into a criminal for using a substance that God made.

My name is [REDACTED] [REDACTED], I am a 36 year old male from Kansas. 10 years ago I had a major knee operation which did not go well and never healed properly. During this span of knee surgeries, doctors gave me thousands of painkillers without a 2nd thought. I became addicted, to the point where i was buying them on the street once i was cut off. The day i found Kratom was a beautiful day and allowed me to turn my life around. On top of that, my sister was an even worse case and Kratom truly saved her life. Do not let them stomp on our liberties, this plant should be revered, not banned. It saves lives and allowed my family to go back to normalcy.

My name is [REDACTED] and I suffer from chronic Lyme disease. Before kratom I was in pain all the time. Kratom gave me the ability to start living my life again. Prescription pain medicine didn't even help the pain. If kratom is banned I don't know how I will make it sometimes the pain is unbearable. I don't want to feel like that again.

My name is [REDACTED]. Herniated & ruptured discs, degenerative disc disease, unsuccessful surgeries, Fibromyalgia, anxieties and depression brought on by these illnesses, opiates and other prescription drugs, and the guilt and failure I feel as a mother have all robbed me of any quality of life for the past 20 yrs. Earlier this year I was blessed to have found Kratom. With Kratom I have been able to stop all medications. I am able to live free of my round the clock pain, able to know what sleep is like again, able to function a more normal life on a daily basis, every single day! Most importantly I am free of the guilty

feelings of failing my children. Kratom has given me a true quality of life back. I now fear I will have to live the rest of my life as I have for those 20 yrs past, I deserve to live free of that pain but without Kratom it just doesn't seem possible.

name is [REDACTED] [REDACTED]. I'm a 51 year old former RN. Former due in large part to fibromyalgia, which was diagnosed in 1996, becoming increasingly worse over the last 20 years. I also have osteoarthritis (diagnosed 1996 as well), sciatica, anxiety and depression. Over the last 20 years I have been prescribed a multitude of medications. Some worked ok-briefly, some a little, some not at all. They all had a boatload of bad side effects. I began managing my symptoms with kratom about two years ago after an RN friend of mine recommended it to me. Much to my surprise it provided more relief than any of the pharmaceuticals I have tried, with minimal side effects. Really the ONLY side effect I have is constipation, which is easily managed. I experience NO high or foggy feeling. I can manage my symptoms with kratom well enough to allow me to care for my aging parents. Without kratom (which my mother also takes for severe arthritis) I am scared to death of how I will be able to care for them. Yes, I probably could get a Norco prescription again, however I would rather not. To avoid dependence on Norco I only took it a few times a week at most, waiting until my pain was severe enough to be in tears. I do not want to return to that existence. That is no way to live.

My name is [REDACTED]. I am a 38 year old wife, mother and small business owner. I suffer from chronic headaches including Episodic Paroxysmal Hemicrania, back pain from herniated discs, an annular tear and pinched nerves, and debilitating abdominal pain from IBS. I have been to countless doctors who have prescribed about 50 different medications, and none of them have really helped but several of them have caused terrible side effects. I would sit in the office of a pain clinic for 3 hours only to be prescribed narcotic painkillers that left me feeling high and nauseous, and seriously clouded my thinking. I discovered kratom about a year ago when someone suggested it as a natural alternative to prescription drugs. I did some research first and was unable to find anything that indicated that it was dangerous, so I tried it. I was skeptical but when I tried it I was amazed - it made the pain tolerable without making me feel high, and if I didn't take it I didn't experience any withdrawal symptoms. I was especially pleased with how it worked for my IBS. The cramping stopped, and I became "regular" again and was finally able to eat normally. I also became much happier because I was able to run my business and spend time with my family without being in constant pain or just feeling too sick to function. If this ban goes through I don't know what I'll do. Kratom has allowed me to stop all 5 of the drugs I was taking daily (some to treat the side effects of others), and now I can't bear the thought of going back to prescription pain meds.

My name is [REDACTED] [REDACTED]. I am a 46 year old industrial maintenance technician for over 26 years. I have suffered from degenerative joint disease for over 8 years in my hips, knees and lower back. I was prescribed percocets and fentanyl patches for my pain for 6 years. I became severely addicted to synthetic opiates because of this. I hated the fact that I had to depend on these opiates just to function and work everyday. I found kratom 9 months ago, after doing research for natural pain relief. I cannot thank the discovery of this plant enough for giving me my life back, free of opiates and being able to have a clear mind. This plant has honestly saved my life. A plant that can relieve pain like kratom does and breaks the cycle of opiates abuse when I thought I would never be able to get off them, should be kept available to us. This plant has honestly gave me my life back, even though I still have the DJD, I can function, with a clear mind and enjoy life again.

My name is [REDACTED] [REDACTED]. I am 36 years old, a mother, & a wife, & a small business owner. I also have endometriosis, herniated disks in my back, & hip dysplasia. My whole life all I ever wanted was to be a mother. Only 2 years ago I was practically bed ridden & was told by several doctors I should start preparing for back surgery. I had to take my new baby to doctor's office after doctor's office and he watched as I was prescribed pill after pill. 11 medications in total including several narcotics specifically

100 percocets a month. This was no life. And I was not the mother I wanted to be. I was in pain but in so much of a fog that I just wanted to sleep. I was riddled with guilt every single time I opened a pill bottle and my son had to watch while mommy took her medicine. I was hopeless, depressed, and fighting anxiety because I felt so stuck. Don't worry they gave me a pill for that too. I stumbled upon kratom after trying to find an alternative to the harmful medications I was taking. I was interested because it is 100% natural & had been around for centuries with no reported deaths or overdoses and no real side effects. Especially in comparison to the chemical cocktail I got filled at the pharmacy every month. I felt like I found a miracle. And it truly is a miracle that this plant just grows on the earth and can & has helped so many people. Now my life is mine again. Mine and my son's and my family's. I was able to begin taking yoga classes and started seeing a chiropractor. No surgery. No pills. I haven't taken so much as a Tylenol in over a year. I can play with my little boy and make plans for the future because we are all healthy now. When I think that I might have to go back to that life on the couch riddled with pills and hopelessness it is too much to bare.

Please do not make kratom a schedule 1 drug. Please just learn the truth about what it is and what it is not. It is not an opiate. It is not a dangerous chemical. It is a plant. A natural miracle. And we kratom users are not addicts. We are mothers and fathers. Husbands and wives. We are teachers and nurses and small business owners who don't wish to be heavily medicated by the prescription drugs that are poisoning our country. Please make your decision based on facts and science not media hype and misinformation. Thank you very much for your time. Sincerely, [REDACTED]

My name is [REDACTED]. I discovered Kratom 3 years ago when my back pain got really out of hand. I was literally spending most of my days in bed because the pain got so bad I couldn't function. I have 3 children so I had to look for a way to control the pain without the side effects from opiates that would leave me sleeping more than being awake. I discovered kratom. I did a lot of research before ever taking a pill. I wanted to make sure it was safe for me. So after my research I was comfortable enough to order some and try it. It starting working on the pain for day 1. It gave me energy and made me feel so much better. 3 years later I am now back to working and raising my children like I was before my back took me down. I have scoliosis and sciatica. The pain would get so pain I couldn't even stand and now I work as a housekeeper at a hotel. Kratom gave me my life back. Opiates always left me in a haze and I couldn't raise my children feeling high all the time. I also feared taking opiates because I didn't want to get addicted so I am so thankful for Kratom and I know many many more feel the same way. Stop trying to ban a coffee plant and focus on the prescription drugs that are the real problem. Please stop the ban!

Sincerely
[REDACTED]

My name is [REDACTED]. I was diagnosed with fibromyalgia and chronic fatigue around 15 years ago. I also have some neurological problems, including chronic migraines and restless leg syndrome and have spent more than my fair share of sleepless nights. I also had pneumonia several years ago that left me with scar tissue in one of my lungs. It burns every now and then and is quite painful at times. All of this has severely impacted my ability to work full time, which I haven't done in 12 years.

I've been put on many pharmaceutical medications over the years, including Neurontin, Cymbalta and Vicodin, which all helped ease my pain, but turned me into unemotional zombie. I cannot take NSAIDS due to another medical condition and I don't take pain killers unless I'm really hurting. But since taking kratom I haven't had to. I also suffer from depression and anxiety and the Cymbalta, which helped the fibro pain, really wasn't addressing the depression/anxiety issues, even though it's supposed to. So I started looking at alternative options, including botanicals.

I learned about kratom nearly seven years ago and decided to give it a try. It has been a godsend for me. Not many people were talking about it when I first started taking it, but all I knew was that it helped me not

only to be free of pain, but it also gave me enough energy to be productive and get through my day. I found that after 10 years of sleepless nights, I could get a decent night's sleep.

I don't consider myself a drug addict. I'm a 61 year old woman who suffers from pain. Kratom doesn't get a person high and you can't overdose on it (you will get sick if you take too much). I do not want to become a slave to opiates. I'd rather be in pain, but I honestly don't know what's going to happen to me and so many others if this ban takes place.

Hi, I'm [REDACTED]. A senior citizen, wife, mother, and grandma. I have suffered a non-cancerous brain tumor, which left me deaf in one ear 17 years ago and caused other cranial nerve issues to set in. I have Hashimoto's autoimmune thyroiditis, trigeminal neuralgia (one of the so-called "suicide diseases" due to the extreme pain it causes), herniated discs in neck, daily migraine for 32 years, spinal stenosis, generalized anxiety disorder, and end-stage neurological Lyme disease diagnosed last year but likely acquired at least 25 years ago. I have been on many medications for the above conditions, all legally prescribed and taken as the doctors ordered. I use no alcohol or illegal drugs and seek no highs from medication---only relief from symptoms. A year ago, I learned about Kratom and tried it, since RXs provide me such limited help. I have found Kratom to be wonderfully beneficial in remediating many of the terrible effects of the conditions I am faced with. It helps lessen my pain and makes my days and tasks far easier to manage. My life without Kratom will be difficult to bear. Please reconsider any proposed ban. Thank you.

My Name is [REDACTED] [REDACTED]. I am a 10 year veteran of the United States Navy and I have used Kratom occasionally over the past 4 years to manage symptoms of anxiety and depression. I chose to take kratom as a natural and more therapeutic option and have had great success in using it. I did not like the prescription anti-depressants given to me because I had adverse reactions to 3 different ones I've been prescribed and it was effecting my daily life. With Kratom I have been able to function as a normal member of society. I feel like kratom is just therapeutic enough to take the edge of. I cannot fathom the reasoning behind an all out ban on this tea leaf and implore you to reconsider and think of the thousands of people this will adversely affect. I live my life with integrity and I am certainly not a criminal. Thank you.

My name is [REDACTED] and I am a 36 year old computer programmer working for a startup in California. I am also a veteran of the US army infantry, having served twelve years and multiple combat tours. I have been diagnosed with chronic PTSD and other conditions which cause chronic pain in my back and knees and hands. The VA put me on many different pharmaceutical prescriptions to manage my PTSD symptoms, and opiate painkillers to manage my chronic pain. But as a computer programmer, it became virtually impossible to do my job on all of these medications. They also didn't work very well to fight my symptoms. There was a time in my life after I got out of the military where I couldn't leave the house. My life was in shambles, even with the medication. I started researching alternatives and found Kratom, a plant from Indonesia in the same family as the coffee tree. After talking it over with my VA doc, I decided to try it. Within a couple of hours of trying Kratom for the first time, my back pain was nearly gone. Over the next few weeks, I also discovered that Kratom helped tremendously with the anxiety and depression of PTSD. I was able to return to work, even starting my own business. I would say that nowadays, thanks to Kratom, I am just a regular person. I provide for my family, I am active in their lives again, and I work full time. When I take Kratom, I pay my taxes.

My name is [REDACTED] and I am a 36 year old Security Engineer from [REDACTED], WA. In 2012 I was diagnosed with cervical cancer and after 3 surgeries I was left with chronic pain which left me bedridden most days. The doctors provided me with all types of pain killers which still left me bedridden and unable to work due to their side effects. I would be slightly out of pain, but be too "high" to function. In 2013 I was introduced to Kratom by a friend who was utilizing it for her fibromyalgia. I tried it soon after and was amazed at its effectiveness. I was pain free, had some energy and it did not have the "high" that narcotic

pain pills have. I have been using Kratom ever since and it has given me my life back. I am now working which I could not do before, I am able to fully function which I also could not do before.

Not long after I tried Kratom I began reading what could only be described as propaganda against Kratom on different media outlets. There were misconceptions that Kratom was the new pain killer stronger than Morphine that cause relapses in opiate abusers. There were reports of deaths, however they were not proven to be caused by Kratom, just anecdotal evidence stating Kratom was the cause. For example there was recently a death attributed to Kratom by a mother who's son had committed suicide and she blamed it on Kratom since she found empty packets in his room. The young man was also on a mire of anti-depressants which are known to cause suicidal thoughts in young people. Correlation is not causation and I have not seen one credible death linked to Kratom where the cause of death was proven to actually be Kratom. I would like to also mention that while 15 deaths have been erroneously linked to Kratom, Four deaths in the UK and up to 60 worldwide have recently been directly attributed to the substance 2,4-dinitrophenol (DNP), an industrial chemical that has become popular among people wanting to lose weight, including bodybuilders and people with eating disorders, however this is not on an emergency list for Scheduling. The DEA notice also attributes over 600 calls to poison control, however to put that in perspective poison control received 4201 calls in regards to energy drinks and caffeine in 2013 alone.

Current peer reviewed studies on Kratom and its constituents have shown that Kratom has no acute toxicity, displays powerful antioxidant and antibacterial properties, assists with drug and alcohol withdrawal symptoms, contains several oxindole alkaloids which have exhibited potent immunomodulatory properties, and even contains constituents that have exhibited anti-cancer properties! A brief search in any scholarly database will present many peer reviewed studies and clinical trials that can attest to the medical potential of this plant. In short, Kratom does not present a significant threat to human health or safety on any level and does not belong in Schedule 1, period.

If Kratom does end up on Schedule 1, even temporarily, we will never be able to research this natural plant as a medicine because as we all know once this has been put on Schedule 1, it's not coming off. Marijuana is a great example. Adding it will make it almost impossible to do the research necessary to show the medicinal benefits. Kratom has been used for hundreds of years in Thailand and is currently banned, but Kratom, also known as Thang, Thom, and Biak, was not originally banned because of substance abuse. When the Thai government started levying taxes from users and shops involved in the opium trade many users switched to Kratom to manage their withdrawal symptoms. The Greater East Asia War in 1942 and declining revenues from the opium trade eventually suppressed the opium market competition by making Kratom illegal. Thailand is now looking to legalize Kratom once again as people have been using this for thousands of years with no cases of overdose, psychosis, murder, violent crime. Never in all of recorded history.

Not to mention this plant is saving lives. People that were addicted to opiates are being helped by it and getting their life back. That is not because Kratom is the same as opiates, because it isn't. It doesn't get you high, it takes away the withdrawal symptoms associated with strong opiate pain killers. Kratom was something they could use to manage their disease on their own time. It was easily accessible and affordable unlike the other options such as Methadone or Suboxone which is hard to get on a program if you don't have insurance or can't afford the drug. Now, with the DEA taking away that option I'm afraid people are going to go back to whatever they were doing before causing the death toll will skyrocket. If you want to save lives and keep people safe as you claim, you will keep Kratom legal.

I do understand there should be some regulations concerning Kratom, such as the "extracts" and "drinks" that people have made and added other known or unknown chemicals. These should be regulated, but I would ask that whole leaf remain obtainable.

In closing I would kindly ask you to please don't take my life away again. I am a mother of 4 who has to work full time to support her family and I am unable to manage my pain effectively in other ways. Me and

hundreds of thousands of others are begging you to reconsider this decision and look at both sides of this situation, not just the unproven fear driven side.

Sincerely,

██████████

My name is ██████████ ██████████. I am here to say that as a 64 year old woman I never thought that I would take something like Kratom. After many decades of pain due to spinal stenosis and fibro and trying all that the doctor's told me to try; pain pills, antidepressants, spinal blocks, physical therapy, I finally just didn't use anything for years because none of those things worked and why should I spend money on something that didn't work and could potentially make me an addict or worse. So after going another decade just getting by because of constant pain and fatigue and after much, and I mean much, research and encouragement from family I tried Kratom. I could not believe how much relief I had almost immediately. Now I don't take it on a daily basis, but when I am really in pain or having a flare I know that I can get relief and that is a life changer for me. In fact, a couple of weeks ago, my daughter and granddaughter wanted to go see a cave because granddaughter had never been in one. Well, I took the Kratom that morning with some orange juice and for the first time in a very very long time, I walked for over an hour down stairs, and ramps and uneven ground in a cave. Yea, I might have a life back to enjoy with the grandkids.

That was what i thought before the DEA published their intent to ban Kratom and make it a Schedule I drug. This is so wrong for so many. I hope you will take this as serious as those of us who have gotten our lives back and are functioning, stable, contributing members of society.

My name is ██████████ ██████████ and I am a mother of a 2 and a 3 year old, working at a bank and going to school full time for computer science. I was in a hit and run with a drunk driver, while I was pregnant with our son. Because of that crash, my son was born over a month early. I suffered broken ribs and many other injuries, including physical and many emotional. I couldn't function as a part of my family. With the pain and PTSD, I couldn't take care of my children, I couldn't have a relationship with my friends, or with my fiancé. I lived in bed, in pain, until I was on enough prescription meds, prescribed by my doctor, to kill me. Which it nearly did. The meds only worsened my anxiety, my depression and barely worked for the pain. I thought I would be better off dead and no longer just a burden to my family. I was on (and completely addicted to) several anti-depressants, anxiety and pain meds. I had no quality of life. No way to hold down a job, school, or anything else. Finding kratom literally saved my life. I was able to get off all of the medications. My anxiety, depression, insomnia, were all gone but most importantly the severe debilitating physical pain. Was gone. I am able to function as a productive part of society, hold down a job, my family and go to school. Without kratom, none of this will be possible for me any longer. I am able to play with and take care of my kids. And contribute to my family. I feel like I am actually worth something. And I am terrified of what will happen to me, if kratom is banned. It is definitely life or death for me. Thanks for reading.

I am a registered nurse of 17 years with a bachelor degree, working on a master's. I am also a "Kratom consumer". Years ago I had a series of back injuries from lifting patients. This led to an autoimmune disorder called Ankylosing Spondylitis. A disorder that primarily attacks the spine. I have worked in various departments, from OB to ICU.

Caring for thousands of patients over the years. I tried every therapy available, from pain medication and injections, to acupuncture and herbal remedies. Nothing helped. I found myself no longer able to do my job effectively. And have had to since take a "desk job" reviewing charts. I still suffered immensely despite the biologic therapy (Humira, Remicade, and now Cosentyx) and as of last year was seriously looking into disability. Which would make me no longer a continuing member of society, and a financial burden to

taxpayers. But last year I was introduced to an herb called Kratom.

I researched the plant extensively before even attempting to try it. I am personally against any recreational use of any substance and to this day have never tried a single illegal drug, even when I was young. After my research, I tried it. I found not only did it help with my pain, but I could think clearer and function better than I had in years! The worst side effect was constipation. I was able to wean off of prescribed opiates, which did help with pain but made it impossible to do my job. And as a nurse, I can not have any mind altering substances in my system while caring for patients. Since Kratom doesn't cause the drowsiness or alter my thinking process like opiates, I am now able to work better than I ever did before.

I have several other agendas. The first being that I have family that depends on this herb to function. One with an autoimmune disorder similar to mine, and several others with back injuries as a result of construction jobs and motor vehicle accidents. All have said that they cannot function well without Kratom. Not because of a dependency, but because of pain. And these are hard working individuals that have tried every other means available, including surgery and various medications. The other agenda I have, is I lost my spouse to suicide when he could not get the pain relief that was so desperately needed. We have insurance and he literally spent years trying every treatment and medication available to no avail. He despised drug use and never took illegal drugs in his life, and rarely took prescriptions. I often wonder if this herb could have saved his life. He was disabled for our entire 10 years of marriage and leaves behind a 9 year old daughter.

I'm a married 30 yr 4-year college educated, stay at home mom to 3 intelligent, healthy children. Some 10 years ago I was prescribed opiate painkillers for a chronic condition, Interstitial Cystitis (diagnosed via instillation and cystoscopy). I became physically dependent on the narcotic pain relief prescribed to me. When those became unavailable, my drug abusing husband introduced me to heroin to ward off withdrawal. I used that for a short duration, until I found out I was pregnant. I immediately told my OBGYN of the situation, and not wanting to risk a miscarriage from withdrawal, she placed me in a methadone clinic. There I stayed for 8 long encumbered years. I was a model patient; however, I became frustrated given that the dependency that led to my placement in the program lasted only a month. The clinic itself did nothing in terms of advocating for me to wean myself out of the clinic. In other words, while this was the safest course of action for my unborn child, this maintenance treatment had made my dependence far worse. The methadone sugar cravings wreaked havoc on my teeth and caused heart problems. I also had a close relative die from a methadone overdose during my own time dealing with the maintenance clinic setting. The heart problems landed me in the hospital when I had a seizure and was diagnosed with elongated QT syndrome, caused by the high dose methadone, at which point I was switched to suboxone. However, I was in a good place mentally in my life and I wished to be beholden to no one but myself. I had no desire to seek a "high", but I was still fearful of the withdrawal that I would incur from suboxone detox, so I researched and found Kratom. I am so eternally grateful that quality, Kratom-community vetted products from reputable vendors were available to me during this period. As a nearly catatonic mother and wife from the effects of the methadone and suboxone I felt as though I was nothing more than a burden to my family. Kratom use has never made me feel intoxicated, altered my perception of reality or cause me to have cravings after disuse. It did not make me high in any sense of the word; it repressed my pain, anxiety and depression with a slight energy boost like coffee without the jitters. I was human again. I stayed on Kratom daily for about six months, & I came off of Kratom completely a month ago. Now for the first time in a decade I am completely psychoactive substance free. There were some slight withdrawals associated with my Kratom detox after daily use for 6 months. Objectively, these included: chills, mild depression and anxiety, but the anxiety & depression were present before I found Kratom and after cessation. If Kratom were to remain legal, I would undoubtedly prefer to utilize Kratom tea to combat my ongoing depression and anxiety over prescription medications. I have tried many, only to stop due to the debilitating side effects I've experienced. I can only speak for myself and how Kratom has helped me become a better mom, wife and overall human being. Despite not being a current consumer of Kratom, my heart breaks for those who's livelihood and families will be torn apart from

chronic pain or addiction should this DEA ban become final. My focus of advocacy sits on the heavy weight this puts on the humanity of our great Nation. The opiate epidemic is real and killing countless more everyday, when a quasi-solution is right before our eyes. This "temporary ban" is the real "imminent threat to public safety." As a once opioid dependent person, I wanted nothing more than to admit my faults and take full control mending my own physical health, while working in conjunction with my mental health professional. My heart breaks for those whose livelihood and families will be torn apart from chronic pain or addiction should this DEA ban become final. The gift of Kratom raised me out of a prescription-induced fog and dramatically increased my quality of life. This was only made possible as it was extremely effective, and more importantly, easily available, from reputable vendors for use in the privacy of my own home, with family support and supervision. Like any ingested substance, responsible use is the key and as this grassroots moment has shown, clearly, the responsible consumers far outweigh the outliers in this scenario. Please understand, I advocate for responsible Kratom use and public availability, not for me, but for the sake of the children of those suffering from the disease of addiction, chronic pain patients, anxiety/Depression/PTSD suffers, and all who will deal with the inevitable fallout from this well-intentioned but misguided decision.

I'm 65, a retired writer and horseback riding instructor. I was on hydrocodone for chronic pain since my first (of four) back surgeries in 1996, so 20 years. I learned about Kratom last year. It is the only thing other than opiates that helps this one particular kind of back pain that especially debilitates me. I have said often that finding Kratom for me was like getting released from prison. Now I will have to go back in. I don't want to live much longer that way, so I will probably check out early, especially since my fellow humans are sending me the message that they do not care that I have to live in misery. I won't. And I find myself hoping karma smites them.

A Kratom ban will not save lives, it will cost them, and mine is one of them.

██████████ ██████████, 59, ██████████ Tx. After 15 years of relentless pain from Fibromyalgia I developed Trigeminal Neuralgia. I now have suffered from the condition known as the "Suicide" Disease (for which there is no cure) because the pain is so severe, for 10 years in addition to Fibromyalgia. Until my discovery of Kratom I was at the mercy of very serious medications that came with very serious side effects. Kratom has enabled a huge reduction in some of those medications. I no longer need to constantly take antidepressants, anti anxiety meds or strong pain killers. Kratom has enabled a intensely needed improvement in my quality of life! Never have I experienced a foggy head, "lala" land, confusion or hallucinated with Kratom like the other meds caused. I live with a deep sense of gratitude every day! Please do not take away my option of an improved life by banning Kratom!

My name is ██████████. I am a 30 year old professional from Idaho. In 2008 I had a traumatic spine injury resulting in chronic pain. I hated taking prescription opioids for pain as they hampered my quality of life more than they helped. I found Kratom in 2012 and have taken it since with no unpleasant side effects. It has helped me with my pain, energy levels and positive outlook on life. I have reviewed all available data and I firmly believe that Kratom is as safe or safer than coffee and other caffeine containing products. Kratom should remain a supplement in the United States as it is in Canada. Many states have reviewed the available data on Kratom and decided to keep it legal. Please, focus on the problem: Prescription painkillers and illicit drugs. Kratom is not a plant that can be easily abused as it has a ceiling effect i.e. more is NOT better. Please step in to stop this regulatory overreach by the FDA and DEA. This plant is also a great tool in the fight against our current opioid problems. Kratom is NOT an opioid. This is FACT. Contrary to the statements from the DEA, Kratom has been the focus of intense study and has been found to be effective in helping people with a multitude of issues. What will they ban next? Coffee? If the DEA applied the same logic to coffee it would be a schedule 1 substance. This is a deplorable act on the part of institutions that have been entrusted to protect Americans.

My name is [REDACTED]. I'm a father of 5. Several years ago, I had an industrial accident and had to have my shoulder rebuilt. I was in constant pain and the doctor's solution to that was to give me all the narcotic pain medication I wanted. After using opiates for 6 years, I had become a legal junkie. Not only was I taking the pills for pain, but also to get high. One day a friend suggested kratom. I ordered some and quit taking opiates cold turkey. 4 years later, I haven't touched an opiate and am able to successfully manage my pain with kratom. Kratom doesn't get me high, and I am not addicted, as I sometimes go a few months without taking it with no ill effects.

My name is [REDACTED] and I am 33 years old. I suffer from Fibromyalgia and Endometriosis. Before I found Kratom I was in so much pain from my illnesses that I would be bedridden at least 2 weeks every month. I was on 10 medications and severely depressed. The pain medications my doctor prescribed didn't really help with the pain and I became dependent on them. Seven months ago I found Kratom. Since then I have not stayed in bed one day. I am now only taking 2 medications. Kratom has helped improve my life immensely. I am no longer depressed. I even exercise now and have lost 25 pounds. My kids and husband love the person I've become and so do I.

My name is [REDACTED]. I am a mother and I work as a piano and violin teacher. I have been taking kratom for two years to help with pain issues. I had a prescription for pain medication before but the prescription medication left me feeling sleepy and sick for a lot of the time. When I started taking kratom it made a huge difference in my quality of life. It helps me deal with the pain (shoulder and back) and also helps with energy. I do not want to have to go back to prescription opiates. I might have to if there is a ban on kratom.

My name is [REDACTED] [REDACTED] I am 51. I have suffered from severe fibromyalgia for 10 years. I am married and have three children in college. My doctor has tried a multitude of prescriptions to help me and yet I remained bedridden. We tried Lyrica, Savella and many heavy hitter narcotics, even fentanyl, and nothing really helped. I have been to the University of Michigan hospital and the Cleveland Clinic and they couldn't find anything that could help.

Because of kratom I enjoy my family and they enjoy me. Before kratom i was chained to my bed or couch with pain and had to use a walker or wheelchair. I have been taking kratom for 2 years. Before writing this testimonial, I went on a 10+ mile bike ride with my husband. We do this pretty much everyday. Kratom isn't a cure. But now I finally have a life.

I feel like I have a sentence of death with this ban looming over me. My family and I are trying to do everything as fast as we can with events. And are doing household stuff too like putting things in easy reach as the pain will be excruciating to reach for or lift things without kratom. And tightening all stair railings as i will have to pull myself up the stairs without kratom. We have a trip to Wyoming planned for next summer with the solar eclipse. I will have to stay home and will have to find someone to stay with me should kratom be banned. I don't want to go back to being bedridden again. My family will lose me again if kratom is banned. My husband and three adult children are also fighting to keep Kratom legal.

My name is [REDACTED] [REDACTED]. I have several medical conditions which have all been GREATLY improved if not eliminated by my use of kratom. 1 Failed back syndrome 2 DDD 3 Arthritis 4 depression 5 Anxiety 6 High blood sugar 7 high blood pressure 8 Restless leg Syndrome. I have also gotten off most of my medications for these by using kratom which has helped more and with no side effects.

I was on 180 mg of Methadone for my constant pain and now I don't take anything except for kratom which manages my pain so much better. Please don't allow the DEA to ban this plant that has helped me

be a productive person again. I'm now able to work part time, play and interact with my grandkids and have a normal life where before on pharmaceutical drugs I was house bound unable to do much except t for laying around in my recliner watching tv or sleeping due to the side effects of those drugs. 10 in all. I appreciate your time reading this thank you.

My name is [REDACTED] [REDACTED] I am 31 years old and I suffer from chronic migraine disorder. I have had migraines since I was a teenager but later on in my adult life they have got much worse to where I would have either a headache or migraine almost everyday of my life. I have been through countless medications (including Botox injections) and doctors to try and resolve my headaches but either would have unbearable side effects or no effect at all. I have struggled to maintain a job without getting any sick days and missing too much work that I had to be reduced to less hours. Chronic migraine is the 8th most disabling disease in America yet migraines are the most underfunded neurological disease.

I discovered Kratom after looking for other natural avenues to help my migraines since I was having no luck barely at all to resolve my pain. I researched it and decided to give it a try. I took a small dose of it and then started to see the results very fast. I have gone to having a headache/ migraine almost every day to only having a few a month. I have been able to go to work on a regular basis and get back to regular life. Kratom has helped me so tremendously and I'm afraid after it is banned I will be forced back to medication that doesn't work for me and back to pain everyday. I finally have my life back and I don't want to go back to my old life of pain and solitude. This ban can affect my life a lot and I'm scared to see it happen.

My name is [REDACTED] [REDACTED], I'm 35 years old and I'm a Cardiovascular Sonographer for a large University Hospital. I am a homeowner, tax-paying, law-abiding, professional. I'm a wife, sister, daughter, colleague, friend and neighbor and I've also been using Kratom for the last 4 years to help with depression, anxiety and to manage a past addiction to prescription painkillers. I've dealt with depression and anxiety my whole life to the point where I've been hospitalized for panic attacks. In 2009/2010 I had a few significant traumas occur in my life, one of which being my dearest friend committing suicide by putting a gun in her mouth and pulling the trigger. That was the straw that broke the camel's back as they say. At that same time I was prescribed Vicodin to treat a leg injury I had sustained and like many others I found it also assuaged the deep emotional pain and anxiety I was dealing with all day and night. When I realized I was addicted I went to my Doctor right away because I had never so much as smoked or done any substances before. He prescribed me Suboxone which was POISON for my body. I searched high and low for an alternative that would be safe, natural and not just swap one problem for another. I found Kratom and haven't touched a prescription opiate, anti-anxiety, or suboxone in four years. I'm the happiest, healthiest and most productive I've EVER been in my life and Kratom is an integral part of that. I'm afraid if this ban goes through I'll be forced to either become a felon (not an option), suffer and potentially relapse, or go back to pharmaceuticals that not only not help me but HURT me. This is LIFE and DEATH for hundreds of thousands of Americans. This plant has brought nothing but good into my life and if it's ripped away I fear for my very life.

[REDACTED] [REDACTED], BA, RDCS, RVT

My name is [REDACTED] & I'm a 39 year old female. In 2006 I was diagnosed with Limb-Girdle Muscular Dystrophy. On top of this, I also have chronic back pain from bulging discs, degenerative disc disease & a decade of working on an assembly line for [REDACTED] Co. There is no cure for my condition. Doctors prescribed me powerful narcotic pain medication to treat my pain. The side effects were terrible, so I was prescribed more medication to treat side effects. Eventually the meds stopped working. Taking the medications made me sick, but not taking them was worse. I felt hopeless in this vicious cycle & had no quality of life. Then I saw a post in my Facebook Chronic pain support group about Kratom. I did some research & placed an order. Kratom saved my life. I was able to quit taking all my pain, depression &

anxiety medications. The last 514 days since I started taking Kratom I have been able to do more than I did in the previous 8 years. I feel like I've got my life back.

This is LIFE and DEATH for hundreds of thousands of Americans. This plant has brought nothing but good into my life and if it's ripped away I fear for my very life.

I am a 47 year old responsible female. I found kratom almost a year ago and have been using it daily since then to manage my chronic pain and fatigue from fibromyalgia and hypothyroidism and other chronic health issues. I was diagnosed with fibro in 2003 and was put on disability by 2004 and spent most of my days in bed. Numerous medications was tried to help with all my many symptoms but few if any really helped. Was on antidepressants, muscle relaxers, pain medicine, Fentanyl,percocet,norco,adderall,nuvigil and many others. kratom has been a lifesaver for me and has given me a better quality of life than what I have had for the last 15 years. I really don't want to go back to living my life spending all my days in bed which is really not living at all. I'm afraid that is what will happen if this amazing herb is banned, and Not just my life that will be adversely affected but thousands of others as well. Praying the ban is stopped, [REDACTED] [REDACTED]

My name is [REDACTED] and I'm a 40 yr old married mother of 2. I have had chronic back pain (lumbar disk degeneration, arthritic muscle spasms) since 2005. I have been on pain relievers and muscle relaxers since then. I was tired of taking pills and them not always working so I went online to find an alternative and found KRATOM! I read nothing but positive reviews about it. I immediately stopped taking pills and it's been 4 yrs now. Kratom saved my life , I am able to work full time , take walks with my family and do everyday normal activities due to Kratom. My life will be turned upside down over this DEA ban and it's not fair. I don't want to go back to pills and I won't. A natural leaf that's compared to coffee should not be banned. People should be able to take any natural remedy that they want, not the DEA telling you it's in the same class as heroin. It deeply saddens me.

My Name is [REDACTED]. I am 51 years old. I work as a database report writer. I have suffered my entire life from anxiety and severe depression. Anti-depressants and anti-anxiety meds have not been of any value to me as I felt little to no effect from them yet experienced severe side effects. I first tried Kratom a little over a year ago and found the effects it had finally provided some relief to both the depression and the anxiety. Everything about my health seemed to begin to balance out. I stopped consuming as much alcohol, got a healthy appetite back, slept peacefully and was generally better able to manage my life. Please reconsider the ban on a dried leaf from a tree that has saved my life.

My name is [REDACTED]. I have been using Kratom for chronic pain caused by the side effects from an extensive course of antibiotics for about two years, as well as gradual and long-lasting pain from complications of H-Flu Meningitis which caused me to have spinal cord damage. Before I heard about Kratom, I was taking Vicodin, but upon stopping the drug, I began to suffer extreme symptoms of withdrawal, even though my dosage was quite low. In the few weeks after stopping the Vicodin, and researching natural pain relief, I had resorted to over-the-counter pain meds such as Tylenol, Ibuprofen, and Excedrin, at one point taking as many as ten to twelve pills a day. As a result of believing I'd have to deal with this pain for the rest of my life, I was also facing depression to the point where my family started to worry. I was skeptical about Kratom, at first, but figured I'd give it a try. To date, I rarely take synthetic pain medication. Not only has Kratom provided me with wonderful pain relief, but I spend a lot less money on it compared to what I was paying for over-the-counter pain relief.

If Kratom were to become a Schedule I drug, I would have to face the real possibility of catastrophic side effects associated with prescription drugs, as well as OTCs. Knowing that Kratom provides strong pain

relief without side effects gives me peace of mind that I will never have to face medical complications in the future.

I am a 61 year old female with 2 Herniated disks, Spinal Stenosis and Sciatica. I was prescribed cortisone, Xanax, Soma, and Oxycodone. I was not at all functional. Previously I had mothered 4 children (triplets are in there), and been very successful in Financial and Supplement sales since age 31. I don't like not functioning or working. When I found Kratom I got my life back. It is very "self regulating". If you take too much you vomit. This is about freedom of choice. We need some folks interested in Science here.

My name is [REDACTED]. I am 55 years old and I have been using Kratom for over 5 years. I like so many people started out using pain pills because of numerous surgeries. I searched the internet for an alternative to pain medication and found Kratom. It has been a lifesaver. Two years ago I lost my only child to alcohol. I am pretty sure without Kratom, I wouldn't be here today. Besides helping with the pain I have, it helps me to get out of bed in the morning. The hole left in my heart is never going to go away, but with Kratom I can at least make an effort to get through another day. I don't know what I will do if I can't use it anymore. I do not want to be sedated for the rest of my life with pharmaceuticals just because they are legal. I prefer the natural way instead of something created in a laboratory. But I also prefer Kratom because it has worked for me.

I am a 32 year old woman with a 5 ½ year old daughter. I am an artist, musician, jewelry designer, wife, mother. I have a family history of alcoholism, and severe anxiety/depression. I also suffer from chronic back pain due to fused vertebrae in my spine. Over the years i tried several anti anxiety medications, have been addicted to opiates and a heavy drinker. My drinking got so bad that I did not foresee a day that I would be able to get through the day without a drink (or 5). I sincerely believe that if i had known about kratom sooner my drinking would not have had such a detrimental effect on my life. Nothing else has worked as well for my anxiety, for my pain, and to keep me from drinking. I don't even like the taste of alcohol anymore. I also believe that if the several friends I knew who died from drug overdoses had known about kratom, they may still be here today. I don't like to think about what will happen if it becomes illegal, when it helps so many people. It has truly changed my life for the better. - [REDACTED] [REDACTED], California

My name is [REDACTED] [REDACTED] I am 28 years old and I have used Kratom for close to two years now to help with arthritis from a hip replacement as well as opiate addiction. I was in the worst place of my life two years ago before i found kratom. I had no money and no hope of escaping prescription drugs or heroin addiction. I took a title loan out on my car to get suboxone which failed me miserably I was back to narcotics within two weeks. Then I found kratom I now have a new car with money in the bank and my fiancée and I have 2 month old son. Currently I'm looking to buy a house for my family in the spring. Please don't take away my life from me and my family

My name is [REDACTED] [REDACTED] and I am 24 years old and a graduate of [REDACTED] [REDACTED] University ([REDACTED]). I first started using kratom a couple of months ago for Anxiety, ADHD, and Depression. It has literally changed my life. I DO NOT use kratom to get high. I just take a 2-3 capsules 2-3 times a day and it helps my ability to focus immensely and allows me to relax and not pay so much attention to my often negative and non-productive thoughts. It is literally the only thing I've ever found that truly gives me relief from Generalized Anxiety Disorder. I cannot imagine this plant becoming illegal and I hate the idea of being criminalized for just trying to help myself. The only negative side effect I've occasionally gotten from kratom is constipation but that is nothing compared to the side effects I've gotten from prescription medications like klonopam (clonazepam) which has caused me to have suicidal thoughts (something I

previously was never experienced with). Please, please, if you're reading this, do whatever you can to keep this life-saving plant legal. If you don't help and it is banned, you may deeply regret it one day when you, or someone important to you, is suffering greatly from chronic pain, anxiety, depression, PTSD, fibromyalgia, or many of the other things that kratom helps with, and you/they do not have access to this natural alternative. Thank you so much for your time. All the best, [REDACTED].

My name is [REDACTED]. I've had a problem with drugs since I was 16 years old. In and out of prison since I've been 20. I recently found out about kratom about 2 years ago. I've become a productive member of society since then. I don't ever want to get high. I finally am on the road to getting custody of my son. Before this time, I'd use everything I could get my hands on to try and maintain my addiction. Now, I don't spend every bit of my money on drugs. I exercise, hang out with friends, actually participate in my life, not just exist. There should be no reason for this plant to be banned. It helps me with social anxiety and ADHD. I've tried over prescription medications for both, and I end up grossly abusing them, and end up in that downward spiral again. I'm afraid that once I end up running out of kratom, with it being banned, I'll head right down that path again. I'm 29 years old and, for the first time in my life, have been successful. It's about to all be taken away. I can see why heroin is a scheduled drug, it destroys lives, I'm yet to find someone who had their life made WORSE by taking kratom!! - [REDACTED]

I am a thirty-four year old U.S. Army veteran. I have been married for over eleven years and have two children. I have been using Kratom in place of opiates the VA hospital prescribed. I do not get "high". I do feel a slight energy boost. I also feel relaxed because the pain in my back is not overwhelming. I suppose that if Kratom is made illegal I will still try to find it. So then this U.S. veteran of two tours in support of OIF will become a felon. [REDACTED]. [REDACTED]

I am a 29 year old logistics coordinator. For the past 10 years I have struggled to work because of pain, mostly in my back, but other places as well. I always thought it was because I was heavy, so I lost weight. I was still in pain. I tried to get into better shape, exercising most days of the week; gritting my teeth through body wide muscular pain. Every day. I was diagnosed with many acute conditions, many times. Pulled muscles, tendinitis, bursitis, TMJ. I went to physical therapy for my hands, my back, and my feet. I saw a chiropractor. I was placed on many medications, such as steroids, anti inflammatories, muscle relaxers, and antidepressants. Xrays showed narrowing of my spine, but nothing could explain the constant and continuous pain everywhere else. The word 'fibromyalgia' has been thrown around, but the suggested treatment is just more of the same. I was told about kratom in a back pain support group. People were always talking about their pills, usually narcotics. What symptoms get you what prescriptions, etc. It was a sad place to be. I ordered kratom, completely skeptical, out of desperation. As I stood in my bedroom, crying over a pile of laundry that I couldn't fold, I placed my first order with overnight shipping. CAN YOU IMAGINE BEING IN TOO MUCH PAIN TO FOLD A TSHIRT? Kratom has picked up where medicine left off. There was nothing else the medical profession could offer me. I'm still under medical care, and I still receive regular check ups, blood work, and occasionally physical therapy. I still have pain, but I am working and living again. I'm active. I cannot imagine going back to crying over laundry again. It's simply unimaginable to be left with a life like I was living. It wasn't worth living. Sincerely, [REDACTED], [REDACTED], MA

I am a 35 year old female. Fitness and health is my life. I started using kratom about three months ago. It is the only substance that gets rid of my monthly menstrual cramps, it relieves severe PMS and I use it for pain management related to workouts. I also have found it to be the best substance I have ever used for anxiety, and social anxiety. I am not a drug user, I am very healthy and I run obstacle races for fun. I am currently attending grad school for herbal medicine to earn a master's degree in science. Kratom is what gave me the motivation to start this endeavor. I do not depend on kratom to live, but kratom enhances my

life greatly. I am truly my best self on kratom. I am focused, determined and resilient naturally and kratom brings out the best of those qualities.

My name is [REDACTED]. I'm a 46 year old Father from [REDACTED] MI and I'd like to voice my concern.

Kratom has helped me control my anxiety and depression disorder to a great degree and has helped me to completely stop my use of alcohol any illicit drugs and lose 40 pounds. My doctor is impressed with my progress and the fact that my blood pressure is now in the healthy range also due to kratom use. In fact it is better than it was when I was in my 20's. My life is much more stable for myself and my children now thanks to it after over a year of responsible use. It is as safe as coffee and abuse potential is non-existent, the worse that can happen if too much is taken is that you will get sick and may vomit.

Kratom is a safe alternative to pharmaceutical drugs with important medicinal uses and has changed my life, so I'm asking you to please help stop this bill. Please do not try to Schedule this drug until more research can take place, this is in no way a synthetic or dangerous substance and has safely been used by Buddhist monks for thousands of years.

Please do not fall prey to the propaganda, such as deaths and getting "high" that have been put out by Pharmaceutical companies that will lose the deadly grip they have on the American population with deadly and addictive opioids and other drugs.

My name is [REDACTED], I'm a 37 year old chronic illness/rare disease patient, a wife, daughter, sister and mother of 3. I started having life altering symptoms at the age of 18 and slowly declined over a decade before I received a correct diagnosis. At that point I was pretty much bedridden, had missed out on my young adult life, isolated myself from friends and most importantly, my husband and children missed "ME".

My condition is endocrine so I can't choose alternatives for the body's master hormones I must replace to stay alive. Patients with my condition are often left weak, severely fatigued, unmotivated and lacking the overall feeling of well-being. Synthetic hormones (prescription) can only do so much. Research has shown that Ritalin and antidepressants can help us. I tried many antidepressants and stimulants but didn't feel like myself and hated the side effects.

I found Kratom in 2012 and immediately felt better. I was happier, I no longer needed to nap 3 times a day, I had the strength and energy to play with my children and most importantly I felt as close to my old self as I will get. I have used the same strain and dosage for at least 4 years. Without Kratom I'll end up back in bed sleeping my life away. My husband will pick up the slack, my children will miss their mom (my youngest is 15 months) and I'll have to live my life wishing others wouldn't hurt if I were just put out of my misery.

I had more faith in our government. I feel like I'm in another less fortunate country or a bad dream. Please don't take away the one thing that helps so many and harms so few (if any). I want to remain a productive member of society. I shouldn't be FORCED onto disability.

My name is [REDACTED] and I am 61 years old. I am a wife, a mother, a friend, a grandmother, a Christian, and I take kratom. No one chooses to live a life in chronic pain. I am not gifted with words, as a matter of fact, my illness often makes it difficult to put my thoughts clearly. But for this life giving, gentle herb, I will attempt to tell my story.

In 1992 I thought I had suffered a work related injury. Repetitive actions lead to pain that quite often made it impossible to work. Later it was determined that I have fibromyalgia, and a host of back and neck issues. I wish I could name them all. Years of doctor visits, following every instruction the various doctors gave me from medications to massage, physical therapy, acupuncture, I was finally told there was nothing more that could be done. Everyday was, and is, one lived in pain. Until I found kratom. It was briefly mentioned in a fibromyalgia support group. Taking it has been a Godsend. With narcotics, the pain never stopped. Yet with kratom, I have days that I forget that I have these illnesses. It truly has been a miracle for me. I have always lived my life "naturally". Choosing organic foods, dietary supplements, etc. Being careful what I put in my body. I take kratom in its powdered form, mixing it with a bit of orange juice. Within moments, the pain is gone. I have no side effects with kratom, only pain relief and the thrill of living my life again. I have been able to go for walks and even hikes with my husband, cook again, clean house--simple things that most take for granted. Please help me continue to live my life productively and healthily. Please help us stop, or delay the ban on kratom in the US.

My name is [REDACTED] & I'm 46 years old. I've suffered from depression my entire life. At 15 I was prescribed ritalin along with prozac. By the time I reached my 21st birthday I was a full blown alcoholic addicted to a host of prescription medications. Suicidal thoughts loomed through my head daily nevermind the fact that I now had a marriage and a baby. I made countless visits to a psychiatrist and doctors only to be PRESCRIBED MORE MEDICATION THAT DID NOT WORK. In 2005 I found myself desperate for change and I quit everything cold turkey! The next 6 years were a fog and I found myself sleeping all day with no quality of life. I found kratom through much research. The results for me taking kratom were out of bed, out of pain, and the depression was at bay finally! For the first time in my life I was happy & productive part of society. I've been taking kratom since 2011 and NOTHING ELSE! If the ban goes through I will eventually go back into a depression and be in physical and emotional pain. I vaguely remember my life without kratom but now expected to deal with the ban from a tree leaf. I don't want to go back to that life but I know myself well enough that all the old symptoms of depression will come back. Life without kratom means a life with depression because i will not go back to the men in white coats for their laboratory pills when my creator has left me a leaf to take care of all of it! My inherent right!

I'm a 51 year old woman living with Fibromyalgia, Reflex Sympathetic Dystrophy and other conditions. I use kratom for chronic pain and it gives me great relief that prescription pain meds don't offer.

I'm a 47 year old wife, Mom and Grandma. I use kratom to help with my RSD, Depression, Anxiety, insomnia, nerve pain, herniated disks, PTSD, social anxiety, muscle spasms, arthritis, chronic fatigue and regulating my blood pressure. I was on countless pharmaceuticals and endured painful injections on a regular basis and it didn't help any. With pharmaceuticals I was unable to function and became a zombie. There's about 2 ½ years that I don't remember much of because of all the meds they had me on. I started searching for an alternative that was less harmful for my body and state of mind. I've tried many things and kratom is the one that works best for me. It is the only thing that helps with the nerve pain. My overall health and state of mind improved dramatically. I have been taking kratom for over 2 ½ years now and I can't imagine life without it. It allows me to control my pain and gives me the energy to get up and moving. I sleep way better and my thought have become more positive. It doesn't leave me in a fog or high at all. It actually clears my head and allows me to function somewhat "normal". Before I found kratom I had lost all hope and the burning pain was eating me alive. I would lay curled up in ball crying and wishing for death. Kratom gave me my life back! The prospect of returning to that state is absolutely terrifying! I love where I live, my family is here. But if I lose kratom we are seriously considering moving out of the country. I shouldn't have to choose between my health and my home. I have seen kratom help people get off of dangerous drugs and regain control of their life. I have seen it help with chronic migraines, Fibromyalgia, Lyme Disease, Addiction, ADHD, depression, anxiety and so much more! And it is safe. You take too much you puke. And it tastes gross so the kids won't want to get into it and if they

do, I'm confident it won't hurt them, unlike dangerous pharmaceuticals. My body responds better to plant medicine and I choose kratom. Please don't take my quality of life away by allowing this ban to go through.

My friend just got back on Adderall for anxiety because of this ban. Within a week she passed out while driving and totalled her car and got a DUI for driving on prescription medication. Kratom never did this to her

My name is [REDACTED]. I am 35 year old father of two young children I work full time and live with my partner, the mother of my two children. I have been on one medication or another since I was 14. I also starting drinking and drugging around that age. I have suffered from severe depression and social anxiety as well as temporal lobe epilepsy. For many years I drank very heavily since no medication I was prescribed ever worked for me. I couldn't hold jobs, I got in trouble with the law, I was a degenerate basically. I also became addicted to opiates around the age of 21 and this led to many many years of struggling with my addiction. I was a true blue drug fiend, shooting whatever I could find into my vein and doing any substance I could get my hands on. I was a legit danger to society with no cares but to get high and get there quick. My struggle resulted in me losing both my children and my partner I ended up on the streets shooting heroin, smoking crack and suicidal. In the past two years I have been able to get off the streets, get off of all hard drugs/prescriptions got my family back together, get an apartment, get a car, thrive in my workplace (a cook at the head of a line in a very busy restaurant) and combat my depression and anxiety. Without a strong, loving and supportive partner, and Kratom, none of this would be possible. I am not willing to let this plant go without a hell of a fight. It is a life saver. And trust me IT DOESN'T GET YOU HIGH. I WOULD KNOW!

I started taking Kratom for Depression and anxiety. I was on pharmaceutical antidepressants for 25 years and still was not living a happy life. I was actually miserable and couldn't care less about life. Even with prescription drugs, I would not shower or brush my teeth, sometimes for weeks! I was beautiful yet didn't care that I was rotting in a mental prison that was physically paralyzing.

In November 2015, a friend suggested that I try Kratom to help with my depression. I can't even begin to tell you what Kratom has done for me....It has given me a life that I used to dream about, a life that never existed for me, a life that I thought I could never have! 2015/2016 has been THE BEST YEAR OF MY LIFE, I have traveled, reconnected with family and friends, began living a healthy lifestyle of Clean eating, exercise and spiritual well being! None of the prescription pills ever brought me this close to happiness. Big Pharma and Doctors have had 25 years to get it right..they FAILED ME. Now it's my turn to get it right...AND I DID!

Since word of the ban on Kratom, I decided to finish up what little bit I had in preparation for the Scheduling. I did not taper down, I did it cold turkey. I had no withdrawals, no cravings and no suffering. I'm sad to say, day 4 without Kratom. I quickly returned to my natural state, staring into space, completely disconnected, expressionless and exhausted, while being TRAPPED in the memories of such a great year and FEARING I will never experience life like that again. I do not have to live this way, I've found a plant that changes my existence for the better..This is MY LIFE THAT I'M TALKING ABOUT and IT'S IMPERATIVE THAT I'M HAPPY!

I deserve better for myself and I have found better for myself but as of October 1st 2016, I will either be a criminal or severely depressed. I ask that you consider ME and my well being when you choose to support or oppose keeping Kratom legal. Please sign the Pocan/Salmon Dear Colleague letter! -
[REDACTED]
