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Dear Sen. Young,

I appreciate you sponsoring bill SB 0147. I had a fruitful conversation with Josh today and provided more information that may be useful to you.

Josh mentioned that you are receiving emails opposing the law from people stating that kratom has helped them overcome their opioid addictions. I've provided below information from credible sources that I hope will help you during the hearing.

1) I think it is important that you negate this claim by quoting the spokesperson of the AKA using this article from NPR. https://www.npr.org/sections/health-shots/2020/01/13/789145948/the-kratom-debate-helpful-herb-or-dangerous-drug

McClain Haddow, spokesperson for the American Kratom Association, agrees that the product should be sold only to people over age 18.

"We would like vendors to register their product with the FDA and get a chemical analysis from a certified lab to insure the only ingredient is the naturally occurring alkaloid in the kratom plant," Haddow says. "Some manufacturers are spiking products with fentanyl, heroin or morphine to give users a high."

Why the spokesperson believes that it is acceptable to currently sell a product to people over the age of 18 who don't know it possibly contains fentanyl, a drug that killed Tom Petty and Prince who both died because they inadvertently consumed fentanyl-laced products, is strange. Surely selling a product that may contain fentanyl is problematic regardless of how old the consumer is. The fact that both of these successful artists died because they took drugs they did not know contained fentanyl, shows how easy it is for ordinary people to consume something that they assume is harmless but in fact can cause an overdose because it may be laced with an extremely high-powered respiratory inhibitor. And, the synergistic interaction of the primary compound in kratom, mitragynine and $7-\alpha$ -hydroxymitragynine, may increase the likelihood of respiratory depression.

Opioid addicts who claim that kratom has helped them overcome their addiction may simply be ingesting fentanyl, and therefore aren't actually transitioning away from opioids. Quite the opposite, they may be ingesting more toxic substances inadvertently.

- 2) Kratom is predominantly produced in Thailand where it is illegal. It is rapidly gaining popularity in the USA under the guise of a natural, herbal tea. The Thai government who has dealt with this product for centuries and other governments have recognized the problems associated with kratom and outlawed it. Consequently, any black market manufacturer of kratom is already facing serious criminal charges in Thailand. Therefore, they are already producing an illicit drug. Spiking that drug with other drugs such as those mentioned above does not incur harsher penalties, so it is in the best interests of the manufacturers to provide their customers the most potent product possible, so it is commonly spiked and sold under different "street names". There is no regulation in the home country or in the USA to ensure that kratom is not adulterated with these drugs, increasingly fentanyl.
- 3) As an unregulated "herbal tea", kratom has not undergone clinical trials in the U.S. to determine its medicinal value. If its primary compounds do in fact, have a medicinal value that claim should be supported by credible research as has been undertaken to support marijuana legislation. Currently, the FDA, HHS, CDC, and the DEA all consider it a harmful and addictive substance that should be banned. It is banned by the U.S. military and illegal in several states and municipalities, including Denver where it is now legal to purchase hallucinogenic mushrooms, but kratom is outlawed.
- 4) Kratom is widely available through online retailers such as Amazon and in smoke shops throughout Maryland. As such, it provides an easy access point for minors to experiment with the drug, which may contain strong opioids. This ease of access qualifies it as a gateway drug, which may actually exacerbate the opioid problem as teens and adolescents can easily "score" the drug without proof of age, etc.
- 5) The CDC reports kratom is directly linked to overdoses and fatalities. https://www.pharmacytimes.com/contributor/jennifer-gershman-pharmd-cph/2019/04/drug-overdose-deaths-are-linked-with-kratom-in-27-states

https://www.cdc.gov/mmwr/volumes/68/wr/mm6814a2.htm?s_cid=mm6814a2_w

6) Kratom is addictive. Because it impacts the same opioid receptors as do opium, heroin, and fentanyl, kratom is severely addictive. Whether the main compound in kratom leads to addiction or whether its adulteration via products such as fentanyl lead to addiction is undetermined. Therefore, it should be studied and then regulated if it is deemed to have medicinal value in its pure form. Meanwhile, it should be banned so that it is not easily accessible. If it is accessible under the current conditions it can lead to more exposure to fentanyl and heroin in an unwitting population who believe they are simply drinking herbal teas. As stated by NIH, https://www.drugabuse.gov/publications/drugfacts/kratom:

Like other drugs with opioid-like effects, kratom might cause dependence, which means users will feel physical withdrawal symptoms when they stop taking the drug. Some users have reported becoming addicted to kratom. Withdrawal symptoms include:

- muscle aches
- insomnia
- irritability
- hostility
- aggression
- emotional changes
- runny nose
- jerky movements

Information from the Mayo Clinic is provided below. https://www.mayoclinic.org/healthy-lifestyle/consumer-health/in-depth/kratom/art-20402171

Side effects and safety concerns

Although people who take kratom believe in its value, researchers who have studied kratom think its side effects and safety problems more than offset any potential benefits. Poison control centers in the United States received about 1,800 reports involving use of kratom from 2011 through 2017, including reports of death. About half of these exposures resulted in serious negative outcomes such as seizures and high blood pressure. Five of the seven infants who were reported to have been exposed to kratom went through withdrawal.

Kratom has a number of known side effects, including:

- Weight loss
- Dry mouth
- Chills, nausea and vomiting
- Changes in urine and constipation
- Liver damage
- Muscle pain

Kratom also affects the mind and nervous system:

- Dizziness
- Drowsiness
- Hallucinations and delusion
- Depression and delusion
- Breathing suppression
- Seizure, coma and death

Kratom takes effect after five to 10 minutes, and its effects last two to five hours. The effects of kratom become stronger as the quantity taken increases. In animals, kratom appears to be more potent than morphine. Exposure to kratom has been reported in an infant who was breastfed by a mother taking kratom.

Many of the problems that occur with pain medications happen when these drugs are used at high doses or over a long period of time. It's not known exactly what level of kratom is toxic in people, but as with pain medications and recreational drugs, it is possible to overdose on kratom.

Research shows little promise

At one time, some researchers believed that kratom might be a safe alternative to opioids and other prescription pain medications. However, studies on the effects of kratom have identified many safety concerns and no clear benefits.

Kratom has been reported to cause abnormal brain function when taken with prescription medicines. When this happens, you may experience a severe headache, lose your ability to communicate or become confused.

In a study testing kratom as a treatment for symptoms of opioid withdrawal, people who took kratom for more than six months reported withdrawal symptoms similar to those that occur after opioid use. Too, people who use kratom may begin craving it and require treatments given for opioid addiction, such as naloxone (Narcan) and buprenorphine (Buprenex).

Kratom also adversely affects infant development. When kratom is used during pregnancy, the baby may be born with symptoms of withdrawal that require treatment.

In addition, substances that are made from kratom may be contaminated with salmonella bacteria. As of April 2018, more than 130 people in 38 states became ill with Salmonella after taking kratom. Salmonella poisoning may be fatal, and the U.S. Food and Drug Administration has linked more than 35 deaths to Salmonella-tainted kratom. Salmonella contamination has no obvious signs, so the best way to avoid becoming ill is to avoid products that may contain it.

Kratom is not currently regulated in the United States, and federal agencies are taking action to combat false claims about kratom. In the meantime, your safest option is to work with your doctor to find other treatment options.

I hope this information will support your advocacy of the bill on Wednesday. If there are other opportunities for me to provide support, please let me know.

I can always be reached at 208-881-8257.

Thanks,

Tom Fields.