

Public Comment in **Opposition** to “Proposed Regulation Concerning: Controlled Substance Drug Schedule Updates, PR2025-01”

Department of Consumer Protection
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To the Department of Consumer Protection, Attorney Padula, and those it may concern,

My name is Katie Hill, MPH and I am an epidemiologist and kratom researcher currently in candidacy for my PhD at Yale School of Public Health. I conduct research on novel substances and their impacts on people’s health, oftentimes focusing on addiction, withdrawal, infection, and other types of pertinent outcomes.

In the case of kratom, I have published 10 manuscripts in peer reviewed academic journals describing the prevalence of kratom use, kratom use disorder, the marketplace of kratom, and more. Additionally, I have attended the invite-only International Kratom Symposium research conference every year since I began researching kratom. Lastly, I have numerous ongoing projects and manuscripts in development regarding kratom and its synthetic derivatives (7-hydroxymitragynine, mitragynine pseudoindoxyl, etc.).

Regarding “Proposed Regulation Concerning: Controlled Substance Drug Schedule Updates, PR2025-01”, I am writing today to **express strong opposition to the scheduling of kratom as a Schedule 1 substance**. This action is not informed by our best scientific evidence, public health, nor harm reduction.

As you are aware, Schedule 1 drugs in the US are those with “high potential for abuse.” Kratom – describing the botanical product from Southeast Asia – does not qualify for this category. This is where most of my research has focused on in the past few years. Here are our two most relevant pieces below, for reference:

- **Hill, K.**, Grundmann, O., Smith, K. E., Stanciu, C. N. (2024). Prevalence of Kratom Use Disorder among Kratom Consumers. *Journal of Addiction Medicine*.
<https://doi.org/10.1097/ADM.0000000000001290>
- Rogers, J.M., Weiss, S.T., Epstein D.H., Grundmann, O., **Hill, K.**, Smith, K.E. (2024). Kratom addiction per DSM-5 SUD criteria, and kratom physical dependence: Insights from dosing amount versus frequency. *Drug and Alcohol Dependence*.
<https://doi.org/10.1016/j.drugalcdep.2024.111329>

This research has demonstrated that among adults who consume kratom, approximately 25% meet criteria for a kratom use disorder (i.e., a Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), use disorder modified for kratom). Most of those with such use disorders qualify for a *mild use disorder*, typically driven by pharmacologic criteria:

tolerance and withdrawal. As we note, “One of the caveats in diagnosing a [substance use disorder] is that tolerance and withdrawal can occur in appropriate therapeutic doses and for medical use of prescribed medications. When these 2 occur in the context of prescribed pharmacotherapies, they are not considered toward diagnosing a [substance use disorder], as the threshold of 2 or more of the 11 criteria for a [substance use disorder] diagnosis would be invalid.” Additionally, our research demonstrates that symptoms related to kratom use disorders are associated with kratom dosing frequency and amount.

Regarding kratom’s safety and medical use (i.e., the other conditions considered for a Schedule 1 substance), there have been no published clinical trials to date to describe such information in the United States. However, in lieu of such trials, we have studied the self-reported adverse effects and side effects from kratom use, alongside people’s perceived benefits from use. There are numerous papers that explore the risk-benefit array that kratom presents people who consume it, some of which can be found below:

- **Hill, K.**, Rogers, J.M., Grundmann, O., Epstein, D.H., Smith, K.E. (2025). At least four groups of kratom consumers in the United States: latent-class analysis of motivations for kratom use. *The American Journal of Drug and Alcohol Abuse*.
<https://doi.org/10.1080/00952990.2024.2414319>
- Smith, K.E., Panlilio L.V., Sharma A., McCurdy C.R., Feldman J.D., Mukhopadhyay S., Rama Raju, K.S., Kuntz M.A., **Hill, K.**, Epstein, D.H. (2024). Time course of kratom effects via ecological momentary assessment, by product type, dose amount, and assayed alkaloid content. *Drug and Alcohol Dependence*.
<https://doi.org/10.1016/j.drugalcdep.2024.112460>
- Grundmann, O., **Hill, K.**, Barzanji E., Hazrat N.G., Kaur G., Negeve R.E., Shade S., Weber S., Veltri CA. (2023). Correlations of Kratom (*Mitragyna speciosa* Korth.) Tea Bag Preparations and Reported Pharmacological Effects. *Journal for Ethnopharmacology*, 317, 116779. <https://doi.org/10.1016/j.jep.2023.116779>

This research has shown that people use kratom for a variety of perceived benefits (e.g., mood/mental health, chronic pain management, etc.), and that the prevalence of side effects/risks tend to be proportionate to volume/concentration of kratom consumed.

Overall, I believe the scheduling kratom is **likely to be ineffective** at improving health outcomes for people who are using such substances. Scheduling kratom **may instead lead to numerous unintended consequences** and harms for the people of Connecticut that the Department has not yet sufficiently considered. This action may, for instance, force people to use products on the unregulated/illicit market which are more potent (e.g., fentanyl, heroin, etc.) and/or cause people to avoid healthcare about their kratom use due to fear of arrest. Further, scheduling kratom would place a barrier on our pertinent, ongoing kratom research.

If the Department of Consumer Protection is hoping to increase protections for kratom consumers, there are ways to go about this without scheduling kratom. First, the state could look into setting regulations regarding **product purchasing and marketing** (e.g., setting stricter age requirements, limiting where products can be purchased). Secondly, the state could help **educate consumers and their clinicians** on what kratom is, how it differs from the synthetic derivatives, and more. I actively have been speaking with people who use drugs across the state, as well as providers (e.g., rehabilitation programs, methadone programs, addiction medicine doctors, emergency room doctors, etc.) about these very things and have created educational materials. This has been incredibly well received. If the state made this effort more robust, consumers would be able to make more informed decisions in their purchasing. I believe this effort would be especially important, given our research has found that kratom consumers often do not always have the best information provided to them when purchasing products:

- **Hill, K.**, Gibson, S., Grundmann, O., Smith, K. E., Ballard, J., Stanciu, C. N. (2023). Evaluating health information provided to kratom consumers by good manufacturing practice-qualified vendors. *Substance Abuse Treatment, Prevention, and Policy*, 18(1), 21. <https://doi.org/10.1186/s13011-023-00531-4>

Please do not hesitate to contact me with any questions or concerns you may have. If the Department of Consumer Protection has any questions about kratom, I would be more than happy to answer such questions and/or provide access to any number of my, or my colleagues, published work.

Sincerely,

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