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Systematic Information Control and Narrative Engineering: The Case of Kratom

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Abstract

This academic analysis presents compelling evidence for the existence of a systematic information control campaign targeting kratom (*Mitragyna speciosa*). Through rigorous examination of regulatory communications, scientific publications, media coverage, and economic contexts, a clear pattern emerges of coordinated narrative engineering that has positioned kratom as a dangerous substance with minimal therapeutic value. This campaign bears the hallmarks of institutional narrative control, characterized by selective information dissemination, scientific misrepresentation, media amplification, and alignment with pharmaceutical industry interests. While direct evidence of explicit coordination remains elusive in publicly available documents, the consistent patterns of information management across multiple domains strongly suggest a systematic effort to shape public and professional perception of kratom in ways that serve established institutional and commercial interests rather than reflecting a balanced scientific assessment.

Keywords: kratom, 7-hydroxymitragynine, 7OH, narrative engineering, FDA, information control, pharmaceutical industry, media framing

Introduction

Kratom (*Mitragyna speciosa*), a tropical tree indigenous to Southeast Asia, has been utilized for centuries in traditional medicine for its analgesic, stimulant, and mood-enhancing properties. In recent decades, its use has expanded globally, particularly as a self-management tool for chronic pain, anxiety, depression, and notably, as an aid for mitigating opioid withdrawal symptoms. This growing popularity has been met with significant regulatory scrutiny and public health warnings, primarily led by the U.S. Food and Drug Administration (FDA). This analysis examines the evidence for a systematic information control campaign targeting kratom through multiple channels, including regulatory communications, scientific representation, media narratives, and their alignment with pharmaceutical industry interests. The investigation reveals patterns consistent with coordinated narrative engineering rather than objective, evidence-based public health communication.

Methodology

This analysis employed a multi-faceted qualitative research approach, including:

1. **Freedom of Information Act (FOIA) Document Analysis:** Systematic review of internal FDA communications obtained through FOIA requests, focusing on messaging strategies and narrative development.
2. **Critique of Scientific Information:** Critical examination of FDA statements, press releases, and the scientific evidence cited to support claims about kratom's risks and pharmacological properties.

3. **Media Coverage Analysis:** Assessment of how kratom is portrayed in mainstream media, medical news sources, and health information websites, with attention to narrative framing, statistical presentation, and source attribution.
4. **Comparative Analysis:** Examination of kratom in relation to FDA-approved treatments for opioid use disorder, particularly Suboxone (buprenorphine/naloxone), considering efficacy, safety profiles, accessibility, cost, and alignment with pharmaceutical industry interests.

Evidence of Systematic Information Control

Regulatory Narrative Engineering

The FDA has consistently employed specific communication strategies that frame kratom in the most negative light possible:

- **Strategic Classification as an "Opioid":** The FDA has deliberately classified kratom alkaloids as "opioids," emphasizing their binding to mu-opioid receptors while downplaying crucial pharmacological distinctions from classical opioids. This classification, while technically defensible based on receptor interactions, obscures the nuanced pharmacology of kratom's alkaloids (partial agonism, biased agonism, activity at multiple receptor systems) that differentiate them from conventional opioids in terms of safety profile and effects.
- **Selective Use of Scientific Modeling:** The FDA's Public Health Assessment via Structural Evaluation (PHASE) computational model has been prominently featured in public communications to bolster the "opioid" classification. However, the agency has not provided transparent information about the model's limitations or validation, nor

adequately addressed how structural similarity does not necessarily equate to identical pharmacological action or risk profile.

- **Decontextualized Presentation of Mortality Data:** The FDA has repeatedly cited deaths "associated with" kratom (initially 36, later increased to 44) without adequate contextualization regarding polysubstance use in most cases. This presentation creates a misleading impression of kratom's direct lethality, despite the agency's own acknowledgment that "many of the cases received could not be fully assessed because of limited information provided."
- **Controlled External Communication:** FOIA documents reveal a carefully managed communication strategy, with the FDA often reiterating established positions rather than providing transparent access to the full scientific basis for its claims. Significant reductions in released documents further obscure internal deliberations and data analysis processes.

Scientific Misrepresentation and Selective Interpretation

The FDA's scientific stance on kratom demonstrates patterns of selective emphasis and interpretation:

- **Emphasis on Risk, Downplaying of Benefit:** There is a consistent pattern of highlighting studies or data points that emphasize kratom's risks while minimizing or omitting research suggesting potential therapeutic benefits or a more favorable safety profile compared to classical opioids.
- **Dual Misrepresentation of 7-hydroxymitragynine:** The FDA's approach to 7-hydroxymitragynine (7OH) involves two levels of scientific distortion. First, they

emphasize its potency at mu-opioid receptors without contextualizing its very low concentration in natural kratom leaf—a common defense used by kratom advocates. However, this research reveals a second, more fundamental misrepresentation: the characterization of 7OH itself as extraordinarily powerful and more dangerous than morphine is scientifically inaccurate. Contrary to FDA claims, comprehensive evidence shows that 7OH's potency is highly context-dependent, with the WHO finding morphine has "8-10 times more binding affinity and 3 times more intrinsic activity than 7OH." This dual misrepresentation maximizes perceived risk through both decontextualization and fundamental scientific distortion.

- **Inconsistency with FDA's Own Guidance:** The FDA's approach to kratom appears inconsistent with aspects of its own guidance on "Assessment of Abuse Potential of Drugs," particularly regarding comparative risk assessment and consideration of therapeutic potential alongside abuse liability.
- **Suppression of Counter-Evidence:** The FDA's own emerging research, such as a pilot study suggesting kratom capsules were well-tolerated even at high doses, has received minimal public emphasis compared to its warnings, indicating a reluctance to revise established negative messaging.

The 7-Hydroxymitragynine Potency Narrative: Scientific Misrepresentation

A central element of the FDA's kratom disinformation campaign is the portrayal of 7-hydroxymitragynine (7OH) as "many times more powerful than morphine." This claim has been instrumental in characterizing kratom as dangerous and deserving strict regulatory control. However, a comprehensive investigation reveals significant methodological flaws, selective citation, and strategic exaggeration in this narrative.

Scientific Context and Distortion

The claim originates primarily from two studies: Matsumoto et al. (2004), which found 7OH "more potent than morphine" in specific mouse pain models, and Takayama et al. (2002), which reported "13-fold higher potency" in a guinea pig ileum preparation. As these findings were cited in subùsequent literature, critical experimental context was systematically eliminated:

- The specific experimental models were omitted
- The limited scope of the comparison (antinociception only) was dropped
- Important pharmacological distinctions (partial vs. full agonism) were ignored

Through citation chains, these limited findings transformed into broader, more alarming claims—from "more potent in mouse pain tests" to "10x more potent than morphine" without qualification, and from scientific uncertainty to regulatory certainty.

Contradictory Evidence Systematically Excluded

The FDA has systematically excluded contradictory evidence, including:

- The WHO Expert Committee Report (2021), which directly contradicts the FDA narrative, stating: "morphine has 8-10 times more binding affinity and 3 times more intrinsic activity than does 7-OH-mitragynine"
- Behavioral studies showing lower abuse potential, such as Behnood-Rod et al. (2020), which found that high-dose 7OH increased brain reward thresholds (an aversive effect) while morphine decreased them (a rewarding effect)

- Clinical and epidemiological data showing dramatically lower risk, with Henningfield et al. (2019) concluding that "the risk of overdose death is >1000 times greater for opioids than for kratom"

Methodological Issues in the FDA's Approach

The FDA's portrayal of 7OH potency demonstrates several methodological problems:

- **Overreliance on Computational Modeling:** In 2018, FDA Commissioner Scott Gottlieb claimed that their PHASE computational model "provided even stronger evidence of kratom compounds' opioid properties," elevating computer simulation above experimental data.
- **Omission of Critical Pharmacological Distinctions:** The FDA consistently fails to acknowledge that 7OH is a partial agonist at μ-opioid receptors (Emax = 41.3%) while morphine is a full agonist, and that 7OH shows biased signaling that predicts lower respiratory depression risk.
- **Conflation of Different Potency Measures:** The FDA's communications conflate binding affinity, functional activity, in vivo potency, and relative potency ratios, creating a misleading impression of overall danger.

Context-Dependent Potency: The Complete Picture

The relative potency of 7OH compared to morphine varies dramatically depending on experimental context:

- In some models (mouse tail-flick test, guinea pig ileum), 7OH appears more potent
- In others (binding affinity per WHO report, reward potential), morphine is more potent

- Effects vary by route of administration and measured outcome (antinociception vs. respiratory depression)

This context-dependency is never acknowledged in FDA communications, which present 7OH as categorically more dangerous than morphine.

Media Amplification and Industry Alignment

The FDA's selective portrayal of 7OH potency has been systematically amplified through media and policy channels, with increasingly certain language, elimination of scientific caveats, and strategic use of death reports without proper context. This narrative serves pharmaceutical industry interests by protecting the opioid treatment market from a non-patentable competitor, while pharmaceutical companies simultaneously file patents on modified kratom alkaloids.

Media Amplification of Institutional Narratives

Mainstream media has largely served as an amplification mechanism for the FDA's framing of kratom:

- **Uncritical Reproduction of Official Warnings:** Media outlets consistently reproduce FDA warnings and statistics with minimal critical analysis or independent investigation, lending their credibility to the official narrative.
- **Decontextualized Statistical Presentation:** Death figures associated with kratom are frequently presented without crucial context regarding polysubstance use or comparison to mortality associated with FDA-approved medications or common activities.

- **Reliance on Official Sources:** FDA officials and press releases are typically the primary or exclusive sources in media coverage, with limited representation of alternative scientific perspectives or user experiences.
- **Fear-Based Framing:** Headlines and lead paragraphs often emphasize danger, risk, and death, creating an emotionally resonant narrative that aligns with the construction of kratom as a "folk devil" in a moral panic framework.

Alignment with Pharmaceutical Industry Interests

The negative framing of kratom aligns remarkably well with the economic interests of established pharmaceutical stakeholders:

- **Threat to Opioid Treatment Market:** Kratom represents a potential competitive threat to FDA-approved opioid addiction treatments like Suboxone. The high cost of these medications, coupled with their often long-term prescription patterns, represents a substantial market that could be undermined by a cheap, accessible alternative like kratom.
- **Accessibility and Cost Differential:** Kratom is significantly more accessible and affordable than prescription alternatives, available without the barriers of prescriptions, insurance approval, or regular medical supervision. This accessibility makes it particularly threatening to established treatment paradigms and their associated revenue streams.
- **Regulatory Capture Dynamics:** While direct evidence of collusion is not apparent in the analyzed documents, the alignment between FDA messaging and pharmaceutical

industry interests suggests potential regulatory capture, where regulatory actions serve commercial interests rather than being driven solely by objective scientific assessment.

Statistical Misrepresentation: A Comparative Analysis of Mortality Data

A critical examination of the statistical presentation of kratom-associated mortality reveals one of the most compelling examples of narrative engineering in the systematic information control campaign. The FDA has repeatedly cited deaths "associated with" kratom (initially 36, later increased to 44) as evidence of its danger, despite significant methodological concerns about these attributions.

Contextualizing Kratom-Associated Mortality

Several critical contextual factors must be considered when evaluating the FDA's mortality claims:

1. **Polysubstance Involvement:** The vast majority of these cases involved multiple substances, making direct causality impossible to establish. According to a systematic review of the FDA's own data, "most kratom associated deaths appear to have resulted from adulterated products or taking kratom with other drugs" (NIDA review cited in Kansas Legislature testimony, 2020).
2. **Methodological Limitations:** An independent analysis by Dr. Jane Babin concluded that the FDA's kratom death data contained "exaggerated claims" and questionable methodology. The FDA's own acknowledgment that "many of the cases received could not be fully assessed because of limited information provided" further undermines the reliability of these figures.

3. **Relative Risk Assessment:** A peer-reviewed study published in PubMed (Henningfield et al., 2019) concluded that "the risk of overdose death is >1000 times greater for opioids than for kratom," though the authors appropriately noted that limitations in the mortality risk estimate warrant caution.

Comparative Mortality Statistics

When placed in context with other mortality causes, the FDA's emphasis on kratom-associated deaths (44 over multiple years) represents a striking statistical distortion:

- **Prescription Opioid Deaths:** According to CDC data, prescription opioids contribute to tens of thousands of deaths annually in the United States. In 2016 alone, 42,249 opioid-related deaths were recorded, with a significant portion involving prescription opioids—a mortality rate hundreds of times higher than that attributed to kratom.
- **Common Household Accidents:** Approximately 450 Americans die annually from falling out of bed, according to multiple sources including widely cited CDC data. This everyday occurrence results in approximately 10 times more annual deaths than the total number ever attributed to kratom by the FDA.
- **Agricultural Incidents:** CDC data indicates that 20-22 people are killed annually by cows in the United States (CDC MMWR, 2009). This means that in any given year, a person is statistically more likely to be killed by a cow than by kratom, based on the FDA's own figures.
- **Statistical Perspective:** If we consider that an estimated 1.7 million Americans used kratom in 2021 (SAMHSA National Survey on Drug Use and Health), the mortality rate—even accepting all 44 deaths as directly caused by kratom over multiple

years—would be vanishingly small compared to FDA-approved medications and common activities.

Implications for Narrative Engineering

The stark contrast between the emphasis placed on kratom-associated deaths and the relative silence regarding much more common mortality causes reveals a fundamental asymmetry in risk communication. This asymmetry serves several functions in the information control campaign:

1. **Creation of Disproportionate Fear:** By highlighting a relatively small number of deaths without appropriate statistical context, regulatory communications generate a perception of risk that is grossly disproportionate to actual mortality data.

2. **Justification for Regulatory Action:** These decontextualized statistics are then used to justify aggressive regulatory measures that might otherwise appear disproportionate if the true relative risk were accurately communicated.

3. **Media Amplification:** News outlets reproduce these statistics without critical analysis or contextual comparison, further distorting public perception of risk. Headlines emphasizing "kratom-linked deaths" create a false equivalence with substances causing orders of magnitude more mortality.

4. **Protection of Pharmaceutical Alternatives:** The emphasis on kratom's alleged dangers, contrasted with the normalization of much higher mortality rates from FDA-approved prescription opioids, serves to protect established pharmaceutical markets from competition by a botanical alternative.

Conclusion: The Case for Systematic Information Control

The evidence presented demonstrates a consistent pattern across multiple domains—regulatory communications, scientific representation, media coverage, and economic contexts—that strongly suggests a systematic effort to control information about kratom in ways that serve established institutional and commercial interests rather than providing balanced, evidence-based public health information.

This information control campaign has effectively positioned kratom as a dangerous substance with minimal therapeutic value, despite significant counter-evidence and user-reported benefits. The campaign bears the hallmarks of institutional narrative engineering, characterized by selective information dissemination, decontextualized risk presentation, media amplification, and alignment with pharmaceutical industry interests.

While direct evidence of explicit coordination remains elusive in publicly available documents, the consistent patterns across these domains cannot be dismissed as coincidental. The cumulative evidence points to a systematic effort to shape public and professional perception of kratom in ways that maintain existing power structures, treatment paradigms, and commercial interests in the pain management and addiction treatment sectors.

This analysis calls for greater transparency in regulatory decision-making, more balanced scientific assessment of botanical substances like kratom, and increased critical scrutiny of the economic interests that may influence public health messaging. Only through such measures can we ensure that policy decisions about substances like kratom are truly driven by comprehensive scientific evidence and genuine public health concerns rather than institutional inertia or commercial interests.

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