

EXHIBIT 34

UNITED STATES DISTRICT COURT

EASTERN DISTRICT OF LOUISIANA revisions to p. 33- new material is highlighted

KATHLEEN MOLLER,

Plaintiff,

v.

**MARTIAN SALES, INC.; JOPEN,
LLC; JOHNSON FOODS, LLC; LP
IND., LLC; CAG HOLDINGS, LLC;
RMH HOLDINGS, LLC; ABC
INSURANCE COMPANY and John
Does 1-4,**

Defendants.

*

*

*

*

*

*

*

*

*

*

*

*

CIVIL ACTION NO.

2:24-CV-228-WBV-DPC

THE HONORABLE WENDY B. VITTER

MAGISTRATE JUDGE DONNA PHILLIPS

CURRAULT

EXPERT REPORT OF JACK E. HENNINGFIELD, PH.D.

1. I have been asked by Defendants to review relevant medical records and other documents and render a professional opinion regarding the current state of the science concerning kratom's chemistry, pharmacological effects, safety, reasons for use, why kratom is considered to be an important public health asset by leading kratom science experts, and federal agencies that have the authority to ban kratom.

2. I have developed this report to address scientific, regulatory, and public health issues within my expertise as it pertains to kratom safety, reasons for use, effects, and potential for abuse and physical dependence (commonly referred to as "addiction potential"). My opinions are my own and do not necessarily reflect those of any of the many organizations I have been affiliated with in the past or present.

3. My work is through my employer, Pinney Associates, which is compensated at a rate of \$800 per hour for work performed through December 31, 2024, and at a rate of \$850 per hour for work performed through December 31, 2025. Pinney Associates compensates me at a rate of \$148.75 per hour in addition to my base salary for my work on this matter. My compensation is neither contingent on the outcome of this matter nor the conclusions reached in this report.

4. My opinions are based on my five decades of training and research, regulatory experience, advising companies in support of their efforts with the United States Food and Drug Administration ("FDA"), as well as contributing to the development and submission of New Dietary Ingredient Notifications ("NDIN") to the FDA for kratom products. My opinions also reflect my published research and expert reports, commentaries, and review articles that have addressed kratom and evolved along with the rapidly emerging science over the past decade. My opinions are to a reasonable degree of scientific and regulatory certainty. Together, my own

research, collaborations with other researchers, and professional regulatory experience provide the foundation for my summary of the current state of kratom science and rebuttal of key opinions within my area of expertise offered by Plaintiff's experts and alleged in the Third Amended Complaint.

5. A copy of my current *curriculum vitae* (including testimonial history) is attached as Appendix A.

6. A list of the documents referenced and reviewed is attached as Appendix B.

BACKGROUND AND QUALIFICATIONS

7. My relevant experience began with my work in a leading neuropharmacology and abuse potential testing laboratory in 1971 while an undergraduate student. In 1974, I graduated from the University of Minnesota with a major in psychology with honors, summa cum laude. I was invited to apply to and was accepted as a U.S. Public Health Service Fellow at what was then the lead psychopharmacology training program in the U.S. This program, based at the University of Minnesota, was established to train generations of researchers in addiction science, neuropsychopharmacology, evaluation of potentially addictive substances, addiction treatment, and addiction control-related public policy. My training included pharmacology and its specialty branch, toxicology. I received my PhD in Experimental Psychology with a supporting program in pharmacology from that program in 1977. I was then awarded a National Council on Alcoholism research fellowship to continue my research.

8. In 1978, I was recruited to a faculty position at the Johns Hopkins University School of Medicine, where I am presently Adjunct Professor of Behavioral Biology, Part Time, in the Department of Psychiatry and Behavioral Sciences. I was recruited to the National Institute on Drug Abuse (NIDA) Intramural Research Program ("Addiction Research Center") housed on the Johns Hopkins Baltimore, Bayview campus in 1980 where I remained until 1996.

9. My appointments at NIDA included service as Chief of the Biology of Dependence and Abuse Potential Section and Chief of the Clinical Pharmacology Branch. My responsibilities included conducting research to evaluate the safety and addictiveness of known and potentially addictive substances, as well as potential addiction treatment medicines. Beginning with my research and regulatory responsibilities at NIDA until the present, I have contributed to the development and/or regulatory approval of most of the medicines presently approved by the FDA for treating opioid, tobacco and alcohol use disorders and withdrawal ("addictions").

10. My work at NIDA included contributing to the regulation of potentially addictive drugs and substances, such as prescription medicines and tobacco products. This included work with the FDA and the DEA on matters pertaining to addiction science, abuse potential assessment, and Controlled Substances Act drug scheduling. My NIDA position involved advising several Surgeons General, including Dr. C. Everett Koop, and several FDA commissioners, including Dr. David Kessler (from whom I received service awards for my addiction research and contributions to substance control and regulation).

11. Most of my FDA regulatory work while I was a NIDA employee was focused on abuse potential assessment of various substances (e.g., cannabinoids, heroin, smoked cocaine, and

tobacco products), and pharmaceutical products in development including the partial opioid agonist buprenorphine and a broad range of others. In the 1990s, my work was extensively focused on potential regulation of cigarettes and smokeless tobacco products working directly with FDA Commissioner David Kessler and senior scientific and legal staff from FDA, including those representing three FDA centers collaborating on the development of an appropriate regulatory approach to tobacco products, which raised many novel issues. This included the FDA's Center for Devices and Radiological Health ("CDRH"), Center for Drug Evaluation and Research ("CDER"), and Center for Food Safety and Applied Nutrition ("CFSAN").

12. From 1994 until I left NIDA on September 1, 1996, I was officially on a part time "detail" to serve FDA in this regulatory development by order of the Secretary of Health, while maintaining my NIDA responsibilities as Chief of the Clinical Pharmacology Branch and the Biology of Dependence and Abuse Potential Assessment Section. During my tenure, the Dietary Supplement Health and Education Act of 1994 ("DSHEA") came into effect, and FDA's thinking about how to regulate dietary supplements was evolving in parallel to its thinking on regulating tobacco products. An important focus of the FDA during this time was food and dietary supplement standards for evaluating safety, purity, and labeling in the context of public health, as well as practical considerations for product development and manufacture. I was among the FDA team members on this regulatory effort invited to DHHS and White House Ceremonies in 1996 and at the passage of the Family Smoking and Tobacco Control Act in 2009. I also received an award from the Secretary of Health and Commissioner of the FDA for my service in regulatory development.

13. Additionally, I represented NIDA in various congressional hearings and FDA briefings. I was detailed at times to serve on various FDA committees involved in drug and tobacco regulation and various U.S. Surgeon General's reports on addiction-related issues, including the prevention and treatment of substance abuse and addiction.

14. Since leaving NIDA, I have served on several governmental committees and as a Special Government Employee at the FDA CDER and separately for the FDA Center for Tobacco Products. I was invited by the World Health Organization ("WHO") to serve on its inaugural Scientific Advisory Committee and then its Tobacco Regulatory Study Group based on my expertise in addiction, abuse potential assessment and substance regulation. I served the WHO from 2001 to 2014.

15. While at NIDA, with outside activities approval, and since leaving NIDA, I have served as an expert witness in matters related to addiction science, treatment and prevention. This included serving as the lead addiction witness for state attorneys general against the tobacco industry in the late 1990s and for the U.S. Department of Justice against the tobacco industry in the early 2000s.

16. My work at NIDA included a focus on addiction treatment development. These efforts began with buprenorphine for opioid use disorder and pain management at NIDA in 1980, nicotine gum for tobacco use disorder and withdrawal in 1982, and naltrexone for opioid use disorder in the mid-1980s. Later, these efforts also included nicotine gum, patch, nasal spray, a nicotine vapor device, and other tobacco addiction treatments and substitutes. Through my research at NIDA and Johns Hopkins and consulting with Pinney Associates, I have been involved

in the development and regulatory approval of most of the FDA-approved treatments for opioid, tobacco, and alcohol addiction and a broad range of medicines for other disorders including those related to ADHD, epilepsy, opioid overdose prevention, various types of pain, and others. I have also given invited testimony to Congress, the FDA, and the White House on the importance of providing less harmful alternatives for people who continue to use addictive substances.

17. My research and responsibilities at NIDA included consideration of the benefit-risk balancing that public health institutions, such as the Centers for Disease Control and Prevention (“CDC”), FDA, and international bodies, take into account in their regulatory and other substance policy efforts to advance public health. As listed in my CV, I regularly publish and present state of the art reviews on these topics, often along with former FDA and DEA officials and at times FDA staff.

18. My work on kratom product research, product assessment, and regulation began in 2014 working with a former FDA Office of Dietary Supplement staff member and legal regulatory consultants on kratom product submissions to FDA, labeling and other issues. I am a leading kratom scientist. I have published nearly 500 scientific articles, monographs, and books of which most have been peer reviewed. These include 17 original research articles and reviews of kratom abuse and dependence potential, safety, toxicology and public health impact, and 5 joint scientific expert reports and comments to federal agencies and the White House. I have also given more than 600 presentations at scientific meetings, many of which were invited. More than 30 presentations have addressed kratom science, policy and regulatory needs.

19. As summarized in my CV, I have served on many international panels for governmental agencies and scientific organizations regarding addiction science, treatment, regulation and policy, including harm reduction. Most recently, I was accepted by the WHO Expert Committee on Drug Dependence to provide testimony on kratom safety, real world therapeutic use, and addictiveness during its 2021 review of kratom to determine if kratom should be put under one of the international drug control conventions. After considering the types of factors summarized above, the WHO and the United Nations Bureau on Drugs and Crime determined that putting kratom under international drug control treaties (which would have banned legal kratom) was not warranted. Rather, they recommended that kratom should remain under surveillance. In 2025, I was invited to the United Nations Commission on Narcotic Drugs meeting in Vienna to serve on a Roundtable Discussion Panel that addressed harm reduction approaches, including kratom and the public health benefits of its regulation.

20. I am currently Vice President for Research, Health Policy and Abuse Liability at Pinney Associates, and Adjunct Professor of Behavioral Biology, Part-time in the Department of Psychiatry and Behavioral Sciences at Johns Hopkins University School of Medicine, Baltimore.

SUMMARY OF GENERAL OPINIONS RELATED TO KRATOM SAFETY, USE, ADDICTIVENESS AND REGULATORY STATUS IN THE UNITED STATES

21. In this section I provide my foundational opinions and facts related to kratom science, public health context, and regulatory framework. These pertain to the broad universe of kratom products available and marketed in the United States, recognizing that products vary widely in their purity, efforts to assure that they are not adulterated, their alkaloid contents and

other factors. In contrast, the OPMS products alleged to have been consumed by Harmony Moller and to have caused her death are made to higher standards and compliant with the American Kratom Association's Good Manufacturing Practice ("GMP") Standards Program.

Opinion 1:

22. Kratom is not and should not be characterized as "an opioid," nor regulated as a dangerous or addictive controlled substance in the United States Controlled Substances Act ("CSA") or under the International Drug Control Conventions of United Nations. I agree with the determinations of the U.S. Department of Health and Human Services ("DHHS"), DEA and the United Nations Office on Drugs and Crime ("UNODC") that kratom does not warrant such designations or control.

Opinion 2:

23. Kratom is not characterized by "high abuse," "dependence" or "addiction" potential and is well within the range of many licit consumer dietary substances and health products (e.g., caffeine, antihistamines, and CBD) that are abused and can be addictive in some people but overall are used primarily for their beneficial and otherwise useful health and/or life-enhancing effects.

Opinion 3:

24. Kratom does not carry a high risk of death. To the contrary, the risk of death by kratom alone appears very low and rare. This has also been the conclusion of NIDA and DEA for approximately a decade and similarly concluded by FDA in 2024 after its approximately decade of review and own testing. My opinion continues to be consistent with Assistant Secretary Gior's 2018 review statement on this matter: "There is still debate among reputable scientists over whether kratom by itself is associated with fatal overdoses."

Opinion 4:

25. There is no consensus on the basis by which kratom might cause life threatening effects or death; in contrast to most substances that contribute to overdose deaths (e.g., respiratory depression by opioids and sedatives, cardiovascular incidents by stimulants).

Opinion 5:

26. There is no consensus on what level of kratom consumption or level in the bloodstream would constitute a lethal dose, in contrast to most substances of high abuse, addiction and mortality potential that contribute to the U.S. drug overdose epidemic. Specifically, there is no well-defined toxidrome for kratom, but rather kratom associated deaths most commonly involve other substances, including prescription and non-prescribed drugs, and various pre-existing disease conditions. Deaths occurring in the absence of use of other substances are rare, as concluded by NIDA (2022) and FDA (2024).

Opinion 6:

27. Kratom is an overall public health asset that is used by many people as a harm reduction approach to reduce or eliminate the use of opioids, sedatives, stimulants, and alcohol. Such public health benefits were considered in the determinations of the DEA, the DHHS, and the WHO Expert Committee on Drug Dependence not to schedule kratom as a controlled substance.

Opinion 7:

28. Most people use kratom for health and well-being, including as a supplement to, or replacement for, caffeinated beverages or to self-manage depression, anxiety, pain, or opioid and other drug withdrawal. Like many dietary substances that consumers use, the health and well-being benefits of kratom are not and cannot be approved for therapeutic use by the FDA.

Opinion 8:

29. Kratom is a legally marketed product in 44 states, and it is legal for people in those states to possess and consume kratom. Moreover, at the time of this writing, the legislatures of 18 states have passed laws to ensure legal access to kratom with varying approaches to ensure that products meet their standards for safe access and potential benefit to public health and adults who choose to consume kratom.

Opinion 9:

30. Kratom carries a low risk of producing a medical condition requiring treatment, such as Substance Use Disorder (“SUD,” also known as “dependency” or “addiction”) or withdrawal disorder (also referred to as “physical” or “physiological” dependence). However, mild to moderate SUD and/or withdrawal following discontinuation of kratom use is not uncommon in people who consume kratom repeatedly every day for at least several months. In contrast with opioid, alcohol, and stimulant use and withdrawal disorders for which treatment is often sought, most kratom users who reported dependence or addiction did not seek treatment and found it self-manageable and not debilitating.

Opinion 10:

31. The vast majority of the evidence upon which I base my opinions was generated by independent researchers primarily supported by the National Institutes of Health (“NIH”) and NIDA and not commercial kratom product developers or kratom advocacy organizations such as the American Kratom Association. Such studies have been published at an increasing rate over the past decade at leading biomedical research institutions, including Johns Hopkins, the University of Florida, the NIDA intramural program itself and many others. Only a few percent of such publications were supported by commercial companies or foundations.

Opinion 11:

32. The FDA fueled misunderstandings related to kratom safety, legal status, and benefits by its approach from 2014 to 2018 that was intended to prohibit legal kratom access and criminalize kratom marketers and consumers. More recently, the FDA ceased making statements that imply kratom has narcotic-like risks of addiction and death. However, the FDA’s website at the time of this writing is confusing in its description about kratom’s safety and regulatory status.

Opinion 12:

33. The FDA has not attempted to generally ban marketing kratom or to suggest that marketing kratom is illegal or irresponsible through its warning letters to some companies that sell kratom. In fact, the FDA states that its approach in these warning letters is to protect public health and to guide acceptable marketing practices.

Opinion 13:

34. For several years, the FDA diverged from the DEA with respect to communications related to kratom science, safety and appropriate public health policy. In the past few years, however, the FDA appears to have adopted positions that are more consistent with scientific evidence and in support of public health.

OPINIONS SPECIFIC TO PLAINTIFFS' CLAIMS

35. In this section I provide opinions specific to Plaintiff's allegations.

36. Plaintiff has not provided valid and reliable support for the allegation that kratom was the cause, or a substantial contributing factor, to Harmony Moller's death on February 6, 2023.

37. The coroner's report, as cited in the Complaint (para 33), suggests potential pre-existing heart abnormalities, e.g., "Abnormally high left coronary ostia takeoff." The coroner's report does not provide a basis for concluding that mitragynine contributed to Ms. Moller's death. I note that blood levels of mitragynine were far lower than those that are sometimes associated with death (150 ng/mL by NMS Labs and 158 ng/mL by UC). NMS labs did not find a positive result for the mitragynine metabolite, 7-hydroxymitragynine ("7-OH"), which is consistent with low kratom/mitragynine intake. However, the NMS Labs reports did identify several other pharmacological substances and metabolites.

38. Although I do not have an opinion on the actual cause of Ms. Moller's death, my scientific training and experience make clear that singling out kratom use as the primary or substantial contributor to death is confounded by Ms. Moller's potential preexisting conditions and other substance use.

39. The autopsy finding that Ms. Moller's pre-existing heart condition was "exacerbated by Mitragynine use" is speculative. There is no established scientific or medical consensus that mitragynine "exacerbates" Ms. Moller's specific and rare cardiac anomaly or causes death in such circumstances. This is distinct from substances with well-defined mechanisms of lethal toxicity (e.g., respiratory depression from classic opioids or hypertensive crisis from classic stimulants). As Eckhardt and Nickel (2023) have concluded, "Some case reports of kratom associated arrhythmia, including fatalities, have surfaced, but little is known of the mechanism of kratom-induced ventricular arrhythmia nor the depth of the problem."

40. Attributing causation to mitragynine is confounded by (a) Ms. Moller's pre-existing cardiac condition noted in the coroner's report, (b) the multiple empty liquor and prescription pill bottles (including Acyclovir, methylphenidate, hydrocodone/acetaminophen, and gabapentin) and drug paraphernalia found at the scene (*see* St. Tammany Parish Sheriff's Office Incident Report),

and (c) the toxicology report confirming the presence of multiple other drugs and substances such as diphenhydramine, promethazine, and marijuana (THC finding). Note that evidence of marijuana use is of concern because my own marijuana research and many others have found that marijuana can produce rapid and pronounced tachycardia (Heishman et al. 1990; Huestis et al. 1992) arrhythmias and ventricular fibrillation (see also NIDA, 2024; Paulraj, 2024). Furthermore as found in my own research (Heishman et al. 1990 and Huestis et al. 1992) plasma THC levels plummet rapidly beginning with minutes following the marijuana vapor/smoke inhalation which means that seemingly low levels of THC exposure from post mortem blood samples can greatly underestimate actual exposure (see also NEW REF COMING).

41. I do not see any basis in the autopsy report or NMS labs assessment of mitragynine or 7-OH levels that suggest anything but relatively low levels as compared to those that are more likely to be associated with death (see Papsun et al. 2023; Henningfield, Grundmann, Huestis and Smith, 2026). The mitragynine level was determined to be 150 ng/mL by NMS Labs and 158 ng/mL by UCSF Clinical Toxicology. NMS did not report 7-OH. UCSF Clinical Toxicology reported 0.8 ng/mL with a footnote indicating the “[v]alue was below the lower limit of quantification of 3 ng/mL and equal to the limit of detection for the analysis.”

42. Huestis et al, 2024 assessed the effects of single and consecutive daily oral ascending doses of dried kratom leaf powder in healthy adults, including the mitragynine and 7-OH concentrations, over 10 days after a single dose and 23 days after multiple dosing. This was a Health Canada approved study designed to detect kratom-related adverse effects. In the trial’s highest dose group (4000mg kratom leaf powder / 53.2mg mitragynine daily for 15 days), the mean steady state peak plasma concentration (Cmax) measured was 143 ng/mL with a median of 155 ng/mL (range 64.3 – 215 ng/mL). In this same group, the mean 7-OH level measured was 21-8 ng/mL (range 13.3 – 31.7 ng/mL). The study concluded that the kratom powder was well-tolerated with no clinically significant abnormal findings in blood pressure, heart rate, or ECG. No active participants had abnormal QTc intervals, and QTc intervals greater than 500 milliseconds were not reported.

43. Reissig et al., 2024 evaluated the pharmacokinetics, pharmacodynamics, and safety of single ascending oral doses of botanical kratom in non-dependent, recreational polydrug users with opioid experience. In this pilot, placebo-controlled, dose-finding study performed under an Investigational New Drug (IND) application, participants were administered single doses of 1g, 3g, 8g, 10g, or 12g of oral kratom powder in capsules. In the highest dose groups, Cmax for mitragynine ranged from 250-300 ng/mL but 7-OH levels were below the lower limit of quantitation. The study concluded that at the doses tested, kratom was well-tolerated with no serious adverse effects reported, including no abnormalities in vital signs and ECG.

44. Smith et al., 2024 assessed the acute effects of a “typical” morning dose of kratom in 10 adults who use kratom regularly. This was an observational study designed to measure physiological, subjective, and psychomotor effects and to quantify alkaloids in plasma. Participants self-administered their typical dose of kratom (mean 5.16 g, range 1.1-10.9g). The mean plasma concentration for mitragynine found was 175.6 ng/mL (median 174.5 ng/mL, range 36.6 – 396.5 ng/mL). The mean plasma concentration for 7-OH was 34.0 ng/mL (median 27.4 ng/mL, range 2.9 – 77.7 ng/mL). The study concluded that among these regular consumers, there were “few clinically significant differences” pre- and post-dosing. Physiological changes,

including those in blood pressure and heart rate, were described as “minor” and “not clinically significant.”

45. Each of these studies recorded mitragynine blood concentrations at levels similar or higher than what was found in this case.

46. Taken together, these data from clinical studies, designed to the standards of an FDA registration study for safety (Huestis et al. 2024 and Reissig et al. 2024) observed somewhat higher mitragynine blood concentrations without any evidence of adverse cardiovascular or any other serious adverse effects.

47. The potential dose of mitragynine that would be likely to substantially contribute to or cause death is not known, but Ms. Moller’s documented level appears to have been very low. Additionally, post-mortem testing identified at least two cannabinoids, diphenhydramine, and promethazine. Of course, novel fentanyl related substances and other substances may have been involved but not tested for.

48. Plaintiff contends that powdered kratom products sold in the United States are far more dangerous than other natural products that are sold over the counter. This is an overly broad statement given the diversity of kratom products and natural products that are sold over the counter (OTC). For example, many products based on natural and botanical ingredients carry serious health and in some cases addiction risks, such as caffeine, yohimbine, kava, and green tea extract.

ADDITIONAL EVIDENCE-BASED SUPPORT FOR OPINIONS

Opinion 1: Kratom is not and should not be characterized as “an opioid,” nor regulated as a dangerous or addictive controlled substance in the U.S., CSA or under the International Drug Control Conventions of the United Nations. I agree with the determinations of the DEA and UNODC that kratom does not warrant such designations or control.

49. Kratom is not an opioid or narcotic by nature of its botanical origin, chemical structure or overall pharmacology and thus it is not included in the CSA or any of the United Nations International Drug Control Treaties. Nor has it ever been listed as a national drug threat in DEA’s annual National Drug Threat Assessment reports as necessary to meet statutory requirements for CSA Scheduling. Furthermore, kratom does not produce opioid-like respiratory depressant effects or the powerful euphoria that fuels the opioid epidemic. Its primary alkaloid and metabolites that do have some activity similar to opioids are partial agonists, meaning that their strongest effects are weaker than classic opioids (Henningfield et al. 2018, 2022, 2024; Kruegel et al. 2019; Kruegel et al., 2016; Henningfield and Fant, 2016; Varadi et al. 2016).

50. The DEA, NIDA, the U.S. Assistant Secretary for Health, and the WHO’s Expert Committee on Drug Dependence all agree with the conclusion that kratom is not an “opioid” and should not be scheduled as such.

51. In recent years, the FDA has been reevaluating its 2017 and 2018 statements that had suggested kratom had narcotic opioid-like effects. The FDA’s stated position as of December 2023 was that it “ha[d] not yet made a determination regarding whether kratom is dangerous.” (*United States v. Nine2Five, LLC*, Case No. 3:23-CR-00179-TWR (S.D. Cal.) ECF No. 110-8 at

2.) In February 2024, the FDA also updated its website to state: “In rare cases, deaths have been associated with kratom use, as confirmed by a medical examiner or toxicology reports. However, in these cases, kratom was usually used in combination with other drugs, and the contribution of kratom in the deaths is unclear.” (FDA, Feb. 22, 2024, at <https://www.fda.gov/news-events/public-health-focus/fda-and-kratom>).

52. Although the FDA or DEA theoretically could determine that kratom and its constituents are sufficiently pharmacologically equivalent to previously scheduled drugs such as morphine-like opioids or methamphetamine-like stimulants, the scientific evidence does not support that conclusion. In 2017, the FDA developed an 8-factor analysis to support such a conclusion, but based on limitations in the evidence cited and because the agency ignored key evidence to the contrary, the FDA’s analysis was not considered reliable or valid by leading experts (e.g., Henningfield et al. 2018; US DHHS (Giroir, 2018) or the WHO Expert Committee on Drug Dependence, 2021).

53. Furthermore, in the FDA’s 2017 8-factor analysis, the agency ignored the serious adverse public health consequences of banning kratom and the benefits of keeping kratom available as a path away from opioid overdose. These considerations are a critical part of drug scheduling considered in factors 4, 5 and 6 of CSA 8-factor analysis as noted in DHHS’s review of the FDA’s analysis led by Assistant Secretary Giroir. Dr. Giroir stated, the “FDA’s recommendation was rejected because of embarrassingly poor evidence and data, and a failure to consider overall public health” (Giroir, 2021; and detailed analysis in Giroir, 2018). The DHHS report raised additional concerns, including the risk of precipitating potentially thousands of opioid overdose deaths, deterring kratom users (including pregnant women) from discussing their use with health care providers, the impact of criminalizing millions of U.S. citizens, and impeding further necessary research.

54. Separate from the DHHS report, I earlier led development of the first CSA guided 8-factor analysis to evaluate kratom’s potential for abuse (Pinney Associates, Henningfield and Fant, 2016). In summary, we concluded that factors 4, 5, and 6¹ weighed against scheduling and that there was not sufficient evidence of factors 1-3 or 7 to recommend scheduling. We further concluded that kratom and kratom constituents did not meet the factor 8 standard.

55. When the FDA’s 2017 8-factor analysis became publicly available, I also led a more detailed evaluation of the FDA analysis, along with eleven other leaders in kratom and opioid sciences and abuse potential. Our conclusions are summarized below:

FDA’s 8-Factor Analysis does not constitute a reliable and valid scheduling decision guiding document.

¹ Factors 4, 5 and 6 pertain to whether a substance with potential abuse-related uses poses a national drug threat and might warrant consideration for CSA scheduling. The factors are typically addressed by the DEA, FDA, NIDA, and experts with national survey data and other national monitoring systems. The factors are as follows: Factor 4: its history and current pattern of abuse; Factor 5: the scope, duration, and significance of abuse; and Factor 6: what, if any, risk is there to public health.

FDA clearly did not involve NIDA or kratom science experts, as revealed by its major deficiencies. A 1985 DHHS Memorandum of Understanding, requires NIDA scientific input on FDA led abuse potential assessment evaluations.

The FDA analysis is incomplete, omitting key data sources routinely relied upon for identifying trends in abuse (e.g., the major federal surveys) and key scientific studies, AND is out-of-date as it does not refer to critical studies including those by NIDA (Yue et al., 2018 and Hemby et al., 2018).

The evidence is sufficient to conclude that placement of kratom in Schedule I or any other approach that would ban kratom would lead many kratom consumers to seek black market kratom and some to relapse to opioids and thus pose a serious risk of death (Henningfield et al., 2018).

The 2021 WHO Expert Committee on Drug Dependence came to a similar conclusion.

56. My review has been updated, peer-reviewed and published in 2018, and again in 2023 based on additional research (Henningfield et al. 2018, 2022, *see also* 2024). Those reviews include hundreds of new studies and additional reviews by other kratom research leaders who came to similar conclusions.

57. Kratom is in the same family as coffee, and like its botanical cousin, kratom contains many substances referred to as alkaloids, which tend to be somewhat alkaline and bitter in flavor. More than 40 alkaloids are identified in kratom to date, with most having little or no known pharmacological effect, or occurring at such low levels as to be of little cause for harm or benefit. The main ingredient in kratom currently thought to account for most of the pharmacological effects reported by consumers is mitragynine, which does not have strong rewarding and addictive effects like conventional stimulants, nor respiratory depressant effects like opioids (Brown et al. 2017; Henningfield, Grundmann, Huestis & Smith, 2020; McCurdy et al. 2024).

58. Unsurprisingly, given its botanical origin, kratom leaf products and extracts that contain primarily mitragynine are consumed by many people in place of coffee for alerting and occupational performance enhancing benefits (Henningfield et al. 2024). Another example of the distinction between kratom and narcotic like opioids. The term “narcotic” is derived from the Greek word for “stupor” and used to describing the sedating, sleepiness inducing, and sometimes dulling-of-the-senses effects of opioids.

59. To summarize, available scientific research has determined kratom does not have narcotic opioid-like properties.

Opinion 2: Kratom is not characterized by “high abuse” potential.

60. The FDA has performed an initial study of high doses of kratom without finding serious adverse effects and with affirmative findings that the study established that the products were sufficiently safe to pursue further such high dose research (Reissig *et al.* 2024).

61. The abuse potential reviews and specific studies cited for Opinion 1, including several hundred basic pharmacology, animal and human studies as well as extensive surveillance and epidemiological research, also support Opinion 2. The vast majority of this research has been conducted by highly acclaimed researchers at leading research institutions and with support from NIDA.

62. Recent peer-reviewed articles that address this include Henningfield et al. 2022 and 2024. Additionally, several studies funded by NIDA and conducted by NIDA and Johns Hopkins researchers using state of the art monitoring and study approaches have found that for most kratom consumers who show some signs of dependence or withdrawal, the symptom and harm profile was generally more similar to caffeine than opioids, methamphetamine or alcohol with respect to severity and self-manageability. The studies also found that kratom consumers, like caffeine consumers, are more likely to report that kratom is beneficial in daily life, functionality, and with respect to managing pain, stress, anxiety, insomnia, and withdrawal from opioids and other drugs (Grundmann, Green, Berthold et al. 2025; Henningfield et al. 2022; Smith, Panlilio, Feldman et al. 2024; Smith, Rogers, Sharma et al. 2023, Swogger, Smith, Garcea-Romeu et al. 2022).

63. Taken together, the current scientific studies and reviews show that people who report any signs of kratom dependence or “addiction” generally have few symptoms. Additionally, the reported symptoms were generally related to patterns of use (e.g., using more over time and using longer than originally intended) instead of the more severe and disruptive symptoms common with opioids and methamphetamine-like stimulants.

Opinion 3: Kratom does not carry a high risk of death. To the contrary, the risk of death by kratom alone appears very low and rare.

64. This has been known for decades in Southeast Asia, where kratom is likely used daily by more than 100 million people and has been studied for decades. Unfortunately, FDA’s earlier mischaracterization of kratom as a “narcotic opioid” was accepted by much of the popular media, by some prestigious medical institutions such as the Mayo Clinic, and apparently by many medical examiners who seemed to assume that if kratom was present in an overdose case, it could be listed as a cause of death. They would claim that “lethal” doses were taken, despite the fact that a lethal dose has not been determined. Typically, the determination that kratom was the cause or contributing factor in a death is based on the absence of evidence of other substances, even though oftentimes there was no testing done to detect the presence of several potentially lethal substances.

65. I led a peer-reviewed published evaluation cited by NIDA and others that concluded the risk of death involving kratom was at least one thousand times less than that posed by opioids. Perhaps more important are the conclusions of NIDA nearly a decade ago and revised slightly with increased nuance in 2022 (see below), along with DEA’s approach since 2016.

66. NIDA’s statements related to kratom’s risk of death on its kratom Science Facts Webpage in February 2016 were as follows: “Kratom by itself is not associated with fatal overdose, but commercial forms of the drug are sometimes laced with other compounds that have caused deaths.”

67. NIDA's webpage was updated in March 2022 to state:

A very small number of deaths have been linked to kratom products compared to deaths from other drugs. While more research is needed, it appears that fatal overdose from kratom use alone is extremely rare. A 2019 report found that 11 deaths between 2011 and 2017 in the United States were associated with kratom exposure, including two deaths associated with kratom exposure alone. In contrast, during that same period, more than 200,000 people died from opioid-related overdose.

68. With the exception of its August 2016 FDA-recommended proposal for temporary placement in Schedule 1 of the CSA, the DEA has not concluded that kratom poses a substantial risk of death or poses a national drug threat. The DEA's "Kratom Drug Fact Sheet" webpage includes the following based on user reports and available data (DEA, 2020, April at https://www.dea.gov/sites/default/files/2020-06/Kratom-2020_0.pdf):

What are the effects?

At low doses, kratom produces stimulant effects with users reporting increased alertness, physical energy, and talkativeness. At high doses, users experience sedative effects. Kratom consumption can lead to addiction. Several cases of psychosis resulting from use of kratom have been reported, where individuals addicted to kratom exhibited psychotic symptoms, including hallucinations, delusion, and confusion.

What does it do to the body?

Kratom's effects on the body include nausea, itching, sweating, dry mouth, constipation, increased urination, tachycardia, vomiting, drowsiness, and loss of appetite. Users of kratom have also experienced anorexia, weight loss, insomnia, hepatotoxicity, seizure, and hallucinations.

69. The DEA broadly uses the term "abuse" for use of any substance with psychoactive effects that has not been approved by the FDA for therapeutic use as a drug. FDA approval has generally been the operational standard for what is termed Commonly Accepted Medical Use (CAMU) in the CSA. In contrast to DEA's Kratom Drug Fact Sheet, its Narcotic/Opioid Drug Fact Sheet states the following with respect to effects: "Overdoses of narcotics are not uncommon and can be fatal." (See DEA 2020, April at <https://www.dea.gov/sites/default/files/2020-06/Narcotics-2020.pdf>).

70. Additionally, reports that a condition or event was associated with kratom use, such as DEA and FDA reports of kratom-associated "hepatotoxicity" and "seizures," do not mean that kratom has conclusively been determined to be the actual cause. For example, liver disease can have many contributors, including acetaminophen, alcohol, viral infections, obesity, diabetes, and genetic disorders. Similarly, neurological disorders and brain injuries can be associated with falls, vehicular accidents, concussions, genetic conditions, viral infections, alcohol, other substances of abuse, medications commonly used to treat anxiety and depression, sleep deprivation, discontinuation of certain medicines, and flashing lights. The foregoing opinion is based on my

experience working with medical practitioners to develop medicines for treating seizure disorders and to determine if rarely observed associated events should be included in warnings for drugs that carry known risks of seizure and liver disorders.

71. FDA's 2017-2018 public kratom communications did not draw the distinction between kratom and narcotics that has long been well understood by FDA and NIDA.

72. Whereas narcotic opioids account for most of the nearly 90,000 documented deaths that are widely agreed by the DEA, FDA, NIDA, and CDC to be primarily caused by drugs of abuse (NIDA, 2024), it is not clear how many, if any, can be primarily, if at all, attributed to kratom (*see* current FDA and NIDA, kratom webpages and Henningfield et al. 2022 & 2024).

73. The challenges in determining causality of a substance for injury and death are difficult for many substances, and in cases involving prior or existing medical conditions and other substance use, virtually impossible to definitively confirm. For example, although caffeine may cause an overdose death at extraordinarily high doses, it is rare even at that high dose to carry overdose risk (Murray and Traylor, 2025).

74. Similarly, tetrahydrocannabinol (THC), the primary active constituent in cannabis, is presumed to be able to cause or contribute to lethality at some undetermined dose (Turner et al. 2023). As with kratom, overdose death in cannabis users in which there is no evidence of other substances or other potentially lethal conditions are rare.

75. For substances such as kratom with a low risk of overdose death, it may be practically impossible to determine whether a single substance is the cause of death or can be eliminated as a theoretical cause of death. From a public health perspective, it is more likely that kratom is contributing to reduced drug overdose-related deaths than contributing to deaths. The most recent drug overdose data revealed a decrease in estimated drug overdose deaths in 2024 as compared to 2023, with synthetic opioids (fentanyl and related substances) accounting for 48,422; psychostimulants (including methamphetamine) accounting for 29,456 and cocaine accounting for 22,174. Kratom was not listed as a cause of death in these or any earlier CDC and NIDA estimates (CDC, May 14, 2025, media release). Although the downward trends are under investigation by CDC and NIDA, federal officials (e.g., NIDA Director Nora Volkow at the 2024 June Annual Meeting of the College on Problems of Drug Dependence) believe that harm reduction efforts, including increased access to naloxone and needle exchange, and harm reduction treatment efforts including substitute opioids such as methadone and buprenorphine contributed to the reductions. This contradicts the theory that kratom is fueling the overdose epidemic because the prevalence of kratom use appears to have increased. For example, a 2025 publication of a nationally representative survey suggests that the prevalence of past 30-day kratom use among adults is 9.1%, which suggests more than 20 million people in 2024 consumed kratom (Grundmann et al. 2025).

76. In my opinion, there is strong evidence that the use of kratom as a harm reduction approach by people who are addicted to opioids has contributed to the apparent downturn in drug overdose deaths; however, the magnitude of this likely public health benefit of kratom is not known. My opinion on the likely net public health benefit provided by licit retail access to kratom across most of the United States is also supported by nearly a decade of comments of kratom consumers to federal agencies, as well as in public hearings on kratom regulatory needs that I have

participated in. It is also supported by several peer-reviewed and published scientific surveys, including one of my own (Coe et al. 2019), which suggests that many thousands of people who had been using and in some cases were addicted to opioids reduced or eliminated their use of opioids through their consumption of kratom (Coe, et al. 2019; Garcia, 2020; Grundmann, 2017, Grundmann et al. 2025; Henningfield et al. 2016, 2018, 2022; 2024; Smith, Panlilio, Feldman et al. 2024).

77. This is also consistent with the summary of findings of the National Institute of Drug Abuse “that people report using kratom to alleviate pain, to address symptoms of mental health conditions like anxiety and depression, to help stop or reduce opioid or other substance use and to manage withdrawal symptoms and cravings related to opioids and other drugs. Most report multiple reasons for using kratom.” (NIDA, 2022).

78. It was for those same reasons that in 2018, the Assistant Secretary for Health Admiral Giroir rescinded FDA’s effort to end the legal distribution, sale, possession and use of kratom by making it a Schedule I substance in the Controlled Substances Act as I discuss in this report. In the rescission letter and following Twitter comment, he made clear that the evidence did not support the conclusion that kratom itself caused overdose deaths or contributed to the opioid epidemic and that, to the contrary, thousands of people might die from drug overdose if kratom’s sale was prohibited (Giroir, 2018, 2020).

Opinion 4: There is no consensus on the basis by which kratom might cause death.

79. The evidence for this opinion is largely summarized above. Additionally, in contrast to most substances that contribute to the U.S. drug overdose epidemic, there is no consensus on the manner by which kratom might cause death. In many cases for which death is attributed to kratom, no actual cause was put forward other than “intoxication,” “consumption,” or a measured mitragynine blood level.

80. This is in contrast to most of the substances that contribute to overdose deaths, e.g., respiratory depression by opioids and sedatives, cardiovascular causes by stimulants. The few deaths that involve kratom are rare, idiosyncratic, and in most cases involve other substances and/or disease conditions making it virtually impossible to rule in or rule out the potential contribution, if any, of kratom.

81. This opinion has been extensively supported by numerous studies, including nearly 200 cited in my peer-reviewed 2024 article entitled, “Kratom safety and toxicology in the public health context: research needs to better inform regulation.” It was coauthored with three other leading kratom and toxicology researchers: Drs. Grundmann, Huestis and Smith.

82. Harmony Moller appears to have suffered from cardiovascular disease, and several drugs were identified in post-mortem blood samples. The basis for concluding that her death resulted from use of a kratom product is not clear.

83. Virtually any consumable substance that is necessary for life, such as water and oxygen, most marketed food products and dietary supplements, and FDA approved medicines that are presumed to be “safe” carry risks if used at excessive levels. It is misleading to imply that such substances are generally dangerous or that any substance that can cause injury at extremely high

levels of intake should be considered dangerous and not used or marketed. This is fundamental in toxicology and best summarized by the following version of Paracelsus 16th century dictum: “the dose makes the poison” and its corollary “the dose makes the medicine.” As discussed in this opinion and in many peer-reviewed study publications and reviews of such (e.g., Henningfield, et al. 2022, 2024; McCurdy, et al., 2024), many studies over decades have documented that kratom and its most abundant neurobiologically active constituent, mitragynine, are primarily used for their effects that are considered beneficial to many people and traditional health practitioners in the U.S. and Southeast Asia.

Opinion 5: There is no consensus as to what level of kratom consumption or constituent level in the bloodstream would constitute a lethal dose.

84. A frequently cited source for establishing a lethal dose of mitragynine in humans is Papsun et al. (2023). What Papsun actually concluded is that “blood mitragynine concentrations of > 1000 ng/mL are more often *associated with* severe adverse events, up to and including death”—not that 1000 ng/mL was a known harmful or lethal dose (Papsun et al., 2023) (emphasis added).

85. Most medical examiner reports that I have reviewed in which a causal role for kratom was suggested have either based their conclusions on levels of mitragynine in the blood (despite the fact that no level has ever been determined as a lethal dose), or on other medical conditions that may have been part of the decedent’s medical history (e.g., seizures). Additionally, in these cases the decedent may have a history of use of substances that carry risks of liver, cardiovascular, or seizure disorders, or the decedent may have been using other drugs for which they were not tested.

86. For many drugs and substances, such as opioids, stimulants, sedatives, alcohol, and caffeine, there is reliable evidence-based estimates of what constitutes a lethal dose. This is sometimes referred to as the LD50 or dose at which 50% of animals and possibly humans might die. The reliability of the estimates varies across drugs but for opioids, sedatives and alcohol, the findings are considered reliable.

87. Theoretically, most any substance, including water, can be lethal at a high enough intake. However, a lethal level has yet to be determined for kratom despite many years of effort. The lethality of kratom is so low that the many animal studies that have attempted to determine the lethal dose of kratom solutions or kratom’s primary active ingredient, mitragynine, have failed to produce death (Henningfield Grundmann, Huestis and Smith, 2024; Henningfield Rodricks et al. 2022b).

88. The FDA’s recommended respiratory effect study protocol (Xu et al. 2020, 2021) was applied to determine the potential life-threatening and lethal doses of kratom. Although numerous studies previously evaluated respiratory and potentially life-threatening effects of mitragynine and kratom extracts in numerous animal species (mouse, rat, dog, monkey), none had employed FDA’s recommended approach.

89. I, along with Drs. Marilyn Huestis and Joseph Rodricks, as well as Dr. Aaron Magnuson, conducted a study meeting the FDA's recommended respiratory effect study protocol for evaluating respiratory safety of opioids and other drugs (Xu et al. 2020, 2022).

90. The study had a challenging adaptive design that pushed the dose to the highest physiochemical feasibility or until the point of life-threatening effects. Mitragynine doses were systematically increased to the maximum level that could be administered—400 milligrams per kilogram (mg/kg)—which was higher than that achieved in most other animal safety studies.

91. The tested mitragynine doses were 20, 40, 80, 240, and 400 mg/kg, which are equivalent to approximately 3.2, 6.6, 12.9, 38.7, and 64.5, (mg/kg) respectively when converted to human equivalent doses (Nair and Jacob 2016). These mitragynine doses produced peak ("C_{max}") median blood plasma levels of 723, 1720, 2497, 5182, and 7513 (with levels as high as 10,096). In contrast, it appears that many daily kratom consumers ingest less than 1 mg/kg, with other more heavy users consuming a few mg/kg over the course of a day. Typical human consumption levels are far lower than those evaluated in numerous animal studies in multiple species routinely used to evaluate drug and dietary safety for FDA submissions (Henningfield et al. 2022; 2023, 2024).

92. In this study, the FDA comparator opioid (oxycodone) doses produced striking dose related behavioral and life-threatening effects, including plummeting blood oxygen levels and deaths at the two highest doses. In contrast, mitragynine produced no life-threatening effects and no dose or time-related respiratory gas parameters recommended by the FDA. The two highest doses produced dose-related increases in expected effects, such as transient disrupted mobility. There were no dose or time related effects on the respiratory gas measures that would suggest adverse respiratory effects or risk of overdose death. These data are consistent with findings by other investigators using other techniques of respiratory assessment, though most of those studies did not achieve the highest dose level that was administered in our study (e.g., Hill et al., 2022; Macko et al. 1972, Hill et al. 2022, Váradi et al., 2016; and other studies review by the forgoing investigators and by Henningfield et al. 2022, 2024).

93. There are no human studies or data that provide a basis for determining the dose at which mitragynine, or any other kratom associated alkaloid, or whole kratom leaf material or extracts might produce life threatening cardiovascular or respiratory or other effects. Nor have any of the many animal studies that have attempted to achieve potential life-threatening effects determined what might constitute a life-threatening or lethal dose. Thus, medical examiner reports stating that a decedent had a lethal dose or that kratom was the cause of death are not supported by scientific evidence and are in fact contradictory to scientific evidence.

94. In addition to the dose of various potentially harmful constituents in a substance or product are the many other aspects of widely consumable products that may contribute to their effects, desired and undesired. This is true with respect to food such as wheat, cheese, meat, nuts and vegetables, which may be beneficial in many people, harmful to some depending on individual factors including allergies, and depending how the products were obtained, processed for use, packaged and other factors that may affect their safety due to contamination with heavy metals, harmful bacteria and other substances.

95. It is well established that marketed kratom products vary widely in their purity and levels of contaminants in the United States. For example, Prozialeck et al. (2020) found that kratom products purchased in stores in 2019 before product purity testing was becoming more common by marketers varied widely in contaminants.

96. Generalizing from reports of harm associated with kratom that have been documented across the nation with diverse products to the Defendants' products ignores the reality that kratom products vary widely in their ingredients and associated risks of harm and benefit. For example, some products marketed as "kratom" and as "derivatives of kratom" actually contain high doses of the mitragynine metabolite 7-OH, which is not generally present at neurobiologically meaningful levels in natural leaf product but can be synthesized from naturally occurring mitragynine to form 'semi-synthetic' 7-OH. This is thought to carry higher risks of adverse effects than kratom leaf-based product (Smith et al., 2025). Thus, reports by consumers of adverse effects associated with the use of products with high levels of 7-OH as due to kratom are misleading and should not be referred to as due to "kratom". Semi-synthetic metabolites of mitragynine are not kratom.

97. For example, Smith et al. (2025, p. 387), concluded as follows: "To be clear: equating 7-hydroxymitragynine products to kratom is analogous to equating synthetic cannabinoids to unaltered cannabis or hemp. Although not all organic kratom products are equal, they have not emerged as a net detriment to public health, and they remain unscheduled at the federal level. Novel semi-synthetic 7-hydroxymitragynine products pose public health risks due to the unknown chemical constituents and the known pharmacology of 7-hydroxymitragynine. Clinicians must screen patients for their use and policymakers must distinguish between kratom and 7-hydroxymitragynine."

98. The advice offered by Smith et al., which I agree with, is not generally followed and even national surveillance systems such as America's Poison Control Centers and the FDA Adverse Events Reporting System (FAERS), which document "kratom" reports do not and cannot reliably differentiate between reports from consumers and health professionals that involved pure kratom versus reports by consumers who, perhaps unknowingly, had consumed products containing high levels of 7-OH. I discuss this issue in the context of FDA's July 29, 2025, media release addressing 7-OH at the end of this report (FDA, 2025a, b, c, d).

99. Plaintiffs appear to have made no distinction between the vast range of products marketed in the U.S. and on the internet, which is known to include contaminated and adulterated products as compared to products that are made with high quality kratom leaves that have been tested to determine their purity and then manufactured and packaged so as to minimize contamination as is the case with O.P.M.S. and many other products. Natural kratom leaf-based products that are not adulterated with toxic substances or artificially high levels of alkaloids such as 7-OH do not carry serious risk and dangers based on decades of use in the United States and centuries of use in Southeast Asia (Henningfield et al. 2024; Grundmann et al. 2024; Smith et al. 2025).

Opinion 6: Kratom is an overall public health asset that is used by many people as a harm reduction approach to reduce or eliminate the use of opioids, sedatives, stimulants, and alcohol. Such public health benefits were considered in the determinations of the DEA, the

DHHS, and the WHO Expert Committee on Drug Dependence to not restrict access of kratom by controlled substance scheduling.

100. The “kratom 8-factor analysis” contained in Henningfield and Fant, 2016, which I led and which was submitted to the DEA in response to its request for comments in its October 2016 Withdrawal of Notice of Intent to Temporarily Place Mitragynine and 7-Hydroxymitragynine Into Schedule I (DEA, 2016b), supports this opinion. Our analysis followed the format of the CSA 8-factor analysis of pharmacology and public health data from more than 100 scientific publications, major federal surveys used to evaluate public health effects of substance use, two national kratom-focused surveys, more than 1000 testimonials, and discussions with other kratom experts. This report was submitted to the DEA, FDA and NIDA, and hundreds of more recent studies have confirmed its core conclusions, including conclusions 4 through 7 related to public health set forth below:

Factor #4: Kratom consumption is widespread across the U.S. and spans more than two decades, but kratom consumption has not emerged as a substance abuse problem in the U.S. as measured by any of the U.S. 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.

Factor #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 U.S.; however, there has been very little documentation and characterization of kratom use patterns in the U.S. by such populations.

Factor #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.

Factor #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 U.S., as in Southeast Asia, to contribute to work productivity, quality of life, and social relationships.

101. My major conclusions in 2016 and today are consistent with the tweet response of Assistant Secretary Dr. Giroir to the FDA commissioner, who led the DHHS review of the FDA’s prior approach characterizing kratom as a narcotic-like opioid:

May 21 2021 Dr. Giroir responds to Dr Gottlieb
Kratom Tweet



102. In its review and formal order to rescind the February 2018 scheduling request, the DHHS made clear that (a) the evidence did not support scheduling and did not meet the statutory requirements for scheduling, and (b) the main public health threat was not kratom use but a kratom ban that could foreseeably include the following:

Furthermore, there is a significant risk of immediate adverse public health consequences for potentially millions of users if *kratom* or its components are included in Schedule I, such as:

- Suffering with intractable pain;
- *Kratom* users switching to highly lethal opioids, including potent and deadly prescription opioids, heroin, and/or fentanyl, risking thousands of deaths from overdoses and infectious diseases associated with IV drug use;
- Inhibition of patients discussing *kratom* use with their primary care physicians leading to more harm, and enhancement of stigma thereby decreasing desire for treatment, because of individual users now being guilty of a crime by virtue of their possession or use of *kratom*
- The stifling effect of classification in Schedule I on critical research needed on the complex and potentially useful chemistry of components of *kratom*.

Therefore, I conclude at the current time, available evidence does not support mitragynine and 7-hydroxymitragynine being controlled in Schedule I of the Controlled Substances Act. This assessment supersedes the previous recommendation letter from Acting Assistant Secretary Wright dated October 17, 2017. In the meantime, it is recognized that *kratom* may potentially have harmful effects, especially in specific circumstances and/or when used with potent prescription or illicit drugs.

(Giroir, 2018 August kratom scheduling recission order letter to the U.S. Department of Justice, DEA Administrator Dhillon).

Opinion 7: Most people use kratom for health and well-being, including as a supplement to or replacement for caffeinated beverages, and to self-manage depression, anxiety, pain, opioid and other drug withdrawal. Like many dietary substances that consumers use, the health and well-being benefits of kratom are not and cannot be approved for therapeutic use by the FDA.

103. My opinions related to the reasons people use kratom are based on decades of study in Southeast Asia and more than a decade of study in the U.S. Research has been rapidly increasing in the U.S. over the past decade and has been primarily supported by the NIH, led considerably by NIDA, with encouragement of such research and funding from Congress. For example, the Fiscal Year 2023 Omnibus bill included the statement that “[NIDA supported research on kratom] may

provide help for some Americans struggling with addictions, given its analgesic and less addictive properties as compared to opioids.” (<https://www.congress.gov/congressional-report/117th-congress/house-report/403/1>).

104. The scientific evidence for my conclusions related to primarily beneficial use is strong and widely replicated in various peer-reviewed studies in the U.S. and Southeast Asia and is summarized at NIDA’s kratom science website. This evidence includes surveys that suggest most of the several million U.S. kratom consumers find kratom more effective, tolerable, accessible, affordable, or simply desirable because of their preferences for natural products than prescription drugs and FDA-approved over-the-counter medicines. This is despite the fact that kratom, as is the case with most dietary and natural products, is not approved for therapeutic use by the FDA.

105. This opinion is extensively supported by numerous studies in Southeast Asia and many more in the U.S., including those conducted by NIDA researchers led by Dr. Kirsten Smith and others and in reviews by global kratom research leaders such as Prozialeck et al. 2019. Key surveys include Coe et al., 2019; Garcia-Romeu et al. 2020, Grundmann et al. 2017. (*See also* review by Henningfield et al. 2023, 2024 and several more from 2020 to 2025 by Dr. Smith et al.).

106. Together, these studies show that kratom is diversely used, primarily by adults, especially among those aged 35-55, with jobs and health insurance. Participants report that their consumption is primarily for health and well-being. This includes consumption as an alternative to caffeinated products for alertness and increased focus, for the self-management of pain, and to improve mood. Many consumers state that kratom worked better for them and had fewer side-effects than the FDA-approved medicines they had taken, and/or that they preferred natural products.

107. A smaller but important fraction of consumers are people who consider kratom as a “lifeline” or a path away from opioids. They use kratom to manage opioid withdrawal and reduce or eliminate opioid use. Some report use of kratom to reduce or cease use of alcohol and stimulants such as methamphetamine and cocaine, which is consistent with its diverse effects that include stimulation and relaxation. Addiction to kratom is reported by some but generally a small minority of respondents in major published surveys and with characteristics that appear relatively benign and not problematic as compared to opioids and other prototypic substances of abuse.

108. Recent research led by Dr. Kirsten Smith, in collaboration with NIDA and Johns Hopkins colleagues, has found that many people use kratom for multiple reasons that may evolve, e.g., first to escape opioid use, and later for improved general health and well-being. Her studies also demonstrate that among people who might meet criteria for a “kratom use disorder” (also known as “dependence” and “addiction”), in contrast to use disorders with opioids, stimulants, and alcohol, use of kratom is generally relatively benign in that it does not interfere with social and occupational commitments and is not harmful in its own right but may involve craving and regular use.

109. Similar to Dr. Smith’s research, Dr. Garcia-Romeu et al. (2020) concluded: “This study supports the results of previous studies (Coe et al., 2019; Grundmann, 2017; Smith and Lawson, 2017; Swogger et al., 2015) by suggesting that kratom has a relatively benign risk profile

with only a minority of respondents endorsing kratom related adverse effects, withdrawal symptoms, or problematic use.”

Opinion 8: Kratom is legal federally and is also a legally marketed product in 44 states. (Henningfield et al. 7-OH Eight Factor Analysis, September 2025).

110. DEA, FDA, and NIDA positions in recent years are similar to mine in these respects.

111. For example, the DEA² states as follows on its webpage:

What is its legal status?

Kratom is not controlled under the Controlled Substances Act; however, there may be some state regulations or prohibitions against the possession and use of kratom. The FDA has not approved Kratom for any medical use. In addition, DEA has listed kratom as a Drug and Chemical of Concern (DEA, 2020 Kratom Drug Fact Sheet).

112. Several of the six states that placed kratom as a Schedule I drug in their state Controlled Substances Act frameworks on advice from FDA from 2014 to 2016 are in the process of replacing those laws with laws to ensure legal access and appropriate regulatory oversight of kratom.³ The reason that FDA encouraged states to place kratom (specifically, mitragynine and 7-hydroxymitragynine) in Schedule I of the Controlled Substances Act and requested that DEA take this action as well is because kratom could legally be sold as a unique type of food and thus, did not require premarket “approval” to be marketed, sold, possessed or consumed. This is consistent with its regulatory place as a dietary ingredient as defined in the United States Code, Title 21-FOOD AND DRUGS, Chapter 9 Federal Food Drug and Cosmetic Act Subchapter Definitions (U.S.C § 321). Kratom is not an approved prescription or over-the-counter drug, nor could it be because it is not a drug product. When some companies have made what FDA considers to be drug product claims, FDA has warned them to not make those claims. The FDA’s Office of Dietary Supplement has worked with sponsors and advised them on aspects of their submissions to FDA as New Dietary Ingredient Notifications (NDINs); however, it has claimed deficiencies in the submissions that must be addressed before FDA will accept them. Nonetheless, such products can be and are lawfully distributed, sold, purchased, possessed, and consumed except in states that do not prohibit sales.

113. In contravention of the scientifically justified approach of the federal government and most states, in 2025 the Louisiana legislature passed a law that bans kratom by listing both mitragynine and 7-OH as Schedule I controlled substances. Although the federal government has expressed an intent to list concentrated 7-OH products in Schedule I – an action that I support on

² DEA is in the Department of Justice and is accepted as the highest authority among these agencies pertaining to legal matters.

³ *United States v. Nine2Five, LLC*, Case No. 3:23-CR-00179-TWR (S.D. Cal.).

the basis of the evidence including public health benefits (of keeping kratom and mitragynine legal, and 7-OH in Schedule I) – the federal government has not scheduled mitragynine.

Opinion 9: Kratom carries a low risk of inducing a condition requiring medical care, and the most common side effects (such as gastrointestinal upset) self-resolve and are avoided by consuming less kratom. (Brown et al. 2017; Henningfield Grundmann Huestis Smith, 2024; Swogger et al. 2022). Serious medical conditions reported in kratom users occur at such low rates and so frequently in the context of preexisting conditions or other substance use that determining whether or not kratom consumption was a contributing factor with reasonable scientific certainty is complicated if not impossible.

114. Among the most common undesirable effects reported following kratom consumption are gastrointestinal upset and nausea that generally self-resolve and are avoided by using less kratom.

115. Many of the purported risks of kratom have not actually been demonstrated to be caused by kratom consumption. They are based on consumer and medical reports of association with little evidence to confirm any causal relationship between kratom consumption and the effects reported.

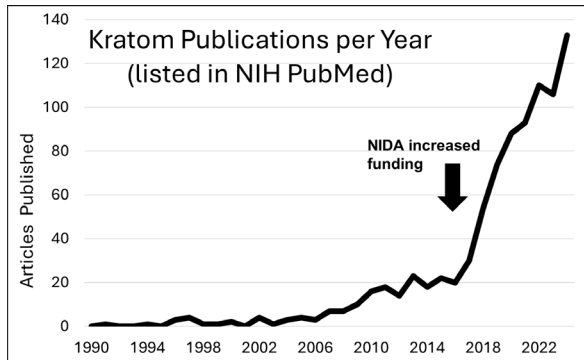
Opinion 10: The vast majority of the evidence upon which I base my opinions was generated by independent researchers primarily supported by the NIH and NIDA and not commercial kratom product developers or kratom advocacy organizations such as the American Kratom Association.

116. Studies of kratom pharmacology, toxicology, safety mechanisms of action and real-world reasons for use and patterns of use are being published at an increasing rate. Around 2015, NIDA funding increased substantially both to address public and regulatory questions and because kratom and its alkaloids showed considerable promise for safer and less addictive products for treating addiction and other disorders. By 2024, the publication rate accelerated to nearly 140 publications per year as based on NIH PubMed listed articles.

117. The rate of publication will likely increase due to ongoing kratom research at leading biomedical research institutions including NIDA's Intramural Research Program, Johns Hopkins University School of Medicine, and the University of Florida. Most of these studies are funded by NIH, NIDA or by government-funded research in other countries, including the Centre for Drug Research University Sains, Malaysia. NIDA supported research has rapidly and substantially expanded the base of reliable and validated evidence relevant to understanding why and how people use kratom, their reasons for use, and the health-related consequences of such use.

118. The vast majority of the scientific studies and publications are not supported by either commercial interests or the AKA. The AKA has supported only one major study of which I am aware, and that was the FDA-recommended study model for evaluating respiratory effects and safety that I led. That funding was unrestricted with no input from AKA in the design, interpretation or publication of the result (Henningfield Rodricks, Aaronson & Huestis, 2023). Only a small percentage of the increased kratom research and publications have been commercially supported.

119. The figure below shows the dramatic increase in kratom scientific publications.



120. These results are from a search of the National Library of Medicine’s PubMed® database of scientific literature published between the dates of 1/1/1990 to 12/12/2024 using the keywords (“kratom” OR “ketum” OR “mitragynine” OR “mitragyna speciosa” OR “7-Hydroxymitragynine” OR “7-OH-mitragynine” OR “7OHMG” OR “7-OH-MG”). Available at <https://pubmed.ncbi.nlm.nih.gov/>.

Opinion 11: The FDA has fueled misunderstandings related to kratom safety, legal status, and benefits by its approach from 2014 to 2018 that was intended to prohibit legal kratom access and criminalize kratom marketing and consumption. More recently, the FDA has ceased making statements that imply kratom has narcotic like risks of addiction and death. However, the FDA’s website at the time of this writing is confusing in its description about kratom’s safety and regulatory status.

121. Despite the FDA’s acknowledgment that kratom associated death are rare, its present website does not include that acknowledgment. Instead, the FDA lists potential adverse effects that have been reported without any effort to discuss which, if any, it has determined should be included on product warning labels. Developing warnings for products in which serious risks are rare is challenging, but the FDA has considerable experience in assessing the evidence and striking the right balance in the interest of public health.

122. Since the formal DHHS kratom scheduling rescission order to the FDA in August 2018, the FDA has not recommended that the DEA schedule kratom in the CSA. As discussed below, the FDA has taken some actions to protect public health as discussed on its FDA and Kratom website.

123. For example, the FDA has issued warning letters to kratom marketers that it has determined made unsubstantiated drug claims or whose products constitute “adulterated products” and has taken other oversight actions. The FDA and the Department of Justice also occasionally “seize” kratom products and imported kratom about which the agencies have concerns or believe pose potential violations. In some cases, these products and shipments are released back to the kratom importers/vendors, who are then allowed to sell the products or the manufactured derivatives of the products after it was determined they do not pose concerns.

124. Unfortunately, the FDA has not announced public hearings or the sort of federal rule making process for kratom that it frequently uses to obtain the latest scientific information for all interested stakeholders. Instead, the FDA continues to state concerns about kratom without developing the evidence base to guide product standards, labeling, warnings, and other approaches to protect public health. At the state level, more than a dozen states have passed laws to ensure access to kratom and protect consumers, including providing guidance on labeling standards and alkaloid content.

125. The current regulatory and policy approaches to kratom ensure legal consumer access along with oversight and research by the DEA, FDA, and NIDA. This includes the following facts:

126. Kratom is legal in most other states and was legal in Louisiana until August, 2025. As announced by the Department of Revenue on July 31 ([athttps://revenue.louisiana.gov/news-and-announcements/2025/new-penalties-for-kratom-in-effect-aug-1/](https://revenue.louisiana.gov/news-and-announcements/2025/new-penalties-for-kratom-in-effect-aug-1/)), “Starting Aug. 1, 2025, severe new penalties are in effect for the possession of the herbal supplement known as Kratom. Kratom is sold often as an energy booster, pain reliever and mood lifter. Its potential harmful side effects include liver toxicity, seizures and death.”

127. According to Act 41 of the 2025 Regular Session of the Louisiana Legislature, it is unlawful for any person in Louisiana to knowingly or intentionally produce, manufacture, distribute, dispense or possess kratom.

128. Depending on the amount of kratom involved, offenders may face up to five years in prison and fines of up to \$50,000.

129. Additionally, establishments licensed by the Louisiana Office of Alcohol and Tobacco Control (ATC) are prohibited from selling or storing kratom products on their premises. I note that this law is not consistent with the science or actions or position of the federal government since 2018.

130. Congress has encouraged ensuring kratom access to consumers, increased research, and balanced FDA regulation including the earlier mentioned Fiscal Year 2023 Omnibus bill that included the statement that “[NIDA supported research] may provide help for some Americans struggling with addictions, given its analgesic and less addictive properties as compared to opioids” (at <https://www.whitehouse.gov/briefing-room/legislation/2022/12/29/bill-signed-h-r-2617/>).

131. The FDA no longer makes any statements on its website suggesting that kratom is a narcotic like addictive substance or that it should be banned. However, by refusing to accept kratom as a legitimate dietary supplement or ingredient, refusing to ban kratom, and also refusing to set product standards or labeling requirements, the FDA sows confusion for kratom consumers, manufacturers and sellers.

132. The following is from the FDA’s current (June 13, 2025) kratom webpage⁴:

⁴ <https://www.fda.gov/news-events/public-health-focus/fda-and-kratom>.

How is FDA protecting the public from the risks of kratom?

There are no FDA approved kratom drug products or over the counter drugs containing kratom, or its ingredients- mitragynine, or 7-OH-mitragynine that are legally on the market in the U.S. FDA continues to warn consumers not to use kratom because of the risk of serious adverse events, including liver toxicity, seizures, and substance use disorder (SUD).

Consistent with its mission to protect the public's health, FDA regularly exercises its authority to protect consumers from companies selling unapproved kratom drug products, making false or misleading claims about unproven benefits of kratom, and selling unlawfully marketed kratom dietary supplements and conventional foods. The agency has partnered with the U.S. Customs and Border Protection and with the Department of Justice to take numerous actions to limit the sale of unlawful kratom products in the U.S. The agency continues to work with its federal partners to warn the public about risks associated with use of kratom.

Unapproved drug products are some of the most challenging products that FDA regulates, due to the complex and fragmented supply chain of distributors, wholesalers, retailers, and even individuals. These entities are not usually registered with FDA, may operate out of residences, and distribute kratom through sales made on the internet, social media, smoke/vape shops, other small stores, or by using the mail or other package delivery services. Kratom-containing drug products have been shipped through U.S. and international mail facilities and may falsely be declared as other items, such as potpourri or incense.

FDA will continue to work with its federal partners to warn the public about the risks associated with the use of kratom and protect consumers from entities that are selling violative kratom products, including products with false or misleading labeling claims about unproven health benefits of kratom. Additionally, states may have their own regulations or prohibitions for kratom, mitragynine, or 7-OH-mitragynine products. State health and law enforcement agencies are the best resource concerning applicable state laws.

133. Nowhere in the FDA's statement about what it is doing to protect public health does FDA state that it is presently seeking to ban the distribution, sale, purchase or consumption or to prevent consumer use. However, on its kratom website FDA states "While FDA continues to evaluate the available safety information about the effects of kratom, the agency encourages health care professionals and consumers to report any adverse reactions to the FDA's MedWatch program." Such statements fall far short of claiming that kratom is an illicit substance.

134. Instead, the FDA should comply with recommendations of Congress and follow the lead of more than a dozen states to accept kratom as a dietary ingredient and review new dietary

ingredient notifications submitted to the Agency by responsible industry participants, as well as other actions that would support public health and benefit consumers.

Opinion 12: The FDA has not attempted to ban marketing kratom or to suggest that marketing kratom is illegal or irresponsible through its warning letters to some companies that sell kratom. In fact, the FDA states that its approach in these warning letters is to protect public health and to guide acceptable marketing practices.

135. In some cases, the FDA may determine that a marketing claim crossed the line and could be interpreted as a drug claim, such as “works best as a sedative,” “for heroin and opiate withdrawal,” or “is great for pain relief and pain management.” If so, the FDA may send a warning letter that requests that the vendor correct the problem (e.g., remove and cease such claims) and inform the FDA of how the problem was corrected. Generally, as in the foregoing case, the vendor has a certain amount of time to correct the problem or at least explain to the FDA why it might take longer. A typical example of this is illustrated in the June 30, 2022, FDA letter to Omni Consumer Products.⁵

136. This is consistent with the FDA’s clarification of its position when asked to testify in the Southern District of California,⁶ as well as its 2024 update to its website noted earlier in this report. In that matter, the FDA declined to testify but took the position that it had not yet determined if kratom was hazardous.

137. Warning letters and product confiscation actions are not intended to ban kratom or prevent consumer access to kratom but rather to address specific issues that appear to warrant some remedial action.

138. The purpose of warning letters is rarely to remove categories of products from the market, but rather to stop and prevent inappropriate marketing practices. However, FDA could issue a series of warning letters for a specific ingredient based upon safety concerns rather than marketing claims. FDA has not issued this type of warning letter for products containing kratom to date.

139. In some cases, I understand that acting on the FDA’s import warning, mislabeled products have been seized by agents of the Department of Justice but later returned to the vendor for distribution to retailers (discussed in *United States v. Nine2Five, LLC*, Case No. 3:23-CR-00179-TWR (S.D. Cal.)).

140. This results in a marketing landscape with uncertain rules and regulations that can be easily misinterpreted by those who are unfamiliar with the FDA’s approach to kratom.

Opinion 13: For several years, the FDA has diverged from the DEA with respect to communications related to kratom science, safety and appropriate public health policy;

⁵ See FDA Warning Letter to Omni Consumer Products at <https://www.fda.gov/inspections-compliance-enforcement-and-criminal-investigations/warning-letters/omni-consumer-products-llc-dba-yokratom-634184-06302022>.

⁶ *United States v. Nine2Five, LLC*, No. 3:23-CR-00179-TWR (S.D. Cal.), ECF No. 110-8 at 2.

however, in the past few years, the FDA appears to have adopted approaches that are more consistent with the scientific evidence and in support of public health.

141. Three federal agencies—the DEA, FDA, and NIDA—monitor kratom use, safety and public health impact with their public attention increasing since about 2010. All three agencies have been involved in developing and interpreting kratom science, public health impact, and translation of such into public health policy and communications such as on their kratom specific websites.

142. NIDA is the U.S. and world leading funder of kratom research and the lead U.S. agency with responsibility for generating and assessing the science related to substances with central nervous system effect.

143. NIDA has contributed to FDA CSA drug scheduling recommendations since the 1970s. NIDA’s input was formally established as part of the protocol by which the Assistant Secretary of Health provides CSA scheduling recommendations to the DEA which is the agency with the designated authority to schedule drugs.⁷ After the 1985 Memorandum of Understanding, NIDA established the Biology of Dependence and Abuse Potential Assessment Section within the Clinical Pharmacology Branch of its Intramural Research Program (“Addiction Research Center”). I served as the first Section Chief, as well as Chief of the Clinical Pharmacology Branch, until I left NIDA in September, 1996.

144. The three agencies have not been closely aligned on whether kratom scheduling was in the interest of public health or the rational for scheduling kratom. Specifically, NIDA and later the DEA considered the importance of kratom as a path away from opioids and opioid overdose risks, as well as other health related effects of kratom that are reported by kratom users. The FDA initially took the position that people with opioid use disorder should use FDA approved drugs without recognizing that kratom was helping many people who found FDA approved drugs ineffective, not acceptable or not accessible (Grundmann et al. 2018; Henningfield et al. 2018a). NIDA has not voiced support for kratom prohibition by designating it as a Schedule I controlled substance. Neither has the DEA since October 2016, when it withdrew its August 2016 proposal to classify kratom (specifically mitragynine and 7-OH) as Schedule I drugs along with heroin and LSD.

145. The FDA has now moderated its position on kratom somewhat but has yet to announce an approach to provide regulatory safeguards without banning kratom, which would foreseeably lead to some “kratom users switching to highly lethal opioids” and other serious adverse consequences (Giroir, 2018).

146. In addition to differences across these three agencies, the public statements, regulatory approaches, and actual policy approaches of each of these agencies have evolved over

⁷ Memorandum of Understanding with the National Institute on Drug Abuse (Notice; 50 FR 9518-20; March 8, 1985), at https://archives.federalregister.gov/issue_slice/1985/3/8/9517-9520.pdf#page=2, accessed April 13, 2025.

the past one to two decades as kratom marketing, consumption, and reports in the general media and scientific literature have increased.

147. The differences across these three federal agencies and how their positions have evolved over time are relevant, as the following summaries of the actions of the three agencies show. Although the DEA, FDA and NIDA rely upon multiple lines of evidence, including surveillance data from other federal agencies such as the CDC, the Substance Abuse and Mental Health Services Administration, and the U.S. Poison Control Centers (PCC), the DEA, FDA and NIDA are more actively involved in kratom related public policy and product regulation.

148. The FDA also no longer provides any numerical estimates of kratom-caused deaths, which is a departure from the various estimates it provided in 2018, in which follow-up called into question the specific role of kratom in all of those deaths.

149. In most reports of kratom associated deaths, the contribution of kratom in the deaths is unclear at best. My current opinion with respect to kratom in general, and with respect to specific kratom death related assertions and complaints, is consistent with the report I developed for submission to the DEA in 2016 (Pinney Associates / Henningfield and Fant, 2016, p. 53-54):

150. 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.

151. The scientific evidence since 2016 continues to support this position, and the vast majority of the new science was generated by research supported by NIDA and published in peer-reviewed journals. It is also consistent with the approach adopted and communicated by the DEA and NIDA since 2016. The FDA was overruled due to its failure to consider the public health implications of a kratom ban and reliance on weak and misinterpreted evidence and data (*e.g.*, Giroir, 2018 and Giroir May 2021 tweet response to FDA Commissioner Scott Gottlieb who led FDA's statements and position on kratom in 2017 and 2018).

152. I agree with former Assistant Secretary for Health Dr. Giroir's evaluation of the Dr. Gottlieb-led 2017-2018 position that appears to be generally relied upon by some medical institutions (*e.g.*, Mayo Clinic).

153. Another example related to the DEA's approach was its inclusion of kratom on its list of Drugs of Concern as part of its broader concern about the introduction of synthetic psychoactive substances such as K2, Spice, and bath salts in 2008 (DEA, Drugs Forum 2008). The DEA later reported its detection of kratom (mitragynine specifically) in evaluating substances found in drug enforcement actions of illicit drug marketers and consumers in its mid-year 2015 Annual National Forensic Laboratory Information System (NFLIS) report which reported on mitragynine identifications (US DEA, 2015). Importantly, neither the DEA's Drugs of Concern listing nor its NFLIS detection reports included data or statements related to reasons for use or effects of use or harmfulness to consumers or public health (DEA, 2016). The DEA's action reflects its observation of increasing detection of kratom in some of its diverse efforts to detect and monitor potential emerging trends in the availability, distribution and use of substances that have psychoactive effects relevant to their use.

154. The DEA's statutory mission includes early detection of substances that might be of public health impact and the frequent designation of the substances as being on a "Watch List" and "Drugs of Concern," regardless of whether actual harm, abuse, or addiction have been documented.

155. I developed a summary of the DEA's initial kratom findings in an evaluation of kratom abuse potential according to the 8-factor analysis of the DEA and Controlled Substances Act. This evaluation was developed for submission to the DEA in response to its October 2016 requests for information related to kratom safety and abuse potential (Pinney Associates, led by Henningfield and Fant, 2016):

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 (, July, 2015) 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, 2014.⁸

156. In 2018, I expanded and updated my 2016 8-factor analysis of the abuse potential of kratom in a peer-reviewed analysis and review of kratom abuse potential (Henningfield, Fant & Wang, 2016) as follows:

In 2016, the DEA published its notice of intent to temporarily place mitragynine (MG) and 7-hydroxymitragynine (7-OH-MG) (the primary active alkaloids of kratom) into Schedule I of the Controlled Substances Act (CSA) (US Drug Enforcement Administration 2016a; Ingraham 2016). Within weeks, DEA received thousands of comments from the public, a bipartisan response from the US Congress, and legal-regulatory arguments from the AKA by its representatives Hogan Lovells (American Kratom Association and Botanical Education Alliance 2016; Hogan Lovells 2016; Wing 2016). Comments highlighted personal experiences and use in order to abstain from previous dependencies on opioids and to treat a variety of maladies including pain and depression with few risks of side effects and serious adverse events. In response, the DEA announced less than 2 months after its initial emergency action that it was withdrawing its proposed intent to schedule kratom and would be seeking input from the Food and Drug Administration (FDA), the National Institute on Drug Abuse (NIDA), as well as comments from the public, in order to develop a full abuse potential assessment according to the eight factors of the CSA and develop regulatory recommendations (US Drug Enforcement Administration 2016b; Gruley 2016).

157. In withdrawing its proposal to schedule kratom, the DEA included the following rationale in its October 6, 2016, Federal Register Announcement (DEA, <https://www.federalregister.gov/documents/2016/10/13/2016-24659/withdrawal-of-notice-of-intent-to-temporarily-place-mitragynine-and-7-hydroxymitragynine-into>):

On August 31, 2016, the Drug Enforcement Administration (DEA) published in a notice of intent to temporarily place mitragynine and 7-hydroxymitragynine, which are the main psychoactive constituents of the plant *Mitragyna speciosa*, also referred to as kratom, into schedule I pursuant to the temporary scheduling provisions of the Controlled Substances Act. Since publishing that notice, DEA has received numerous comments from members of the public challenging the scheduling action and requesting that the agency consider those comments and accompanying information before taking further action. In

⁸ The 2015 DEA NFLIS Special Report on which the above statements are based is listed in the references (U. S. DEA, 2015).

addition, DEA will receive from the Food and Drug Administration (FDA) a scientific and medical evaluation and scheduling recommendation for these substances, which DEA previously requested.

DEA is therefore taking the following actions: DEA is withdrawing the August 31, 2016 notice of intent; and soliciting comments from the public regarding the scheduling of mitragynine and 7-hydroxymitragynine under the Controlled Substances Act.

158. Since the DEA's 2016 withdrawal of its August 2016 kratom scheduling proposal, it has not reported kratom detection data in its annual NFLIS reports, and it has never included kratom or its alkaloids in its annual National Drug Threat Assessment (NDTA) reports. However, it continues to monitor kratom, consistent with its mission to protect public health by surveillance and monitoring.

159. In sum, the FDA's formal kratom scheduling recommendation was transmitted to the DEA by the protocol required by the Controlled Substances Act to permanently schedule kratom as a Schedule I drug by the Assistant Secretary for Health, Dr. Giroir (Giroir, 2018). In response to concerns by leading kratom researchers and evidence from surveys, the Department of Health and Human Services conducted its own review of the evidence for scheduling and its potential public health implications and rescinded the FDA's recommendation.

160. The most recent example of the FDA's evolving opinion related to kratom safety is its focus on the mitragynine metabolite, 7-OH. The level I and others recommended as unlikely to cause harm was adopted by the American Kratom Association's Good Manufacturing Standards Program, now in its 4th revised version (American Kratom Association, 2024). Related to 7-OH, it includes the following requirement (that the OPMS product at issue meets):

A declaration that any level of 7-hydroxymitragynine does not exceed the alkaloid fraction that is greater than two percent (2%) of the overall alkaloid composition of the product.

Any product that contains a level of 7-hydroxymitragynine greater than this two percent (2%) limit cannot be marketed, labeled, or contain any reference on its packaging that it is a kratom product.

161. On July 29, 2025, the FDA issued a warning specific to 7-OH, distinguishing this chemical, from "kratom" in a manner that is consistent with my opinions in three documents: (1) its own review of 7-OH pharmacology, toxicology and safety (FDA, 2025d), (2) its approach to preventing a new potential wave in the opioid epidemic, given the categorization of 7-OH as a "potent opioid" (FDA, 2025b), and (3) a "Dear Colleague" warning letter to health professionals (FDA, 2025c). In these materials, FDA was careful to make clear that its actions pertain to 7-OH products, which "no longer represent botanical kratom" (FDA, 2025d, p. 5).

162. For example, in the "Dear Colleagues" warning letter for public health professionals released on July 29, 2025, FDA Commissioner Martin A. Makary included the following statement that is consistent with other statements made and materials released at FDA's press conference and on its website:

I am writing to warn you about an opioid that few physicians may be aware of. It's called 7-hydroxymitragynine (7-OH).

7-OH is found in trace amounts in the kratom plant leaf. But this is not our focus. Our primary concern is the concentrated form of 7-OH. This is an important distinction. These concentrated 7-OH opioid products are far more dangerous than traditional kratom leaf products.

Concentrated 7-OH products have exploded in popularity in recent years, with vape shops, gas stations and corner stores selling pills, gummies, candies, and even eye-catching products like ice cream cones containing 7-OH. You may also see 7-OH referred to as 7-OHMG, 7-Hydroxy, 7-HMG, or 7. Additionally, some kratom leaf products marketed as "spiked" or "enhanced" may contain 7-OH at a level 500% higher than would be naturally expected in kratom leaf.

(FDA, 2025c).

163. In sum, as of July 29, 2025 (FDA, 2025a, b, c, d), FDA has made it clear that its concern is not kratom, nor the low amounts of 7-OH that may occur naturally in kratom leaves and in many products. However, it expressed serious concern about products with highly concentrated levels of 7-OH. The OPMS products at issue, as discussed earlier, do not contain such high levels of 7-OH.

Rebuttal

Joseph Thundiyl, M.D., opinions

Thundiyl offers two opinions relevant to plaintiffs claim that kratom caused Harmony Moller's death. These are the first two (a and b) of his four opinions

a. I agree with the Medical Examiner Report of Forensic Pathologist, Michael DeFatta, M.D. insofar as mitragynine use contributed to and caused Harmony Moller's death.

b. I agree with the opinions of Christopher Williams, Ph.D. submitted herewith regarding the pharmacology and risk profile of kratom. I agree with the opinions of Ron Wharton, M.D. submitted herewith, specifically, that Harmony Moller's death was an adverse cardiorespiratory event caused by kratom."

It is not clear what evidence supports his opinions as there is no discussion in his report. Moreover, although he states that he agrees with the opinions of Michael DeFatta, Christopher Williams and Ron Warton, all of them came to conclusions that are not supported by the evidence as I note below in my comments on their opinions.

Furthermore, the reliance materials that he cites include published reviews and studies that do not support his opinions or those of DeFatta, Williams, and Warton (e.g., Henningfield et al. 2018, 2019, 2021, 2022; Hill et al. 2022; Papsun 2019; Wilson et al. 2020; McCurdy, 2021; Swogger et al. 2022; World Health Organization, 2021). The foregoing is not comprehensive, however given the very limited of evidence that kratom consumption in the absence of other substances is a cause of death by any known pathophysiological mechanism, and nor the cardiovascular abnormalities described in the coroner's report which stated (without evidence of causality) that the "CAUSE(S) OF DEATH: [was] Abnormally high left coronary ostia takeoff exacerbated by mitragynine use." (Coroner's Report Pursuant to R.S. 44:19 (E)(3), Christopher Tape, March 11, 2025).

It is simply not clear on what actual evidence Thundiyl's opinions are based.

Christopher Williams, PhD, opinions

On the first page of his report, Williams states as follows

"My goal in this case is not to identify cause of death, nor is it to provide clinical diagnostic information. Rather, my role is to provide the scientific background on the pharmacological activity of Kratom (*mitragyna speciosa*) alkaloids, and the mechanistic underpinnings of its drug-like effects when consumed or utilized as a so-called nutritional supplement or food. My opinions herein are given to a reasonable degree of scientific certainty."

Williams' main case-specific opinion on the second page of his report is as follows:

“The cause of death was officially documented as “abnormally high left coronary ostia takeoff exacerbated by mitragynine use”. It is my opinion that the mechanisms of Kratom alkaloid activity support this conclusion, and I agree with the findings of Dr. Thundiyl and Dr. Wharton in this regard.”

I note that Williams and Thundiyl both note that they agree with the other, with neither of them actually providing an evidence supported basis for their opinions. Moreover, both Williams and Thundiyl included reliance materials that do not support their opinions.

Williams’ “scientific background” includes only seven citations, two from 2004 and 2014 which do not support the conclusion that kratom was the cause of the cardiovascular abnormality reported by the coroner – specifically the “Abnormally high left coronary ostia takeoff exacerbated by mitragynine use.” (Coroner’s Report Pursuant to R.S. 44:19 (E)(3), Christopher Tape, March 11, 2025).

Nor do the other five citations support Williams’ stated opinion. In fact, one of these seven citations was for the sole major clinical trial, conducted by a major independent contract research organization, with Health Canada regulatory input, and commissioned by Johnson Foods, determined that a range of kratom doses and types did not produce serious cardiovascular events or side effects (Huestis et al. 2024). This study was cited by Williams but not its findings which do not support Williams’ opinion related to kratom’s contribution to Harmony Moller’s death. Note that I contributed to the design of the Huestis et al. study but did not co-author the publication.

The “scientific background” is limited in scope and depth in approximately two pages of text. It includes statements that are not supported by recent, reliable and replicated studies but rather apparently “stands to reason” by Williams.

For example, on page 3 Williams states as follows:

“With largely similar pharmacological mechanisms of action and *similar potency to prescription opioids* [italics in original], it stands to reason that kratom alkaloids will mirror those of opioids. Among the most significant opioid-related adverse effects is respiratory depression.”

He did not discuss the increasingly documented extensive differences between kratom alkaloids that have actually been compared to morphine that find differences in classic opioids measures including rewarding effects, in animals, withdrawal, respiratory effects, behavioral generalization in drug discrimination studies.

The exception is 7-OH or 7HMG which can produce similar effects as morphine when injected intravenously and in animal self-administration studies as recently reviewed by FDA (Reissig et al. 2025; Henningfield, et al. 2024, 2025). But the products claimed by plaintiff to be used by Harmony Moller only contained very low levels of 7HMG that have not been demonstrated to be harmful. Furthermore, respiratory depression has not been documented in animal studies in which mitragynine was administered at very high levels and did produce high blood concentrations of

7HMG (e.g., Gonzalez et al. 2025; Henningfield et al., 2022 [respiratory study], 2024; Hill et al. 2022 [respiratory mouse study]; Kruegel et al. 2019).

Williams' scientific background and conclusion that kratom mirrors the effects of opioids is at odds with the understanding the neither kratom in general nor products such as purportedly used by Harmony Moller "mirror" the effects of opioids, have "largely similar mechanisms of action" and/or "similar potency to prescription opioids."

However, as I discussed in this report, intravenous administration of high doses of 7-OH has been demonstrated to produce opioid-like reward and respiratory depression in rodent models.

As discussed in my report, kratom and mitragynine differ from opioids across a broad range of measures of mechanism of action, opioid-like brain rewarding effects, respiratory depression, overdose deaths, or real-world patterns of use and associated physical dependence and withdrawal as have been observed for morphine, heroin, oxycodone and fentanyl type opioids. If Williams' statement was accurate, then kratom and mitragynine would likely be scheduled in the Controlled Substances Act as discussed in my report and elsewhere (Henningfield et al. 2022 [8FA], 2024, 2025a [Introduction to Kratom book], b [8-Factor Analysis]; Reissig et al. 2025; WHO, Expert Committee on Drug Dependence, 2021).

Williams' science summary simply does not reflect the increasingly documented extensive differences between kratom alkaloids that have actually been compared to morphine that find differences in classic opioids measures including rewarding effects, in animals, withdrawal, respiratory effects, behavioral generalization in drug discrimination studies. The exception is 7HMG which can produce similar effects as morphine when injected intravenously and in animal self-administration studies as recently reviewed by FDA (Reissig et al. 2025; Henningfield, et al. 2024, 2025).

Williams' very brief overview of the "scientific background on the pharmacology of kratom" includes misunderstandings of both mitragynine and 7-hydroxymitragynine (7-OH). Some of his statements are generally consistent with observations made a decade or more ago, even by FDA, but are no longer accurate and do not overall reflect the current state of kratom science, which thanks substantially to research support by the NIDA, has been numbering more than 100 publications per year for the past few years and appears to be accelerating still as I discussed earlier in my report.

For example, 7HMG, is now known to be not a kratom constituent but a metabolite and its gradual emergence in the blood following oral consumption apparently contributes to its low risk of association with respiratory depression and other adverse effects. Such effects may require intravenous administration of large doses or possibly oral consumption of large doses of highly concentrated 7-OH, neither of which are known to be relevant to Harmony Moller (Gonzalez et al. 2025; Henningfield et al. 2024; Hill et al. 2019; Kruegel et al. 2019; Reissig et al. 2025).

Furthermore, Williams' summary of kratom pharmacology cannot be considered a scientifically sound and evidence-based foundation for his opinions and those other plaintiff's experts who may rely on his summary and opinions (as expressed by Thundiyil).

Williams also relies on the FDA Adverse Event Reporting System (FAERS) database to support his statement that “MG was associated with a greater incidence of ventricular arrhythmia/cardiac arrest than any other drug tested, including methadone. *In 39% of those cases, MG exposure was indicated in the absence of concurrent QTc prolonging drugs*, thereby suggesting that MG was the primary driver of cardiotoxicity” [italics in Williams original].

Williams apparently does not understand what FDA itself states about the limitations of FAERS for assessing causality. Reports to FAERS are spontaneous reports from manufacturers, healthcare professionals, and the public. The reports within FAERS are heterogeneous, varying widely in how events are described and in their completeness and reliability. In many cases, it is unclear whether the reported product caused the event, whether other products were used, or whether pre-existing conditions may have caused or contributed to the event. FDA explicitly cautions that FAERS data alone cannot be used to establish causality. (Reference: <https://www.fda.gov/drugs/fdas-adverse-event-reporting-system-faers/fda-adverse-event-reporting-system-faers-public-dashboard>)

For example, in a recent report by FDA staff addressing 7HMG (7-OH) FDA itself stated as follows in its summary two cases:

“Although FDA’s Adverse Event Reporting System (FAERS) has documented cases reporting adverse events (13 cases, including 2 deaths) suspected to involve 7-OH, ambiguity about the contributory role of 7-OH from uncharacterized products or concomitant medications and underlying disease limits interpretation” (Reissig et al., 2025).

Note that this same report led by Reissig made clear that FDA’s kratom related serious safety concerns were specific 7-OH.

Related to the general safety and risks of 7-OH, it is important to note that as I discussed in the eight factor analysis of 7-OH that I led and submitted to DEA, FDA and NIDA, I agree with FDA’s characterization of 7-OH. This includes the conclusion that at least in the intravenous form and plausibly, highly concentrated marketed 7-OH products (not the focus of this litigation) have opioid like effects.

However, in contrast to the tens of thousands of opioid attributed overdose deaths annually in the US, FDA was only able to document two potential 7-OH deaths two date.

Thus, whether MG itself contributed to the events reported in the FAERS database cannot be ascertained from the reports.

Williams seems to have dismissed the potential contribution of diphenhydramine, promethazine and delta-9 THC, that is obtained by the use of cannabinoids which have well known cardiovascular effects (See NIDA at <https://nida.nih.gov/research-topics/cannabis-marijuana#long-term-health-cannabis> of cannabis use and Paulraj S, Upreti P, Tamirisa K,

Batnyam U. Arrhythmias and cannabis use: A comprehensive overview. *Heart Rhythm* 02. 2024;6(1):78-85. Published 2024 Nov 6. doi:10.1016/j.hroo.2024.10.020)

Williams states (on page 4) as follows: “Of note, the levels of the diphenhydramine (64 ng/ml) and promethazine (18ng/ml) are in accordance with expected levels in therapeutic drug usage, suggesting that these drugs alone were not used at a level that should precipitate cardiorespiratory toxicity (toxicity is apparent near (100ng/ml range for either drug). Additionally, the typically benign elevated heart rate that is associated with cannabis use might present another potential unrecognized interaction with Kratom alkaloids.”

I note that the actual level of intake of cannabinoids by Harmony Moller cannot be ascertained by postmortem blood sampling and analysis because delta-9 THC levels decline very rapidly.

Williams did not similarly comment on plasma mitragynine levels which were low and well within the range that has been observed in participants in NIDA support research (discussed in Henningfield et al. 2024), and FDA safety study (Reissig et al. 2024); and a full scale clinical safety study conducted by a major contract research Organization (Huestis et al. 2024a,b).

For example, Dr. Marilyn Huestis presented data at the American Academy of Forensic Sciences (AAFS) Annual Meeting in February 2024 showing that there were dose-proportional increases of mitragynine Cmax after single doses of Mitra-Leaf ($\approx 17, 32, 57$, and 125 ng/mL at $6.65\text{--}53.2$ mg), and reached slightly higher values at steady state with multiple dosing ($\approx 21, 34, 75$, and 143 ng/mL across the same dose levels).

She concluded that, in contrast to mitragynine, blood levels of 7-hydroxymitragynine remained much lower, with single-dose Cmax values of about $3\text{--}23$ ng/mL and steady-state Cmax values of about $3\text{--}22$ ng/mL, showing no meaningful accumulation. Overall, these data demonstrate predictable, linear increases in mitragynine exposure, minimal changes in 7-OH-MG with repeated dosing, and a consistently low 7-OH-MG to mitragynine ratio at all doses.

Mitra-Leaf was found to be generally well tolerated by participants at all dose levels and there were no reported serious cardiovascular adverse events or other serious adverse effects.

Part of the problem with basing opinions on population level reports of reported cardiovascular events associated with kratom and most case reports to date, is that they typically have little information on dosing levels, the nature of the kratom product, other substances that were used and the potential other health conditions. Papsun et al. (2023) report rarely seeing death at levels below 1000 ng/mL, a figure that should not be interpreted as the determination that 1000 ng/mL is a threshold for risk but it is consistent with the evidence it is likely that levels of several hundred ng/mL are achieved by many of the millions of kratom consumers in the US and yet few deaths per year in which there was no evidence of other drug use. As I discuss in this report, that is part of the reason that FDA no longer provides numerical estimates of kratom associated deaths, but rather agrees with NIDA that kratom alone deaths are rare and generally associated with other drugs (See also Giroir, 2018 in my report).

Harmony Moller did show evidence of at least four different substances, with none of them at apparently high levels of exposure, except possibly cannabis in which it cannot be concluded as to what her level was at the time of her death. It could have been very high if she had consumed cannabis in the hours before her death.

Thus, I am in general agreement with the first clause of Williams' following summary concluding sentence on page 4: "[C]ausality is difficult to ascertain in cases of polypharmacy induced drug effect." That is, I agree that causality is difficult to ascertain in cases of polypharmacy. Moreover, as I discussed earlier in my report, both FDA and NIDA agree that kratom associated deaths are "rare" and generally involve other substances.

Regarding the second clause of his sentence: "the mechanistic underpinnings are present for significant drug-drug interactions involving MG and 7HMG," he provides no evidence-based foundation, though the clause was vague and did not address whether he was attempting to provide a foundation for cardiovascular effects, respiratory depression or any other effects. Nor did he cite any drug-drug interactions studies involving "MG and 7HMG" or other kratom alkaloids. Perhaps this is because there have not been systematic drug-drug interactions studies involving these alkaloids related to cardiovascular, respiratory or central nervous system effects, with the exception of some studies assessing the effect of naloxone on some mitragynine, 7-OH effects (e.g., Henningfield et al. 2024, Reissig et al. 2025)

Ronald H. Wharton MD, FACC, FASE

I will address Dr. Wharton's third opinion which is as follows on page 3 of his report: "In my opinion, more likely than not, Harmony Moller died from a cardiorespiratory adverse event induced by consumption of kratom."

He supports this with the following observation: "There are multiple reports in the medical literature that associate the use of kratom products with the development of ventricular tachycardia and ventricular fibrillation (VT/VF), which cause the heart to stop beating."

It is not clear why he did not raise cannabis as a potential contributor since cannabis has been far more extensively documented to produce ventricular fibrillation than is the case for kratom. (See my discussion above addressing Williams and including NIDA cannabis website and Paulraj S, Upreti P, Tamirisa K, Batnyam U. Arrhythmias and cannabis use: A comprehensive overview. Heart Rhythm O2. 2024;6(1):78-85. Published 2024 Nov 6. doi:10.1016/j.hroo.2024.10.020)

The conclusion that kratom was the primary cause of death, or even contributing cause, in Harmony Moller cannot be inferred from plasma mitragynine levels, as no known level has been identified as a lethal dose by kratom use alone or in combination with opioids, stimulants, sedatives or other drugs. Having said this, I and many experts urge caution in the use of kratom with other drugs, because although no particular combination of kratom/mitragynine with other drugs has emerged as a consistent cause of death in the more than 80,000 annual drug overdose deaths in the United States, and no animal interaction studies, it seems prudent to urge caution in general conclusions.

How Wharton came to the conclusion that it is “more likely than not, Harmony Moller died from a cardiorespiratory adverse event induced by consumption of kratom” is not evident to me in his report.

Evelyn Cadman, BS, CN

I will briefly comment on two aspects of Cadman’s opinions, her disagreement that kratom can be represented as a “food” and comments that warnings on the products in dispute were not adequate.

Page 20 of Cadman’s report states “Kratom is Not a Food.” I agree that kratom is not a conventional food necessary for health and wellbeing, however it is regulated in a special category of foods by FDA’s Office of Dietary Supplements which is in the Human Foods Program of FDA’s Center for Food Safety and Applied Nutrition (CFSAN). Key definitions and concepts for dietary ingredients and dietary supplements merged with the 1994 Dietary Supplement and Health Education Act (DSHEA) of 1994.

As I state above in Paragraph 112, “its regulatory place as a dietary ingredient as defined in the United States Code, Title 21-FOOD AND DRUGS, Chapter 9 Federal Food Drug and Cosmetic Act Subchapter Definitions (U.S.C § 321).”

I quote a former director of FDA’s Office of Dietary Supplements from a recently published review article in a book that I co-edited. It is as follows:

DSHEA provided a definition of what a dietary supplement is, which can be found in section 201(ff) of the FDCA.⁹ Among other attributes, the definition of a *dietary supplement* requires that it contain at least one dietary ingredient, be swallowed into the alimentary canal, not mimic or be intended to take the place of a conventional food, and not contain a dietary ingredient that was approved as a drug or studied, under an Investigational New Drug authorization, as a drug prior to being marketed as a dietary ingredient.¹⁰

The definition of a dietary supplement includes that of a *dietary ingredient*, defined as: (1) a vitamin, (B) a mineral, (C) an herb or other botanical, (D) an amino acid, (E) a dietary substance for use by man to supplement the diet by increasing the total dietary intake, or (F) a concentrate, metabolite, constituent, extract, or combination of any ingredient described in (A) through (E).¹¹

Thus kratom, as a botanical, and its extracts and constituents (e.g., alkaloids, flavonoids, metabolites), qualify as dietary ingredients for use in dietary

⁹ 21 U.S.C. § 321(ff).

¹⁰ 21 U.S.C. § 321(ff)(3).

¹¹ 21 U.S.C. § 321(ff)(1).

supplements. (Durkin, Grundmann, and Smith, *Kratom*, Regulation and policy regarding kratom-derived dietary supplements and direct-to-consumer sales, 2026).

As I discussed in my report, I have worked with FDA before and during the passage and implementation of DSHEA and more extensively on dietary regulation over the past decade. I agree with Durkin et al. summary.

Regarding warnings

On page 12 Cadman cites Papsun et al. 2023 to support her conclusions about warnings. She states, “The warning on the OPMS kratom package... adverse effects and death.” She seems not to understand that detailed product warnings typically emerge as a collaborative process by FDA and product sponsors to determine what risks have actually been determined to be posed by that consumption of a specific product and not simply events that have sometimes been associated with consumption often along with other products and may be better described as undetermined, polypharmacy or at extremely high dosage levels

In fact, as I discussed in my report and have earlier testified, developing warnings for dietary products as for drugs is not an exercise of simply warning people of anything that has been reported. Such reports are only the starting point for a process that must involve FDA. I have called for FDA to develop product standards and appropriate warnings for more than a decade, as have kratom product sponsors including those who have submitted NDINs’ FDA has yet to act.

Sarah D. Kowitt, PhD

Dr. Kowitt’s primary opinion is stated on page 2 of her report as follows: “It is my opinion that the warnings on the kratom packages discovered near Ms. Moller were not adequate for the reasons outlined below.”

Dr. Kowitt’s report is a summary of research, largely academic and public health on examples of warnings, warning effectiveness, and warning research, primarily addressing tobacco products. Notably absent is discussion of the FDA process by which warnings are developed and how sponsors work with FDA on that process. The only reference to FDA is with respect to FDA’s website which provides a list of potential concerns and warnings but not an evidence-based list that would necessarily emerge from an FDA effort to development warnings for kratom.

Dr. Kowitt does provide, on page 6, an example of an FDA required warning on iron-containing dietary supplements. I was not involved in the generation of that warning, but this illustrates the result of an FDA warning generating process that results in concise, evidence-based statements.

I have worked with FDA staff on warnings for drugs (both prescription and over-the-counter consumer products), and tobacco for several decades. It is an elaborate process that takes into consideration some of the concepts discussed by Dr. Kowitt.

It is not a matter of listing adverse effects that have been associated with a product. As an example, kratom use has occasionally been associated with liver abnormalities. Whether serious liver abnormalities were contributed to by kratom consumption or by the decades of consumption often at high levels of acetaminophen, alcohol and other substances which are known to carry very high risks of liver abnormalities, disease and death, especially in people with pain and addictions who are among the prominent reason for kratom use by millions of people, or kratom or both is not at all clear. FDA could help sort that out and determine what warnings are appropriate and how they should be worded.

Dated: December 18, 2025

/s/ Jack E. Henningfield

Jack E. Henningfield, Ph.D.

APPENDIX A
(CV)

Revised October 20, 2025

CURRICULUM VITAE

Jack E. Henningfield, Ph.D.

Personal:

Born: August 23, 1952, St. Paul, Minnesota
Married: Lucy L. Henningfield (Loyd)
Children: Travis L. Henningfield
Vincent B. Henningfield
Address: Pinney Associates, 4800 Montgomery Lane, Suite 400
Bethesda, Maryland, 20814
Home: 5504 Roland Avenue, Baltimore, Maryland, 21210
Email: jhenning@pinneyassociates.com

Education and Degrees:

1970-1974 - University of Minnesota, College of Liberal Arts
B.A., *summa cum laude*, Psychology, June 1974.

1974-1977 - University of Minnesota, Graduate School
Ph.D., Experimental Psychology with Pharmacology Supporting Program
in Psychopharmacology Training Program, June 1977.

Post-Doctoral:

1977-1978 - Postdoctoral Research Fellow, National Council on Alcoholism,
at the University of Minnesota.

1978-1980 - Postdoctoral Research Associate and Instructor, The Johns Hopkins
University School of Medicine, Department of Psychiatry and Behavioral
Sciences, Division of Behavioral Biology, Behavioral Pharmacology
Research Unit at Baltimore City Hospitals.

1980-1982 - Staff Fellow, NIDA Addiction Research Center, Baltimore.

Present Positions:

Pinney Associates, Bethesda, Maryland:
1996 (Sept. 1) - Vice President, Research, Health Policy, and Abuse Liability

Johns Hopkins University School of Medicine, Baltimore:
1978 – Adjunct Professor of Behavioral Biology, Part-time
Department of Psychiatry and Behavioral Sciences, Behavioral Biology
Division, Appointed in 2002
2024-2025 annual reappointment as Adjunct Professor of Psychiatry and
Behavioral Sciences, Part-time, Behavioral Biology Division

Prior to 2002 my Johns Hopkins faculty positions were Instructor (1978-1980), Assistant Professor (1980-89), and Associate Professor (1989-2002)

Previous Positions outside of Johns Hopkins and Pinney Associates:

1971 - 1978 – Research Assistant, Behavioral Pharmacology Laboratory, Psychiatry Research Unit, Department of Psychiatry, University of Minnesota, Minneapolis

1977 -1978 – Postdoctoral Research Fellow awarded by the National Council on Alcoholism, at the University of Minnesota, Department of Psychiatry, Behavioral Pharmacology Laboratory

1980 (Apr. 28) – 1996 (Aug. 31) National Institute on Drug Abuse, Intramural Research Program – The Addiction Research Center, Baltimore:

1980 - 1982 – Staff Fellow, Addiction Research Center

1982 (Apr. 27) - August 31, 1996 – Pharmacologist, Addiction Research Center

1984 -1985 - Acting Chief, Human Performance Laboratory Section, Addiction Research Center

1984-1988 - Principal Investigator, U.S. Army Contract to Study the Effects of Drugs on Human Performance, Addition Research Center

1985 - August 31, 1996 - Chief, Biology of Dependence and Abuse Potential Assessment Section, Addiction Research Center

1989 - August 31, 1996 - Chief, Clinical Pharmacology Research Branch, Addiction Research Center

1990 - August 31, 1996 - Coordinator, Minority Recruitment & Training Program, Addiction Research Center

1988 - 1995 - Adjunct Professor, Dept. of Psychology, Coppin State College

1990 - 1992 Adjunct Professor, University of Maryland Program of Toxicology, School of Pharmacy, University of Maryland at Baltimore

1999 - The Johns Hopkins Bloomberg School of Public Health, Baltimore: Institute for Global Tobacco Control, Affiliated Faculty

World Health Organization

1980-1996 – Through my position at NIDA, I contributed to drug abuse/dependence potential assessments through NIDA and WHO tobacco program reports beginning in early 1980s.

2000-2004 – Scientific Advisory Committee on Tobacco Product Regulation (SACTob), WHO (Designated a Study Group in 2005)
2005-2014 (May) – Tobacco Regulation Study Group (TobReg), WHO

Innovators Combating Substance Abuse Awards Program at The Johns Hopkins University School of Medicine, Baltimore, sponsored by the Robert Wood Johnson Foundation:

2002 (Dec. 1) 2009 - National Program Director. Note that program funding ended in 2009; website and follow-up activities continued into 2011.

Food and Drug Administration (FDA)

1980 – August 1996 Through my position at NIDA, I contributed to drug abuse potential assessments and Controlled Substances Act (CSA) drug scheduling recommendations through NIDA often collaborating with the FDA and Drug Enforcement Administration (DEA), serving as an ad hoc member of various Drug Abuse Advisory Committee (DAAC) meetings, and serving as NIDA's liaison to FDA on nicotine pharmacology and addiction related issues.

1994 to 1996 – I served as NIDA's primary liaison and advisor to FDA Commissioner David Kessler's Office on nicotine pharmacology and addiction during its tobacco rule making process beginning in and continuing through the finalization of the Tobacco Rule: Regulation of Cigarettes and Smokeless Tobacco Under the Federal Food, Drug, and Cosmetic Act, August 28, 1996.

2009 to 2014 – Special Government Employee (SGE), Center for Drug Evaluation and Research (FDA CDER).

2010 to 2013 – SGE, Center for Tobacco Products.

2010 to 2011 – Member, inaugural Tobacco Products Scientific Advisory Committee (TPSAC).

Awards and Professional Honors:

Summa cum laude graduate, June, 1974.

USPHS Predoctoral Fellow in Psychopharmacology, University of Minnesota, 1974-1977.

National Council on Alcoholism Postdoctoral Fellow, University of Minnesota, 1977-1978.

Fellow, American Psychological Association, Psychopharmacology and Substance Abuse Division (Division 28), 1986.

Vice President (national), International Study Group Investigating Drugs as Reinforcers (ISGIDAR), 1987. (Tomoji Yanagita was Vice President, International)

Outstanding Service Award for work on the Report of the Surgeon General's Advisory Committee on the Health Consequences of Using Smokeless Tobacco. Presented by Surgeon General C. Everett Koop, M.D., Sc.D., April 27, 1987.

Outstanding Service Award for work as Scientific Editor on the Report of the Surgeon General on the Health Consequences of Smoking: Nicotine Addiction. Presented by Surgeon General C. Everett Koop, M.D., Sc.D., May 16, 1988.

Treasurer, American Psychological Association, Psychopharmacology and Substance Abuse Division (Division 28), 1989 to December 31, 1995.

Commemorative Medal from the World Health Organization, Tobacco or Health Programme. For "work having made a highly significant contribution to the understanding of the addictive nature of nicotine and tobacco, and your pioneering research on the treatment of nicotine addiction." Presented by the Deputy Secretary-General, WHO, World No Tobacco Day Ceremony at Palace of Nations (Palais des Nations), United Nations Office, Geneva, May 31, 1991.

Lincoln University Substance Abuse Prevention Conference. Distinguished Service Award "In recognition of excellence provided in opportunities for minority input and careers in research. Establishing a global network to better the health of mankind." Lincoln, PA, November 21, 1991.

Board of Directors, The College ("Committee" until 1991) on Problems of Drug Dependence, 1990-1994.

Charter Fellow, College on Problems of Drug Dependence, 1991.

Fellow, American Psychological Association, Experimental Analysis of Behavior Division (Division, 25), 1992.

Selected for the Third Annual Donohoe Vascular Lecture, The George Washington University Medical Center, June 4, 1992, Washington, D.C.

Co-Chair, Tobacco Dependence Section, International Council on Alcohol and Addictions, 1993 - present. Lausanne, Switzerland.

Member, Ross Round Table on Critical Issues in Family Medicine: Substance Abuse, Washington, D.C., October 13-14, 1993.

Charter Fellow and Membership Chair, Society for Research on Nicotine and Tobacco, 1994 - 2000.

NIDA Equal Employment Opportunity Award. National Institute on Drug Abuse, October, 1995.

NIDA Director's Award of Merit for activities as a member of NIDA's Minority Consortium and Equal Opportunity Office. National Institute on Drug Abuse, October, 1995.

American Society of Addiction Medicine, 1996 ASAM Annual Award "for expanding the frontiers of the field of addiction medicine and broadening our understanding of the addictive process, through research and innovation." Announced December, 1995. Presented April 20, 1996, in Atlanta.

NIDA Director's Award of Merit in recognition of exemplary achievements as a member of the Minority Recruitment and Training Program Staff. National Institute on Drug Abuse, September 25, 1996.

Alton Ochsner Award Relating Smoking and Health. For contributions that "have Led to our understanding of the neuropharmacology of tobacco dependence demonstrating that tobacco consumption, through nicotine, is a true addiction and not merely a habit." Co-recipients of this award were Neal L. Benowitz, M.D., University of San Francisco, and Michael A.H. Russell, M.D., University of London. Presented at the Annual Convocation Ceremony of the American College of Chest Physicians, San Francisco, October 28, 1996.

US Department of Health and Human Services. Secretary's Award for Distinguished Service "for outstanding performance in the development of regulations to protect the nation's children from cigarette smoking." Presented by the Secretary of Health and Human Services, Dr. Donna E. Shalala and FDA Commissioner, Dr. David A. Kessler in Washington D.C. on February 28, 1997.

President, Society for Research on Nicotine and Tobacco, March 1998 - March 1999.

Annual Jellinek Award Lecture for the Yale School of Medicine, New Haven, November 7, 1997.

Joseph W. Cullen Award of the American Society of Preventive Oncology. Presented on March 6, 1998.

Innovators Combating Substance Abuse Award. September 2000 – August 2002. A nomination based award "that recognizes the Innovators contributions to the field [substance abuse] and that will allow the recipient to continue to seek innovative solutions to the nation's substance abuse problems." Sponsored by the Robert Wood Johnson Foundation and awarded July 2000 with two years

funding.

Society for Research on Nicotine and Tobacco Ted Klein Commemorative Award.
For the promotion of science in tobacco control. March 2001.

Senator Frank R. Lautenberg Annual Lecture in Public Health and Convocation
Address. Public health the John Slade way. Convocation ceremony, class of
2002. University of Medicine and Dentistry of New Jersey, School of Public
Health. Woodbridge Hilton, Iselin, NJ. May 20, 2002.

Fellow, American Psychological Association, General Psychology Division (1),
2002.

John Slade Award for outstanding contributions to public health and tobacco
control through science-based policy and public health advocacy. Selected by
Sir Richard Doll, Former Surgeon General C. Everett Koop, former FDA
Commissioner David Kessler and Ms. Judith Wilkenfeld for the Society for
Research on Nicotine and Tobacco. March 22, 2005.

Enduring Contributions in the Interest of Science Award, by The 7th Annual Dr.
Lonnie E. Mitchell National HBCU Substance Abuse Conference. April 23,
2005.

The most cited authors in tobacco control. Pictured on the cover of the journal,
Tobacco Control, Volume 14, Issue 3, May 2005.

Distinguished Visiting Scholar, Kansas University Medical Center. January 11,
2006.

Choice Magazine. Addiction Treatment: Science and Policy for the 21st Century,
by Henningfield, J.E., Santora, P.B, Dowell, M.L. and Bickel, W.K., was
selected as one of the Outstanding Academic Titles of 2008.

Distinguished Service Award, College on Problems of Drug Dependence. For
outstanding contributions to the field of drug abuse beyond scientific
contributions, per se, which further the mission of CPDD. Scottsdale,
Arizona, June 13, 2010.

MED Associates Brady/Schuster Award, Psychopharmacology and Substance
Abuse Division ("Division 28) of the American Psychological Association.
For outstanding research underscoring the fundamental importance of
behavioral science to psychopharmacology or substance use disorder
San Diego, August 11, 2010.

British Medical Association, Medical Book and Patient Information Awards.
Addiction and Art, by Santora, P.B, Dowell, M.L. and Henningfield, J.E., was
distinguished as a "Highly Commended Book", September 14, 2011. Experts
from BMA citation: "*Stunning and sometimes unsettling, this unique portfolio*

reveals addiction art as a powerful complement to addiction science. ...a pleasure to read and would be of great value a part of any addiction training course. ...a valuable tool for anyone involved in teaching addiction studies both as a source of 'addiction stories' and as a resource for focusing thought and discussion on the personal meaning of addiction."

Presidential Citation Award, American Psychological Association. For research contributions to the science foundation for understanding tobacco as an addictive substance and contributions to the Food and Drug Administration, U.S. Congress, World Health Organization, and professional scientific organizations including APA, on the development of national and global policy and regulation to more effectively control tobacco addiction and disease. Presented at the Scientific Leadership Conference, by APA President, Melba Vazquez, Washington, D.C., October 23, 2011.

Alzheimer's Association Memory Ball, Bolero (Lucy Henningfield, partner). Baltimore, Maryland, April 12, 2014. Judges Choice First Runner-Up. At <https://www.youtube.com/watch?v=KNK1GLFX3PA>

Spotlighters Theatre Award for Community Service. Presented to Jack and Lucy Henningfield for their dedication to community service and charitable fund-raising with a focus on the performing arts and addiction services. Spotlighters Theatre, Annual Gala, Baltimore, MD, October 26, 2014.

Communities Engaged in Advocating for a Smoke Free Environment (CEASE) Tobacco Research Award. Presented at the First Annual Conference of the Morgan State University CEASE, Baltimore, MD, 21210, November 8, 2014.

Fellow, Society for Research on Nicotine and Tobacco, 2017.

Fellow, American College of Neuropsychopharmacology, 2017.

Grant and Other Review Activities:

NIDA, Behavioral and Clinical Drug Abuse, Initial Review Group (Ad Hoc, 1982 to 1990s, Member 1989-1992), and various Special Review Groups.

NHLBI, Ad Hoc Member, 1987 to early 1990s.

Veterans Administration, scientific review system.

Addiction Research Foundation (Toronto), scientific review system.

Robert Wood Johnson Foundation, science and policy grant review system.

Canadian Research Chairs of Canada, reviewing nominations for research chair

positions from early 2000s to the present.

Tobacco-Related Disease Research Program, University of California, Nicotine Dependence Study Section - Chair. April 1994; May 1997; April 1998, March 1999.

Minnesota Partnership for Action Against Tobacco, State Research Grants Program, Study section, 2000 to 2002, chair.

Policy Advisory Panel, American Legacy Foundation, Washington D.C., 2000 to present, member.

College of Reviewers, Canadian Research Chairs Program, 2001 to present, member.

Cancer Research, United Kingdom, 2002.

National Institutes of Health, Center for Scientific Review Special Emphasis Panel, March, 2007.

International Advisory Committees including the World Health Organization:

Barcelona Conference on the Clinical Testing of Drug Abuse Liability: Development of consensus and recommendations. Presentation: Drug self-administration methods in abuse liability evaluation. Barcelona, November, 1990

Canada's Expert Committee on Cigarette Modifications, Presenter and Discussant. Toronto, March 1-3, 1996; September 20-22, 1999.

United Kingdom Health Education Authority. Alternative Nicotine Delivery Systems. Presentation and Consultant. Presentation: Regulation of Nicotine in the U.S. London, November 25, 1996.

United States-Mexico Bi-National Commission Meeting: Smoking Prevention Core Group. Presenter and Consultant. Presentation: Understanding of Tobacco Addiction. Mexico City, March 3-5, 1997.

United Kingdom Anti-Smoking Tobacco Summit. Presenter and Consultant. Presentation: Consumer Protection Issues, London, July 14, 1997.

United Nations Council on Trade and Development (UNCTAD). Conference on Reduction of Tobacco Harm. Presenter and Consultant: (1) Nicotine Dependence as a Barrier for Reduction of Smoking-Related Mortality and (2) Discussion of Public Health Aspects of Widespread Use of Alternative Nicotine Delivery Systems (ANDS). Palais Des Nations, Geneva, September, 22-24, 1997.

European Commission Round Table on Smoking Control. Expert consultant.
Plateau du Kirchberg, Luxembourg, Belgium, December 12, 1997.

Expert Committee on Tobacco Research Issues. World Health Organization.
Washington D.C., Campaign for Tobacco Free Kids, March 16, 1999.

Member, Expert Committee. Tobacco Intervention Policy for the World Health
Organization. Mayo Medical Center, Rochester, MN, March 21-23, 1999.

Committee on Treatment and Rehabilitation Models, Tobacco in Mexico. Working
meetings and seminars. Cocoyoc, Morelos, Mexico, August 26-28, 1999.

Member, Expert Panel on Nicotine and Nicotine Policy, European Institute of
Oncology. To provide guidance to European Commission regarding proposed
European Tobacco Directive. Milan, Italy, September 7 & 8, 1999.

Rapporteur and Expert, Conference on the Regulation of Tobacco Products, World
Health Organization, European Region, Helsinki, Finland, October 18, 1999.

Participant, Conference on the Regulation of Tobacco Dependence Treatment
Products World Health Organization. Helsinki, Finland, October 19, 1999.

Member, World Health Organization, Region of the Americas, Consultation Group,
1999 to 2000 (Report: Tobacco Control: Critical Review and Scope of
Treatment in the Americas: Strategic Plan to Reduced Tobacco Caused Death
and Disease in the Near Term, Pan American Organization, 2000).

Chair, Addiction Science Tract Planning Committee (1999-2000), 11th World
Conference on Tobacco or Health Meeting, Chicago, August 6-11, 2000.

Presenter and participant, Advancing Knowledge on Regulating Tobacco Products,
World Health Organization. To provide guidance for WHO policy and the
Tobacco Control Framework Convention. Oslo, Norway, February 9-11,
2000.

Expert, WHO Scientific Advisory Committee on Tobacco Product Regulation
(SACTob). World Health Organization, Geneva. 2000 to 2004.

Expert, WHO Study Group on Tobacco Product Regulation (TobReg). World
Health Organization, Geneva. 2004 to 2014.

Nicotine Advisory Board, European Institute of Oncology, Milan, Oct. 5&6, 2000.

Rapporteur and Expert, Second World Health Organization European Meeting on
the Regulation of Tobacco Dependence Treatment Products, Barcelona,
Spain, October 13, 2000.

Advisor to International Agency for Research on Cancer (IARC), World Health

Organization. Lyon, France. 2004 to 2006.

Report on Tobacco Control in India. Ministry of Health and Family Welfare, Government of India. New Delhi, India. 2004. Edited by K.S. Reddy and P.C. Gupta. Ministry of Health and Family Welfare, India; Centers for Disease Control and Prevention, United States; World Health Organization. Advisory role and reviewer.

Chairman, Expert Committee on Health and Smoking, Japan-U.S. Seminar for Treating Smokers. Tokyo Prince Hotel Park Tower, Tokyo, November 21, 2005.

Henningfield, J.E. Working Group Convened to Elaborate Guidelines for the Implementation of Articles 9 and 10 of the WHO Framework Convention on Tobacco Control. 2006 to 2014.

Other Advisory Committees, Boards, and Governmental Consulting Activities:

Advisor to the Commissioner of the Food and Drug Administration, on behalf of the National Institute on Drug Abuse, on scientific issues regarding the introduction of a new nicotine delivery system, 1988.

Advisor to the Commissioner of the Food and Drug Administration, on behalf of the National Institute on Drug Abuse, on scientific issues regarding the addictiveness of nicotine delivery tobacco and pharmaceutical products, 1994-1996.

Technical advisor to American Lung Association on the pharmacologic basis and treatment of nicotine dependence, 1990.

Consultant and Ad Hoc Member Food and Drug Administration Subcommittee of the Drug Abuse Advisory Committee, 1990.

Alcohol/Substance Abuse Experts Working Group, American Psychological Association, 1991-1993.

Medications Development Guidelines Committee, Sub-Committee to the Drug Abuse Advisory Committee to the Food and Drug Administration, 1991.

Tobacco Advisory Board, George H. Gallup International Institute, 1991-1992.

Working Group. American Heart Association and the Coalition on Smoking or Health. Monterey, CA, January 1993.

Working group on Nicotine Dependence. Tobacco Use: An American Crisis. American Medical Association. Washington, DC, January 1993.

Consultant and Committee Member. Development of recommendations for coverage of treatment of substance abuse in potential health care reform legislation. National Center for Addiction and Substance Abuse (CASA), Columbia University, New York, March 6-7, 1993.

Advisor to the Agency for Health Care Policy and Research on the process leading To the eventual development of the 1996 guideline, Smoking Cessation, Clinical Practice Guideline, No. 18. Approximately 1991-1996.

Committee Member. Consortium on Minority Concerns. National Institute on Drug Abuse. 1994 to 1996.

Committee Member. Robert Wood Johnson Foundation review of Etiology of Substance Abuse. Princeton, NJ, Jan. 13, 1995.

National Cancer Institute/National Institute of Dental Research Initiative on Spit Tobacco, 1995.

Chair, Study section for the Tobacco-Related Disease Research Program, University of California, San Francisco, California, May 22-23, 1997.

Senior Advisor. Robert Wood Johnson Foundation. Research Network on the Etiology of Tobacco Dependence (TERN), 1996 to 2008.

Centers for Disease Control and Prevention's Office on Smoking (CDC, OSH) and Health and Division of Adolescent and School Health (DASH): Tobacco Use Cessation Among Youth. Atlanta, September 15-16, 1997. Consultant and Discussant.

Member, The March Research Task Force. Behavioral Sciences Research Working Subcommittee, January 20, 1998.

Member, Ad Hoc Treatment Group, Center for the Advancement of Health. "Treating Tobacco Dependence in the U.S.", February 10, 1998.

Member, Youth Tobacco Prevention Initiative. Research Questions: A Transdisciplinary Approach to Youth Tobacco Use Prevention. Chair, Research Questions Committee. Robert Wood Johnson Foundation, October 16, 1998.

Founding Member, Committee on Tobacco Product Change, sponsored by the Campaign for Tobacco Free Kids. Washington, D.C., 1999 -.

Member, Expert Committee. Tobacco Cessation Specialist and Program Certification and Training. Washington, DC, December 15, 1999.

Course Coordinator and Instructor (along with Joseph Gitchell), Cessation

Programs at State and Local Levels. Tobacco use Prevention Training Institute, Centers for Disease Control and University of North Carolina. Denver, September 17-22, 2000 with Internet Provided Distance Learning supplemental course

Expert Panel Member, Robert Wood Johnson Foundation study to develop and test new tobacco use and treatment related measures on the Health Plan Employer Data and Information Set (HEDIS). 2000.

Member, Policy Advisory Panel and ad hoc advising, American Legacy Foundation, Washington D.C., 2000 to 2009.

Member, Expert Advisory Panel on Modified Tobacco Products, Massachusetts Department of Public Health, Tobacco Control Program, June 28, 2002-2004.

Expert Panelist and Program Committee, Conference on Abuse Liability Assessment of CNS Drugs. College on Problems of Drug Dependence. Bethesda, October 28-29, 2002.

Member, Initiative on the Study and Implementation of Systems (ISIS) – a National Cancer Institute Project to explore innovations in tobacco control science and public health efforts, 2003 to 2004.

Member, National Institute on Drug Abuse Clinical Trials Network, Data and Safety Monitoring Board, February, 2005 to 2008.

Discussion participant: First SAMHSA/CSAT Open Dialogue on the Issue of Non-Therapeutic Use of Prescription Medications. Rockville, February 9, 2005.

Discussion participant: NIH State-of-the-Science Conference on Tobacco Use. Bethesda, Maryland, March 7-9, 2005.

Expert Panelist and Program Committee, Impact of Drug Formulation on Abuse Liability Safety and Regulatory Decisions Conference. College on Problems of Drug Dependence. Bethesda, April 19-20, 2005.

Recommendations work group leader: Risk Management Strategies. Impact of Drug Formulation on Abuse Liability Safety and Regulatory Decisions Conference. College on Problems of Drug Dependence. Bethesda, April 19-20, 2005.

Member, Interagency Committee on Smoking and Health, Centers for Disease Control and Prevention. July 1, 2005 to December 8, 2008.

Member, Scientific Advisory Board, Morgan State University, Center for the Study and Prevention of Drug Use. Baltimore, August 27, 2007.

Special Government Employee and Member, Tobacco Products Scientific Advisory Committee (TPSAC), Center for Tobacco Products, Food and Drug Administration, March 2010 to 2011.

Board of Trustees, Institutes for Behavior Resources, Inc., 2011 – present.

Centers of Biomedical Research Excellence (COBRE): Vermont Center on Behavior and Health, University of Vermont, Review Panel and Retreat, September 25, 2013, Member.

Consortium on Models Evaluating Tobacco (COMET), External Advisory Board Meeting. University of Minnesota, Minneapolis, October 7, 2013, Chair.

Board of Directors and Associates Board, Spotlighters Theatre, Baltimore, Maryland, 2015 - Present

Invited Testimony at Governmental Hearings and Committees

On behalf of the National Institute on Drug Abuse on nicotine addiction. Before the United States House of Representatives, Committee on Energy and Commerce, Subcommittee on Health and the Environment. 100th Congress, Second Session. Hearing on the Health Consequences of Smoking: Nicotine Addiction. Washington, DC, July 29, 1988.

On behalf of the National Institute on Drug Abuse, to support the Commissioner, Food and Drug Administration (Dr. David Kessler) on tobacco industry research on the assessment of abuse liability (“addictiveness”) of nicotine in animal models. Before the United States House of Representatives, Committee on Energy and Commerce, Subcommittee on Health and the Environment. 103rd Congress, Second Session. Hearing on the Health Effects of Smokeless Tobacco. Washington, DC, March 25, 1994.

On behalf of the National Institute on Drug Abuse on the topic of addiction to Smokeless tobacco and the influence of pH on free nicotine. Before the United States House of Representatives, Committee on Energy and Commerce, Subcommittee on Health and the Environment. 103rd Congress, Second Session. Hearing on the Health Effects of Smokeless Tobacco. Washington, DC, November 29, 1994.

Massachusetts Department of Public Health. Public Hearing on Proposed Regulations to be implement Massachusetts General Law Chapter 94, Section 307 C. Testified regarding labeling of Cigarettes and Smokeless Tobacco Products. Reports of Added Constituents and Nicotine Ratings. Boston, January 31, 1997.

White House, Briefing for the Secretary, Department of Health and Human

Services, and the President's Advisory on Tobacco and Health Issues. Proposed National Tobacco Resolution. Reduction of Tobacco Caused Diseases, Washington, D.C. July 23, 1997.

On the topic of tobacco addiction and treatment and request of Senator Jeffords to address the current state of the science, public health policy approaches, and FDA Regulation of tobacco. Before the United States Senate, Committee on Labor and Human Resources. February 24, 1998.

Massachusetts Department of Public Health. Public Hearing on the Proposed Regulations to Declare Cigars Hazardous Substances Under the State Hazardous Substances Act, Boston, Massachusetts, May 21, 1998.

United States Interagency Committee on Smoking and Health's Subcommittee on Tobacco Cessation. Washington, D.C., October 24, 2002.

United States Interagency Committee on Smoking and Health's Subcommittee on Tobacco Cessation. Washington, D.C., February 11, 2003.

United States House of Representatives, Committee on Government Reform. Hearing: Reduced exposure/reduced risk tobacco products: An examination of the potential public health impact and regulatory challenges, Washington, DC, June 3, 2003.

United States House of Representatives, Committee on Government Reform, Subcommittee on Criminal Justice, Drug Policy and Human Resources. Investigative hearing: To do no harm: Strategies for preventing prescription drug abuse. Testimony on behalf of Purdue Pharma. Winter Park, Florida, February 9, 2004.

United States Senate, Health Education, Labor and Pension (Help) Committee. Invited testimony by Senator Edward M. Kennedy before the hearing on Senate Bill S.6.25: the Family Smoking Prevention and Tobacco Control Act, which would provide the Food and Drug Administration with effective authority to regulate tobacco products. Washington D.C., Dirksen Building, February 27, 2007.

United States House of Representatives, Committee on Government Reform, Subcommittee on Health. Invited by Chairman, Senator Henry A. Waxman to testify in the Hearing on H.R. 1108, Family Smoking and Prevention and Tobacco Control Act. Washington D.C., Rayburn House Office Building, Wednesday, October 3, 2007.

United States Senate, Commerce, Science and Transportation Committee, Chairman, Senator Daniel K. Inouye, Subcommittee on Consumer Affairs. Invited by Senator Frank R. Lautenberg to testify in the Hearing on the Accuracy of the FTC Tar and Nicotine Rating System. Washington D.C., Russell Senate Office Building, Tuesday, November 13, 2007.

United States House of Representatives, Bi-Partisan Psychedelics Advancing Therapeutics (PATH) Caucus, Co-Chairs, Representatives Jack Bergman (R) and Lou Correa (D). Executive Branch Briefing, Capital Hill, Cannon Office Building, January 31, 2024

United States House of Representatives, Bi-Partisan Psychedelics Advancing Therapeutics (PATH) Caucus, Co-Chairs, Representatives Jack Bergman (R) and Lou Correa (D). Executive Branch Briefing, Capital Hill, Cannon Office Building, June 24, 2025.

Trial Testimony as Expert witness - NOTE: this is not complete with respect to litigation against the tobacco industry because my records are not complete; furthermore, I have been listed in many cases that may have relied on my video taped testimony without my knowledge for litigation in the state of Florida.

Related to tobacco addiction for plaintiffs versus tobacco industry: 1986: Sean Marsee v. U.S. Tobacco, Oklahoma City.

1996 to present:

U.S. Department of Justice v. major cigarette manufacturers (Washington, D.C.). For Attorney's Generals for the states of Mississippi, Florida, Texas, Connecticut, Missouri, Washington, Maryland, Massachusetts, Wisconsin, Oklahoma

For California Municipality (San Francisco area); Arch v. American Tobacco et al. (Pennsylvania); and Small & Fubini v. Lorillard Tobacco Co., et al. (New York); Little v. Brown and Williamson and R.J.Reynolds (South Carolina); McCune v. Philip Morris et al. (West Virginia); National Asbestos Workers Medical Fund et al. v. Philip Morris et al. Maryland); Grinnell v. American Tobacco/Brown and Williamson (Texas), Scott et al. v. American Tobacco et al. (Louisiana); West Virginia Consolidated Tobacco Litigation (Blankenship) v. Philip Morris et al.; Michael McMullin, et al. v. U.S. Smokeless Tobacco Co.; Haines; Christensen; West VA Consolidated; St. Louis v. Philip Morris et al.; Kelly Hill et al. v. U.S. Smokeless Tobacco Company; Evans, Executor v. Lorillard Tobacco Company et al.; Brown, California, Deposition, August, 2012, Tried May, 2013; St. Louis, Tried, February, 2011; Allen, Florida, McMannis, Florida; Whitney, Florida; Govea, Florida; Day, Florida

Florida Engle Progeny Litigation:

Townsend, Tried, 2010

Sulcer, Tried April, 2011

Evans, Tried, April, 2011

Gregory, Deposition, March 2011

Perry, Deposition, March 2011

Szymanski, Deposition April, 2011

Sulcer, Deposition, April, 2011

Allen, Trial, April, 2011, November 2014

Rivenburg, Deposition May-June?

Ramsey, Scheduled for Trial, May, 2011
Cox, Trial, December, 2011
Alexander, Deposition, July 2012
Rizutto, Deposition, July, 2012, Tried, August,
2013 Goviea, Deposition, August, 2013
Bishop/Ramsey, October, 2014

Juul Labs, Inc (Defendants) testimony

Deposition (virtual), March 10, 2021. State of North Carolina, Ex Rel. Joshua H. Stern, Attorney General v. Juul Labs, Inc.; PAX Labs, Inc., In the General Court of Justice Superior Court Division, Case No. 19 cvs 2885

Deposition (virtual) September 23, 2021. Juul Labs, Inc. Marketing, Sales Practices, and Products Liability Litigation, Case No. 3:19-md-02913-WHO, United States District Court, Northern District of California

Deposition (virtual) January 13, 2022. Juul Labs, Inc. Marketing, Sales Practices, and Products Liability Litigation, Case No. 3:19-md-02913-WHO, United States District Court, Northern District of California

Deposition (virtual) October 18, 2022. Juul Labs, Inc. Case File No. 27-CV-19-19888, State of Minnesota by its Attorney General

Deposition (virtual) October 28, 2022. Juul Labs, Inc. Case No. 2019 CA 007795 B, District of Columbia

Trial testimony (live) April 14, 2023. Juul Labs, Inc. Case File No. 27-CV-19-19888, State of Minnesota by its Attorney General

Deposition (virtual) August 7, 2024. Alaska v. Juul Labs Inc. Case File No. 3AN-20-09477CI, Superior Court of the State of Alaska

Trial testimony (live) November 19-20, 2024. Alaska v. Juul Labs Inc. Case File No. 3AN-20-09477CI, Superior Court of the State of Alaska

Other (non tobacco-related) trial testimony:

Pharmacia Corp. vs. GlaxoSmithKline Consumer Healthcare, L.P. Civ. No. 02-5292 (MLC) (for GSKCH). Spring/summer, 2003.

Natural Answers, Inc. vs. SmithKlineBeecham (GlaxoSmithKline). U.S. District Court, Southern District of Florida, Case No. 04-22646-CIV UNGARO-BENAGES/BROWN. December, 2004 to January, 2005.

Kratom Related

United States v. Sebastian Guthery & Nine2Five LLC, Jopen, LLC, Plaintiff. United States District Court Southern District of California, 9th Circuit Court, San Diego, Case No. 23-CR-179-TWR. Invited by Barnes & Thornberg, LLP, Defense Counsel and

American Kratom Association, to testify in a kratom evidentiary hearing requested by Judge Todd W. Robinson to resolve differences claimed by plaintiffs and defense regarding kratom evidence and the position of the FDA and kratom safety. JEH testified on kratom science including pharmacology & epidemiology, and regulatory status and opinions. May 13 – 14, 2024. JUDGMENT as to NINE2FIVE, LLC (1), Count(s) 1, 12-14, 2-7, 8-11, Dismissed on the Government's oral motion; Count(s) 15, Probation for a term of 3 years. Special assessment of \$400.00 imposed. No fine. Signed by Judge Todd W. Robinson

Tina Mehalic et. al v. Greenlight of PA, LLC et al, Defendants. No. 2022-792; Mercer County Court of Common Pleas. Sherr Law Group, Defense Counsel.

McKibban v. JOpen LLC, et al., Defendants. Superior Court of Washington, Case No. 23-2-1183-08 (Cowlitz Cnty. Sup. Ct.). Kilpatrick Townsend & Stockton LLP, Defense Counsel.

Valente v. CKL Sales LLC dba Smok'N Ray's Smoke Shop, et al., Defendants. Case No. CV22-01705 (Washoe Cnty. Dist. Ct.). Kilpatrick Townsend & Stockton LLP, Defense Counsel.

Weber v. OPMS aka Optimized Plant Mediated Solutions, et al., Defendants. Case No. 23EV000485 (Fulton Cnty. State Ct.). Kilpatrick Townsend & Stockton LLP, Defense Counsel. Testified in deposition requested by plaintiff, held in Washington DC July 2, 2025

Moller v. Martian Sales Inc. dba OPMS, et al., Defendants. Case No. 2:24-CV-781 (E.D. La.) Kilpatrick Townsend & Stockton LLP, Defense Counsel.

Young v. OPMS Wholesale, et al., Case No. CC-23-01707-C (Dallas Cnty. Law Ct.) Defendants. Kilpatrick Townsend & Stockton LLP, Defense Counsel.

Co-Editor: Innovations, The Newsletter of the Innovators Combating Substance Abuse Awards Program of The Johns Hopkins University School of Medicine, supported by the Robert Wood Johnson Foundation; since 2004.

Past and present editorial boards:

Deputy Chair, Editorial Board, The Society for Research on Nicotine and Tobacco
Treatobacco.net
Associate Editor, Pharmacology and Addiction, for Tobacco Control
Editorial Board, Wellness Perspectives: Research, Theory and Practice.
Editorial Advisory Board, Clinical Advances in Smoking Cessation.
Editorial Board, Journal of Smoking-Related Disorders
Editorial Board, Prevention Science
World Health Organization/Society for Research on Nicotine and Tobacco
Treatment Data
Base Project, Deputy Editor
Editorial Advisory Board, The Open Addiction Journal

Review and Editorial Activities:

Addiction
Alcohol Research and Health
Alcoholism: Clinical and Experimental Research
Addictive Behaviors
American Council on Science and Health
American Hospital Formulary Service Drug Information
American Journal of Public Health
Archives of General Psychiatry
Archives of Internal Medicine
Cancer Epidemiology Biomarkers and Prevention
Cancer Prevention Research
Chest
CNS Drugs
Clinical Pharmacology and Therapeutics
Drug and Alcohol Dependence
Drug Evaluations
Drug, Healthcare and Patient Safety
Experimental and Clinical Psychopharmacology
Growing up Tobacco Free, Institute of Medicine
Institute of Medicine Reports:
 Growing Up Tobacco Free, 1994
 State Tobacco Programs Can Reduce Tobacco Use, 2000
 Clearing the Smoke, 2001
 Ending the Tobacco Problem: A Blueprint for the Nation, 2007
Nicotine Addiction in Children

Health Education Research
Health Psychology
Johns Hopkins University Press
Journal of Abnormal Psychology
Journal of Agricultural and Food Chemistry
Journal of the American Medical Association
Journal of Applied Social Psychology
Journal of Consulting and Clinical Psychology
Journal of Health Communication
Journal of Investigative Medicine
Journal of the National Cancer Institute
Journal of Neuropsychopharmacology
Journal of Pharmacology and Experimental Therapeutics
Journal of Preventive Medicine
Journal of Psychoactive Drugs
Journal of Studies on Alcohol
Journal of Substance Abuse
Journal of Substance Abuse Treatment
Life Sciences
Mayo Clinic Proceedings
National Women's Health Resource Center Publications
Neuropharmacology
Neuropsychopharmacology
New Zealand Ministry of Health Reports
 Chemical Factors Influencing the Addictiveness and Attractiveness of
 Cigarettes
 Novel Tobacco Products: Health Risk Implications for Smokers
Nicotine and Tobacco Research
Patient Care
Perceptual and Motor Skills
Pharmacology Biochemistry and Behavior
Pharmacological Reviews
Physiology and Behavior
Preventive Medicine
Prevention Science
Proceedings of the Association of American Physicians
Psychological Bulletin
Psychological Reports
Psychopharmacology
Public Health Reports
Science
Smoking and Tobacco Control (National Cancer Institute)
The Medical Letter
Tobacco Control
Tobacco Regulatory Science
Vascular Health and Risk Management

Membership in Professional Societies:

American Psychological Association -- Divisions 1, 3, 25, 28 and 38 (Fellow Div.25, 28)
International Study Group Investigating Drugs as Reinforcers
Behavioral Pharmacology Society
American Association for the Advancement of Science
Hastings Center Institute of Society, Ethics and the Life Sciences
The Johns Hopkins Medical and Surgical Association
College on Problems of Drug Dependence, Charter Fellow
American College of Neuropsychopharmacology
National Foundation for Mental Health, Founding Individual Member
Society for Research on Nicotine and Tobacco, Member 1994-2022 Charter Member, President
(1998-1999)
Drug Information Association (DIA)
Food and Drug Law Institute (FDLI)

Inventions and Patents

1. Two-stage transmucosal medicine delivery system for symptom relief (US Patent No. 6,358,060 B2) Pinney, JM, Henningfield, JE, Shiffman, S, Gitchell, J, and Cone, EJ. Date of Patent: Mar. 19, 2002; Anticipated expiration Sept. 3, 2018. At: #1 - <https://patents.google.com/patent/US6893654B2/en?q=Two-stage+transmucosal+medicine+delivery+system+symptom+relief>
2. Medicated chewing gum delivery system for nicotine (US Patent Application Publication No. US2002/0098264 A1) Cherukuri, SR, Pinney, JM, Henningfield, JE, Sasan, A, Cone, EJ, Shiffman, S, Gitchell J, and Malvestutto, CD. Date of Application: Jul. 25, 2002. At: <https://patents.google.com/patent/US20020098264A1/en?q=Medicated+chewing+gum+delivery&q=Medicated+chewing+gum+delivery+>
3. Chewing gums, lozenges, candies, tablets, liquids, and sprays for the efficient delivery of medications and dietary supplements (US Patent Application Publication No. US2006/0073189 A1) Pinney, JM, Henningfield, JE, Taylor, LD, and Cone, EJ. Date of Application: Apr. 6, 2006. At: <https://patents.google.com/patent/US20060073189A1/en>
4. Medicated chewing gum delivery system for nicotine (US Patent No. 6,344,222 B1) Cherukuri, SR, Pinney, JM, Henningfield, JE, Sasan, A., Cone, EJ, Shiffman, S, Gitchell, J, and Malvestutto, CD. Date of Patent: Feb. 5, 2002; Anticipated expiration Sept. 3, 2018. At: <https://patents.google.com/patent/US6344222B1/en?q=Medicated+chewing+gum+delivery&q=Medicated+chewing+gum+delivery+>
5. Medicinal delivery system and related methods (U.S. patent number 10,799,449 [Application Number 14/172,604] was granted by the patent office on 2020-10-13 for

medicinal delivery system and related methods. This patent grant is currently assigned to JSRNTI, LLC. The grantee listed for this patent is JSRNTI, LLC. Invention is credited to Tommy L. Chau, Edward J. Cone, Joseph G. Gitchell, Jack E. Henningfield, John M. Pinney, Saul M. Shiffman. At: <https://uspto.report/patent/grant/10,799,449>

Research Collaborations funded by the National Institutes of Health

On most of the following research my role is as member of a scientific advisory group or an expert consultant on the research with the primary role being to contribute to the design, interpretation, and/or public health and policy implications of the research.

University of Minnesota, Department of Psychiatry. Various grants from 1971-1978 awarded to R.A. Meisch and T. Thompson supported my efforts as technician and/or collaborator on animal alcohol and other drug self administration research.

Johns Hopkins University School of Medicine, Department of Psychiatry and Behavioral Sciences. Various grants awarded to R. R. Griffiths, G.E. Bigelow, M.L. Stitzer et al., supported my collaborative research efforts that were mainly focused on tobacco self-administration in humans but also included establishing an oral baboon alcohol and sedative self administration preparation.

National Institute on Drug Abuse, Intramural Research Program (Addiction Research Center), supported my research from 1980 until I retired in 1996. I remain a research collaborator at NIDA but do not draw any salary or fees from NIDA.

Johns Hopkins University School of Medicine, Department of Psychiatry and Behavioral Sciences, Maxine Stitzer, P.I.: Abuse liability of flavored nicotine gum. Funded by Smith Kline Beecham Consumer Healthcare. Co-Investigator, 1997-1998

Johns Hopkins University School of Medicine, Department of Psychiatry and Behavioral Sciences, Maxine Stitzer, P.I.: Abuse liability of nicotine lozenge. Funded by Smith Kline Beecham Consumer Healthcare. Co-Investigator, 1999-2001.

Johns Hopkins University School of Hygiene and Public Health, Institute of Global Tobacco Control, Jonathan Samet, P.I.: Biomarkers of nicotine dependence in China. Funded by Smith Kline Beecham Consumer Healthcare. Co-Investigator, 1998-2000.

Transdisciplinary Tobacco Use Research Center (TTURC) Initiative Concept Mapping Planning Project. Funded by the National Cancer Institute, National Institute on Drug Abuse, and the Robert Wood Johnson Foundation. Advisor, 1999.

University of Wisconsin, Center for Tobacco Research and Intervention, Michael C. Fiore, Timothy B. Baker et al., P.I.s: Relapse: Linking Science and Practice, Transdisciplinary Tobacco Use Research Center (TTURC). Funded by the National Cancer Institute, National Institute on Drug Abuse, and the Robert Wood Johnson Foundation. Advisor, Expert Panel, 1999-2000.

Yale University School of Medicine, Stephanie O'Malley, P.I.: Transdisciplinary Tobacco Use Research Center, Naltrexone augmentation of nicotine patch therapy. Funded by National Cancer Institute, National Institute on Drug Abuse, Robert Wood Johnson Foundation. Scientific Advisory Board Member, 1999 to 2004.

Howard University, College of Medicine, Center for Drug Abuse Research, Ura Jean Oyemade Bailey, P.I.: Recruited research scientist advisory committee. Funded by the National Institute on Drug Abuse Advisory committee member 2000 to 2003.

Brown University Center for Behavioral and Preventive Medicine, David Abrams, P.I.: Transdisciplinary Tobacco Use Research Center (TTURC), Nicotine dependence and risk across generations. Funded by National Cancer Institute, National Institute on Drug Abuse, Robert Wood Johnson Foundation. Scientific Advisory Board Member, 2000 to 2004.

University of Minnesota, Dorothy Hatsukami, P.I.: Transdisciplinary Tobacco Use Research Center, Nicotine dependence and risk across generations. Funded by National Cancer Institute, National Institute on Drug Abuse, Robert Wood Johnson Foundation. Scientific Advisory Board Member, 2000 to 2004.

University of California, and San Francisco Veterans Administration Medical Center, Timothy Carmody, P.I.: Transdisciplinary Tobacco Use Research Center. Funded by National Cancer Institute, National Institute on Drug Abuse, Robert Wood Johnson Foundation. Scientific Advisory Board Member, 2000 to 2004.

Washington University School of Medicine, Theodore Reich, P.I.: Collaborative Genetic Study of Nicotine Dependence. Funded by the National Cancer Institute and the National Institute on Drug Abuse. Consultant, 2001 to 2005.

University of Nebraska, Medical Center, Jan Atwood, P.I.: Identifying Smoking Phenotypes. Funded by the National Cancer Institute. Consultant, 2001 to 2005.

Pinney Associates, Edward Cone, P.I.: Transmucosal oral diphenhydramine for rapid relief of nausea. Funded by National Institutes of Health, consultant, 2001.

Intramural Research Program, National Institute on Drug Abuse, Eric Moolchan, P.I.: Adolescent tobacco dependence treatment. Collaborator and advisor, 1999 to present.

Center for Health Promotion and Disease Prevention, Henry Ford Health System, Ronald Davis, P.I.: Analysis of Tobacco Depositions and Trial Testimony. Funded by the National Cancer Institute. Consultant, 2000 to 2005.

Team Member of Initiative on the Study and Implementation of Systems (ISIS) to Improve the Health Outcomes Related to Tobacco Use, 2001-2004. National Cancer Institute Sponsored resulting in NCI Tobacco Control Monograph Series No. 18, Greater than the Sum: Systems Thinking in Tobacco Control. US Department of Health and Human Services, 2007

University of Memphis, Kenneth D. Ward, P.I. International Tobacco and Health Research and Capacity Building Program. Funded by Fogarty International Center, National Institute on Drug Abuse, National Cancer Institute and Centers for Disease Control and Prevention. Advisory Board Member, 2002-2006.

Roswell Park Cancer Institute. Gary A. Giovino and K. Michael Cummings, CO-PIs. Policy effects on cigarette design, emissions & behavior project. Funded by National Institutes of Health. Scientific Advisory Board Member and Consultant, to Health Research Inc., 2004 to 2008.

University of Pittsburg and University of Minnesota, Center for the Evaluation of Nicotine in Cigarettes, CENIC. E. Donny and D. Hatsukami (Co-PIs). External Advisory Board, 2011-.

University of Vermont, Center for Behavior and Health, Center of Biomedical Research Excellence (COBRE). S. Higgins (PI). External Advisory Board, 2012-.

University of Vermont, Center for Behavior and Health, Tobacco Center of Regulatory Science (TCORS). S. Higgins (PI). External Advisory Board, 2012-.

University of Minnesota, Consortium on Methods Evaluating Tobacco (COMET). D. Hatsukami and P. Shields (Co-PIs). External Advisory Board, 2013-.

Pennsylvania State University Tobacco Center of Regulatory Science (TCORS). J. Muscat and J. Foulds (Co-PIs). External Advisory Board, 2013-.

University of Texas Health Science Center San Antonio. Methocinnamox (MCAM): A novel M-opioid receptor antagonist for opioid use disorders. James Woods (PI). Advisor, 2019-.

Cairn Biosciences, Inc., High-throughput profiling of compound abuse liabilities and identification of addiction-related drug targets using an iPSC-enabled platform, RFA-DA-19-019 HEAL Initiative: America's Startups and Small Businesses Build Technologies to Stop the Opioid Crisis. C. Ludlam (PI). External Advisory Board, 2019-.

EDUCATIONAL ACTIVITIES

Teaching

Since 1980, JEH has provided 1-3 lectures or seminars per year, and less frequently since about 2000, upon request for courses addressing addiction related topics, primarily in the School of Medicine and School of Hygiene and Public Health, but also including special lectures, e.g., noontime series on Bayview Campus, for staff of the Center for Addiction and Pregnancy, and Cardiology Grand Rounds. Additional specific offerings are listed below.

Medical Student Elective: Nicotine Dependence and Public Policy, offered from 1980s to early 2000's.

Henningfield, J.E. Direct course and present papers entitled "Pharmacology of nicotine dependence" and "Smoking and other drug dependencies." Co-faculty: Gary Giovino, Centers for Disease Control, Office on Smoking and Health, and Mark Manley, National Cancer Institute. Held at the Annual 7th Medical Command/U.S. Army Europe Alcohol and Drug Abuse Prevention Control Program Conference, Bad Kissingen, Germany, June 14-15, 1990.

Johns Hopkins School of Public Health Institute for global tobacco control, 1999 to present, affiliated faculty.

Monthly evening seminar series on drug abuse related topics was initiated by JEH in 1982 and run until 1992 (coordinated by Dr. Suzette Evans beginning in 1988). It included faculty and post doctoral fellows from Hopkins and several Baltimore-Washington areas schools, as well as visiting leaders in drug abuse research, treatment, and policy. Speakers included: Naim Khazan, Joseph V. Brady, Edward Moreton, Gerald Young, Scott Lukas, George Bigelow, Maxine Stitzer, Patricia McGuire, Donald Jasinski, Roland Griffiths, David Pentar, Charles Haertzen, Nancy Ator, James Barrett, Jaylan Turkan, Steven Goldbeg, Larry Chait, Christine Eccles, Linda Brady, John Glowa, Jonathan Katz, John Boren Neil Grunberg, Antonia Mattia, Jeffrey Witkin, John Roach, Charles Catania, John Falk, Marian Fischman, Chris Johanson, Sheppard Kellam, Jerome Jaffe.

Alcohol, tobacco, illicit drugs, and public health, School of Hygiene and Public Health, headed by Professor James Anthony. JEH role was as tobacco lecturer during the initial 3 years that the course was developed and offered in the early 1990s.

Nicotine pharmacology and treatment of tobacco dependence. In annual course: Medical Pharmacology for Second Year Students. John Hopkins University School of Medicine. 1999 to 2011.

Johns Hopkins University, School of Public Health 18th Annual Summer Institute of Epidemiology and Biostatistics. Tobacco addiction: science, medicine and public health policy, 2001, lecturer.

Tobacco Control: National and International Approaches, School of Hygiene and Public Health, mid 1990s to present. JEH provides lecture on tobacco pharmacology, addiction, treatment and policy issues.

University of Maryland, Department of Psychiatry, Advanced Addictions Seminar. Present on the science, diagnosis and treatment of tobacco dependence. 1990s annual lectures.

Lectures are also provided on occasion for Baltimore area schools: e.g., Friends School and Bryn Mawr.

Johns Hopkins University, Bloomberg School of Public Health 19th Annual Summer Institute of Epidemiology and Biostatistics. Tobacco addiction by design: implications for health policy, and harm reduction issues. June 24, 2002, lecturer.

History of tobacco control, nicotine addiction and public policy. Tobacco Control and the Law, University of Maryland Law School, Baltimore, Sept. 3, 2002, lecturer.

Johns Hopkins University Bloomberg School of Public Health. Distance Learning course be Internet: Tobacco addiction by design: implications for health policy, and harm reduction issues. 2005.

National Speakers Bureau Service for the American Psychological Association. 2007-present.

Johns Hopkins University Bloomberg School of Public Health. Distance Learning course be Internet: Tobacco addiction, recorded 2010.

Continuing Medical Education (CME)

JEH is regularly invited to provide lectures and organize mini-courses for continuing education credit for universities, professional organizations, and the Centers for Disease Control and Prevention. Over 100 of these have been approved for continuing education credit.

Mentoring and Advising

Over 30 pre and postdoctoral scientists, primarily at the Intramural Research Program (IRP) of the National Institute on Drug Abuse, The Johns Hopkins University and Johns Hopkins Bloomberg School of Public Health, and as well as many of the summer fellows of the NIDA Minority Recruitment and Training Program.

Miyasato, Katsumasa, MD, NIDA, IRP, foreign medical fellow, 1981-1983. Presently Director, Nishihachioji Hospital, Tokyo, Japan.

Frederick R. Snyder, BA, NIDA, IRP, pre-doctoral fellow, 1984-1986. Presently Project Director, NOVA, at NIDA, IRP, Bayview campus.

Caroline Cohen, PhD, NIDA, IRP, foreign fellow, 1989-1991. Presently Laboratory Chief, CNS department, Sanofi-Synthelabo Pharmaceuticals, Paris.

Carles Muntaner, MD, NIDA, IRP, foreign fellow, 1986-1989. Presently believed to be involved in public health research in Spain.

Samuel A. Klein, MD, NIDA, IRP, postdoctoral fellow and medical officer, 1987-1988. Presently believed to be in clinical practice in Detroit, MI.

Edward G. Singleton, PhD, NIDA, IRP, Senior Fellow, 1991-1994; JHU Behavioral Pharmacology Research Unit, Visiting Scientist. Presently Assistant Professor of Counseling Psychology, Co-Director of the University of Baltimore/Coppin State College Collaborative, and Director of B.A. in Psychology Division of Applied Psychology and Quantitative Methods, Yale Gordon College of Liberal Arts, University of Baltimore, MD.

Marilyn A. Huestis, PhD, NIDA, IRP, pre doctoral fellow and University of Maryland, Program of Toxicology, doctoral candidate, 1989-1992; JEH was a thesis advisor ("An Integrated Pharmacokinetic and Pharmacodynamic Study of Acute Marijuana Use"), PhD was awarded 1992. Presently Chief, NIDA, IRP, Baltimore, MD.

Amanda Jenkins, PhD, NIDA, IRP, pre doctoral fellow and University of Maryland, Program of Toxicology doctoral candidate, 1993-1995; JEH was a thesis advisor ("An Integrated Pharmacokinetic and Pharmacodynamic Study of Smoked Heroin and Cocaine in Humans"), PhD awarded 1995. Presently Chief Toxicologist, Cuyahoga County Coroner's Office, Cleveland, OH.

Robert M. Keenan, MD, PhD, NIDA, IRP, senior staff fellow and medical officer, 1991-1993. Presently biomedical research consultant, and owner and staff physician of The Elite Center (weight control clinic), Baltimore, MD.

Mi Li, MD, NIDA, IRP, foreign fellow, 1992-1993. After an additional fellowship at the University of Arkansas (under Dr. Donald McMillan) Dr. Li is believed to have returned to China to take a lead role in addiction science research.

Leslie M. Schwandt (now Schuh), PhD, NIDA, IPR postdoctoral fellow; June 1993 – July 1995, NIDA, IRP. Presently, Scientific Communications Associate and Publication Coordinator Eli Lilly and Company, Indianapolis, IN.

Moolchan, Eric. T., M.D., Ph.D. Summer fellow from Howard University School of Medicine in the Minority and Recruitment Training Program at NIDA, IRP, 1995. Presently, Staff Physician and Director of the Teen Tobacco Addiction Treatment Research Center, NIDA, IRP, Baltimore, MD.

Bustamante, Ines. Doctoral student, doctoral examination committee. Johns Hopkins Bloomberg School of Public Health. Preventive interventions for tobacco use in Lima, Peru, December, 2003 to 2004.

Smith, Stephanie. Doctoral student. Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, 2002 to 2004.

Mentoring and Advising

Over 30 pre and postdoctoral scientists, primarily at the Intramural Research Program (IRP) of the National Institute on Drug Abuse, The Johns Hopkins University and Johns Hopkins Bloomberg School of Public Health, and the NIDA Minority Recruitment and Training Program, among many other students and colleagues.

Post doctoral fellows who joined my laboratory after completing fellowships in the Behavioral Pharmacology Research Unit (JHU Dept. Psychiatry and Behavioral Sciences)

Rosemary Nemeth-Coslett, PhD, NIDA, IRP, postdoctoral fellow, 1986-1987. Presently NIDA Extramural Division, tenured psychologist.

Phillip P. Woodson, PhD, NIDA, IRP, postdoctoral fellow, 1987-1989. Presently deceased having been primarily employed as a pharmaceutical industry, consultant since leaving NIDA.

Richard J. Lamb, Richard, PhD, NIDA, IRP, postdoctoral fellow, 1985-1988. Presently Associate Professor with Tenure, Departments of Psychiatry and Pharmacology, University of Texas Health Science Center at San Antonio, San Antonio, TX.

Stephen Higgins, PhD, NIDA, IRP, postdoctoral fellow, 1985-1986. Presently Professor, Departments of Psychiatry and Psychology, and Co-Director, Human Behavioral Pharmacology Laboratory.

Stephen J. Heishman, PhD, NIDA, IRP, postdoctoral fellow, 1988-1991. Presently Senior Investigator, Clinical Pharmacology and Therapeutics Branch, NIDA, IRP.

Fant, Reginald V. Ph.D., NIDA, IRP, postdoctoral fellow, 1985-1986. Presently Scientist, Pinney Associates, and head, Clinical Pharmacology Section, Bethesda, MD.

John D. Roache, , PhD, NIDA, IRP, postdoctoral fellow, 1985-1987. Presently Associate Professor (with tenure), Departments of Psychiatry and Pharmacology, and Associate Chief of the Division of Alcohol and Drug Addiction, University of Texas Health Science Center at San Antonio, San Antonio, TX.

Evans, Suzette M., Ph.D., NIDA, IRP, postdoctoral fellow, 1990-1992. Presently Associate Professor of Clinical Neuroscience and Research Scientist, Department of Psychiatry, College of Physicians and Surgeons of Columbia University, New York.

Kirsten E Smith, PhD, NIDA, IRP, postdoctoral Fellow, Real-world Assessment, Prediction, and Treatment Unit 2020 – present.

Robert Wood Johnson Foundation Developing Leadership in Reducing Substance Abuse mentoring program

I assisted Dr. John Slade and the leadership of the Robert Wood Johnson Foundation in the Developing Leadership in Reducing Substance Abuse Mentoring Program and was honored to serve as the mentor of two fellows in the program:

Bridgette E. Garrett, PhD, Behavioral Health Scientist at the Centers for Disease Control and Prevention, Office on Smoking and Health, Epidemiology Branch, Associate Director for Health Equity, and later a Scientific Program Official in the Research and Training Program The National Institute for Occupational Safety and Health (NIOSH) (2000 – 2003).

and

Samira Asma, PhD, Health Scientist, and later Chief, Global Noncommunicable Diseases, Centers for Disease Control and Prevention (2001 – 2003).

College on Problems of Drug Dependence, Annual Breakfast With Champions, mentoring program. 2018 Annual Meeting in San Diego, June 9-14, and 2022 Annual Meeting in Minneapolis, June 12-15, 2022.

Thesis and doctoral examination committees

Marilyn A. Huestis, University of Maryland, Program of Toxicology, An Integrated Pharmacokinetic and Pharmacodynamic Study of Acute Marijuana Use, 1992, thesis advisor.

Amanda Jenkins, University of Maryland, Program of Toxicology, An Integrated Pharmacokinetic and Pharmacodynamic Study of Smoked Heroin and Cocaine in Humans, 1995, thesis advisor.

Ines V. Bustamante, Johns Hopkins Bloomberg School of Public Health, 2003

Stephanie Smith, Johns Hopkins Bloomberg School of Public Health doctoral candidate, 2005

Andrea C. Villanti, Johns Hopkins Bloomberg School of Public Health doctoral candidate, 2010.

Other Interests

Diversity, Equity, and Inclusion (DEI) Efforts in Scientific Organizations

June 1986 – August 1996 NIDA Minority Recruitment and Training Program (MRTP).

NIDA leadership supported my efforts in collaboration with Drs. Edward Singleton and Professor Lonnie E. Mitchell (senior consulting advisor to the program for NIDA) and the faculty of numerous Historically Black Colleges and Universities (HBCU's), to establish the MRTP program. The MRTP included summer internships for students and faculty members of HBCUs. Input was obtained from representatives of more than 100 of the nation's HBCU's and special active relationships developed with Coppin State University, Howard University, Lincoln University, Morehouse College, Morgan State University, and Texas Southern University, among others.

April 1987 – First Annual Coppin State University Substance Abuse Conference.

This was an outgrowth of the NIDA Minority Recruitment and Training Program and was a collaborative effort between NIDA and Coppin State University ("College" until 2004) to provide a forum with a focus on strengthening substance abuse research, treatment, and policy programs at HBCUs. Establishment of the conference series was led by Drs. Lonnie Mitchell, Patrick Coggins, and Edward Singleton, in collaboration with Dr. Henningfield with support from NIDA. In honor of Dr. Mitchell who passed away in 1997, it was renamed and evolved with support of Howard University, NIDA, and the Substance Abuse and Mental Health Services Administration (SAMHSA) as follows:

Dr. Lonnie E. Mitchell National HBCU (Historically Black Colleges and Universities) Substance Abuse Conference (1999-2005).

Dr. Lonnie E. Mitchell National HBCU Substance Abuse and Mental Health Conference (2006-2008).

Dr. Lonnie E. Mitchell HBCU Behavioral Health Policy Academy (2009-2017).

Dr. Lonnie E. Mitchell HBCU Behavioral Health Policy Summit (2018).

June 1993 establishment of the Underepresented Populations Committee (URPop) of the College on Problems of Drug Dependence (CPDD)

CPDD URPpop was collaborative effort that involved many CPDD leaders, as well as Drs Edward Singleton, Jean Lud Cadet, Lawrence Brown, Beny Primm, and I. We had broad CPDD and NIDA support with the rationale that increasing diversity was critical to increase the excellence, relevance, and process of the science and was the right thing to do from a humanitarian perspective.

See: Henningfield, J.E., Singleton, E.G. and Cadet, J.L. Why we need increased ethnic diversity among drug dependence researchers. Drug and Alcohol Dependence, 35: 262, 1994.

More recent efforts include the development of new approaches to measure diversity and inclusion and accelerate DEI in CPDD and ACNP.

See: Henningfield, J.E., Fields, S., Anthony, J.C., Brown, Jr., L.S., Bolaños-Guzmán, C.A., Comer, S.D., De La Garza, II, R., Furr- Holden, D., Garcia-Romeu, A., Hatsukami, D., Raznahan, A. and Zarate, C.A. Advancing Equity, Diversity, and Inclusion in the American College of Neuropsychopharmacology (ACNP): Advances, Challenges, and

Opportunities to Accelerate Progress. Neuropsychopharmacology, 2020, <https://doi.org/10.1038/s41386-020-0784-y>.

Henningfield, J.E., Fields, S., Anthony, J.C., Brown, Jr., L.S., Bolaños-Guzmán, C.A., Comer, S.D., De La Garza, II, R., Furr-Holden, D., Garcia-Romeu, A., Hatsukami, D., Raznahan, A. and Zarate, C.A. Correspondence: Reply to Drs. Hart and Cadet: We Agree – the Challenges of Increasing Equity, Diversity and Inclusion Include Societal Issues and Actions Now are Vital. Neuropsychopharmacology, 2021.

Fields, S., Henningfield, J.E., Correa-Fernandez, V., de Dios, M.A., Garcia-Romeu, A., Heads, A.M., Hood, C.O., Hudzik, T., Moreland, A.D., and Skinstad, A.H. A Commentary from the CPDD Underrepresented Populations Committee: New CPDD Member Survey to Accelerate Progress in Equity, Inclusion and Diversity. Drug and Alcohol Dependence, 2021.

February 2004 – August 2007 Morgan State University NIDA-funded Center for the Study and Prevention of Drug Use, Scientific Advisory Board Member. This program was established by Professor Dot Browne and later taken over and directed by Professor Fernando Wagner.

2016 – 2017 American College of Neuropsychopharmacology, Diversity & Inclusion Task Force (formerly, the Minority Task Force).

2019 – present College on Problems of Drug Dependence, UnderRepresented Populations Committee.

Art and Addiction

2002-2003 Advisor to the American Visionary Art Museum, Mega Exhibit: High on Life: Transcending Addiction, including featured essay: Bridge to Compassion: A Scientist's Perspective on Addiction and Art, Published in American Visionary Art Museum magazine, Visions, Vol. 8, High on Life, 2002. A computer disc providing a virtual tour of the AVAM exhibition was produced in collaboration with AVAM and Innovators Awards and is available at AVAM and from the Innovators Awards Program or on request from JEH.

Addictions Art Program supported by the Innovators Awards of The Johns Hopkins University School of Medicine and supported by the Robert Wood Johnson Foundation. Providing adjudicated addiction art exhibitions at the Annual National Dr. Lonnie E. Mitchell National Historically Black College and University Substance Abuse Conference and College on Problems of Drug Dependence from 2004 to 2010.

Guidelines for Organizing Art Exhibitions on Addiction and Recovery by Santora, P.B., Dowell, M. L. and Henningfield, J.E. Available online (<https://addictionandart.org/>) and in the book, *Addiction Art*, and at <https://folio.iupui.edu/bitstream/handle/10244/658/artguidelines2009.pdf?sequence=2>

Gallery of Roadside Memorials from the Baltimore Washington Region was commissioned and presented at the Third Annual Symposium of the Innovators Awards Program: Alcohol screening, intervention and confidentiality requirements in trauma centers and emergency departments, Johns Hopkins University School of Medicine, 2006.

Addiction art was also included in the book, *Addiction Treatment: Science and Policy for the Twenty-first Century*. Edited by J.E., Henningfield, P.B. Santora, and W.K. Bickel. The Johns Hopkins University Press, Baltimore, 2007. Selected by *Choice Magazine* as one of the Outstanding Academic Titles of 2008.

Addiction and Art, edited by P.B. Santora, M.L. Dowell, Margaret L., and J.E., Henningfield. The Johns Hopkins University Press, 2010. Placed in the "Highly Commended" category by the British Medical Association's 2011 Medical Book Awards

Addiction Art related Exhibitions and Galleries: Art and Addiction: Putting a Human Face on Addiction and Recovery:

2004: March 30 – April 2. Dr. Lonnie E. Mitchell National Historically Black College and University Substance Abuse Conference, Annual National Meeting, Baltimore, Maryland.

2005: March 20-22. Dr. Lonnie E. Mitchell National Historically Black College and University Substance Abuse Conference, Annual National Meeting, Baltimore, Maryland.

2005: June 18-23. College on Problems of Drug Dependence, Annual National Meeting, Orlando, Florida.

2005: October 26. A Gallery of Roadside Memorials from the Baltimore Washington Region. Presented at the Third Annual Symposium of the Innovators Awards Program: Alcohol screening, intervention and confidentiality requirements in trauma centers and emergency departments. Johns Hopkins University School of Medicine Baltimore, Maryland.

2006: April 5-9. Dr. Lonnie E. Mitchell National Historically Black College and University Substance Abuse Conference, Annual National Meeting, Washington DC.

2006: June 17-22. College on Problems of Drug Dependence, Annual National Meeting, Scottsdale, Arizona.

2007: March 29 – April 1. Dr. Lonnie E. Mitchell National Historically Black College and University Substance Abuse Conference, Annual National Meeting, Washington DC.

2007: June 16-21. College on Problems of Drug Dependence, Annual National Meeting, Quebec, Canada.

Dance, Music, and Theater

Co-Chair (with Lucy Henningfield) Tuerk House Dancing for Recovery Annual-Fund raising gala (2011 – 2013) and perform several fund-raising dances for recovery.

Serve on the annual Memory Ball fund raising committee (2015 – 2016) and performed fund-raising “Dance for the Memories” – a bolero with Lucy Henningfield, Baltimore, Maryland, April 12, 2014, at: <https://www.youtube.com/watch?v=KNK1GLFX3PA>.

Walden School, Young Musicians program. Serve on fund-raising committees and assist Lucy L. Henningfield in her Board of Directors activities (2011 – 2016).

Serve on Board of Directors and Associates Board of the Spotlighters Theatre, Baltimore, Maryland, 2015 – Present.

Selected Dance Performances

Nutcracker Ballet, by the Baltimore Ballet Company, “Parent’s Dances” in opening Party Scene, 2003-2010. Grandfather Dance, 2011-2019.

Viennese Waltz Concert (Leslie Lamberson, partner) accompanying The Viennese New Year’s Celebration Concert by the Orchestra of St. Johns, Ellicott City, Maryland, January 16, 2011.

Tuerk House Dancing for Recovery Gala, Cha Cha (Shannon Thrasher, partner), Baltimore, Maryland, May 15, 2010.

Tuerk House Dancing for Recovery Gala, Waltz (Lucy Henningfield, partner), Baltimore, Maryland, June 3, 2011.

Tuerk House Dancing for Recovery Gala, Triple Argentine Tango (Lucy Henningfield and Shannon Thrasher, partners), Baltimore, Maryland, June 1, 2012. See dance at <https://www.youtube.com/watch?v=s08PaMHAtso>.

Celebration of former Surgeon General C. Everett Koop’s 95th Birthday, Waltz (Lucy Henningfield, partner). Koshland Science Museum of the National Academy of Sciences, Washington, D.C., September 24, 2011. See dance and with Dr. Anthony Fauci safely 6 feet away from the taped dance floor perimeter, at <https://www.youtube.com/watch?v=QN7LshKzHGw>.

Celebration of Vivian Henningfield’s 90th Birthday, Waltz (Lucy Henningfield, partner). Little Canada, Minnesota, October 15, 2011.

House of Cards, Episode 1, Presidential Inauguration Ballroom Gala Scene, filmed at Baltimore War Memorial Museum, April 2012, with Kevin Spacey (also dancing), David Fincher (director), Viennese Waltz (Lucy Henningfield, partner), released by Netflix, February 1, 2013.

Alzheimer's Association Memory Ball, Bolero (Lucy Henningfield, partner). Baltimore, Maryland, April 12, 2014. Judges Choice First Runner-Up. At <https://www.youtube.com/watch?v=KNK1GLFX3PA>.

Baltimore Artscape, Bolero and Viennese Waltz (Lucy Henningfield, partner); Foxtrot, Quickstep, Swing, Waltz (Danette McCraw, partner), Baltimore, MD, July 18 and 20.

The Homestead Resort, Bolero (Lucy Henningfield, partner). Hot Springs, Virginia, September 5 and 6, 2014.

Bibliography

Books, Monographs, and Expert Reports for the World Health Organization, and other expert reports and letters:

48. Grabowski, J., Stitzer, M.L. and Henningfield, J.E. (eds.) Behavioral Intervention Techniques in Drug Abuse Treatment, NIDA Research Monograph, Vol. 46, Washington, D.C., U.S. Government Printing Office, 1984.
56. Henningfield, J.E. Nicotine: An Old-Fashioned Addiction, Vol. 1 in the Encyclopedia of Psychoactive Drugs Series, M. Cohen (ed.), New York: Chelsea House, 1985. Revised in 1986 with S.H. Snyder (new general editor) and B.L. Jacobs (associate editor).
59. Henningfield, J.E. and Ator, N.A. Barbiturates: Sleeping Potion or Intoxicant. In the Encyclopedia of Psychoactive Drugs Series, S.H. Snyder and B.L. Jacobs (Eds.), New York: Chelsea House, 1986.
87. Pomerleau, O.F. Pomerleau, C.S. Fagerström, K.O. Henningfield, J.E. and Hughes, J.R. (eds) Nicotine Replacement: A Critical Evaluation. New York: Alan R. Liss, 1988.
134. Henningfield, J.E. and Stitzer, M.L. (eds.) New Developments in Nicotine Delivery Systems. New York: The Cortlandt Group Inc., 1991.
135. Brunton S.A. (primary author) and Henningfield, J.E. (Ed.) Nicotine Addiction and Smoking Cessation (monograph). New York: Medical Information Services, 1991.
293. Kozlowski, L.T., Henningfield, J.E. and Brigham, J. Cigarettes, Nicotine, and Health – A Biobehavioral Approach. Sage Publications, Thousand Oaks, California, 2001.
368. Henningfield, J.E., Santora, P.B. Bickel, W.K. (eds.) Addiction Treatment: Science and Policy for the Twenty-first Century. The Johns Hopkins University Press, Baltimore, 2007. *Selected by Choice Magazine as one of the Outstanding Academic Titles of 2008.*
356. Miczek, K.A., Henningfield, J.E. and Stolerman, I.P. (Eds.) Nicotine Psychopharmacology. Psychopharmacology, Special issue, 184: 263-652, 2006.

375. Henningfield, J.E., London, E.D., Pogun, S. (Eds.). Nicotine Psychopharmacology. Handbook of Experimental Pharmacology 192. Springer-Verlag, Berlin Heidelberg, 2009.

390. Santora, Patricia B, Dowell, Margaret L. and Henningfield, J.E. Addiction and Art. The Johns Hopkins University Press, Baltimore, Maryland, 2010. Placed in the "Highly Commended" category by the British Medical Association's 2011 Medical Book Awards

392. Boyle, P., Gray, N., Henningfield, J., Seffrin, J. and Zatonski, W. (eds.) Tobacco and Public Health: Science and Policy, Second Edition. Oxford University Press, Oxford, 2010.

403. Henningfield, J.E, Guest Editor (with Heal, D.J. and Smith, S.) 2013-2014 Neuropharmacology, Special Issue: CNS Stimulants, 87: 1-3, 2014.

Henningfield, J.E. Guest Editor (with Heal, D.J, Henningfield, J.E., Frenguelli, B.G., Nutt, D.J., and Smith, S.L.) Neuropharmacology, Special Issue, Psychedelics – Re-opening the doors of perception. 2018-2018, published in 2018.

Henningfield, J.E. Guest Editor (with Belouin, S., Heal, D.J., Smith, S.L., and Xi, D.) Neuropharmacology, Special Issue 'National Institutes of Health Psilocybin Research Speaker Series'. 2021-2022.

294. World Health Organization. Advancing Knowledge on Regulating Tobacco Products (monograph). Published by World Health Organization, Geneva, 2001 (JEH contributed material and assisted in preparation of the monograph).

481. Journal of Psychopharmacology – Special Issue on Psychedelics, Dedicated to Roland R. Griffiths, 2025, in press.

482. Henningfield, J.E., Beyer, C.E. & Raffa, R.B. (Editors) Kratom – History, Science, and Therapeutic Potential. Academic Press, Elsevier, London, United Kingdom. 2025

World Health Organization. Tools for Advancing Tobacco Control in the XXIst Century: Policy Recommendations for Smoking Cessation and Treatment of Tobacco Dependence. Vera da Costa e Silva, Editor. Geneva, 2003. JEH, along with Reginald Fant are acknowledged contributors.

World Health Organization, Scientific Advisory Committee on Tobacco Product Regulation (SACTob). Recommendation documents available in Arabic, Chinese, English, French, Russian and Spanish, at <http://www.who.int/tobacco/sactob/recommendations/en/>. Recommendation documents of the Committee with contributions and co-authorship by J.E. Henningfield:

Scientific Advisory Committee on Tobacco Product Regulation (SACTob)
Recommendation on Health Claims derived from ISO/FTC Method to Measure
Cigarette Yield. World Health Organization, Geneva, Switzerland, 2002.

Scientific Advisory Committee on Tobacco Product Regulation (SACTob)
Recommendation on Nicotine and the Regulation in Tobacco and Non-Tobacco
Products. World Health Organization, Geneva, Switzerland, 2003.

Scientific Advisory Committee on Tobacco Product Regulation (SACTob)
Recommendation on Tobacco Product Ingredients and Emissions (ISBN 92 4
159054 8). World Health Organization, Geneva, Switzerland, 2003.

Scientific Advisory Committee on Tobacco Product Regulation (SACTob)
Statement of Principles Guiding the Evaluation of New or Modified Tobacco
Products (92 4 159051 3). World Health Organization, Geneva, Switzerland, 2003.

Scientific Advisory Committee on Tobacco Product Regulation (SACTob)
Recommendation on Smokeless Tobacco Products (92 4 159055 6). World Health
Organization, Geneva, Switzerland, 2004.

World Health Organization, Scientific Study Group on Tobacco Regulation (TobReg).
Recommendation documents available in Arabic, Chinese, English, French, Russian and
Spanish, at <http://www.who.int/tobacco/sactob/recommendations/en/>. Recommendation
documents of the Committee with contributions and co-authorship by J.E. Henningfield:

Study Group on Tobacco Product Regulation (TobReg) Recommendation: Guiding
Principles for the Development of Tobacco Product Research and Testing Capacity
and Proposed Protocols for the Initiation of Tobacco Product Testing. World
Health Organization, Geneva, Switzerland, 2004.

Advisory Note Waterpipe smoking: Health effects, research needs and
recommended actions by regulators. World Health Organization, Geneva,
Switzerland, 2005.

Study Group on Tobacco Product Regulation (TobReg) Report: Best Practices in
Tobacco Control: Regulation of Tobacco Products in Canada. World Health
Organization, Geneva, Switzerland, 2005.

World Health Organization and reviewed and approved through WHO process as an
official WHO report. Tobacco: Deadly in Any Form or Disguise, World No Tobacco
Day Monograph, WHO, Geneva, 2006 (J.E. Henningfield was lead author of report).
(http://www.who.int/tobacco/communications/events/wntd/2006/Tfi_Rapport.pdf).

World Health Organization, The Scientific Basis of Tobacco Product Regulation; Report
on the Scientific Basis of Tobacco Product Regulation: Report of a WHO Study Group
(TobReg). WHO Technical Report Series, No. 945, Geneva, 2007. Co-
Rapporteur/Chair: chapter addressing “Contents and Design Features of Tobacco
Products: Their Relationship to Dependence Potential and Consumer Appeal”

World Health Organization, The Scientific Basis of Tobacco Product Regulation; Report on the Scientific Basis of Tobacco Product Regulation: Second Report of a WHO Study Group (TobReg). WHO Technical Report Series, No. 951, Geneva, 2008. Co-Rapporteur/Chair: chapter addressing “Smokeless Tobacco Products: Health Effects, Implications for Harm Reduction and Research”

World Health Organization, The Scientific Basis of Tobacco Product Regulation; Report on the Scientific Basis of Tobacco Product Regulation: Third Report of a WHO Study Group (TobReg). WHO Technical Report Series, No. 955, Geneva, 2009. Co-Rapporteur/Chair: chapter addressing “TobReg Scientific Recommendation: Devices Intended for the Purpose of Nicotine Delivery to Respiratory System in Which Tobacco is not Necessary for their Operation”

World Health Organization, The Scientific Basis of Tobacco Product Regulation; Report on the Scientific Basis of Tobacco Product Regulation: Fourth Report of a WHO Study Group (TobReg). WHO Technical Report Series, No. 967, Geneva, 2012. Co-Rapporteur/Chair: chapter addressing “Recommendations on the Basis of a Regulatory Framework to Reduce the Dependence Potential of Tobacco Products”

Kratom Science and Policy Expert Letters to federal agencies and published online:

Henningfield J. E., Swogger M. T., Walsh Z., Kruegel A. C., Grundmann O., Garcia-Romeu A., Raffa R. B., Griffiths R. R., and Brown P. Kratom Science Letter to the White House Office of National Drug Control Policy. February 8, 2018
<https://static1.squarespace.com/static/54d50ceee4b05797b34869cf/t/5a7c9378e4966b135dce815a/1518113657129/Science+Letter+on+Kratom+Feb+8+2018.pdf>

Henningfield J. E., Swogger M. T., Walsh Z., Kruegel A. C., Grundmann O., Garcia-Romeu A., Raffa R. B., Griffiths R. R., and Brown P. Kratom Science Letter to US Congressional Leadership on Kratom Science and Policy. June 12, 2018
<http://www.americkratom.org/images/file/Kratom-Scientist-Letter-to-House-and-US-Senate-Leadership-June-21-2018.pdf>

Henningfield J.E., Babin, J., Boyer, E.W., Brown, P., Garcia-Romeu A., Griffiths R.R., Grundmann O., Hemby, S.E., McCurdy, C.R., Raffa, R.B., Swogger M. T., and Walsh Z. Analysis of FDA’s October 17, 2017 “Basis for the recommendations to control mitragynine and 7-hydroxymitragynine in Schedule I of the Controlled Substances Act”. November 28, 2018. <https://www.americkratom.org/images/file/Scientists-Response-to-FDA-Kratom-8FA--28-Nov-2018-FINAL.pdf>

Henningfield J.E., Grundmann, O., Babin, J., Laredo, G., and Cone, E. A Reply to CDC Report on Unintentional Drug Overdose Deaths with Kratom Detected (2019); appropriate regulation of kratom and improved postmortem testing protocols are needed immediately. https://www.americkratom.org/images/Reply_to_CDC_-_Unintentional_Drug_Overdose_Deaths_with_Kratom_Detected.pdf

Henningfield, J.E., Huestis, M.A., Grundmann, O., and Garcia-Romeu, A. Kratom Science Update: Evidence-Based Facts Annual Update – December 2023.
https://assets.website-files.com/61858fcec654303987617512/65f062c788153478813f27e9_Kratom%20Science%20Update24.pdf

Pinney Associates Comments to FDA Dockets and other Federal Agencies

2004: Pinney J. M., Gerlach K. & Henningfield J. E. Docket No. 2004D-0188: Development and Use of Risk Minimization Action Plans.

2006: Pinney J., Schnoll S., Henningfield J. E., Sees K. L. Gorodetzky, C. & Ertischek M. Docket No. 2005N-0479: International Drug Scheduling; Convention on Psychotropic Substances.

2008: Schnoll S. H., Henningfield J. E. & Fant. R. V. Docket No. FDA-2008-N-0448: International Drug Scheduling; Convention on Psychotropic Substances; Single Convention on Narcotic Drugs: Ketamine. Retrieved from
<https://www.regulations.gov/document?D=FDA-2008-N-0448-0006>.

2010: Schnoll S., Henningfield J. E. & Ertischek M. Docket No. 2009-N-0143: Risk Evaluation and Mitigation Strategies for Certain Opioid Drugs; Notice of Public Meeting. Retrieved from <https://www.regulations.gov/document?D=FDA-2009-N-0143-1080>. April 29th, 2010.

2010: Schnoll S., St. Jean E., Gerlach K. & Dasgupta N. Docket No. 2009-N-0143: Risk Evaluation and Mitigation Strategies for Certain Opioid Drugs; Notice of Public Meeting. Retrieved from <https://www.regulations.gov/document?D=FDA-2009-N-0143-1228>. June 30th, 2009.

2010: Henningfield J. E., Buchhalter A. R., Fant. R. V., Schnoll S. H. & Cone E. J. Docket No. FDA-2010-D-0026: Draft Guidance for Industry on Assessment of Abuse Potential of Drugs. Retrieved from <https://www.regulations.gov/document?D=FDA-2010-D-0026-0006>.

2013: Schnoll S. H., Henningfield J. E., St. Jean E. & Gerlach K. Docket No. FDA-2012-P-0818: Physicians for Responsible Opioid Prescribing (PROP) Citizen Petition. Retrieved from <https://www.regulations.gov/document?D=FDA-2012-P-0818-0690>.

2013: Henningfield J. E., Cone E. J., Buchhalter A. R., Fant. R. V., Schnoll S. H., Sembower M. A. & Sellers E. M. Docket No. FDA-2013-D-0045: Draft Guidance for Industry on Abuse-Deterrent Opioids – Evaluation and Labeling; Availability Specifications; Availability. Retrieved from
<https://www.regulations.gov/document?D=FDA-2013-D-0045-0011>.

2014: Henningfield J. E., Cone E. J., Buchhalter A. R., Fant. R. V. & Schnoll S. H. Government Notices: Vol. 148, No. 26 – June 28, 2014: Notice of Intent for Interested Parties: Tamper Resistance under the Controlled Drugs and Substances Act [Health Canada].

2014: Pinney Associates. Docket No. FDA-2014-N-0233: Use of Innovative Packaging, Storage, and/or Disposal Systems to Address the Misuse and Abuse of Opioid Analgesics. Retrieved from <https://www.regulations.gov/document?D=FDA-2014-N-0233-0011>.

2014: Pinney Associates. Docket No. FDA–2014–N–0374: Postmarketing requirements for the class-wide extended-release/long-acting opioid analgesics. Retrieved from <https://www.regulations.gov/document?D=FDA-2014-N-0374-0006>.

2015: Henningfield J. E. & Cone E. J. Docket No. FDA-2014-N-1359: Request for Comments on Development and Regulation of Abuse-Deterrent Formulations of Opioid Medications Public Meeting. Retrieved from <https://www.regulations.gov/document?D=FDA-2014-N-1359-0020>.

2015: Pinney J. M, Hufford M. R., Buchhalter A. R., Kleykamp B. A., Gerlach K., Pillitteri J. L., Gitchell J. G., Shiffman S., Gougelet R., Sweeney C. T., Henningfield J. E. & Zapawa L. M. Docket No. FDA-2015-N-2002: Clarification of When Products Made or Derived from Tobacco Are Regulated as Drugs, Devices, or Combination Products; Proposed Rule. Retrieved from <https://www.regulations.gov/document?D=FDA-2015-N-2002-1924>.

2015: Pinney Associates. Comments on the Draft Smoking Cessation Guidelines of the U.S. Preventive Services Task Force (USPSTF).

2016: Henningfield J. E., Schnoll S. H., Pinney J. M., Gitchell J. G. & Gerlach K. K. Docket No. CDC- 2015-0112: Proposed 2016 Guideline for Prescribing Opioids for Chronic Pain. Retrieved from <https://www.regulations.gov/document?D=CDC-2015-0112-4079>.

2016: Pinney J. M., Henningfield J. E., Gerlach K., Kleykamp B. A., Gitchell J. G., Pillitteri J. L., Gougelet R. & Shiffman S. Docket No. FR 5597-P-02: Comments on the Department of Housing and Urban Development’s Proposed Rule on Instituting Smoke-Free Public Housing. Retrieved from <https://www.regulations.gov/document?D=HUD-2015-0101-0791>.

2016: Cone E. J., Buchhalter A. R., Henningfield J. E., Fant. R. V. & Schnoll S. H. Docket No. FDA–2016–D–0785: Draft Guidance for Industry General Principles for Evaluating the Abuse Deterrence of Generic Solid Oral Opioid Drug Products. Retrieved from <https://www.regulations.gov/document?D=FDA-2016-D-0785-0076>.

2017: Gerlach K., Hufford M., Gitchell J. G., Kleykamp B. A., Gougelet R., Shiffman S. & Henningfield J. E. Docket No. CDC-2017-0103: Request for Information on Effective, Large-Scale, Sustainable Approaches To Help People Quit Using Tobacco by Employing

Evidence-Based Treatment Options. Retrieved from <https://www.regulations.gov/document?D=CDC-2017-0103-0014>.

2017: Henningfield J. E. Docket No. FDA-2017-N-2903: Data and Methods for Evaluating the Impact of Opioid Formulations with Properties Designed to Deter Abuse in the Post market Setting: A Scientific Discussion of Present and Future Capabilities. Retrieved from <https://www.regulations.gov/document?D=FDA-2017-N-2903-0010>.

2018: Henningfield J. E. Docket No. FDA-2017-N-6502: Opioid Policy Steering Committee Public Hearing: Prescribing Intervention—Exploring a Strategy for Implementation. Retrieved from <https://www.regulations.gov/document?D=FDA-2017-N-6502-0320>.

2018: Henningfield J. E. Docket No. FDA-2018-N-0987: Public Meeting on Patient-Focused Drug Development for Opioid Use Disorder. Retrieved from <https://www.regulations.gov/document?D=FDA-2018-N-0987-0026>.

2019: Coe M., Schnoll S. H., Ashworth J. & Henningfield J. E. Docket No. FDA-2019-P-1783: Requests that the FDA immediately impose a moratorium on all future approvals of new drug applications (NDAs) for new opioids or new opioid formulations. Retrieved from <https://www.regulations.gov/document?D=FDA-2019-P-1783-0004>

2019: Henningfield J. E., Gerlach K. K., Ashworth J., Coe M. & Schnoll S. H. Docket No. FDA-2019-D-1917: Drug Abuse and Dependence Section of Labeling for Human Prescription Drug and Biological Products — Content and Format; Draft Guidance for Industry. Retrieved from <https://www.regulations.gov/document?D=FDA-2019-D-1917-0007>

2019: Ashworth, J., Wang, D., Henningfield, J.E. Comment in response to: Request for Information for the Development of a CMS Action Plan to Prevent Opioid Addiction and Enhance Access to Medication-Assisted Treatment. Department of Health and Human Services (HHS) and The Centers for Medicare & Medicaid Services (CMS). Submitted via email to: PainandSUDTreatment@cms.hhs.gov

2019: Judy Ashworth et al. Standards for Future Opioid Analgesic Approvals and Incentives for New Therapeutics to Treat Pain and Addiction; Public Hearing, Docket FDA-2019-N-2514 <https://www.pinneyassociates.com/wp-content/uploads/2022/01/20191030-PinneyAssociates.-Standard-Future-Opioid-Analgesic-Approvals-FDA-2019-N-2514.Ashworth.pdf>

Surgeon Generals and Other Reports to the US Congress and FDA Reports:

Contributor to Why People Smoke Cigarettes, a pamphlet by the U.S. Public Health Service, developed from testimony before the U.S. Congress by William Pollin, M.D., Director of the National Institute on Drug Abuse March 16, 1982. U.S. Dept. of Human Services, 1983.

Technical advisor to the National Institute on Drug Abuse in preparation of its First Triennial Report to the U.S. Congress on Drug Dependence Research. Co-Author chapter on tobacco dependence with Thomas Burling, 1984.

Technical advisor on Advisory Committee to the U.S. Surgeon General on the health effects and dependence potential of smokeless tobacco, and co-author of Addiction section (with Joseph Cullen, John Graboski, and Catherine Bell 1986-1987.

Second Triennial Report to the U.S. Congress on Drug Dependence Research, Nicotine dependence chapter, 1987.

The Health Consequences of Smoking—Nicotine Addiction: A Report of the Surgeon General. Davis, R.M. (General Editor); Scientific Editors (alphabetic): Benowitz, N.L., Grunberg, N.E., Henningfield, J.E., Lando, H.A. Washington, D.C, U.S. Government Printing Office, 1988.

Third Triennial Report to the U.S. Congress on Drug Dependence Research, Nicotine dependence chapter, 1990.

Medications Development Guidelines Committee, Sub-Committee to the Drug Abuse Advisory Committee to the Food and Drug Administration, 1991.

Fourth Triennial Report to the U.S. Congress on Drug Dependence Research, Nicotine dependence chapter, 1994.

The Effect of Smoking and Smoking Withdrawal on Flight Performance: A 1994 Update, was completed by this task force in December, 1994)

Federal Liaison, Development of Smoking Cessation and Prevention Guideline Agency for Health Care Policy and Research, Office of the Forum for Quality and Effectiveness in Health Care. Development of the first Clinical Practice Guideline for Smoking Cessation in 1996. 1992-1996.

Contributing Editor and Contributing Author, A Report of the Surgeon General: How Tobacco Smoke Causes Disease. U.S. Department of Health and Human Services, 2010.

Food and Drug Administration. 21 CFR Part 801, et al. *Regulations restricting the sale and distribution of cigarettes and smokeless tobacco products to protect children and adolescents; proposed rule analysis regarding FDA's jurisdiction over nicotine-containing cigarettes and smokeless tobacco products; notice.* Federal Register, 60 (155), 41314-41792 (1995).

Liaison, as representative of the National Institute on Drug Abuse (NIDA) to the FDA to provide expertise pertaining to tobacco addiction science, diagnosis, treatment and prevention in the development of the Tobacco

Regulation.

Food and Drug Administration. 21 CFR Part 801, et al. *Regulations restricting the sale and distribution of cigarettes and smokeless tobacco to protect children and adolescents; final rule*, Federal Register, 61 (168), 44396-45318 (1996). Liaison, as representative of the National Institute on Drug Abuse (NIDA) to the FDA to provide expertise pertaining to tobacco addiction science, diagnosis, treatment and prevention in the development of the Tobacco Regulation.

Participant, Nicotine and Product Regulation Subcommittee of the Congressional Advisory Committee on Tobacco Policy and Public Health (“Koop-Kessler” Committee), 1997.

Centers for Disease Control and Prevention’s Office on Smoking (CDC, OSH) and Health and Division of Adolescent and School Health (DASH): Tobacco Use Cessation Among Youth. Atlanta, September 15-16, 1997. Consultant and Discussant.

Centers for Disease Control and Prevention, Healthy People 2010 Tobacco Working Group

Contributor, Nicotine Addiction in Britain, A Report of the Tobacco Advisory Group of the Royal College of Physicians, London, 2000.

Health Canada Commissioned Report: Ferris Wayne G, Henningfield JE, “Tobacco Product Attractiveness as a Contributor to Tobacco Addiction and Disease.” 2008. Report to Health Canada, Ottawa, Canada

Food and Drug Administration Request for Comments: Comments on Draft Guidance for Industry – Assessment of Abuse Potential Drugs FDA Docket No. FDA-2012-N-1172.

Food and Drug Administration Request for Comments: Draft Guidance for Industry on Assessment of Abuse Potential of Drugs. Docket No. FDA-2010-D-0026 (at <http://www.regulations.gov/#!documentDetail;D=FDA-2010-D-0026-0006>) March 24, 2010.

Food and Drug Administration Request for Comments: Food and Drug Administration, Public Hearing and Request for Comments: Impact of Approved Drug Labeling on Chronic Opioid Therapy, Bethesda, Marriott Hotel, February 7-8, 2013 (written comments on PROP Petition to FDA Docket No. FDA-2012-N-1172.

Food and Drug Administration Request for Comments: Draft Guidance for Industry on Abuse-Deterrent Opioids – Evaluation and Labeling. Docket No. FDA-2013-D-0045: Draft Guidance for Industry on Abuse-Deterrent Opioids – Evaluation and Labeling (at <http://www.regulations.gov/#!documentDetail;D=FDA-2013-D-0045-0011>). March 14, 2013.

Contributing Author, A Report of the Surgeon General: The Health Consequences of Smoking – 50 Years of Progress. A Report of the Surgeon General. U.S. Department of Health and Human Services, 2014.

Educational Video tapes:

How to Help Your Patient Stop Smoking (approx. 20 minutes). With C. Everett Koop, Joseph W. Cullen. National Cancer Institute, Bethesda, MD, 1989.

Nicotine: An Old Fashioned Addiction (approx. 30 minutes). With Donald R. Jasinski and others. The Video Encyclopedia of Psychoactive Drugs Series. Schlessinger Video Productions, Bala Cynwyd, PA, 1991.

Barbiturates: Sleeping Potion or Intoxicant (approx. 30 minutes). With Nancy A. Ator and others. The Video Encyclopedia of Psychoactive Drugs. Schlessinger Video Productions, Bala Cynwyd, PA, 1991.

Nicotine Addiction: Toward a New Understanding (approx. 15 minutes). With Neal L. Benowitz and others. Health Science Media, Inc., Atlanta, GA, 1991.

Nicotine Dependency: The Behavioral Side (approx. 15 minutes). With Marc Manley, Ovide Pomerleau and others. Health Science Media, Inc., Atlanta, GA, 1991.

Feature Length Cinema Credit as interviewee: Addiction Incorporated. Produced and released by Acappella Pictures, Directed by Charles Evans, Jr. 2011. See: https://www.imdb.com/title/tt1735495/?ref_=nm_flmg_slf_1

Nova – Search for a Safer Cigarette, October, 2001 See: https://www.imdb.com/title/tt0662641/?ref_=nm_flmg_slf_2

House of Cards – Chapter 1 opening episode (2013) directed by David Fincher, Dancer/Actors Couple 9 with Lucy Henningfield: See: https://www.imdb.com/title/tt1856010/?ref_=nm_flmg_act_1 and https://www.imdb.com/title/tt2161930/fullcredits/?ref_=tt_ov_st_sm

Published Papers, Books and Monographs:

1. Meisch, R.A. Henningfield, J.E. and Thompson, T. Ethanol as a reinforcer for the rhesus monkey via the oral route: Initial results. Proceedings of the Committee on Problems of Drug Dependence, National Academy of Sciences, Washington, D.C. pp. 984-997, 1974.
2. Henningfield, J.E. and Meisch, R.A. Ethanol-reinforced responding and intake as a function of volume per reinforcement. Pharmacology Biochemistry and Behavior, 3: 437-441, 1975.

3. Henningfield, J.E. and Meisch, R.A. Ethanol as a positive reinforcer via the oral route for rhesus monkeys: Maintenance of fixed-ratio responding. Reports from the Research Laboratories, Report No. PR-75-5. October 20, 1975.
4. Henningfield, J.E. and Meisch, R.A. Ethanol as an oral reinforcer for the rhesus monkeys: Maintenance of fixed-ratio responding. Proceedings of the Committee on Problems of Drug Dependence, National Academy of Science, Washington, D.C., pp. 924-929, 1975.
5. Meisch, R.A., Henningfield, J.E. and Thompson, T. Establishment of ethanol as a reinforcer for rhesus monkeys via the oral route: Initial results. In: Gross, M.M. (ed.) Alcohol Intoxication and Withdrawal, Phila., Pa.: Plenum Press, pp. 323-342, 1975.
6. Henningfield, J.E. and Meisch, R.A. Brief communication: Ethanol as a positive reinforcer via the oral route for rhesus monkeys: Maintenance of fixed-ratio responding. Pharmacology Biochemistry & Behavior, 4, 473-475, 1976.
7. Henningfield, J.E. and Meisch, R.A. Brief communication: Drinking device for rhesus monkeys. Pharmacology Biochemistry & Behavior, 4, 609-610, 1976.
8. Henningfield, J.E. and Meisch, R.A. Ethanol as a positive reinforcer for rhesus monkeys: Effect of fixed-ratio schedules and ethanol concentration on drinking. Proceedings of the Committee on Problems of Drug Dependence, Washington, D.C. pp. 504-524, 1976.
9. Henningfield, J.E. and Meisch, R.A. A drinking device for rhesus monkeys. Reports from the Research Laboratories of the Department of Psychiatry, University of Minnesota, Report No. PR-76-2. January 19, 1976.
10. Pohl, R.W., Henningfield, J.E. and Meisch, R.A. Ethanol-reinforced responding: Two methods of acquisition and two strains of rats. Reports from the Research Laboratories of the Department of Psychiatry, University of Minnesota, Report No. PR-76-4, April 15, 1976.
11. Meisch, R.A. and Henningfield, J.E. Drinking of ethanol by rhesus monkeys: Experimental strategies for establishing ethanol as a reinforcer. In: Gross, M.M. (ed.) Alcohol Intoxication and Withdrawal: Experimental Studies, III. Advances in Experimental Medicine and Biology. New York: Plenum Press, pp. 443-461 1977.
12. Henningfield, J.E. and Meisch, R.A. Establishment of orally delivered ethanol as a positive reinforcer for rhesus monkeys. Reports from the Research Laboratories of the Department of Psychiatry, University of Minnesota, Report No. PR-77-4, December 27, 1977.
13. Meisch, R.A. and Henningfield, J.E. Tactics for the establishment of ethanol as an orally effective reinforcer for rhesus monkeys. Committee on Problems of Drug Dependence, pp. 450-470, 1977.

14. Henningfield, J.E., Kliner, D.J. and Meisch, R.A. Oral pentobarbital self-administration by rhesus monkeys. Committee on Problems of Drug Dependence, pp. 553-573, 1977.
15. Henningfield, J.E., and Meisch, R.A. Ethanol drinking by rhesus monkeys as a function of concentration. Psychopharmacology, 57: 133-136, 1978.
16. Henningfield, J.E. and Griffiths, R.R. A preparation for the experimental analysis of human cigarette smoking behavior. Behavior Research Methods & Instrumentation, 11(6), 538-544, 1979.
17. Henningfield, J.E., and Meisch, R.A. Ethanol drinking by rhesus monkeys with concurrent access to water. Pharmacology Biochemistry & Behavior, 10: 777-782, 1979.
18. Henningfield, J.E., and Meisch, R.A. Ethanol drinking by rhesus monkeys: preference for high concentrations. Alcoholism Clinical and Experimental Research, 3(2): 179, 1979.
19. Griffiths, R.R., Bigelow, G.E. and Henningfield, J.E. Similarities in animal and human drug-taking behavior. In: Mello, N.K. (ed.) Advances in Substance Abuse, Conn.: JAI Press, Inc., pp. 1-90, 1980.
20. Henningfield, J.E. and Griffiths, R.R. Effects of ventilated cigarette holders on cigarette smoking by humans. Psychopharmacology, 68: 115-119, 1980.
21. Henningfield, J.E., Stitzer, M.L. and Griffiths, R.R. Expired air carbon monoxide accumulation and elimination as a function of number of cigarettes smoked. Addictive Behaviors, 5: 265-272, 1980.
22. Henningfield, J.E., Yingling, J., Griffiths, R.R., and Pickens, R. An inexpensive portable device for measuring puffing behavior by cigarette smokers. Pharmacology, Biochemistry & Behavior, 12: 811-813, 1980.
23. Henningfield, J.E., Ator, N.A. and Griffiths, R.R. Establishment and maintenance of oral ethanol self-administration in the baboon. Drug and Alcohol Dependence, 7: 113-124, 1981.
24. Henningfield, J.E. Kliner, D.J., and Meisch, R.A. Pentobarbital drinking by rhesus monkeys: Establishment and maintenance of pentobarbital-reinforced behavior. Reports from the Research Laboratories of the Department of Psychiatry, University of Minnesota, Report No. PR-81-1, December 1981.
25. Henningfield, J.E. and Griffiths, R.R. Cigarette smoking and subjective response: Effects of d-amphetamine. Clinical Pharmacology and Therapeutics, 30(4): 497-505, 1981.

26. Henningfield, J.E., Griffiths, R.R., and Jasinski, D.R. Human Dependence on tobacco and opioids: Common factors. In: Thompson, T. and Johanson, C.E. (eds.) Behavioral Pharmacology of Human Drug Dependence. NIDA Research Monograph, No. 37, Wash., D.C., U.S. Govt. Print Off, pp. 210-234, 1981.
27. Henningfield, J.E. and Meisch, R.A. Ethanol and water drinking by rhesus monkeys: Effects of nutritive preloading. Journal of Studies on Alcohol, 42(3): 192-201, 1981.
28. Henningfield, J.E., Miyasato, K., Johnson, R.E., and Jasinski, D.R. Nicotine: Behavioral and physiological effects and self-administration in humans. Pharmacology Biochemistry and Behavior, 1981, 15(34): 830.
29. Meisch, R.A., Kliner, D.J. and Henningfield, J.E. Pentobarbital drinking by rhesus monkeys: Establishment and maintenance of pentobarbital-reinforced behavior. Journal of Pharmacology and Experimental Therapeutics, 217(1): 114-120, 1981.
30. Griffiths, R.R. and Henningfield, J.E. Experimental analysis of human cigarette smoking behavior. Federation Proceedings, 41(2): 234-240, 1982.
31. Griffiths, R.R. and Henningfield, J.E. Pharmacology of cigarette smoking behavior. Trends in Pharmacological Sciences, 3(6): 260-263, 1982.
32. Griffiths, R.R., Henningfield, J.E., and Bigelow, G.E. Human cigarette smoking: Manipulation of number of puffs per bout, interbout interval and nicotine dose. Journal of Pharmacology and Experimental Therapeutics, 220(2): 256-265, 1982.
33. Jasinski, D.R., Haertzen, C.A., Henningfield, J.E., Johnson, R.E., Makhzoumi, H.M. and Miyasato, K. Progress Report from the NIDA Addiction Research Center. In: Harris, L.S. (ed.) Problems of Drug Dependence, 1981, NIDA Research Monograph, No. 41. Wash., D.C., U.S. Govt. Print Off, pp. 45-52, 1982.
34. Poling, A.D. and Henningfield, J.E. Behavioral pharmacology and principles of drug action. In: Breuning S. and Poling, A.D. (eds.) Drugs and Mental Retardation, Springfield: Charles C. Thomas, Publishers, pp. 86-137, 1982.
35. Henningfield, J.E., Goldberg, S.R., Miyasato, K., Spealman, R.D. and Jasinski, D.R. Functional properties of nicotine in monkeys and humans. Federation Proceedings, 41(33): 153, 1982.
36. Miyasato, K., Henningfield, J.E. and Jasinski, D.R. Physiologic and subjective effects produced by nicotine with and without mecamylamine pretreatment in humans. Federation Proceedings, 41: 1223, 1982.

37. Goldberg, S.R., Spealman, R.D., Risner, M.E. and Henningfield, J.E. Control of behavior by intravenous nicotine injections in laboratory animals. Pharmacology Biochemistry & Behavior, 19: 1011-1020, 1983.
38. Henningfield, J.E. and Goldberg, S.R. Control of behavior by intravenous nicotine injections in human subjects. Pharmacology Biochemistry & Behavior, 19: 1021-1026, 1983.
39. Henningfield, J.E. and Goldberg, S.R. Nicotine as a reinforcer in human subjects and laboratory animals. Pharmacology Biochemistry & Behavior, 19: 989-992, 1983.
40. Henningfield, J.E., Chait, L.D. and Griffiths, R.R. Cigarette smoking and subjective response in alcoholics: Effects of pentobarbital. Clinical Pharmacology and Therapeutics, 33(6): 806-812, 1983.
41. Henningfield, J.E. and Jasinski, D.R. Human pharmacology of nicotine. Psychopharmacology Bulletin, 19(3): 413-415, 1983.
42. Henningfield, J.E., Miyasato, K., Johnson, R.E. and Jasinski, D.R. Rapid physiologic effects of nicotine in humans and selective blockade of behavioral effects by mecamylamine. In: Harris, L.S. (ed.) Problems of Drug Dependence, 1982. NIDA Research Monograph, No. 43, Wash., D.C., U.S. Govt. Print Off pp. 259-265, 1983.
43. Henningfield, J.E., Miyasato, K. and Jasinski, D.R. Cigarette smokers self-administer intravenous nicotine. Pharmacology Biochemistry & Behavior, 19: 887-890, 1983.
44. Jasinski, D.R., Henningfield, J.E., Hickey, J.E. and Johnson, R.E. Progress Report from the NIDA Addiction Research Center, Baltimore, Maryland, 1982. In: Harris, L.S. (ed.) Problems of Drug Dependence, 1982, NIDA Research Monograph, No. 43, Wash., D.C., U.S. Govt. Print Off, pp. 92-98, 1983.
45. Henningfield, J.E. Measurement issues in cigarette smoking research: Basic behavioral and physiologic effects and patterns of nicotine self-administration. In: Grabowski, J. and Bell, C. (eds.) Measurement in the Analysis and Treatment of Smoking Behavior, NIDA Research Monograph, Vol. 48, Wash., D.C., U.S. Govt. Print Off, pp. 27-38, 1983.
46. Grabowski, J., Stitzer M.L. and Henningfield, J.E. Therapeutic applications of behavioral techniques: An overview. In: Grabowski, J., Stitzer, M.L. and Henningfield, J.E. (eds.) Behavioral Intervention in Drug Abuse Treatment, NIDA Research Monograph No. 46, Wash., D.C., U.S. Govt. Print Off pp. 1-7, 1984.
47. Stitzer, M.L., Grabowski, J. and Henningfield, J.E. Behavioral intervention techniques in drug abuse treatment: Summary of Discussion. In: Grabowski, J., Stitzer, M.L. and Henningfield, J.E. (eds.) Behavioral Intervention in Drug Abuse

Treatment, NIDA Research Monograph No. 46, Wash. D.C., U.S. Govt. Print. Off. pp. 147-156, 1984.

48. Grabowski, J., Stitzer M.L. and Henningfield, J.E. (eds.) Behavioral Intervention in Drug Abuse Treatment, NIDA Research Monograph No. 46, Wash., D.C., U.S. Govt. Print Off, 1984.

49. Henningfield, J.E. Behavioral Pharmacology of Cigarette Smoking. In: Thompson, T., Dews, P.B. and Barrett, J.E. (eds.). Advances in Behavioral Pharmacology, Vol. IV. New York: Academic Press, pp. 131-210, 1984.

50. Henningfield, J.E. Pharmacological Basis and Treatment of Cigarette Smoking. Journal of Clinical Psychiatry, 45(12): 24-34, 1984.

51. Henningfield, J.E., Chait, L.D. and Griffiths, R.R. Effects of ethanol on cigarette smoking by volunteers without histories of alcoholism. Psychopharmacology, 82: 1-5, 1984.

52. Jasinski, D.R., Boren, J.J., Henningfield, J.E., Johnson, R.E., Lange, W.R. and Lukas, S.E. Progress Report from the NIDA Addiction Research Center, Baltimore, Maryland. In: Harris, L.S. (ed.) Problems of Drug Dependence, 1983, NIDA Research Monograph, No. 49, Wash., D.C., U.S. Govt. Print Off, pp. 69-76, 1984.

53. Jasinski, D.R., Johnson, R.E. and Henningfield, J.E. Abuse liability assessment in human subjects. Trends in Pharmacological Sciences, 5(5): 196-200, 1984.

54. Henningfield, J.E. and Goldberg, S.R. Stimulus properties of nicotine in animals and human volunteers: A review. In: Seiden, L.S. and Balster, R.L. (eds.) Behavioral Pharmacology: The Current Status. New York, Alan R. Liss, pp. 433-449, 1985.

55. Henningfield, J.E., Miyasato, K. and Jasinski, D.R. Abuse liability and pharmacodynamic characteristics of intravenous and inhaled nicotine. Journal of Pharmacology and Experimental Therapeutics, 234(1): 1-12, 1985.

56. Henningfield, J.E. Nicotine: An Old-Fashioned Addiction Vol. 1 In: Snyder, S.H. (ed.). The Encyclopedia of Psychoactive Drugs Series, New York, Chelsea House, 1985. Revised in 1986 and 1992.

57. Jasinski, D.R., Johnson, R.E., Hickey, J.E., Haertzen, C.A., Henningfield, J.E., and Kumar, K. Progress Report from the NIDA Addiction Research Center Baltimore, Maryland (1984). In: Harris, L.S. (ed.) NIDA Research Monograph, No. 55, U.S. Govt. Print Off, DHHS Publication No. (ADM) 85-1393, 1985.

58. Nemeth-Coslett, R. and Henningfield, J.E. Rational basis for chemotherapy of tobacco dependence. In: Grabowski, J.E. and Hall, S.M. (eds.) Pharmacological Adjuncts in Smoking Cessation, U.S. Govt. Print Off pp. 15-26, 1985.

59. Henningfield, J.E. and Ator, N.A. Barbiturates: Sleeping potion or intoxicant. In: The Encyclopedia of Psychoactive Drugs Series, New York, Chelsea House, 1986. Revised in 1992.
60. Connolly, G.N., Winn, D.M., Hecht, S.S., Henningfield, J.E., Walker, B. and Hoffman, D. The reemergence of smokeless tobacco. New England Journal of Medicine, 314: 1020-1027, 1986.
61. Cullen, J.W., Blot, W., Henningfield, J.E., Boyd, G., Mecklenberg, R. and Massey, M.M. Health Consequences of Using Smokeless Tobacco: Summary of the Advisory Committee's Report to the Surgeon General. Public Health Reports, 101(4): 355-373, 1986.
62. Henningfield, J.E. How Tobacco Produces Drug Dependence. In: Ockene, J.E. (ed.). The Pharmacologic Treatment of Tobacco Dependence: Proceedings of World Congress, November 4-5, 1985. Cambridge, MA: Institute for the Study of Smoking Behavior and Policy, pp. 19-31, 1986.
63. Henningfield J.E., Goldberg, Herning, Haertzen, Jasinski, Lukas, Miyasato, Nemeth-Coslett, Pickworth, Rose, Sampson and Snyder. Human studies of the behavioral and pharmacological determinants of nicotine dependence. In: Harris, L.S. (ed.) Problems of Drug Dependence, 1985, NIDA Research Monograph, No. 67, Wash., D.C., U.S. Govt. Print Off, pp. 59-65, 1986.
64. Henningfield, J.E., Lukas, S.E. and Bigelow, G.E. Human Studies of Drugs as Reinforcers. In: Goldberg, S.R. and Stolerman, I.P. (eds.), Behavioral Analysis of Drug Dependence. New York: Academic Press, pp. 69-122, 1986.
65. Hickey, J.E., Haertzen, C.A. and Henningfield, J.E. Simulation of gambling responses on the Addiction Research Center Inventory. Addictive Behavior, 11: 345-349, 1986.
66. Nemeth-Coslett, R. and Henningfield, J.E. Effects of nicotine chewing gum on cigarette smoking and subjective and physiologic effects. Clinical Pharmacology and Therapeutics, 39(6): 625-630, 1986.
67. Nemeth-Coslett, R., Henningfield, J.E., O'Keefe, M.K. and Griffiths, R.R. Effects of mecamylamine on human cigarette smoking and subjective ratings. Psychopharmacology, 88: 420-425, 1986.
68. Nemeth-Coslett, R., Henningfield, J.E., O'Keefe, M.K. and Griffiths, R.R. Effects of marijuana smoking on subjective ratings and tobacco smoking. Pharmacology Biochemistry & Behavior, 25: 659-665, 1986.
69. Penetar, D.M. and Henningfield, J.E. Psychoactivity of atropine in normal volunteers. Pharmacology Biochemistry & Behavior, 24: 111-1113, 1986.

70. Pickworth, W., Herning, R.I. and Henningfield, J.E. Electroencephalographic effects of nicotine gum in humans. Pharmacology Biochemistry & Behavior, 25: 879-882, 1986.
71. Poling, A., Henningfield, J.E. and Wysocki, T. Behavioral pharmacology and principles of drug action. In: Gadow, K.D. and Poling A.D. (eds.) Advances in learning and behavioral disabilities, Supplement 1, Methodologic Issues in Human Psychopharmacology. Greenwich CT: JAI Press Inc., pp. 1-40, 1986.
72. Henningfield, J.E. Redefining Craving. NIDA Notes, 2(1): 8, 1987.
73. Henningfield, J.E. and Brown, B.S. Do Replacement Therapies Treat Craving? NIDA Notes, 2(1): 8-9, 1987.
74. Henningfield, J.E., Goldberg, S.R. and Jasinski, D.R. Nicotine: Abuse liability, dependence potential and pharmacologic treatment of dependence. In: Martin, W.R., Van Loon, G.R., Iwamoto, E.T. and Davis, D.L. (eds.) Tobacco Smoking and Nicotine. New York: Plenum Publishing Corp., pp. 81-99, 1987.
75. Henningfield, J.E., Johnson, R.E. and Jasinski, D.R. Clinical procedures for the assessment of abuse potential. In: Bozarth, M.A. (ed.) Methods of Assessing the Reinforcing Properties of Drugs. Berlin: Springer-Verlag, pp. 573-590, 1987.
76. Henningfield, J.E., London, E.D. and Jaffe, J.H. Nicotine Reward: Studies of Abuse Liability and Physical Dependence Potential. In: Engel, J. and Oreland, L. (eds.) Brain Reward Systems and Abuse, New York: Raven Press, pp. 147-164, 1987.
77. Henningfield, J.E., Nemeth-Coslett, R., Katz, J.L. and Goldberg, S. R. Intravenous cocaine self-administration by human volunteers: Second-order schedules of Reinforcement. In: L.S. Harris (ed.) Problems of Drug Dependence, 1986. NIDA Research Monograph, No. 76, Wash, D.C., U.S. Govt. Print Off, pp. 266-273, 1987.
78. Nemeth-Coslett, R., Henningfield, J.E., O'Keefe, M.K. and Griffiths, R.R. Nicotine Gum: Dose-related effects on cigarette smoking and subjective ratings. Psychopharmacology, 92: 424-430, 1987.
79. Henningfield, J.E. Reducing the urge to smoke. Chest, 92(6): 963, 1987.
80. Glover, E.D., Schroeder, K.L., Henningfield, J.E., Severson, H.H. and Christen, A.G. An interpretative review of smokeless tobacco research in the United States: Part I. Journal of Drug Education, 18(4): 285-310, 1988.
81. Goldberg, S.R. and Henningfield, J.E. (eds.) Progress in understanding the relationship between the pharmacological effects of nicotine and human tobacco dependence. Pharmacology Biochemistry & Behavior, 30: 217-220, 1988.

82. Goldberg, S.R. and Henningfield, J.E. Reinforcing effects of nicotine in humans and experimental animals responding under intermittent schedules of i.v. drug injection. Pharmacology Biochemistry & Behavior, 30: 227-234, 1988.
83. Henningfield, J.E. Improving the diagnosis and treatment of nicotine dependence (Editorial). Journal of the American Medical Association, 260(11): 1613-1614, 1988.
84. Henningfield, J.E. Side effects of nicotine dependence. New Jersey Medicine, 85(2): 108-112, 1988.
85. Henningfield, J.E. and Goldberg, S.R. Introduction: Progress in understanding the relationship between the pharmacological effects of nicotine and human tobacco dependence. Pharmacology Biochemistry & Behavior, 30: 217-220, 1988.
86. Henningfield, J.E. and Goldberg, S.R. Pharmacological determinants of tobacco self-administration by humans. Pharmacology Biochemistry & Behavior, 30: 221-226, 1988.
87. Pomerleau, O.F., Pomerleau, C.S., Fagerström, K.O., Henningfield, J.E. and Hughes, J.R. (eds.) Nicotine Replacement: A Critical Evaluation. New York: Alan R. Liss, Inc., 1988.
88. Henningfield, J.R. and Jasinski, D.R. Pharmacological basis for nicotine replacement. In: Pomerleau, O.F., Pomerleau, C.S., Fagerström, K.O., Henningfield, J.E. and Hughes, J.R. (eds.) In: Nicotine Replacement: A Critical Evaluation. New York: Alan R. Liss, Inc. pp. 35-61, 1988.
89. Jasinski, D.R. and Henningfield, J.E. Conceptual basis of replacement therapies for chemical dependence. In: Pomerleau, O., Pomerleau, C.S., Fagerström, K.O., Henningfield, J.E. and Hughes, J.R. (eds.) Nicotine Replacement: A Critical Evaluation. New York: Alan R. Liss, Inc. pp. 13-34, 1988.
90. Henningfield, J.E. and Nemeth-Coslett, R. Nicotine dependence: Interface between tobacco and tobacco-related disease. Chest, 93: 37S-55S, 1988.
91. Higgins, S., Preston, K., Henningfield, J.E., and Jaffe, J. Behavioral, Physiological and Hormonal Effects of a Naloxone Challenge Following Acute Morphine Pretreatment in Humans. In: Harris, L.S. (ed.) Problems of Drug Dependence, 1987, NIDA Research Monograph, No. 81, Wash., D.C. U.S. Govt. Print Off, pp. 202-208, 1988.
92. Jarvik, M.E. and Henningfield, J.E. Pharmacologic treatment of tobacco dependence. Pharmacology Biochemistry & Behavior, 30: 279-234, 1988.
93. Nemeth-Coslett, R., Benowitz, N., Robinson, N., and Henningfield, J.E. Nicotine gum: Chew rate, subjective effects and plasma nicotine. Pharmacology Biochemistry & Behavior, 29: 747-751, 1988.

94. Pickworth, WEB., Herning, RI. and Henningfield, J.E. Mecamylamine reduces some EEG effects of nicotine chewing gum in humans. Pharmacology Biochemistry & Behavior, 30: 149-153, 1988.
95. Waranch, H.R., Henningfield, J.E. and Edmunds, M. Elimination of nicotine gum use. Lancet, January 2/9: 49-50, 1988.
96. Henningfield, J.E. and Warner, K.E. Cost as an influence on drug use - on the streets and in the laboratory. University of Michigan, 1988.
97. Cone, E.J. and Henningfield, J.E. Premier 'smokeless cigarettes' can be used to deliver crack. Journal of the American Medical Association, 261(1): 41, 1989.
98. Glover, E.D., Schroeder, K.L., Henningfield, J.E., Severson, H.H. and Christen, A.G. An interpretative review of smokeless tobacco research in the United States: Part II. Journal of Drug Education, 19(1): 1-19, 1989.
99. Henningfield, J.E. and Higgins, S.T. The influence of behavioral analysis on the Surgeon General's Report, The health consequences of smoking: Nicotine addiction. The Behavior Analyst, 12: 99-101, 1989.
100. Henningfield, J.E. and Woodson, P.P. Behavioral and physiologic aspects of nicotine dependence: The role of nicotine dose. In: Nordberg, A., Fuxe, K., Holmstedt, B. and Sundwall, A., (eds.) Progress in Brain Research, Vol. 79. Elsevier Science Publishers, B.V., pp. 303-311, 1989.
101. Henningfield, J.E. and Woodson, P.P. Dose-related actions of nicotine on behavior and physiology: Review and implications for replacement therapy for nicotine dependence. Journal of Substance Abuse, 1: 301-317, 1989.
102. Higgins, S.T., Lamb, R.J., and Henningfield, J.E. Dose-dependent effects of atropine on behavioral and physiologic responses in humans. Pharmacology Biochemistry & Behavior, 34: 303-311, 1989.
103. Higgins, S.T., Woodward, B.M. and Henningfield, J.E. Effects of atropine on the repeated acquisition and performance of response sequences in humans. Journal of Experimental Analysis of Behavior, 51: 5-15, 1989.
104. Jasinski, D.R. and Henningfield, J.E. Human abuse liability assessment by measurement of subjective and physiological effects. In: Fischman, M.W. and Mello, N.K. (eds.) Testing for abuse liability of drugs in humans. NIDA Research Monograph, No. 92. Wash., D.C., U.S. Govt. Print Off, pp. 73-100, 1989.
105. Johnson, R.E., Cone, E.J., Henningfield, J.E., and Fudala, P.J. Use of buprenorphine in the treatment of opiate addiction. I. Physiologic and behavioral effects during a rapid dose induction. Clinical Pharmacology and Therapeutics, 46: 335-343, 1989.

106. Pickworth, W.B., Herning, R.I. and Henningfield, J.E. Spontaneous EEG changes during tobacco abstinence and nicotine substitution. Journal of Pharmacology and Experimental Therapeutics 251(3): 976-982, 1989.
107. Pickworth, W.B., Welch, P., Henningfield, J.E. and Cone, E.J. Opiate-induced pupillary effects in humans. Methods and Findings in Experimental Clinical Pharmacology, 11(12): 759-763, 1989.
108. Radzius, A., Welch, P., Cone, E.J., and Henningfield, J.E. A portable pupilometer system for measuring pupillary size and light reflex. Behavior Research Methods, Instruments & Computers, 21(6): 611-618, 1989.
109. Rose, J.E., Sampson, A., and Henningfield, J.E. Mecamylamine increases nicotine preference and attenuates nicotine discrimination. Pharmacology Biochemistry & Behavior, 32: 933-938, 1989.
110. Snyder, F.R., Davis, F.C. and Henningfield, J.E. The tobacco withdrawal syndrome: Performance decrements assessed on a computerized test battery. Drug and Alcohol Dependence, 23: 259-266, 1989.
111. Snyder, F.R. and Henningfield, J.E. Effects of nicotine administration following 12 h of tobacco deprivation: Assessment on computerized performance tasks. Psychopharmacology, 97: 17-22, 1989.
112. Henningfield, J.E. Understanding nicotine addiction and the physical withdrawal process. Journal of the American Dental Association, Supplement: 2S-6S, January 1990.
113. Boren, J.J., Stitzer, M.L. and Henningfield, J.E. Preference among research cigarettes with varying nicotine yields. Pharmacology Biochemistry & Behavior, 36: 191-193, 1990.
114. Cohen, C. and Henningfield, J.E. Nicotine dependence: A preventable risk factor for other diseases. Journal of General Internal Medicine 5 (Suppl): S73-S78, 1990.
115. Heishman, S.J., Huestis, M.A., Henningfield, J.E. and Cone, E.J. Acute and residual effects of marijuana: Profiles of plasma THC levels, physiological, subjective and performance measures. Pharmacology Biochemistry & Behavior, 37: 561-565, 1990.
116. Henningfield, J.E. Discussion of papers presented. The Biology of Nicotine Dependence, CIBA Foundation Symposium 152. New York: John Wiley and Sons, 1990.
117. Henningfield, J.E., Clayton, R. and Pollin, W. The involvement of tobacco in alcoholism and illicit drug use. British Journal of Addiction, 85: 279-292, 1990.

118. Henningfield, J.E., Cohen, C. and Giovino, G.A. Can genetic constitution affect the 'objective' diagnosis of nicotine dependence? American Journal of Public Health, 80(9): 1040-1041, 1990.
119. Henningfield, J.E., London, E.D. and Benowitz, N.L. Arterial-venous differences in plasma concentrations of nicotine after cigarette smoking. Journal of the American Medical Association 263(15): 2049-2050, 1990.
120. Henningfield, J.E., Radzius, A., Cooper, T.M. and Clayton, R.R. Drinking coffee and carbonated beverages blocks absorption of nicotine from nicotine polacrilex gum. Journal of the American Medical Association, 264(12): 1560-1564, 1990.
121. Pickworth, W.B., Herning, R.I., Koeppl, B. and Henningfield, J.E. Dose-dependent atropine-induced changes in spontaneous electroencephalogram in human volunteers. Military Medicine, 155(4): 166-170, 1990.
122. Swedberg, M.B.D., Henningfield, J.E. and Goldberg, S.R. Nicotine dependency: Animal studies. In: Wonnacott, S., Russell, M.A.H., and Stolerman, I.P. (eds.) Nicotine Psychopharmacology: Molecular, cellular and behavioral aspects, Oxford University Press, 1990.
123. Brigham, J., Henningfield, J.E. and Stitzer, M.L. Smoking relapse: A review. International Journal of the Addictions 25(9A & 10A): 1239-1255, 1990-1991.
124. Brunton, S.A., Henningfield, J.E. and Solberg, L.I. Smoking cessation: What works best? Patient Care, pp. 89-121, June 15, 1991.
125. Cohen, C., Pickworth, W.B. and Henningfield, J.E. Cigarette smoking and addiction. Clinics in Chest Medicine, 12(4): 701-710, 1991.
126. Fudala, P.J., Heishman, S.J. and Henningfield, J.E. Human pharmacology and abuse potential of nalmefene. Clinical Pharmacology & Therapeutics 49(3): 300-306, 1991.
127. Heishman, S.J. and Henningfield, J.E. Discriminative stimulus effects of d-amphetamine, methylphenidate and diazepam in humans. Psychopharmacology 103: 436-442, 1991.
128. Heishman, S.J. and Henningfield, J.E. Application of human laboratory data for the assessment of performance in workplace settings: Practical and theoretical considerations. In: Gust, S.W., Walsh, J.M., Thomas, L.B. and Crouch, D.J. (eds.) Drugs in the workplace: Research and evaluation data, Vol. II NIDA Research Monograph, No. 100, Washington D.C., U.S. Govt. Print Off, pp. 167-174, 1991.
129. Henningfield, J.E. Nicotine Dependence. In: U.S. Department of Health and Human Services, National Institute on Drug Abuse, Drug Abuse and Drug Abuse

Research, The Triennial Report to Congress from the Secretary, Wash. D.C., U.S. Govt. Print Off, Department of Health and Human Services, pp. 213-242, 1991.

130. Henningfield, J.E., Cohen, C. and Heishman, S.J. Drug self-administration methods in abuse liability evaluation. British Journal of Addiction, 86: 1571-1577, 1991.

131. Henningfield, J.E., Cohen, C. and Slade, J.D. Is nicotine more addictive than cocaine? British Journal of Addiction, 86: 565-569, 1991.

132. Lamb, R.J., Preston, K.L., Schindler, C.W., Meisch, R.A., Davis, F., Katz, J.L., Henningfield, J.E. and Goldberg, S.R. The reinforcing and subjective effects of morphine in post-addicts: A dose-response study. Journal of Pharmacology and Experimental Therapeutics, 259(3): 1165-1173, 1991.

133. Muntaner, C., Higgins, S.T., Roache, J.D. and Henningfield, J.E. Ethanol decreases responding on behavior maintained under concurrent schedules of both positive reinforcer presentation and avoidance in humans. Behavioral Pharmacology, 2: 47-56, 1991.

134. Pickworth, W.B., Bunker, E.B. and Henningfield, J.E. Clinical laboratory testing of nicotine. In: Cocores, J.A. (ed.) The Clinical Management of Nicotine Dependence. New York: Springer-Verlag, pp. 232-255, 1991.

135. Henningfield, J.E. and Stitzer, M.L. (eds.) New Developments in Nicotine Delivery Systems. (monograph) New York: The Cortland Group Inc., 1991.

136. Brunton, S.A. (primary author) and Henningfield, J.E. (ed.) Nicotine Addiction and Smoking Cessation. New York: Medical Information Series, 1991.

137. Henningfield, J.E. Role of nicotine in tobacco use: Treatment implications. In: Henningfield, J.E. and Stitzer, M.L. (eds.) New Developments in Nicotine-Delivery Systems. New York: The Cortland Group, pp. 23-33, 1991.

138. Henningfield, J.E., Cohen, C. and Heishman, S.J. Quantitative comparison of drug-administration in animals and humans. In: Cohen-Yanez, J. et al (eds.) Drug Dependence: From the molecular to the social level. Amsterdam, Netherlands: Elsevier Science Publishers, pp. 25-33, 1991.

139. Pickworth, W.B., Klein, S.A., George, F.R., and Henningfield, J.E. Acetaminophen fails to inhibit ethanol-induced subjective effects in human volunteers. Pharmacology Biochemistry & Behavior, 41: 189-194, 1991.

140. Henningfield, J.E. and Obarzanek, E. National Working Conference on Smoking and Body Weight: Task Force 2: Methods of Assessment, Strategies for Research. Health Psychology, II(Suppl.): 10-16, 1992.

141. Heishman, S.J. and Henningfield, J.E. Stimulus functions of caffeine in humans: Relation to dependence potential. Neuroscience & Biobehavioral Reviews, 16: 273-287, 1992.
142. Higgins, S.T., Preston, K.L., Cone, E.J., Henningfield, J.E. and Jaffe, J.H. Supersensitivity to naloxone following acute morphine pretreatment in humans: Behavioral, hormonal and physiological effects. Drug and Alcohol Dependence, 30: 13-26, 1992.
143. Huestis, M.A., Henningfield, J.E. and Cone, E.J. Blood cannabinoids I. Absorption of THC and formation of 11-OH-THC and THCCOOH during and after marijuana smoking. Journal of Analytical Toxicology, 16: 276-282, 1992.
144. Huestis, M.A., Henningfield, J.E. and Cone, E.J. Blood cannabinoids II. Models for the prediction of time of marijuana exposure from plasma concentrations of Δ -9-tetrahydrocannabinol (THC) and 11-nor-9-carboxy- Δ -9-tetrahydrocannabinol (THCCOOH). Journal of Analytical Toxicology, 16: 283-29, 1992.
145. Huestis, M.A., Sampson, A.H., Holickey, B.J., Henningfield, J.E. and Cone, E.J. Characterization of the absorption phase of marijuana smoking. Clinical Pharmacology and Therapeutics, 52(1): 31-41, 1992.
146. Slade, J., Connolly, G.N., Davis, R.M., Douglas, C.E., Henningfield, J.E., Hughes J.R., Kozlowski, L.T. and Myers, M.L. Report of the tobacco policy research study group on adjunctive medications for managing nicotine dependence. Tobacco Control 1 (suppl.): S10-S13, 1992.
147. Slade, J., Connolly, G.N., Davis, R.M., Douglas, C.E., Henningfield, J.E., Hughes, J.R., Kozlowski, L.T. and Myers, M.L. Report of the tobacco policy research study group on tobacco products. Tobacco Control 1(suppl): S4-S9, 1992.
148. Henningfield, J.E. Occasional drug use: Comparing nicotine with other addictive drugs. Tobacco Control, 1: 161-162, 1992.
149. Henningfield, J.E. Pathophysiology of tobacco dependence. In: Proceedings of the Smoking Cessation Consensus Meeting, March, 1992. Chester, England: Adis International, pp. 4-5, 1992.
150. Kozlowski, L.T., Henningfield, J.E., Keenan, R.M., Lei, H., Leigh, G., Jelinek, L.C., Pope, C.A. and Haertzen, C.A. Patterns of alcohol, cigarette, and caffeine and other drug use in two drug abusing populations. Journal of Substance Abuse Treatment, 10: 171-179, 1993.
151. Henningfield, J.E. and Keenan, R.M. The anatomy of nicotine addiction. Health Values, 17(2): 12-19, 1993.

152. Cohen, C., Pickworth, W.B. and Henningfield, J.E., Pharmacological characteristics of tobacco dependence. In: Hirsch, A. et al (eds.), Prevention of Respiratory Diseases. New York: Marcel Dekker, Inc., pp. 545-558, 1993.
153. Henningfield, J.E., Stapleton, J.M., Benowitz, N.L. and London, E.D. Higher levels of nicotine in arterial than in venous blood after cigarette smoking. Drug & Alcohol Dependence, 33: 23-29, 1993.
154. Henningfield, J.E., Cohen, C. and Pickworth, W.B. Psychopharmacology of nicotine. In: Orleans, C.T. and Slade, J.D. (eds.) Nicotine Addiction: Principles and Management. New York: Oxford University Press, pp. 24-45, 1993.
155. Jarvik, M.E. and Henningfield, J.E. Pharmacological adjuncts for the treatment of nicotine dependence. In: Orleans, C.T. and Slade, J.D., (eds.) Nicotine Addiction: Principles and Management. New York: Oxford University Press, pp. 245-261, 1993.
156. Henningfield, J.E. and Keenan, R.M. Nicotine delivery kinetics and abuse liability. Journal of Consulting & Clinical Psychology, 61(5): 743-750, 1993.
157. Heishman, S.J., Snyder, F.R. and Henningfield, J.E. Performance, subjective, and physiological effects of nicotine in non-smokers. Drugs and Alcohol Dependence, 34: 11-18, 1993.
158. Woodson, P.P., Fagerström, K.O., Moland, L., Slade, J., and Henningfield, J.E. Premier: A new nicotine delivery system - studies on its environmental and biological impact. Journal of Smoking-Related Disorders, 4(3): 191-201, 1993.
159. Schwandt, L.M. and Henningfield, J.E. Nicotine. American Association for Clinical Chemistry, 14(10): 249-262, 1993.
160. Henningfield, J.E. More on the nicotine content of vegetables. New England Journal of Medicine, 329(21): 1581, 1993.
161. Tiffany, S.T., Singleton, E.G., Haertzen, C.A. and Henningfield, J.E. The development of a cocaine craving questionnaire. Drug and Alcohol Dependence, 34: 19-28, 1993.
162. Llosa, T. and Henningfield, J.E. Analysis of coca paste cigarettes. Tobacco Control, 2: 333-336, 1993.
163. Cohen, C., Pickworth, W.B., Bunker, E.B. and Henningfield, J.E. Caffeine antagonizes EEG effects of tobacco withdrawal. Pharmacology Biochemistry & Behavior, 47(4): 919-926, 1994.
164. Henningfield, J.E. Do the benefits of nicotine help cigarettes beat the addiction rap? Addiction, 89: 135-146, 1994.

165. Lamb, R.J. and Henningfield, J.E. Human d-amphetamine drug discrimination: Methamphetamine and hydromorphone. Journal of Experimental Analysis of Behavior, 61: 169-180, 1994.
166. Henningfield, J.E. and Singleton, E.G. Managing drug dependence: Psychotherapy or Pharmacotherapy? CNS Drugs, 1(5): 317-322, 1994.
167. Henningfield, J.E. Book Review: Cocaine by Gold, M.S. The New England Journal of Medicine, 330(10): 723-724, 1994.
168. Henningfield, J.E. Nicotine addiction. In: Substance Abuse. Ross Roundtable on Critical Issues in Family Medicine, Columbus, Ohio, Ross Products Division, pp. 96-105, 1994.
169. Henningfield, J.E. Do nicotine replacement medications work? A Unique standard for nicotine. Addiction, 89(4): 434-436, 1994.
170. Pickworth, W.B., Bunker, E.B. and Henningfield, J.E. Transdermal Nicotine: Reduction of smoking with minimal abuse liability. Psychopharmacology, 115: 9-14, 1994.
171. Benowitz, N.L. and Henningfield, J.E. Establishing a nicotine threshold for addiction. New England Journal of Medicine, 331 (2): 123-125, 1994.
- 171a. Benowitz, N.L. and Henningfield, J.E. Reply to letters on "Establishing a nicotine threshold for addiction. New England Journal of Medicine", 331: 1530-1532, 1994.
172. Henningfield, J.E., Kozlowski, L.T. and Benowitz, N.L. A proposal to develop meaningful labeling for cigarettes. Journal of the American Medical Association, 272 (4): 312-314, 1994.
173. Henningfield, J.E., Singleton, E.G. and Cadet, J.L. Why we need increased ethnic diversity among drug dependence researchers. Drug and Alcohol Dependence, 35: 262-262, 1994.
174. Jenkins, A.J., Keenan, R.M., Henningfield, J.E. and Cone, E.J. Pharmacokinetics and pharmacodynamics of smoked heroin. Journal of Analytical Toxicology, 18:317-330, 1994.
175. Heishman, S.J., Taylor, R.C. and Henningfield, J.E. Nicotine and smoking: A review of effects on human performance. Experimental & Clinical Psychopharmacology, 2: (4): 345-395, 1994.
176. Henningfield, J.E., Ramström, L.M., Husten, C., Giovino, G., Zhu, B., Barling, J. Weber, C., Kelloway, E.K., Strecher, V.J., Jarvis, M.J. and Weiss, J. Smoking and the workplace: Realities and solutions. Journal of Smoking Related Disorders, 5 (Suppl.), 261-270, 1994.

177. Henningfield, J.E. and Schuh, L.M. Tobacco dependence: Pharmacologic determinants. American Journal of Therapeutics, 1: 1-7, 1994.
178. Rothman, R.B., Gorelick, D.A., Guo, X.Y., Herning, R.I., Pickworth, W.B., Gendron, Koeppl, B., Thompson, L.E. and Henningfield, J.E. Lack of evidence for context-dependent cocaine-induced sensitization in humans: Preliminary studies. Pharmacology Biochemistry and Behavior, 49 (3): 583-588, 1994.
179. Keenan, R.M., Jarvik, M.E. and Henningfield, J.E. Management of nicotine dependence and withdrawal. In: Miller, N.S. (ed.) Principles of Addiction Medicine, Chevy Chase, Maryland: American Society of Addiction Medicine, Inc., pp. 1-14, 1994.
180. Heishman, S.J. and Henningfield, J.E. Is caffeine a drug of dependence? Criteria and comparisons. Pharmacopsychocologia, 7: 127-135, 1994.
181. Butschky, M., Bailey, D., Henningfield, J.E. and Pickworth, W.B. Smoking without nicotine delivery decreases withdrawal in 12-hour abstinent smokers. Pharmacology Biochemistry and Behavior, 50 (1): 91-96, 1995.
182. Henningfield, J.E., Schuh, L.M., and Jarvik, M.E. Pathophysiology of tobacco dependence. In: Bloom, F.E. and Kupfer, D.J. Psychopharmacology: The Fourth Generation of Progress. New York: Raven Press, pp. 1715-1729, 1995.
183. Pickworth, W.B., Keenan, R.M. and Henningfield, J.E. Nicotine: Effects and mechanisms. In: Chang, L.W. and Dyer, R.S. (eds.) Handbook of Neurotoxicology. New York: Marcel Dekker, Inc., pp. 801-824, 1995.
184. Keenan, R.M., Henningfield, J.E. and Jarvik, M.E. Pharmacological therapies: Nicotine addiction. In: Miller, N.S. and Gold, M.S. (eds.) Pharmacological Therapies for Drug and Alcohol Addictions, New York: Marcel Dekker, Inc. 239-264, 1995.
185. Henningfield, J.E. and Heishman, S.J. The addictive role of nicotine in tobacco use. Psychopharmacology, 117: 11-13, 1995.
186. Kozlowski, L.T. and Henningfield, J.E., Thinking the unthinkable: the prospect of regulation of nicotine in cigarettes by the United States Government. Addiction, 90: 165-167, 1995.
187. Henningfield, J.E., Schuh, L.M. and Heishman, S.J. Pharmacological determinants of cigarette smoking. Clarke, P.B.S., Quik, M., Adlkofer, F.X. and Thureau, K. (eds.) Effects of Nicotine on Biological Systems II, International Symposium on Nicotine. Basel, Switzerland: Birkhäuser Verlag, pp. 247-256, 1995.
188. Henningfield, J.E., Radzius, A. and Cone, E.J. Estimation of available nicotine content of six smokeless tobacco products. Tobacco Control, 4(1): 57-61, 1995.

189. Henningfield, J.E. and Benowitz, N.L. Cigarettes and addiction. British Medical Journal, 310:1082-1083, 1995.
190. Gritz, E.R., Fiore, M.C. and Henningfield, J.E. Smoking and Cancer. In: Murphy, G.P., Lawrence, W. and Lenhard, R.E. (eds.), American Cancer Society, Textbook of Clinical Oncology, second edition, American Cancer Society, Atlanta, pp. 146-163, 1995.
191. Roache, J.D., Meisch R.A., Henningfield, J.E., Jaffe, J.H., Klein, S., Sampson, A. Reinforcing effects of triazolam in sedative abusers: Correlation of drug liking and self-administration measures. Pharmacology Biochemistry and Behavior, 50(2): 171-179, 1995.
192. Pickworth, W.B., Heishman S.J. and Henningfield, J.E. Relationships between EEG and performance during nicotine withdrawal and administration. In: Domino, E.F. (ed.) Brain Imaging of Nicotine and Tobacco Smoking, NPP Books, Ann Arbor, pp. 275-287, 1995.
193. Schuh, L.M. and Henningfield, J.E. Withdrawal: Nicotine (Tobacco). In: Jaffe, J.H. (ed.) The Encyclopedia of Drugs and Alcohol. Macmillan Publishing, pp. 1282-1286, 1995.
194. Schuh, L.M. and Henningfield, J.E. Tobacco, Pharmacotherapy. In: Jaffe, J.H. (ed.) The Encyclopedia of Drugs and Alcohol. New York: Macmillan Publishing, pp. 1124-1130, 1995.
195. Baumann, M.H., Gendron, T.M., Becketts, K.M., Henningfield, J.E., Gorelick, D.A. and Rothman, R.B. Effects of intravenous cocaine on plasma cortisol and prolactin in human cocaine abusers. Biological Psychiatry, 38: 751-755, 1995.
196. Giovino, G.A., Henningfield, J.E., Tomar, S.L., Escobedo, L.G. and Slade, J. Epidemiology of tobacco use and dependence. Epidemiologic Reviews, 17: 48-65, 1995.
197. Schuh, L.M. and Henningfield, J.E. Nicotine replacement treatment and public health interventions: Toward a marriage of two approaches. In: Slama, K. (ed.) Tobacco and Health: Proceedings of the Ninth World Conference on Tobacco and Health, Plenum Press: New York, 1995.
198. Tomar, S.L. and Henningfield, J.E. Additional evidence implicating moist snuff as a potent carcinogen. Journal of the National Cancer Institute, 87: 1822-1824, 1995.
199. Henningfield, J.E. Introduction to tobacco harm reduction as a complementary strategy to smoking cessation. Tobacco Control, 4(suppl 2): S25-S43, 1995.

200. Henningfield, J.E. Nicotine medications for smoking cessation. New England Journal of Medicine, 333: 1196-1203, 1995.

201. Henningfield, J.H. and the Epidemiology Br, Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, CDC. Symptoms of substance dependence associated with use of cigarettes, alcohol, and illicit drugs - United States, 1991-1992. Morbidity and Mortality Weekly Report, 44(44):830-839, 1995

202. Perkins, K.A., Benowitz, N., Henningfield, J.E., Newhouse, P., Pomerleau, O. and Swan, G. Conference summary: Society for Research on Nicotine and Tobacco. Addiction, 91:129-144, 1996.

203. Henningfield, J.E., Keenan, R.M. and Clarke, P.B.S. Nicotine. In: Schuster, C.R. and Kuhar, M.J. (eds.). Handbook of Experimental Pharmacology. Berlin: Springer-Verlag, 1996, pp. 271-314.

204. The Smoking Cessation Clinical Practice Guideline Panel and Staff (including JEH). The Agency for Health Care Policy and Research Smoking Cessation Clinical Practice Guideline. Journal of the American Medical Association, 275:1270-1280, 1996.

205. Fant, R.V., Everson, D., Dayton, G., Pickworth, W.B., and Henningfield, J.E. Nicotine dependence in women. Journal of the American Medical Women's Association, 51:19-28, 1996.

206. Fiore, M., Shi, F.Y., Heishman, S.J. and Henningfield, J.E. The effect of smoking and smoking withdrawal on flight performance: a 1994 update. Report to the Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health (Purchase Order No. 9386129).

207. Schuh, L.M., Schuh, K.J. and Henningfield, J.E. Pharmacologic determinants of tobacco dependence. American Journal of Therapeutics, 3: 335-341, 1996.

208. Henningfield, J.E. and Schuh, L.M. Pharmacology and markers: Nicotine pharmacology and addictive effects relevant to evaluation of the "FTC method" of cigarette dose assessment. In: The FTC Cigarette Test Method for Determining Tar, Nicotine, and Carbon Monoxide Yields of U.S. Cigarettes, Report of the NCI Expert Committee, National Institutes of Health, National Cancer Institute, Monograph 7, NIH Publication No. 96-4028, pp. 113-126, 1996.

209. Henningfield, J.E., Hariharan, M. and Kozlowski, L.T. Nicotine Content and Health Risks of Cigars. Journal of the American Medical Association, 276: 1857-1858, 1996.

210. Pickworth, W.B., Fant, R.V., Butschky, M.F., and Henningfield, J.E. Effects of transdermal nicotine delivery on measures of acute nicotine withdrawal. Journal of Pharmacology and Experimental Therapeutics, 279: 450-456, 1996.
211. Pickworth, W.B., Baumann, M.H., Fant, R.V., Rothman, R.B. and Henningfield, J.E. Endocrine responses during acute nicotine withdrawal. Pharmacology Biochemistry and Behavior, 55(3): 433-437, 1996.
212. Soria, R., Stapleton, J.M., Gilson, S.F., Sampson-Cone, A., Henningfield, J.E. and London, E.D. Subjective and cardiovascular effects of intravenous nicotine in smokers and nonsmokers. Psychopharmacology, 128: 221-226, 1996.
213. Evans, S.M., Cone, E.J. and Henningfield, J.E. Arterial and venous cocaine plasma concentrations in humans: Relationship to route of administration, cardiovascular effects and subjective effects. Journal of Pharmacology and Experimental Therapeutics, 279(3): 1345-1356, 1996.
214. Moolchan, E.T., Heishman, S.J., Pickworth, W.B. and Henningfield, J.E. Pharmacologic aspects of nicotine and nicotine replacement therapies. In: Richmond, R. (ed.), Educating Medical Students about Tobacco: Planning and Implementation, Marrickville, New South Wales, Southwood Press Pty Limited, 1996, pp. 339-357
215. Johanson, C., Evans, S., and Henningfield, J.E. The discriminative stimulus of triptelennamine in humans. Psychopharmacology, 126:140-146, 1996.
216. Heishman, S.J., Kozlowski, L.T. and Henningfield, J.E. Nicotine addiction: Implications for public policy. Journal of Social Issues, 53: 13-33, 1997.
217. Pickworth, W.B., Fant, R.V., Butschky, M.F. and Henningfield, J.E. Effects of mecamylamine on spontaneous EEG and performance in smokers and non-smokers. Pharmacology Biochemistry and Behavior, 56(2): 181-187, 1997.
218. Radzius, A., Carriero, N.J., Weinhold, L.L., Gorelick, D.A. and Henningfield, J.E. Changes in cigarette smoking not observed following repeated cocaine self-administration. Experimental and Clinical Psychopharmacology, 5(1): 51-53, 1997.
219. Henningfield, J.E. and Shiffman, S. Practice guideline for the treatment of patients with nicotine dependence: Commentary 2 - Three Guidelines. Abstracts of Clinical Care Guidelines, 9(1), 1997.
220. Henningfield, J.E. Nicotine Deliveries and Consumer Acceptability. Report of Canada's Expert Committee on Cigarette Modifications: Conference Proceedings, pp. 49-55, Toronto, Canada, Health Canada, March 1997.
221. Schuh, K.J., Schuh, L.M., Henningfield, J.E. and Stitzer, M.L. Nicotine nasal spray and nicotine vapor inhaler: Abuse liability determination. Psychopharmacology, 130:352-361, 1997.

222. Pickworth, W.B., Fant, R.V., Butschky, M.F., Goffman, A.L. and Henningfield, J.E. Evaluation of cranial electrostimulation therapy on short-term smoking cessation. Biological Psychiatry, 42:116-121, 1997.
223. Svikis, D., Henningfield, J.E., Gazaway, P., Huggins, G., Sosnow, K., Hranicka, J., Harrow, C., and Pickens, R. Tobacco use for identifying pregnant women at risk of substance abuse. The Journal of Reproductive Medicine, 42(5):299-302, 1997.
224. Pickworth, W.B. and Henningfield, J.E. Smokable drugs: pharmacologic basis for consumer appeal - Commentary. Addiction, 92(6):691-692, 1997.
225. Burns, D., Benowitz, N., Connolly, G., Cummings, M.K., Davis, R.M., Henningfield, J.E., Shopland, D.R., and Warner, K.E. What should be the elements of any settlement with the tobacco industry? Tobacco Control, 6(1):1-4, 1997.
226. Henningfield, J.E. Postscript - Conference on AHCPR Smoking Cessation Guideline. Tobacco Control, 6 (Suppl 1):S98-S99, 1997.
227. Henningfield, J.E., Fant, R.V., and Tomar, S.L. Smokeless tobacco: An addicting drug. Advances in Dental Research, 11:330-335, 1997.
228. Pickworth, W.B., Fant, R.V., & Henningfield, J.E. Inhibition of prostaglandin synthesis and effects of ethanol and pentobarbital in humans. Journal of Pharmacology and Experimental Therapeutics, 283:274-280, 1997.
229. Tomar, S.L., and Henningfield, J.E. Review of the evidence that pH is a determinant of nicotine dosage from oral use of smokeless tobacco. Tobacco Control, 6:219-225, 1997.
230. Fant, R.V., Pickworth, W.B., and Henningfield, J.E. The addictive effects of nicotine are related to the speed of delivery. Proceedings from the workshop "Nicotine as a therapeutic agent", Frankfurt, Germany -Symposium Volume 10, "Immunity and Environment", 1997
231. Cinciripini, P.M., Hecht, S.S., Henningfield, J.E., Manley, M., and Kramer, B.S. Tobacco addiction: Implications for treatment and cancer prevention. Journal of the National Cancer Institute, 89(24):1852-1867, 1997.
232. Henningfield, J.E. The physiology of nicotine dependence. In: The UN Focal Point on Tobacco or Health, United Nations, pp. 5-6, September, 1997.
233. Shiffman, S., Mason, K.M., and Henningfield, J.E. Tobacco dependence treatments: Review and Prospectus. Annual Review of Public Health, 19:335-358, 1998.

234. Fant, R.V., and Henningfield, J.E. Pharmacology and abuse potential of cigars. Smoking and Tobacco Control Monograph, No.9. Cigars: Health Effects and Trends. Rockville, MD: National Institutes of Health, NIH Publication No. 98-4302, pp.181-193, 1998.
235. Henningfield, J.E., Gopalan, L., and Shiffman S. Tobacco dependence: Fundamental Concepts and Recent Advances. Current Opinion in Psychiatry, 11:259-263, 1998.
236. Ad Hoc Group: Pinney, J.M., Glynn, T, Gruman, J., Hatsukami D, Henningfield, J.E., Hollis, J., Neff, R. Shiffman, S. and Slade, J. Treating tobacco dependence in the U.S.: Findings and Recommendations. Center for Advancement of Health, February, 1998.
237. Henningfield, J.E., and Slade, J. Tobacco-dependence medications: Public health and regulatory issues. Food and Drug Law Journal, 53, supplement: 75-114, July, 1998.
238. Slade J., and Henningfield, J.E. Tobacco product regulation: Context and issues. Food and Drug Law Journal, 53, supplement: 43-74, July, 1998.
239. Warner, K.E., Peck, C.C., Woosley, R.L., Henningfield, J.E., and Slade, J. Treatment of tobacco dependence: innovative regulatory approaches to reduce death and disease, Preface. Food and Drug Law Journal, 53, supplement: 1-9, July, 1998.
240. Pickworth, W.B., Fant, R.V., Nelson, R.A., Henningfield, J.E. Effects of Cigarette Smoking Through a Partially Occluded Filter. Pharmacology Biochemistry and Behavior, 60(4), pp. 817-821, 1998.
241. Henningfield, J.E., and Heishman, S.J. Behavioral Toxicology of Nicotine. In: Benowitz, N.L. (ed.) Nicotine Safety and Toxicity, New York: Oxford University Press, pp.133-146, 1998.
242. Henningfield, J.E., Fant, R.V., and Gopalan, L. Non-nicotine medications for smoking cessation. The Journal of Respiratory Diseases, 19 (8Suppl.): S33-S42, 1998.
243. Henningfield, J.E. Should nicotine be further regulated? Yes. In Public Affairs Television (Producer), Moyers B (Host) Moyers on Addiction: Close to Home [Television Series]. New York: PBS, Thirteen/WNET (www.wnet.org/closetohome).
244. Henningfield, J.E., Benowitz, N.L., Slade, J., Houston, T.P., Davis, R.M., Deitchman, S. Reducing the addictiveness of cigarettes. Tobacco Control, 7: 281-293, 1998.
245. Radzius, A., Gorelick, D.A., Henningfield, J.E. Cigarette smoking

during early cocaine abstinence. The American Journal on Addictions, 7(4): 305-308, 1998.

246. Pickworth, W., Fant, R., Goffman, A., Henningfield, J. Response to: "Cranial Electrostimulation Therapy." Biol Psychiatry, 43: 466-469, 1998.

247. Perisco, A.M., Reich, S., Henningfield, J.E., Kuhar, M.J., Uhl, G.R. Parkinsonian patients report blunted subjective effects of methylphenidate. Exp Clin Psychopharmacol, 6(1): 54-63, 1998.

248. Heishman, S.J., Henningfield, J.E., Kendler, K.S., Le Houezec, J., Malin, D.H., Pomerleau, O.F., Schneider, N.G. Conference Summary: Society for Research on Nicotine and Tobacco, 1997 Annual Meeting. Addiction, 93(6), 907-923, 1998.

249. Eissenberg, T., Stitzer, M.L., Henningfield, J.E. Current Issues in Nicotine Replacement. In: Seidman, D.F., Covey, L.S. (eds.) Helping the Hard-Core Smoker: A Clinician's Guide, New Jersey: Lawrence Erlbaum Associates, Publishers, pp.137-158, 1999.

250. Henningfield, J.E., Fant, R.V. Tobacco smoking and nicotine addiction: Basic research, health & policy implications. In: Palomo, T., Beninger, R.J., Archer, T. (eds.) Interactive Monoaminergic Disorders, Madrid, Spain: Editorial Sintesis, pp. 213-229, 1999.

251. Fant, R.V., Pickworth, W.B., Henningfield, J.E. Health effects of tobacco. In: Ammerman, R.T., Ott, P.J., Tarter, R.E. (eds.) Prevention and Societal Impact of Drug and Alcohol Abuse, New Jersey: Lawrence Erlbaum Associates, Publishers, pp. 93-106, 1999.

252. Bell, S.L., Taylor, R.C., Singleton, E.G., Henningfield, J.E., Heishman, S.J. Smoking after nicotine deprivation enhances cognitive performance and decreases tobacco craving in drug abusers. Nicotine & Tobacco Research, 1: 45-52, 1999.

253. Heishman, S.J., Henningfield, J.E. Is caffeine a drug of dependence? Criteria and comparisons. In: Gupta, B.S., Gupta, U. (eds.) Caffeine and Behavior: Current Views and Research Trends, New York: CRC Press, pp. 137-150, 1999.

254. Henningfield, J.E., Davis, R.M., Houston, T.P., Benowitz, N.L., Slade, J. Response to Letters to Editor on "Eliminating nicotine in cigarettes". Tobacco Control, 8: 107-108, 1999.

255. Henningfield, J.E., Fant, R.V., Radzius, A., Frost, S. Nicotine concentration, smoke pH and whole tobacco aqueous pH of some cigar brands and types popular in the United States. Nicotine & Tobacco Research, 1: 163-168, 1999.

256. Henningfield, J.E. Reducing exposure to tobacco toxins by manipulation of nicotine delivery to cigarette smokers. In: Rickert, W.S. (ed.) Report of Canada's

Expert Committee on Cigarette Toxicity Reduction, Toronto, Ontario, Canada: Appendix pp. 1-13, 1999.

257. Henningfield, J.E., Slade, J. Response to Letters to Editor on “Eliminating the nicotine in cigarettes”. Tobacco Control, 8(2): 223-224, 1999.

258. Fant, R.V., Owen, L.L., Henningfield, J.E. Nicotine replacement therapy. Primary Care, 26(3): 633-652, 1999.

259. Henningfield, J.E., Hartel, C.R. Scientific basis for tobacco policy: Nicotine research travails. In: Glantz, M.D. & Hartel, C.R. (eds.) Drug Abuse: Origins and Interventions, Washington, DC: American Psychological Association, pp. 431-446, 1999.

260. Henningfield, J.E., Jude, N.R. Prevention of nicotine addiction: neuropsychopharmacological issues. Nicotine and Tobacco Research, 1: S41-S48, 1999.

261. Henningfield, J.E. Implications for tobacco regulation and public health. Commentary on Stolerman’s Inter-species consistency in the behavioural pharmacology of nicotine dependence. Behavioural Pharmacology, 10: 581-583, 1999.

262. Henningfield, J.E (Rapporteur) Conclusions to The Conference on the Regulation of Tobacco Products. Helsinki (1999), World Health Organization, 1999.

263. Fant, R.V., Henningfield, J.E., Nelson, R.A., Pickworth, W.B. Pharmacokinetics and pharmacodynamics of moist snuff in humans. Tobacco Control, 8: 387-392, 1999.

264. Pickworth, W.B., Fant, R.V., Nelson, R.A., Rohrer, M.S., Henningfield, J.E. Pharmacodynamic effects of new de-nicotinized cigarettes. Nicotine & Tobacco Research, 1: 357-364, 1999.

265. Henningfield, J.E., Fant, R.V. Tobacco use as drug addiction: The scientific foundation. Nicotine and Tobacco Research, 1: S31-S35, 1999.

266. Heishman, S.J., Weingartner, H.J., Henningfield, J.E. Selective deficits in reflective cognition of polydrug abusers: Preliminary findings. Psychology of Addictive Behaviors, 13(3): 227-231, 1999.

267. Henningfield, J.E (Drafted summary with M. Jarvis) Conclusions to The Conference on the Regulation of Tobacco Dependence Treatment Products. Helsinki (1999), World Health Organization, 2000.

268. Wilkenfeld, J., Henningfield, J., Slade, J., Burns, D., Pinney, J. It’s time for a change: Cigarette smokers deserve meaningful information about their cigarettes. Journal of the National Cancer Institute, 92(2): 90-92, 2000.

269. Henningfield, J.E., Fant, R.V., Shiffman, S., Gitchell, J. Tobacco dependence: Scientific and public health basis of treatment. The Economics of Neuroscience (TEN), 2(1): 42-46, 2000.
270. Henningfield, J.E. How does nicotine addiction compare with addiction to other drugs? (Section 4.4). In Tobacco Advisory Group, Royal College of Physicians of London (Ed.). Nicotine Addiction in Britain. Lavenham Press, Ltd., Sudbury, Suffolk, United Kingdom, pp. 92-100, 2000.
271. Henningfield, J.E. Tobacco dependence treatment: scientific challenges; public health opportunities. Tobacco Control, 9(Supplement I): i3-i10, 2000.
272. Heishman, S.J., Schuh, K.J., Schuster, C.R., Henningfield, J.E., Goldberg, S.R. Reinforcing and subjective effects of morphine in human opioid abusers: effects of dose and alternative reinforcer. Psychopharmacology, 148: 272-280, 2000.
273. Jones, H.E., Johnson, R.E., Fudala, P.J., Henningfield, J.E., Heishman, S.J. Nalmefene: Blockade of intravenous morphine challenge effects in opioid abusing humans. Drug and Alcohol Dependence, 60: 29-37, 2000.
274. Wilkenfeld, J., Henningfield, J., Slade, J., Burns, D., Pinney, J. Response to FTC's Response to: It's time for a change: Cigarette smokers deserve meaningful information about their cigarettes. Journal of the National Cancer Institute, 92(10): 842-843, 2000.
275. Henningfield, J.E., Fant, R.V., Gitchell, J. and Shiffman, S. Tobacco Dependence: Global public health potential for new medications development and indications. In: Glick, S.D. and Maisonneuve, I.M. (editors), New Medications for Drug Abuse, Annals of the New York Academy of Sciences, Volume 909: 247-256, 2000.
276. Henningfield, J.E., Michaelides, T. and Sussman, S. Developing treatment for tobacco addicted youth – issues and challenges. Journal of Child and Adolescent Substance Abuse, 9: 5-26, 2000. Also simultaneously published in: Nicotine Addiction among Adolescents, E.F.Wagner (editor), The Wayworth Press, New York, pp. 5-26, 2000.
277. Moolchan, E.T., Ernst, M. and Henningfield, J.E. A review of tobacco smoking in adolescents: treatment implications. Journal of the American Academy of Adolescent Psychiatry, 39: 682-693, 2000.
278. Lundahl, L.H., Henningfield, J.E., and Lukas, S.E. Mecamylamine blockade of both positive and negative effects of IV nicotine in human volunteers. Pharmacology Biochemistry and Behavior, 66: 737-643, 2000.
279. Baker, F., Ainsworth, S.R., Dye, J.T., Crammer, C., Thun, M.J., Hoffmann, D., Repace, J.L., Henningfield, J.E., Slade, J., Pinney, J., Shanks, T., Connolly, G.N., and Shopland, D.R. Health risks associated with cigar smoking. Journal of the American Association, 284:735-740, 2000.

280. Henningfield, J.E. and Fant, R.V. Nicotine delivery systems: Implications for abuse potential, medications development, and public health. In: Ferrence, R., Slade, J., Room, R. and Pope, M. (editors), Nicotine and Public Health. American Public Health Association, Washington DC, pp. 229-247 (commentary and discussion on pp. 247-255), 2000.

281. Slade, J., Bickel, W.K., Crowley, T.J., Ferrence, R., Henningfield, J.E., Houston, T.P., Mitchell, B., Room, R., Sweanor, D.T., and Warner, K.E. The role of managing nicotine in controlling the tobacco epidemic. In: Ferrence, R., Slade, J., Room, R. and Pope, M. (editors), Nicotine and Public Health. American Public Health Association, Washington DC, pp. 483-501, 2000.

282. Heishman, S.J. and Henningfield, J.E. Tolerance to repeated nicotine administration on performance, subjective, and physiological responses in nonsmokers. Psychopharmacology, 152: 321-333, 2000.

283. Windsor, R., Oncken, C., Henningfield, J.E., Hartmann, K., and Edwards, N. Behavioral and pharmacological treatment methods for pregnant smokers: Issues for clinical practice. Journal of the American Medical Women's Association, 55: 304-310, 2000.

284. Baker, F., Thun, M., Crammer, C., Slade, J., Henningfield, J.E., Burns, D., Connolly, G.N., and Dye, J.T. Health risks of cigar smoking – In reply to Letter by M.P. Stany. Journal of the American Medical Association, 284: 2321, 2000.

285. Singleton, E.G. and Henningfield, J.E. Commentary on Verbal Methods in Perceived Efficacy Work by G.X. Ayala and J.P. Elder (pp. 239-263). In: Handbook of Program Development for Health Behavior Research and Practice, S. Sussman, (ed.), Sage Publications, Thousand Oaks, CA, pp. 264-266, 2000.

286. Henningfield, J.E. (Rapporteur) and Hendrie, A. (Editor). Conclusions: Second Conference on the Regulation of Tobacco Products, Barcelona; World Health Organization, Europe. 27 October, 2000.

287. Henningfield, J.E. No smoking means no smoking, period. Opinion/Editorial/Commentary, Baltimore Sun Newspaper. Tuesday, December 26, 2000.

288. Fant, R.V., Henningfield, J.E., Shiffman, S., Strahs, K.R., and Reitberg, D.P. A pharmacokinetic crossover study to compare the absorption characteristics of three transdermal nicotine patches. Pharmacology Biochemistry and Behavior, 67, 2000.

289. Henningfield, J.E. Tobacco Addiction and Treatment. CVD Prevention – The Journal of the World Heart Federation, 3: 115-120, 2000.

290. Henningfield, J.E. The science of tobacco dependence: The changed brain. In: Tobacco Control: Critical Review and Scope of Treatment in the Americas, Strategic Plan to Reduce Tobacco Caused Death and Disease in the Near Term. Published by the

Pan American Health Organization and World Health Organization, Venezuela, pp. 17-18, 2000.

291. Ad Hoc Working Group on Treatment of Tobacco Dependence (J.M.Pinney, J.S.Ahluwalia, E.B.Arkin, S.Curry, M.Fiore, J.Gitchell, T.Glynn, J.C.Gruman, D.Hatuskami, J.E.Henningfield, J.Hollis, J.R.Hughes, C.O.Maule, R.Neff, J.Ockene, C.T.Orleans, S.Shiffman, J.Slade) Realignment of the nation's tobacco agenda: The need to treat tobacco dependence. Preventive Medicine, 32: 95-100, 2001.

292. Radzius, A., Moolchan, E.T., Henningfield, J.E., Heishman, S.J., Gallo, J.J. A factor analysis of the Fagerstrom Tolerance Questionnaire. Addictive Behaviors, 26: 303-310, 2001.

293. Ernst, M., Matochik, J.A., Heishman, S.J., Van Horn, J.D., Jons, P.H., Henningfield, J.E., London, E.D. Effect of nicotine on brain activation during performance of a working memory task. Proceedings of the National Academy of Sciences, 98: 4728-4733, 2001.

294. Kozlowski, L.T., Henningfield, J.E., Brigham, J. Cigarettes, Nicotine and Health: A Biobehavioral Approach. Sage Publications, Thousand Oaks, California, 2001.

295. World Health Organization. Advancing Knowledge on Regulating Tobacco Products (monograph). Published by World Health Organization, Geneva, 2001 (JEH contributed material and assisted in preparation of the monograph).

296. Sweeney, C.T., Fant, R.V., Fagerstrom, K.O., McGovern, J.F., and Henningfield, J.E. Combination nicotine replacement therapy for smoking cessation: rationale, efficacy, and tolerability. CNS Drugs, 15(6): 453-467, 2001.

297. Henningfield, J.E., and Rose, C.A. Review of "A Question of Intent" by David Kessler. Society for Research and Nicotine and Tobacco Newsletter, Summer, 7(1): 7, 2001.

298. Henningfield, J.E. and Fagerstrom, K.O. Swedish Match Company, Swedish snus and public health: A harm reduction experiment in progress? Tobacco Control, 10: 253-257, 2001.

299. Henningfield, J.E. and Rose, C.A. How United States airlines became smoke free. Tobacco Control, 10: 295-296, 2001.

300. Garrette, B.E., Rose, C.A. and Henningfield, J.E. Tobacco addiction and pharmacologic interventions. Expert Opinion on Pharmacotherapy, 2(10): 1545-1555, 2001.

301. Moolchan, E.T., Radzius, A., Epstein, D.H., Uhl, G., Gorelick, D.A., Cadet, J.L., and Henningfield, J.E. The Fagerstrom Test for Nicotine Dependence and the Diagnostic Interview Schedule: Do they diagnose the same smokers? Addictive Behaviors, 27: 101-113, 2002.

302. Berlin, I. Radzius, A., Henningfield, J.E. and Moolchan, E.T. Correlates of expired air carbon monoxide: effect of ethnicity and relationship with saliva cotinine and nicotine. Nicotine and Tobacco Research, 3: 325-331, 2001.
303. Henningfield, J.E. Support for conflict of interest disclosure: reply to Frenk and Dar's attack. Addiction, 97: 95-96, 2002.
304. Heishman, S.J., Henningfield, J.E. and Singleton, E.G. Tobacco, nicotine, and human cognition (letter to editor). Nicotine and Tobacco Research, 4: 3-4, 2002.
305. Henningfield, J.E., Popovici, R. and Rose, C.A. Neurobiology of tobacco dependence. Commissioned Report to the World Health Organization. May 17, 2002.
306. Henningfield, J.E., Rose, C.A. and Giovino, G.A. Brave new world of tobacco disease prevention: Promoting dual product use? American Journal of Preventive Medicine, 23: 226-228, 2002.
307. Henningfield, J.E. Bridge to compassion: A scientist's perspective on addiction and art. Visions, magazine of the American Visionary Arts Museum, 8: 4-5, 2002.
308. Shiffman, S., Gitchell, J.G., Warner, K.E., Slade, J., Henningfield, J.E., and Pinney, J.M. Tobacco harm reduction: concepts, terms, and issues. Nicotine and Tobacco Research, 4(Supplement 2): S113-S129, 2002.
309. Steckley, S.L., Darwin, W.D., Henningfield, J.E., Huestis, M.A., and Pickworth, W.B. Eclipse can deliver crack cocaine. Nicotine and Tobacco Research, 4(Supplement 2): S189-S190, 2002.
310. Houtsmuller, E.J., Fant, R.V., Eissenberg, T.E., Henningfield, J.E., and Stitzer, M.L. Flavor improvement does not increase abuse liability of nicotine chewing gum. Pharmacology Biochemistry and Behavior, 72: 559-568, 2002.
311. Henningfield, J.E. and Zeller, M. Could science-based regulation make tobacco products less addictive. Invited article for the Yale Journal of Health Policy, Law and Ethics, Vol. III (Winter), Issue 1: 127-138, 2002.
- 311a. Jenkins, A.J., Keenan, R.M, Henningfield, J.E., and Cone, E.J. Correlation between pharmacological effects and plasma cocaine concentrations after smoked administration. Journal of Analytical Toxicology, 26: 382-392, 2002.
312. Henningfield, J.E. and Fant, R.V. Tobacco dependence treatment. Commissioned Report to the World Health Organization, Tobacco Free Initiative, WHO Obligation Number HQ/02/088907, January 15, 2003.
313. Henningfield, J.E., Benowitz, N.L., Ahijevych, K., Garrett, B.E., Connolly, G.N., and Wayne, G.F. Does menthol enhance the addictiveness of cigarettes? A research agenda. Nicotine and Tobacco Research, 5: 9-11, 2003.

314. Henningfield, J.E. and Rose, C. A. Teens and tobacco (Chapter 11). Decisions for Health, Level Red (8/9th grade). Holt Rinehart and Winston, New York, pp. 219-243, 2003-2004

315. Henningfield, J.E. and Rose, C. A. Tobacco (Chapter 14). Decisions for Health, Level Blue (8/9th grade). Holt Rinehart and Winston, New York, pp. 336-367, 2003-2004.

316. Henningfield, J.E., Moolchan, E.T. and Zeller, M. Regulatory strategies to reduce tobacco addiction in youth. Tobacco Control, 12 (Supl. 1): i14-i24, 2003.

317. Houtsmuller, E.J., Henningfield, J.E. and Stitzer, M.L. Subjective effects of the nicotine lozenge: assessment of abuse liability. Psychopharmacology, 167: 20-27, 2003.

318. Stapleton, J.M., Gilson, S.F., Wong, D.F., Villemagne, V.L., Dannals, R.F., Grayson, R.F., Henningfield, J.E. and London, E.D. Intravenous nicotine reduces cerebral glucose metabolism: A preliminary study. Neuropsychopharmacology, 28: 765-772, 2003.

319. Schuster, C. R. and Henningfield, J.E. Conference on abuse liability assessment of CNS drugs: Introduction. Drug and Alcohol Dependence, 70: S1-S4, 2003.

320. Expert Panel (J.E. Henningfield and C.E. Johanson, Rapporteurs, E.M. Sellers, Chair). Abuse liability assessment of CNS drugs: Conclusions, recommendations, and research priorities. Drug and Alcohol Dependence, 70(Supl.): S107-S114, 2003.

321. Moolchan, E.T., Ernst, M. and Henningfield, J.E. Treatment of adolescent tobacco smokers: Issues and opportunities for exposure reduction approaches. Drug and Alcohol Dependence, 70: 223-232, 2003.

322. Henningfield, J.E and Fant, R.V. Pharmacologic interventions: Tobacco dependence and withdrawal. In: Policy Recommendations for Smoking Cessation and Treatment of Tobacco Dependence: Tools for Advancing Tobacco Control in XXIst Century. World Health Organization, Geneva, Switzerland; pp. 24-40, 2003.

323. Markou, A., Koob, G.F., and Henningfield, J.E. Neurobiology of nicotine addiction. Commissioned Report to World Bank and World Health Organization, Disease Control Priorities, Nicotine Addiction Project, September 22, 2003.

324. Henningfield, J.E. and Zeller, M. Science foundation for the WHO Framework Convention on Tobacco Control (FCTC): Principles guiding the development of laboratory testing capacity. Commissioned Report to World Health Organization, Scientific Advisory Committee on Tobacco Regulation, Obligation No. HQ/03/094369, September 25, 2003.

325. Henningfield, J.E. C. Everett Koop, M.D., Sc.D.: A visionary leader of science-based public health policy and tobacco control. Nicotine and Tobacco Research, 5: 611-612, 2003.

326. Henningfield, J.E. and Djordjevic, M. Executive Summary: Menthol cigarettes, research needs and challenges. The First Conference on Menthol Cigarettes: Setting the Research Agenda, Executive Summary. National Cancer Institute, NIH Publication No. 03-5439, September, 2003.

327. Tomar, S.L., Connolly, G.N., Wilkenfeld, J. and Henningfield, J.E. Declining smoking in Sweden: Is Swedish Match getting the credit for Swedish tobacco control's efforts? Tobacco Control, 12: 368-371, 2003.

327a. Shiffman, S., Fant, R.V., Gitchell, J.G., Cone, E.J., Henningfield, J.E., and Fagerstrom, K.O. Nicotine delivery systems: How far has technology come? American Journal of Drug Delivery, 1: 113-124, 2003.

328. Cone, E.J., Fant, R.V. and Henningfield, J.E. Nicotine and tobacco (Chapter 13). In: Mozayani, A. and Raymon, L.P. (Eds.), Handbook of Drug Interactions: A Clinical and Forensic Guide. Humana Press, Totowa, NJ, pp. 463-492, 2004.

329. Hatsukami, D.K., Henningfield, J.E., and Kotlyar, M. Harm reduction approaches to reducing tobacco-related mortality. Annual Review of Public Health, 25: 377-395, 2004.

330. Henningfield, J.E. and Djordjevic, M. Menthol cigarettes, research needs and challenges. Nicotine and Tobacco Research, 6 (Supplement 1): S11-S16, 2004.

331. Radzius, A., Gallo, J.J., Gorelick, D.A., Cadet, J.L., Uhl, G., Henningfield, J.E., and Moolchan, E.T. Nicotine dependence criteria of the DIA and DSM-III-R: A factor analysis. Nicotine and Tobacco Research, 6: 303-308, 2004.

332. Henningfield, J.E., Pankow, J.F. and Garrett, B.E. Ammonia and other chemical base tobacco additives and cigarette nicotine delivery: Issues and research needs. Nicotine and Tobacco Research, 6: 199-205, 2004.

333. Henningfield, J.E., Benowitz, N.L., Connolly, G.N., Davis, R.M., Myers, M.L. and Zeller, M. Reducing tobacco addiction through tobacco product regulation. Tobacco Control, 13: 132-135, 2004.

334. Boyle, P., Gray, N., Henningfield, J., Seffrin, J. and Zatonski, W. Tobacco and Public Health: Science and Policy. Oxford University Press, Oxford, 2004.

335. Henningfield, J.E., and Benowitz, N.L. Pharmacology and nicotine addiction. In: Boyle, P., Gray, N., Henningfield, J., Seffrin, J. and Zatonski, W. Tobacco and Public Health: Science and Policy. Oxford University Press, Oxford, 2004, pp. 129-147.

336. Garrett, B., Dwoskin, L., Bardo, M. and Henningfield, J.E. Behavioral pharmacology of nicotine reinforcement. In: Boyle, P., Gray, N., Henningfield, J., Seffrin, J. and Zatzonski, W. Tobacco and Public Health: Science and Policy. Oxford University Press, Oxford, 2004, pp. 149-165.
337. Harvey, D.M, Yasar, S., Heishman, S.J., Panlilio, L.V., Henningfield, J.E., and Goldberg, S.R. Nicotine serves as an effective reinforcer of intravenous drug-taking behavior in human cigarette smokers. Psychopharmacology, 175: 134-142, 2004.
338. Gray, N.J. and Henningfield, J.E. A long-term view of harm reduction. Nicotine and Tobacco Research, 6: 759-764, 2004.
339. Wayne, G.F., Connolly, G.N., and Henningfield, J.E. Assessing internal tobacco industry knowledge of the neurobiology of tobacco dependence. Nicotine and Tobacco Research, 6: 927-940, 2004.
340. Henningfield, J.E. and Santora, P.B. Addiction. In: Goodman, J. (editor in chief) Tobacco in History and Culture: An Encyclopedia. (Charles Scribner's Sons, Turning Points Library) New York, Thompson Gale, pp. 1-6, 2004.
341. Henningfield, J.E. and McLellan, A.T. Medications work for severely addicted smokers: implications for addiction therapists and primary care physicians. Journal of Substance Abuse Treatment, 28: 1-2, 2005.
342. Panlilio, L.V., Yasar, S., Nemeth-Coslett, R., Katz, J.L., Henningfield, J.E., Solinas, M., Heishman, S.J., Schindler, C.W., and Goldberg, S.R. Human cocaine-seeking behavior and its control by drug-associated stimuli in the laboratory. Neuropsychopharmacology, 30: 433-443, 2005.
343. Cheskin, L.J., Jess, J.M., Henningfield, J.E., and Gorelick, D.A. Calorie restriction increases cigarette use in adult smokers. Psychopharmacology, 179: 430-436, 2005.
344. Henningfield, J.E., Santora, P.B., and Stillman, F.A. Exploitation by design – Could tobacco industry documents guide more effective smoking prevention and cessation in women? Addiction, 100: 735-736, 2005.
345. Gray, N., Henningfield, J.E., Benowitz, N.L., Connolly, G.N., Dresler, C., Fagerstrom, K.O., Jarvis, M.J., and Boyle, P. Toward a comprehensive long term nicotine policy. Tobacco Control, 14: 161-165, 2005.
346. Jenkins, A.J., Henningfield, J.E., and Cone, E.J. Relationship between plasma and oral fluid nicotine concentrations in humans: a pilot study. Therapeutic Drug Monitoring, 27: 245-248, 2005.
347. Henningfield, J.E., Fant, R.V., Buchhalter, A.R., and Stitzer, M.L. Pharmacotherapy of nicotine dependence. CA: A Cancer Journal for Clinicians, 55: 281-299, 2005.

348. Henningfield, J.E., Burns, D.M., and Dybing, E. Guidance for research and testing to reduce tobacco toxicant exposure. Nicotine and Tobacco Research, 7: 821-826, 2005.
349. Gentilello, L.M., Samuels, P.N., Henningfield, J.E., and Santora, P.B. Alcohol screening and intervention in trauma centers: Confidentiality concerns and legal considerations. The Journal of Trauma, 59: 1250-1255, 2005.
350. Shiffman, S., Fant, R.V., Buchhalter, A.R., Gitchell, J.G., and Henningfield, J.E. Nicotine delivery systems. Expert Opinion on Drug Delivery, 2:563-577, 2005.
351. Stanton, H.J., Martin, J. and Henningfield, J. The impact of smoking on the family. Current Paediatrics, 15: 590-598, 2005.
352. Rose, C.A. and Henningfield, J.E. Smoking and health. Encyclopedia Britannica, On Line. Retrieved 7 March, 2006, Encyclopedia Britannica Premium Service <http://www.britannica.com/eb/article-242788>, pp. 1-16.
353. Sweanor, D.T. and Henningfield, J.E. Smoking and public policy. Encyclopedia Britannica, On Line. Retrieved 7 March, 2006, Encyclopedia Britannica Premium Service <http://www.britannica.com/eb/article-242788>, pp. 16-22.
354. Henningfield, J.E., Fant, R.V. and Buchhalter, A.R. Smokeless Tobacco is Not Treatment: A reply to Ross. CA: A Cancer Journal for Clinicians On Line Electronic Letters, 15 January, 2006
355. Nelson, R.A, Boyd, S.J., Ziegelstein, R.C., Herning, R., Cadet, J.L., Henningfield, J.E., Schuster, C.R., Contoreggi, C., Gorelick, D.A. Effect of rate of administration on subjective and physiological effects of intravenous cocaine in humans. Drug and Alcohol Dependence, 82:19-24, 2006.
356. Miczek, K.A., Henningfield, J.E. and Stolerman, I.P. (Eds.) Nicotine Psychopharmacology. Psychopharmacology, Special issue, 184: 263-652, 2006.
357. Henningfield, J.E., Stolerman, I.P., and Miczek, K.A. Nicotine psychopharmacology research: Advancing science, public health, and global policy. Psychopharmacology, 184: 263-265, 2006.
358. Henningfield, J.E. and Zeller, M. Nicotine psychopharmacology research contributions to United States and global tobacco regulation: A look back and a look forward. Psychopharmacology, 184: 286-291, 2006.
359. Henningfield, J.E., lead author of report issued by the World Health Organization and reviewed and approved through WHO process as an official WHO report. Tobacco: Deadly in Any Form or Disguise, World No Tobacco Day Monograph, WHO, Geneva, 2006 (http://www.who.int/tobacco/communications/events/wntd/2006/Tfi_Rapport.pdf)
360. Grudzinskas, C., Balster, R.L., Gorodetzky, C.W., Griffiths, R.R., Henningfield, J.E., Johanson, C.E., Mansbach, R.S., McCormick, C.G., Schnoll, S.H. and Wright, C.

Impact of formulation on the abuse liability, safety, and regulation of medications: the expert panel report. Drug and Alcohol Dependence, Supplemental Issue: Drug Formulation and Abuse Liability, 83: S77-S82, 2006.

361. Wayne, G.F., Connolly, G.N. and Henningfield, J.E. Brand differences of free-base nicotine delivery in cigarette smoke: the view of the tobacco industry documents. Tobacco Control, 15: 189-198, 2006.

362. Schnoll, S.H., Ertischek, M.D. and Henningfield, J.E. Risk management programs: A supplement to the Controlled Substances Act. Update: Food and Drug Law, Regulation, and Education. July/August, Issue 4: 19-23, 2006.

363. Henningfield, J.E., Connolly, G.N., Kemper, K.E., Gitchell, J.G. and Pinney, J.M. Clean Cut cigarettes: fictitious launch foreshadows actual tobacco industry strategy. Tobacco Control, 15: 341-342, 2006.

364. Gray, N. and Henningfield, J.E. Dissent over harm reduction for tobacco. The Lancet, 368: 899-9001, 2006.

365. Henningfield, J.E., Rose, C.A., and Zeller, M. Tobacco industry litigation position on addiction: continued dependence on past views. Tobacco Control, 15 (Supplement IV): iv27-iv36, 2006.

366. Ghitza, U.E., Rothman, R.B., Gorelick, D.A., Henningfield, J.E., and Baumann, M.H. Serotonergic responsiveness in human cocaine abusers. Drug and Alcohol Dependence, 86: 207-213, 2007.

367. Buchhalter, A.R., Fant, R.V. and Henningfield, J.E. Nicotine. In: Sibley, D.R., Hanin, I., Kuhar, M. and Skolnick, P. (Eds.) Handbook of Contemporary Neuropsychopharmacology, Volume 2, Substance Abuse and Addictive Disorders. Hoboken, New Jersey, John Wiley & Sons, Inc., 2007, pp. 535-566.

368. Henningfield, J.E., Santora, P.B. Bickel, W.K. (Eds.) Addiction Treatment: Science and Policy for the Twenty-first Century. The Johns Hopkins University Press, Baltimore, 2007. *Selected by Choice Magazine as one of the Outstanding Academic Titles of 2008*.

369. Henningfield, J.E., Santora, P.B. Bickel, W.K. Preface to Addiction Treatment. In: Henningfield, J.E., Santora, P.B. Bickel, W.K. (Eds.) Addiction Treatment: Science and Policy for the Twenty-first Century. The Johns Hopkins University Press, Baltimore, 2007, pages xii-xvi.

370. Henningfield, J.E., Santora, P.B., Bickel, W.K. Epilog to Addiction Treatment. In: Henningfield, J.E., Santora, P.B. Bickel, W.K. (Eds.) Addiction Treatment: Science and Policy for the Twenty-first Century. The Johns Hopkins University Press, Baltimore, 2007, pages 207-211.

371. Henningfield, J.E., Santora, P.B. Bickel, W.K. Addiction art and science: Two sides of humanity. In: Henningfield, J.E., Santora, P.B. Bickel, W.K. (Eds.) Addiction

Treatment: Science and Policy for the Twenty-first Century. The Johns Hopkins University Press, Baltimore, 2007, pages 126-128.

372. Henningfield, J.E. (Contributor) Mechanisms of tobacco addition in humans. In Royal College of Physicians. Harm Reduction in Nicotine Addiction: Helping People Who Can't Quit. A report by the Tobacco Advisory Group of the Royal College of Physicians. London: RCP, 2007.

373. Wayne, F.E., Connolly, G.N., Henningfield, J.E., Farone, W.A. Tobacco industry research and efforts to manipulate smoke particle size: implications for product regulation. Nicotine and Tobacco Research, 10: 613-625, 2008.

374. Santora, P.B. and Henningfield, J.E. Could Religious Participation Be Recommended as a Therapeutic Intervention for Pregnant Cigarette Smokers? Southern Medical Journal, 101: 673-674, 2008.

375. Santora, Patricia B, Dowell, Margaret L. and Henningfield, J.E. Guidelines for Organizing Art Exhibitions on Addiction and Recovery. Innovators Combating Substance Abuse, National Program of the Robert Wood Johnson Foundation at The Johns Hopkins University School of Medicine, Baltimore, Maryland, 2008.

376. Buchhalter, A.R., Fant, R.V., and Henningfield, J.E. Novel approaches for treating tobacco dependence and withdrawal: Current Status. Drugs, 68(8): 1067-1088, 2008.

376. Shiffman, S., Cone, E.J., Buchhalter, A.R., Henningfield, J.E., Rohay, J.M., Gitchell, J.G., Pinney, J.M., Chau, T. Rapid absorption of nicotine from new nicotine gum formulations. Pharmacology, Biochemistry and Behavior, 9: 380-384, 2009.

377. Henningfield, J.E., London, E.D., Pogun, S. (Eds.). Nicotine Psychopharmacology. Handbook of Experimental Pharmacology 192. Springer-Verlag, Berlin Heidelberg, 2009.

378. Henningfield, J.E., London, E.D., Pogun, S. Preface to nicotine psychopharmacology. In: Henningfield, J.E., London, E.D., Pogun, S. (Eds.). Nicotine Psychopharmacology. Handbook of Experimental Pharmacology 192. Springer-Verlag, Berlin Heidelberg, pp. v-viii, 2009.

379. Fant, R.F., Buchhalter, A.R., Buchman, A.C., Henningfield, J.E. Pharmacotherapy for tobacco dependence. In: Henningfield, J.E., London, E.D., Pogun, S. (Eds.). Nicotine Psychopharmacology. Handbook of Experimental Pharmacology 192. Springer-Verlag, Berlin Heidelberg, pp. 487-510, 2009.

380. Henningfield, J.E., Zeller, M. Nicotine psychopharmacology: Policy and Regulatory. In: Henningfield, J.E., London, E.D., Pogun, S. (Eds.). Nicotine Psychopharmacology. Handbook of Experimental Pharmacology 192. Springer-Verlag, Berlin Heidelberg, pp. 511-534, 2009.

381. Henningfield, J.E., Shiffman, S, Ferguson, S.G. and Gritz, E.R., Tobacco Dependence and Withdrawal: Science Base, Challenges and Opportunities for Pharmacotherapy. Pharmacology and Therapeutics, 123: 1-16, 2009.

382. Zeller M, Hatsukami D, Backinger C, Benowitz N, Biener L, Burns D, Clark P, Connolly G, Djordjevic MV, Eissenberg T, Giovino GA, Heaton C, Hecht SS, Henningfield JE, Husten C, Kobus K, Leischow S, Levy DT, Marcus S, Myers ML, Parascandola M, Pongshe P, Shields PG, Slovic P, Sweanor D, Warner KE. The strategic dialogue on tobacco harm reduction: A vision and blueprint for action in the United States. Tobacco Control, 18:324-332, 2009.

383. Schuster, C.R., Barthwell, A.G. and Henningfield, J.E. Introduction to the College on Problems of Drug Dependence special conference on risk management and post-marketing surveillance of CNS drugs. Drug and Alcohol Dependence, 105S: S4-S8, 2009.

384. McCormick, C.G., Henningfield, J.E., Haddox, J.D., Varughese, S, Lindholm, A., Rosen, S., Wissel, J., Waxman, D, Carter, L.P., Seeger, V. and Johnson, R.E. Case histories in pharmaceutical risk management. Drug and Alcohol Dependence, 105S: S42-S55, 2009.

385. Henningfield, J.E. and Schuster, C.R. Risk management and post-marketing surveillance of CNS drugs: Commentary. Drug and Alcohol Dependence, Supplement: Risk Management and Post-Marketing Surveillance of CNS Drugs, 105S: S56-S64, 2009.

386. Johanson, C.E., Balster, R.L, Henningfield, J.E., Schuster, C.R., Anthony, J.C, Barthwell, A.G., Coleman, J., Dart, R.C, Gorodetzky, C.W., O’Keeffe, C., Sellers, E.M, Vocci, F., and Walsh, S.L. Risk management and post-marketing surveillance for the abuse of medications acting on the central nervous system: Expert Panel Report. Drug and Alcohol Dependence, 105S: S65-S71, 2009.

387. Carter, L.P., Stitzer, M.L., Henningfield, J.E., O’Conner, R.J., Cummings, K.M. and Hatsukami, D.K. Abuse liability assessment of tobacco products including potential reduced exposure products. Cancer Epidemiology, Biomarkers & Prevention, 18: 3241-3262, 2009.

388. Schnoll, S.H., Dasgupta, N., Henningfield, J.E., Gerlach, K., Hayes, A., St. Jean, E., Vince, J. FDA draft guidance on format and content of proposed risk evaluation and mitigation strategies (REMS): Recommendations for moving forward and effective implementation. Global Forum, journal of the Drug Information Association, February, 21:34-35, 2009.

389. Henningfield, J.E and Zaatari, G.S. Electronic nicotine delivery systems: emerging science foundation for policy. Tobacco Control, April, 19:89-90, 2010.

390. Santora, Patricia B, Dowell, Margaret L. and Henningfield, J.E. Addiction and Art. The Johns Hopkins University Press, Baltimore, Maryland, 2010. *Placed in the “Highly Commended” category by the British Medical Association’s 2011 Medical Book Awards.*

391. Santora, P.B., Dowell, M., and Henningfield, J.E. Guidelines for Organizing Art Exhibitions, Innovators Combating Substance Abuse, The Johns Hopkins University School of Medicine, Baltimore, Spring, 2010.
392. Boyle, P., Gray, N., Henningfield, J., Seffrin, J. and Zatonski, W. (eds.) Tobacco and Public Health: Science and Policy, Second Edition. Oxford University Press, Oxford, 2010.
393. Henningfield, J.E. and Benowitz, N.L. Pharmacology of Tobacco Addiction. In: Boyle, P., Gray, N., Henningfield, J., Seffrin, J. and Zatonski, W. (eds.) Tobacco and Public Health: Science and Policy, Second Edition. Oxford University Press, Oxford, pp. 155-170, 2010.
394. Koop, C.E. Preface to Tobacco and Public Health (assisted by J.E. Henningfield, J.E.). In: Boyle, P., Gray, N., Henningfield, J., Seffrin, J. and Zatonski, W. (eds.) Tobacco and Public Health: Science and Policy, Second Edition. Oxford University Press, Oxford, pp. v-xvii, 2010.
395. Hatsukami, D.K, Perkins, K.A, LeSage, M.G., Ashley, D.L., Henningfield, J.E., Benowitz, N.L., Backinger, C.L. and Zeller, M. Nicotine reduction revisited : science and future directions. Tobacco control, 19 (e1-e10 doi:10.1136/tc.2009), 2010.
396. Henningfield, J.E., Hatsukami, D.K., Zeller, M., and Peters, E. Conference on Abuse Liability and Appeal of Tobacco Products: Conclusions and Recommendations. Drug and Alcohol Dependence, 116: 1-7, 2011.
397. Stanfill, S.B, Connolly, G.N., Zhang, Jia, L.T, Henningfield, J.E., Richter, P. Lawler, T.S., Ayo-Yusuf, O.A., Ashley, D.L. and Watson, C. H. Global surveillance of oral tobacco products: total nicotine, unionised nicotine and tobacco-specific N-nitrosamines. Tobacco Control, May:20(3)e2, 2011.
398. Dasgupta, N., Henningfield, J.E., Ertischek, M.D., and Schnoll, S.H. When drugs in the same controlled substance schedule differ in real-world abuse, should they be differentiated in labeling? Drug and Alcohol Dependence, 119(1-2): e1-e4, 2011
399. Henningfield, J.E. Tobacco Psychopharmacology and Public Health Policy: It Takes a Community. Experimental and Clinical Psychopharmacology, 19: 249-262, 2011
400. Cone, E.F., Fant, R.V., and Henningfield, J.E. Nicotine and Tobacco. In: Handbook of Drug Interactions, Second Edition, Mozayani, A. and Raymon, L. (Eds.). Humana Press, New York, 2012, pp. 587-624.
401. Benowitz, N.L. and Henningfield, J.E. Reducing the nicotine content to make cigarettes less addictive. Tobacco Control, i14-i17,doi: 10.1136, 2013

402. Gerlach, K.K., Dasgupta, N. Schnoll, S.H. and Henningfield, J.E. Epidemiology of Stimulant Misuse and Abuse: implications for future epidemiologic and neuropharmacologic research. Neuropharmacology, 87: 97-103, 2014.
403. Heal, D., Smith, S., and Henningfield, J.E. (Eds.) Neuropharmacology, Special Issue: CNS Stimulants, 87: 1-3, 2014.
404. Henningfield, J.E. The tobacco endgame: It's all about behavior. Preventive Medicine, 2014, online September 16, 2014.
405. Negus, S.S. and Henningfield, J.E. Agonist medications for the treatment of cocaine use disorder. Neuropsychopharmacology, 40, 1815–1825, 2015. doi: 10.1038/npp.2014.322. Cover/circumspectives article
406. Walton, K.M., Abrams, D.B., Bailey, W.C., Clark, D., Connolly, G.N., Djordjevic, M.V., Eissenberg, T.E., Fiore, M.C., Goniewicz, M.L., Haverkos, L., Hecht, S.S., Henningfield, J.E., Hughes, J.R., Oncken, C.A., Postow, L., Rose, J.E., Wanke, K.L., Yang, L., Hatsukami, D.K. NIH electronic cigarette workshop: developing a research agenda. Nicotine and Tobacco Research, 2015 Feb;17(2):259-69. doi: 10.1093/ntr/ntu214. Epub 2014 Oct 21.
407. Scholten, W. and Henningfield, J.E. A meta-analysis based on diffuse definitions and mixed quality literature is not a good fundament for decisions on treatment of chronic pain patients. Letter to the Editor. Pain, 156: 1576–1578, 2015.
408. Henningfield, J.E., Buchhalter, A.R., Cone, E.J., Ertischek, M.D., Fant, R.V., Gerlach, K.K., and Schnoll, S.H. Risk Management Implications of Abuse Potential Assessment. In D.C. Compton, T.J. Hudzik, C.G. Markgraf (Eds.). Preclinical Assessment of Abuse Potential for New Pharmaceuticals. Elsevier, Academic Press, pp. 269–287, 2015.
409. Henningfield, J.E. and Sun, W.Z. Neuropharmacological Basis and Clinical Rationale for the Regulatory Control of Transdermal Buprenorphine. Acta Anaesthesiologica Taiwanica, 53(2):77-9, 2015.
410. Pergolizzi, J.V., Scholten, W., Smith, K.J., Leighton-Scott, J., Willis, J.C., and Henningfield, J.E. The Unique Role of Transdermal Buprenorphine in the Global Chronic Pain Epidemic. Acta Anaesthesiologica Taiwanica, 53(2):71–76.
411. Berman, M.L., Connolly, G., Cummings, K.M., Djordjevic, M.V., Hatsukami, D.K., and Henningfield, J.E. Providing a Science Base for the Evaluation of Tobacco Products. Tobacco Regulatory Science. 2015;1(1):76-93
412. Higgins, S.T., Kurti, A.N., Redner, R., White, T.J., Gaalema, D.E., Roberts, M.E., Doogan, N.J., Tidey, J.W., Miller, M.E., Stanton, C.A., and Henningfield, J.E. A Literature Review on Prevalence of Gender Differences and Intersections with Other Vulnerabilities to Tobacco Use in the United States, 2004-2014. Preventive Medicine. In press, 2015.

413. Vallerand, A.H., Cosler, P. Henningfield, J.E., and Galassini, P. Pain management strategies and lessons from the military: A narrative review. Pain Research & Management, 20(5):261-8, 2015.
414. Scholten, W. and Henningfield, J.E. Misuse of low-quality data for drawing conclusions on opioid dependence is a health abuse. Republished in The Blog of the European Association of Palliative Care, July 28, 2015. Accessed July 28, 2015 at: <https://eapcnet.wordpress.com/2015/07/28/misuse-of-low-quality-data-for-drawing-conclusions-on-opioid-dependence-is-a-health-abuse/>
415. Scholten, W. and Henningfield, J.E. Negative outcomes of unbalanced opioid policy supported by clinicians, politicians, and the media. Journal of Pain & Palliative Care Pharmacotherapy. 2016;30(1):4-12
416. Henningfield, J.E., Smith, T.T., Kleykamp, B.A., Fant, R.V., and Donny, E.C. Nicotine self-administration research: the legacy of Steven R. Goldberg and implications for regulation, health policy, and research. Psychopharmacology. 233(23): 3829–3848, 2016.
417. Henningfield, J.E., Buchhalter, A.R., and Fant, R.V. Behavioral pharmacology contributions to regulation of drug and tobacco products by the Food and Drug Administration. Behavior Analysis: Research and Practice. 16(4): 179–189, 2016.
418. Schnoll, S.H. and Henningfield, J.E. FDA Incentivizing Pharma to Develop Less Abusable Pain Medicines. National Pain Report, Alternative Pain Therapy, Government. August 5, 2016 at: <http://nationalpainreport.com/fda-incentivizing-pharma-to-develop-less-abusable-pain-medicines-8831082.html>.
419. Scholten, W. and Henningfield, J.E. Negative outcomes of unbalanced opioid policy supported by clinicians, politicians, and the media. Letter of response to Kolodny. Journal of Pain & Palliative Care Pharmacotherapy, 30:4, 332-334, 2016.
420. Henningfield, J.E. and Fant, R.V. Pinney Associates. Assessment of Kratom under the CSA Eight Factors and Scheduling Recommendation. Published by the American Kratom Association after filing on the docket of the U.S. Food and Drug Administration on December 1, 2016. Access at: http://216.30.191.148/HL-AKA-Eight_Factor_and_Recommendations_by_PinneyAssoc.pdf
421. Webster, L., Henningfield, J.E., Buchhalter, A.R., Siddhanti, S., Lu, L. Odinecs, A., Di Fonzo, C.J., and Eldon, M.A. Human abuse potential of the new opioid analgesic molecule NKTR-181 compared with oxycodone. Pain Medicine, 19(2):307-318, 2018
422. Fant, R.V., Henningfield, J.E., Cash, B.D., Dove, L.S. and Covington, P.S. Eluxadolone Demonstrates a Lack of Abuse Potential in Phase 2 and 3 Studies of Patients With Irritable Bowel Syndrome With Diarrhea. Clinical Gastroenterology and Hepatology, 7: 1021-1029, 2017.

423. Stiles, M.F., Campbell, L.R., Graff, D.W., Jones, B.A., Fant, R.V., and Henningfield, J.E., Pharmacodynamic and pharmacokinetic assessment of electronic cigarettes, combustible cigarettes, and nicotine gum: implications for abuse liability. Psychopharmacology, 234(17):2643-2655, 2017.
424. Henningfield, J.E., Fant, R.V., and Wang, D. The abuse potential of kratom according to the 8 factors of the controlled substances act: implications for regulation and research. Psychopharmacology, 235:573–589, 2017.
425. Heal, D.J., Henningfield, J.E., Frenguelli, B.G., Nutt, D.J., and Smith, S.L. Psychedelics – Re-opening the doors of perception. Neuropharmacology, 142: 1-6, 2018.
426. Belouin, S.J. and Henningfield, J.E. Psychedelic Drug Development: Psychedelics: Where we are now, why we got here, what we must do. Neuropharmacology, 142:7-19, 2018.
427. Johnson, M.W., Griffiths, R.R., Hendricks, P.S., and Henningfield, J.E. The abuse potential of medicinal psilocybin according the 8 factors of the United States Controlled Substances Act. Neuropharmacology, 142:143-166, 2018.
428. Stiles, M.F., Campbell, L.R., Jin, T., Graff, D.W., Fant, R.V., Henningfield, J.E. Assessment of the abuse liability of three menthol Vuse Solo electronic cigarettes relative to combustible cigarettes and nicotine gum. Psychopharmacology, 235(7):2077-2086, 2018.
429. Henningfield, J.E., Higgins, S.T., and Villanti, A.C. Are we guilty of errors of omission on the potential role of electronic nicotine delivery systems as less harmful substitutes for combusted tobacco use? Preventive Medicine, 117:83-87, 2018.
430. Johnson, M.W., Griffiths, R.R., Hendricks, P.S. and Henningfield, J.E. Setting the record straight on medical psilocybin. Scientific American, <https://blogs.scientificamerican.com/observations/setting-the-record-straight-on-medical-psilocybin/>. August 23, 2018.
431. Carter, L.P., Henningfield, J.E., Wang, Y.G., Lu, Y., Kelsh, D. Vince, B. and Sellers, E. A randomized, double-blind, placebo controlled, crossover study to evaluate the human abuse liability of solriamfetol, a selective dopamine and norepinephrine reuptake inhibitor. Journal of Psychopharmacology. 32(12):1351-1361, 2018.
432. Grundmann, O., Brown, P.N., Henningfield, J.E., Swogger, M. and Walsh, Z. The therapeutic potential of kratom. Addiction, 113:1951–1954, 2018.
433. Hughes, J.R., Fagerstrom, K.O., Henningfield, J.E., Rodu, B., Rose, J.E., and Shiffman, S. Why we work with the tobacco industry. Addiction, 2018.
434. Benowitz N.L. and Henningfield J.E. Nicotine Reduction Strategy: State of the science and challenges to tobacco control policy and FDA tobacco product regulation. Preventive Medicine. 117:5-7, 2018.

435. Schwartz, L., Roma, P.G., Henningfield, J.E., Hursh, S.R., Cone, E.J., Buchhalter, A.R., Fant, R.V., and Schnoll, S.H. Behavioral economic demand metrics for abuse deterrent and abuse potential quantification. Drug and Alcohol Dependence, 198: 13-20, 2019.
436. Lanier, R.K., Henningfield, J.E., Gudin, J., Rauck, R., Elder, H., Erpelding, N., Treister, R., Gimbel, J., Tagliaferri, M., Doberstein, S.K., Di Fonzo, C.J., Lu, L., Siddhant, S., Katz, N.P. Assessment of potentially abuse-related events in two phase 3 studies of NKTR-181, a novel opioid analgesic, using the MADDERS® system (Misuse, Abuse, and Diversion, Drug Event Reporting System). Current Medical Research and Opinion, 2019.
437. Kleykamp, B.A. and Henningfield, J.E. The Role of the Pharmaceutical Industry in the Treatment of Mental Health Disorders. In: Evans, S.M. and Carpenter, K.M. (Eds.), American Psychological Association Handbook of Psychopharmacology, Volume 1, 2019, pp. 673-688.
438. Coe, M.A., Pillitteri, J.L., Sembower, M.A., Gerlach, K., and Henningfield, J.E. Kratom as a substitute for opioids: Results from an online survey. Drug and Alcohol Dependence, 202: 24-32, 2019.
439. Prozialeck, W., Avery, B., Boyer, E., Grundmann, O., Henningfield, J., Krueger A., McMahon, L., McCurdy, C., Swogger, M., Veltri, C., and Singh, D. (2019) Kratom Policy: The challenge of balancing therapeutic potential with public safety. International Journal of Drug Policy. 2019;70:70–77.
440. Henningfield, J.E., Ashworth, J.B., Gerlach, K.K., Simone, B., and Schnoll, S.H. The nexus of opioids, pain, and addiction: challenges and solutions. Preventive Medicine, Special Issue on Opioids Addiction and Pain, 2019.
441. Henningfield, J.E., Grundmann, O., Babin, J.K., Fant, R.V., Wang, D.W., and Cone, E.J. Risk of death associated with kratom use compared to opioids. Preventive Medicine, Special Issue on Opioids Addiction and Pain, 2019.
442. Ge, X, Henningfield, J.E., Siddhanti, S., Jobes, J., Lu, L., Xie, S., Ziola, M., Kelsh, D., Vince, B., Di Fonzo, C.J., Tagliaferri, M., Zalevsky, J., Doberstein, S.K., Hoch, U., and Eldon, M.A., Human abuse potential of oral NKTR-181 in recreational opioid users: A randomized, double-blind, crossover study. Pain Medicine, 2020, 21(2), e114–e126.
443. Henningfield, J.E., Ramstrom, L.M., and Fagerstrom, K.O. Forward – A Place for smokeless tobacco in public health with science-guided tobacco regulation? In: W.B. Pickworth and B. Thomas (Eds) Smokeless Tobacco Science, In Emerging Issues in Analytic Chemistry series, Elsevier, 2020, pp. xii-xx.
444. Henningfield, J.E., Gudin, J., Rauck, R., Gimbel, J., Tagliaferri, M., Doberstein, S.K., Di Fonzo, C., Katz, N., Siddhanti, S., and Schnoll, S. Measuring Opioid

Withdrawal in a Phase 3 Study of a New Analgesic, Oxycodol (NKTR-181), in Patients with moderate to severe chronic low back pain. Pain Medicine, 2020. 1-9.

445. Henningfield, J.E., Fields, S., Anthony, J.C., Brown, Jr., L.S., Bolaños-Guzmán, C.A., Comer, S.D., De La Garza, II, R., Furr-Holden, D., Garcia-Romeu, A., Hatsukami, D., Raznahan, A. and Zarate, C.A. Advancing Equity, Diversity, and Inclusion in the American College of Neuropsychopharmacology (ACNP): Advances, Challenges, and Opportunities to Accelerate Progress. Neuropsychopharmacology, online 2020, and in Vol. 46, 871–876, 2021. <https://doi.org/10.1038/s41386-020-0784-y>

446. Singh, D., Grundmann, O., and Henningfield, J.E. Is Kratom (*Mitragyna speciosa* Korth.) Use ToxicUse Associated with ECKG Abnormalities? Comparison of Electrocardiogram and Cardiovascular Comparisons Abnormalities between Regular Kratom Users and Healthy Controls. Clinical Toxicology, 2020, Published on line September 1, 2020. DOI: 10.1080/15563650.2020.1812627.

447. Singh, D., Brown, P. N., Cinosi, E., Corazza, O., Henningfield, J. E., Garcia-Romeu, A., McCurdy, C. R., McMahon, L. R., Prozialeck, W. C., Smith, K. E., Swogger, M. T., Veltri, C., Walsh, Z., & Grundmann, O. (2020). Current and Future Potential Impact of COVID-19 on Kratom (*Mitragyna speciosa* Korth.) Supply and Use. *Frontiers in psychiatry*, 11, 574483. <https://doi.org/10.3389/fpsy.2020.574483>

448. Goldenson, N.I., Buchhalter, A.R., Augustson, E.M., Rubinstein, M.L., Van Hoof, D., and Henningfield, J.E. Abuse liability assessment of the JUUL system in two nicotine concentrations compared to combustible cigarette, nicotine gum and comparator electronic nicotine delivery system. Drug and Alcohol Dependence, 217:108441, 2020. Doi: 10.1016/j.drugalcdep.2020.10844.

449. Goldenson, N.I., Buchhalter, A.R., Augustson, E.M., Rubinstein, M.L., and Henningfield, J.E. Abuse liability assessment of the JUUL system in four flavors relative to combustible cigarette, nicotine gum and a comparator electronic nicotine delivery system among adult smokers. *Drug and Alcohol Dependence*, 217:108395, 2020. Doi: 10.1016/j.drugalcdep.2020.108395.

450. Goldenson, N.I., Fearon, I.M., Buchhalter, A.R., and Henningfield, J.E. An open-label, randomized, controlled, crossover study to assess nicotine pharmacokinetics and subjective effects of the JUUL with three nicotine concentrations relative to combustible cigarettes in adult smokers. Nicotine & Tobacco Research, 202, 2021. Doi: 10.1093/nrt/ntab001.

451. Henningfield, J.E., Fields, S., Anthony, J.C., Brown, Jr., L.S., Bolaños-Guzmán, C.A., Comer, S.D., De La Garza, II, R., Furr-Holden, D., Garcia-Romeu, A., Hatsukami, D., Raznahan, A. and Zarate, C.A. Correspondence: Reply to Drs. Hart and Cadet: We Agree – the Challenges of Increasing Equity, Diversity and Inclusion Include Societal Issues and Actions Now are Vital. Neuropsychopharmacology. 2021.

452. Grundmann, O., Babin, J.E., Henningfield, J.E., Garcia-Romeu, A., Kruegel, A.D., Prozialeck, W.C., Raffa, R.B., Singh, D., and Smith, K.E. Kratom use in the United States: a diverse and complex profile. Addiction;116(1):202-203. 2021.
453. Fields, S., Henningfield, J.E., Correa-Fernandez, V., de Dios, M.A., Garcia-Romeu, A., Heads, A.M., Hood, C.O., Hudzik, T., Moreland, A.D., and Skinstad, A.H. A Commentary from the CPDD Underrepresented Populations Committee: New CPDD Member Survey to Accelerate Progress in Equity, Inclusion and Diversity. Drug and Alcohol Dependence. 2021.
454. Mohammad Farris Iman Leong Abdullah, Kok Leng Tan, Suresh Narayanan, Novline Yuvashnee, Nelson Jeng Yeou Chear, Darshan Singh, Oliver Grundmann & Jack E. Henningfield. Is kratom (*Mitragyna speciosa* Korth.) use associated with ECG abnormalities? Electrocardiogram comparisons between regular kratom users and controls, Clinical Toxicology, 59:5, 400-408, 2021, DOI: 10.1080/15563650.2020.1812627/
455. Singh, D., Narayanan, S., Vicknasingam, B. Prozialeck, W.C., Smith, K.E., Corazza, O., Henningfield, J.E., and Grundmann, O. The Use of Kratom (*Mitragyna speciosa* Korth.) among People who Co-use Heroin and Methamphetamine in Malaysia. Journal of Addiction Medicine, 2021, 2021 May. DOI: 10.1097/adm.0000000000000876. PMID: 34001777
456. Shram, M.J., Spencer, R.H., Qian, J., Munera, C.L., Lewis, M.E., Henningfield, J.E., Webster, L., Menzaghi, F. Evaluation of the abuse potential of difelikefalin, a selective kappa-opioid receptor agonist, in recreational polydrug users. Clinical and Translational Science. 2022; 2:535-547. doi: 10.1111/cts.13173.
456. Henningfield, J.E., Grundmann, O, Garcia-Romeu, A. and Swogger, M. T. We Need Better Estimates of Kratom Use Prevalence. American Journal of Preventive Medicine. 2021; 62. 132-133. 10.1016/j.amepre.2021.07.022.
457. Henningfield, J.E., Wang, D.A. and Huestis, M.A. Kratom Abuse Potential 2021: An Updated Eight Factor Analysis. Frontiers in Pharmacology, Special Issue and article collection – The Pharmacology of Kratom and Its Alkaloids. 2022 Jan 28;12:775073. doi: 10.3389/fphar.2021.775073. PMID: 35197848; PMCID: PMC8860177
458. Swogger, M.T., Smith, K.E., Garcia-Romeu, A., Grundmann, O., Veltri, C.A., Henningfield, J.E., and Busch, L.Y. Understanding Kratom Use: A Guide for Healthcare Providers. Frontiers in Pharmacology, 2022. <https://doi.org/10.3389/fphar.2022.801855>
459. Smith, K. E., Dunn, K. E., Epstein, D. H., Feldman, J. D., Garcia-Romeu, A., Grundmann, O., Henningfield, J. E., McCurdy, C. R., Rogers, J. M., Schrieffer, D., Singh, D., & Weiss, S. T. (2022). Need for clarity and context in case reports on kratom use, assessment, and intervention. Substance abuse, 43(1), 1221–1224. <https://doi.org/10.1080/08897077.2022.2074608>

460. Landry, I., Hall, N., Aluri, J., Filippov, G., Reyderman, L., Setnik, B., Henningfield, J., & Moline, M. (2022). Abuse Potential of Lemborexant, a Dual Orexin Receptor Antagonist, Compared with Zolpidem and Suvorexant in Recreational Sedative Users. *Journal of clinical psychopharmacology*, 42(4), 365–373. <https://doi.org/10.1097/JCP.0000000000001561>

461. Landry, I., Hall, N., Alur, J., Filippov, G., Reyderman, L., Setnik, B., Henningfield, J., & Moline, M. (2022). Acute Cognitive Effects of the Dual Orexin Receptor Antagonist Lemborexant Compared With Suvorexant and Zolpidem in Recreational Sedative Users. *Journal of clinical psychopharmacology*, 42(4), 374–382. <https://doi.org/10.1097/JCP.0000000000001562>

462. Ross, S., Agrawal, M., Griffiths, R.R., Grob, C., Berger, A., and Henningfield J.E. Psychedelic-assisted Psychotherapy to treat Psychiatric and Existential Distress in Life-Threatening Medical Illnesses and Palliative Care. *Neuropharmacology*, Special Issue ‘National Institutes of Health Psilocybin Research Speaker Series’. Advance online publication. <https://doi.org/10.1016/j.neuropharm.2022.109174>

463. Henningfield, J., Gauvin, D., Bifari, F., Fant, R., Shram, M., Buchhalter, A., Ashworth, J., Lanier, R., Pappagallo, M., Inturrisi, C., Folli, F., Traversa, S., & Manfredi, P. L. (2022). REL-1017 (esmethadone; D-methadone) does not cause reinforcing effect, physical dependence and withdrawal signs in Sprague Dawley rats. *Scientific reports*, 12(1), 11389. <https://doi.org/10.1038/s41598-022-15055-3466>.

464. Henningfield, J. E., Coe, M. A., Griffiths, R. R., Belouin S. J., Berger, A., Coker, A. R., Comer, S. E., Heal, D. J., Hendricks, P. S., Nichols, C. D., Sapienza, F., Vocci, F. J., and Zia, F. Z. (2022). Psychedelic Drug Abuse Potential Assessment Research for New Drug Applications and Controlled Substances Act Scheduling. *Neuropharmacology*, Special Issue ‘National Institutes of Health Psilocybin Research Speaker Series’. 2022 Nov 1;218:109220. doi: 10.1016/j.neuropharm.2022.109220. Epub 2022 Aug 17.

465. Belouin, S. J., Averill, L. A., Henningfield, J. E., Xenakis, S. N., Donato, I., Grob, C. S., Berger, A., Magar, V., Danforth, A. L. and Anderson, M.D., B. T. (2022). Policy considerations that support safe, ethical, accountable, and equitable uses of psychedelic medicines. *Neuropharmacology*, Special Issue ‘National Institutes of Health Psilocybin Research Speaker Series’. 2022 Aug 13;219:109214. doi: 10.1016/j.neuropharm.2022.109214. Online ahead of print.

466. Henningfield, J.E., Rodricks, J.V., Magnuson, A.M., and Huestis, M.A. (2022) Respiratory Effects of Oral Mitragynine and Oxycodone in a Rodent Model. *Psychopharmacology*, 239(12), 3793–3804. <https://doi.org/10.1007/s00213-022-06244-z>

467. Henningfield, J.E., Ashworth, J.A., Heal, D.J., and Smith, S.L. (2023) Psychedelic Drug Abuse Potential Assessment for New Drug Applications and Controlled Substance Scheduling: – A United States Perspective. *Journal of Psychopharmacology*. January, online at <https://doi.org/10.1177/02698811221140004>.

468. Moline, M., Asakura, S. Beuckman, C., Landry, I., Setnik, B., Ashworth, J., and Henningfield, J.E. (2023). The abuse potential of lemborexant, a dual orexin receptor antagonist, according to the 8 factors of the Controlled Substances Act. *Psychopharmacology*, Published online ahead of print, at <https://link.springer.com/content/pdf/10.1007/s00213-023-06320-y.pdf>
469. Henningfield JE, Chawarski MC, Garcia-Romeu A, Grundmann O, Harun N, Hassan Z, McCurdy CR, McMahon LR, Sharma A, Shoaib M, Singh D, Smith KE, Swogger MT, Vicknasingam B, Walsh Z, Wang DW, Huestis MA. Kratom withdrawal: Discussions and conclusions of a scientific expert forum. *Drug Alcohol Depend Rep*. 2023 Mar 15;7:100142. doi: 10.1016/j.dadr.2023.100142. PMID: 37397437; PMCID: PMC10311168.
470. Zia, F. Z., Baumann, M. H., Belouin, S. J., Dworkin, R. H., Ghauri, M. H., Hendricks, P. S., Henningfield, J. E., Lanier, R. K., Ross, S., & Berger, A. (2023). Are psychedelic medicines the reset for chronic pain? Preliminary findings and research needs. *Neuropharmacology*, 233, 109528. <https://doi.org/10.1016/j.neuropharm.2023.109528> In: *Neuropharmacology, Special Issue 'National Institutes of Health Psilocybin Research Speaker Series'*.
471. Henningfield, J.E. Guest Editor, *Neuropharmacology, Special Issue 'National Institutes of Health Psilocybin Research Speaker Series' addressing psychedelic drug research and medications development.. Other Editors Sean Belouin, David Heal, Bruno Frenguelli, and Sharon Smith, Online 2022-23. In print April 2024.*
472. Pomerleau, O. F., Benowitz, N. L., Stitzer, M. L., Henningfield, J. E., Hatsukami, D. K., Corrigan, W. A., Perkins, K. A., & Lando, H. A. (online in 2023 & in print, Jan. 2024). Society of Nicotine and Tobacco Research – SRNT- As An Outgrowth Of The 1988 Surgeon General's Report On Nicotine Addiction: Reflections Of The Early Presidents. *Nicotine & tobacco research*. 26(2), 118–125. <https://doi.org/10.1093/ntr/ntad151> In January, 2024, this article was selected as an Editor's Choice Article, and made freely available to all readers in perpetuity.
473. Urrutia, J., Anderson, B. T., Belouin, S. J., Berger, A., Griffiths, R. R., Grob, C. S., Henningfield, J. E., Labate, B. C., Maier, L. J., Maternowska, M. C., Weichold, F., Yaden, D. B., & Magar, V. (2023). Psychedelic Science, Contemplative Practices, and Indigenous and Other Traditional Knowledge Systems: Towards Integrative Community-Based Approaches in Global Health. *Journal of psychoactive drugs*, 55(5), 523–538. <https://doi.org/10.1080/02791072.2023.2258367>
474. Henningfield, J. E., Belouin, S. J., Yaden, D. B., Urrutia, J., Anderson, B. T., Berger, A., ... Magar, V. (2024). In Memoriam: Roland R. Griffiths (July 19, 1946–October 16, 2023). *Journal of Psychoactive Drugs*, 56(3), 299–300. <https://doi.org/10.1080/02791072.2024.2343812>.
475. Nader M.A., Egli M., Henningfield J.E. Obituary: Travis Thompson-Editorial. *The Journal of Pharmacology and Experimental Therapeutics*. 389: 32-33. PMID 38490724 DOI: 10.1124/jpet.124.002088

476. Henningfield, J. E., & Belouin, S. J. Dedication: Roland R. Griffiths (July 19, 1946-October 16, 2023). *Neuropharmacology*, 252: 1-3, 2024. 109945. Advance online publication. <https://doi.org/10.1016/j.neuropharm.2024.109945>
477. Henningfield, J. E., Grundmann, O., Huestis, M. A., & Smith, K. E. (2024). Kratom safety and toxicology in the public health context: research needs to better inform regulation. *Frontiers in pharmacology*, 15, 1403140. <https://doi.org/10.3389/fphar.2024.1403140>
478. Richard, J., Garcia-Romeu, A. and Henningfield, J.E. (2025) Expanded Access to Psychedelic Treatments: Comparing American and Canadian Policies. *General Psychiatry*, 38(1), e101894. <https://doi.org/10.1136/gpsych-2024-101894>
479. Magar, V., Robbins, M., Fernandez (Lobo Blanco), O.M.L., Ali, I., Anderson, B. Grob, C., Henningfield, J.E., Krysiko, P., Kuiper, H., Loizaga-Velder, A., Volat, M. & Rush, B. & Rope, S.I. Indigenous Knowledge Systems and Psychedelic Science: Towards Ethical and Reciprocal Collaboration. *Journal of Psychopharmacology – Special Issue on Psychedelics, Dedicated to Roland R. Griffiths, 2025*, in press.
480. Henningfield, J.E., Comer, S.D., Banks, M.L., Coe, M.A. Collins G.T.; Cooper, Z.D., Fantegrossi, Durgin, C.J., Heal, D.J., Huskinson, S.L., Lanier, R.K., Lynch, W.J., Meisch, R.A., and Rowlett, J.K. Abuse Potential Assessment of Novel Central Nervous System Active and Psychedelic Substances for Controlled Substances Act Scheduling Recommendations. *Journal of Psychopharmacology – Special Issue on Psychedelics, Dedicated to Roland R. Griffiths, 2025*, in press.
481. Henningfield, J.E., Barrett, F.S., Evans, S.M., Garcia-Romeu, A., Garrett, B.E., Hienz, R.D., Lukas, S.E., Nayak, S., Strain, E.C., Weerts, E.M., Yaden, M.E. & Yaden, D.B. Roland R. Griffiths, *Psychopharmacology Pioneer: Abuse Liability, Alcohol, Nicotine, Caffeine, Benzodiazepines, and Psychedelics. Journal of Psychopharmacology – Special Issue on Psychedelics, Dedicated to Roland R. Griffiths, 2025*, in press.
482. Henningfield, J.E., Beyer, C.E. & Raffa, R.B. (Editors) *Kratom – History, Science, and Therapeutic Potential*. Academic Press, Elsevier, London, United Kingdom. 2025.

Selected, Invited and Keynote Lectures

Henningfield, J.E., Meisch, R.A. and Thompson, T. Oral self-administration of ethanol by a rhesus monkey. Minnesota Experimental Analysis of Behavior Society, Spring Meeting, 1974.

Henningfield, J.E. (with Thompson, T., Meisch, R.A.) Ethanol as a reinforcer: An operant analysis of ethanol dependence. Presented at the Second Bi-Annual International Symposium on Experimental Studies of Alcohol Intoxication and Withdrawal, International Council on Alcohol and Addictions. Manchester, England, June 26, 1974.

Henningfield, J.E. and Meisch, R.A. Ethanol as an oral reinforcer for rhesus monkeys: Maintenance of fixed-ratio responding. International Study Group Investigating Drugs as Reinforcers, Satellite to the Committee on Problems of Drug Dependence, National Research Council, Washington DC, National Academy of Science, May 18, 1975.

Henningfield, J.E. and Meisch, R.A. Ethanol as a positive reinforcer for rhesus monkeys: Effects of fixed-ratio schedules and ethanol concentrations on drinking. Committee on Problems of Drug Dependence, National Research Council. Richmond, Virginia, June 7-9, 1976.

Henningfield, J., Poling, A. and MacCorquodale, K. Some ethical issues in the control of human behavior reconsidered. Presented at the Midwestern Association of Behavior Analysis Annual Meeting, Chicago, Illinois, May 1-4, 1976.

Henningfield, J.E. and Meisch, R.A. Ethanol as a reinforcer via the oral route for rhesus monkeys: Effects of fixed-ratio size and ethanol concentration. Presented at the Midwestern Association of Behavior Analysis Annual Meeting, Chicago, Illinois, May 1-4, 1976.

Pohl, R.W., Henningfield, J.E., and Meisch, R.A. Ethanol-reinforced responding: Two methods of acquisition and two strains of rats. Presented at the Midwestern Association of Behavior Analysis Annual Meeting, Chicago, Illinois, May 1-4, 1976.

Henningfield, J.E., and Meisch, R.A. Drinking of ethanol by rhesus monkeys: Experimental strategies for establishing ethanol as a reinforcer. Midwestern Psychological Association, May 6, 1977.

Henningfield, J.E. and Meisch, R.A. Ethanol as a positive reinforcer for rhesus monkeys: Effects of fixed-ratio schedules and ethanol concentrations on drinking. Committee on Problems of Drug Dependence, Richmond, Virginia, June 8, 1976.

Meisch, R.A and Henningfield, J.E. Tactics for the establishment of ethanol as an orally effective reinforcer for rhesus monkeys. Committee on Problems of Drug Dependence. Cambridge, Massachusetts, July 7-9, 1977

Henningfield, J.E. Keynote address: Laboratory models for the experimental analysis of human alcohol dependence. Presented at the annual meeting of the Minnesota Association for Behavior Analysis, St. Cloud, Minnesota, November 3, 1977.

Henningfield, J.E., Kliner, D.J., and Meisch, R.A. Oral pentobarbital self-administration by rhesus monkeys. Committee on Problems of Drug Dependence. Baltimore, Maryland, June 3-6, 1978.

Henningfield, J.E. and Meisch, R.A. Ethanol drinking by rhesus monkeys: Preference for high concentrations. Tenth Annual National Council on Alcoholism Medical-Scientific Conference of the Alcoholism Forum, Sheraton-Park Hotel, Washington DC, April 27 – May 2, 1979.

Henningfield, J.E. and Griffiths, R.R. Human cigarette smoking: Effect of dose manipulations on pattern of self-administration. International Study Group Investigating Drugs as Reinforcers satellite meeting to the Committee on Problems of Drug Dependence, Philadelphia, Pennsylvania, June 3, 1979.

Henningfield, J.E. and Griffiths, R.R. Behavioral and pharmacological variable affecting puffing parameters by cigarette smokers. American Psychological Association, New York, New York, September 2, 1979.

Henningfield, J.E., Griffiths, R.R. and Jasinski, D.R. Human dependence on tobacco and opioids: Common factors. Presented at a NIDA-sponsored conference on the Behavioral Pharmacology of Human Drug Dependence, Belmont Center, Maryland, June 30-July, 1 1980.

Henningfield, J.E., Griffiths, R.R., and Jasinski, D.R. Cigarette smoking and opioid dependence: Common factors. American Psychological Association, Division 28 paper session. Montreal, Canada, September 2, 1980.

Henningfield, J.E. and Griffiths, R.R. Effects of d-amphetamine on cigarette smoking in normal human subjects. American Psychological Association. Montreal, Canada, September 3, 1980.

Jasinski, D.R., Haertzen, C.A., Henningfield, J.E., Johnson, R.E., Makhzouhmi, H.M., and Miyasato, K. Progress Report of the NIDA Addiction Research Center. College on Problems of Drug Dependence 43rd Annual Scientific Meeting. San Francisco, CA, July 12-15, 1981.

Henningfield, J.E. and Jasinski, D.R. Pharmacological basis of tobacco use as a form of drug dependence. National Association on Drug Abuse Problems. New York, March, 1982.

Henningfield, J.E. Behavioral, physiologic and subjective effects of nicotine in humans. Visiting Scientist to Addiction Research Foundation, Ontario. Toronto, Canada, February, 1983.

Brady, J.V., Griffiths, R.R., Hienz, R.D., Bigelow, G.E., Emurian, H.H., Lukas, S.E., Ator, N.A., Nellis, M.J., Ray, R.L., Pearson, G.D., Liebson, I., Funderburk, F., Jasinski, D.R., Henningfield, J.E., and Johnson, R.E. Abuse liability and behavioral toxicity assessment: Progress report from the behavioral biology laboratories of the Johns Hopkins University School of Medicine. College on Problems of Drug Dependence 45th Annual Scientific Meeting. Lexington, KY, June 12-15, 1983.

Henningfield, J.E. Smoking addictions: Psychological aspects. Sixteenth Annual Taylor Manor Hospital Psychiatric Symposium: Double Diagnosis: Double Dilemma. The Polyaddictions" Alcoholism, Substance Abuse, Smoking, Gambling. Ellicott City, MD, April, 1984.

Henningfield, J.E., Goldberg, S.R., Herning, R.I., Jasinski, D.R., Lukas, S.E., Miyasato, K., Nemeth-Coslett, R. Pickworth, W.B., Rose, J.E., Sampson A., and Snyder F. Human studies of the behavioral pharmacological determinants of nicotine dependence. College on Problems of Drug Dependence 47th Annual Scientific Meeting. Baltimore, MD, June 10-12, 1985.

Henningfield, J.E. Tobacco use as an addictive process: Neurosciences and psychopharmacology. Presented at the Working Meeting on Tobacco Use as an Addictive Process, sponsored by NIDA and the John F. Kennedy School of Government of Harvard University, Institute for the Study of Smoking, Behavior and Policy, Cambridge, Massachusetts July 8, 1985.

Henningfield, J.E., London, E.D., and Jaffe, J.H. Nicotine: Brain reward mechanisms. Berzelius Symposium VII: Brain Reward Systems and Abuse. The Swedish Society of Medicine. Gothenburg, Sweden, October 17-18, 1985.

Henningfield, J.E. Abuse liability and dependence potential of nicotine. International Symposium on Tobacco Smoking and Health: A Neurobiologic Approach. University of Kentucky, Tobacco and Health Research Institute. Lexington, KY, December 1985.

Henningfield, J.E. Scientific basis for nicotine as an addictive substance. Tobacco Products Liability Conference. Northeastern University School of Law. Boston, MA, January 10-12, 1986.

Henningfield, J.E. Evidence that smokeless tobacco use may lead to dependence. Health Implications of Smokeless Tobacco Use, National Institutes of Health, Consensus Development Conference. National Institutes of Health, Bethesda, MD, January 13-15, 1986.

Henningfield, J.E. Nicotine Dependence, Implications for Tobacco Cessation Programs. New Concepts in the Diagnosis and Treatment of Lung Cancer, Akron, Ohio, September 24, 1986.

Henningfield, J.E. New fellows address entitled: Behavioral pharmacology of nicotine dependence. Presented at the Annual Convention of the American Psychological Association, Washington, DC, August 1986.

Henningfield, J.E. Nicotine dependence: The interface between tobacco carcinogens and cancer. American Cancer Society's 29th Annual Science Writers' Seminar, San Diego Hilton, San Diego, CA, March 22-25, 1987.

Henningfield, J.E. Research issues in tobacco use cessation. 50th Anniversary Meeting of the National Cancer Institute: Smoking, Tobacco, and Cancer Program: Toward the Year 2000: The Role of Smoking Control in Cancer Reduction. National Institutes of Health, Bethesda, MD, April 27-29, 1987.

Henningfield, J.E. Biobehavioral models of addiction: Human models of abuse liability and dependence potential. Models of Addiction. Nashville, Indiana, May 30, 1987.

Roache, J., Meisch R., Henningfield, J., and Jaffe, J. The effects of yohimbine on triazolam self-administration in subjects with histories of sedative abuse. College on Problems of Drug Dependence 49th Annual Scientific Meeting. Philadelphia, PA, June 14-19, 1987.

Snyder, F., Davis, F., and Henningfield, J. Replacement of cigarette stacking with nicotine gum: Effects on information processing. College on Problems of Drug Dependence 49th Annual Scientific Meeting. Philadelphia, PA, June 14-19, 1987.

Henningfield, J.E. Tobacco dependence. Alaska Tobacco and Health Conference. Anchorage, Alaska, November 5, 1987.

Henningfield, J.E. Addiction potential of nicotine in cigarettes. Symposium on Smoking Cessation. A satellite meeting to the Sixth World Conference on Smoking and Health. Tokyo, Japan, November 7, 1987.

Henningfield, J.E. Pharmacokinetic and pharmacodynamic aspects of urine drug screening: Discussant/Reactor. Scientific Consensus Conference: Clinical Pharmacologic Implications of Urine Screening for Illicit Substances of Abuse. San Diego, California, March 7, 1988.

Henningfield, J.E. Laboratory studies relevant to assessing the impact of economic factors on the course and extent of drug dependence. Licit and Illicit Drug Policy: A Comparative Perspective. University of Michigan, School of Public Health, Ann Arbor, Michigan, March 10, 1988.

Henningfield, J.E. What every science teacher needs to know about addiction to nicotine. National Science Teachers Association, National Convention. St. Louis Missouri, April 9, 1988.

Henningfield, J.E. Nicotine Addiction (Keynote Address). American Lung Association. Augusta, Maine, June 16, 1988.

Henningfield, J.E. Behavioral and pharmacologic mechanisms of nicotine dependence. International Symposium on Nicotinic Receptors in the CNS -- Their Role in Synaptic Transmission. Uppsala, Sweden, June 19-21, 1988.

Henningfield, J.E. Pharmacology of nicotine: Nicotine as a drug of dependence. First National Conference on Nicotine Dependence of The American Medical Society on Alcoholism and other Drug Dependencies. Minneapolis, Minnesota, September 23, 1988.

Henningfield, J.E. Plenary Session: Nicotine among the addicting drugs: Implications for understanding, preventing and treating dependence and policy development. The Second Blaine House Conference on Alcohol and Other Drug Abuse, Prevention, Education, Treatment and Law Enforcement. Portland, Maine, November 29, 1988.

Henningfield, J.E. Discussant/Reactor. Smoking Cessation: Research and Development, Pharmacia. Rusthallargarden, Helsingborg, Sweden, February 27-28, 1989.

Henningfield, J.E. Is Cigarette Smoking an Addiction (symposium panelist (with S. Cummings, R.M. Davis, and N.A. Rigotti). American College of Physicians. San Francisco, April 14, 1989.

Fudala, P.J., Johnson, R.E., Heishman, S.J., Cone, E.J., and Henningfield, J.E. A dose run-up and safety evaluation of nalmefene HCl in human volunteers. College on Problems of Drug Dependence 51st Annual Scientific Meeting. Keystone, CO, June 1989.

Lamb, R.J. and Henningfield, J.E. Human d-amphetamine drug discrimination: Testing with d-amphetamine and hydromorphone. College on Problems of Drug Dependence 51st Annual Scientific Meeting. Keystone, CO, June 1989.

Henningfield, J.E. Nicotine dependence: Scientific basis for medications development. The Wilkerson Group Fourteenth Annual Business and Medicine Symposium. New York City, September 19-20, 1989.

Henningfield, J.E. Neuropharmacology of nicotine. The Second National Conference on Nicotine Dependence, American Medical Association on Alcoholism and Other Drug Dependencies. Chicago, September 21-24, 1989.

Henningfield, J.E. Smoking in the workplace: Fairness and self-preservation -- Nicotine addiction. National Safety Council. Chicago, October 31, 1989.

Henningfield, J.E. Tobacco as an addicting drug. Statehouse Day for a Tobacco-free Ohio. Columbus, Ohio, February 20, 1990.

Henningfield, J.E. Overview of the Addiction Research Center and scientific needs for increased minority involvement in research programs. Fourth Annual Coppin State College Substance Abuse Conference. Baltimore, April 27, 1990.

Henningfield, J.E. Biomedical Basis of Nicotine Addiction and Treatment Symposium. Woodhill Treatment Center (Appalachian Hall), Asheville, North Carolina, April 12, 1990

Henningfield, J.E. Direct course and present papers entitled "Pharmacology of nicotine dependence" and "Smoking and other drug dependencies", at the Annual 7th Medical Command/U.S. Army Europe Alcohol and Drug Abuse Prevention Control Program Conference, Bad Kissingen, Germany, June 14-15, 1990.

Pickworth, W.B., Klein, S.A., Bunker, E.B., and Henningfield, J.E. Assessment of mazindol for abuse liability. College on Problems of Drug Dependence 52nd Annual Scientific Meeting. Richmond, VA, June 1990.

Heishman, S.J., Snyder, F.R., and Henningfield, J.E. Effect of repeated nicotine administration in nonsmokers. College on Problems of Drug Dependence 52nd Annual Scientific Meeting, Richmond, VA, June 1990.

Henningfield, J.E. Tobacco addiction. Tobacco in the '90s. Palo Alto, California, July 25, 1990.

Henningfield, J.E. Food and tobacco self-administration: Common theoretical issues and research problems. Smoking and Body Weight Conference Workshop, Memphis State University and National Heart, Lung, and Blood Institute, Memphis, Tennessee, September 10-13, 1990.

Henningfield, J.E. Drug self-administration methods in abuse liability evaluation. Barcelona Conference on Clinical Abuse Liability Testing. Barcelona, Spain, November 5, 1990.

Henningfield, J.E. Pharmacologic basis and treatment of nicotine dependence. AMERSA (Association for Medical Education and Research in Substance Abuse). Rockville, Maryland, November 15, 1990.

Henningfield, J.E. The basis of nicotine dependency in cigarette smokers. Patient-Centered Smoking Cessation: An Office Based Model. Sponsored by The Heart of Harlem Cardiovascular Disease Program, Harlem Hospital, New York, November 18, 1990.

Henningfield, J.E. Introduction to Interventions for Cigarette Smoking, and Session Moderator. NIDA National Conference on Drug Abuse Research and Practice: An Alliance for the 21st Century. Washington, D.C., January 14, 1991. Abstract in National Institute on Drug Abuse, Conference Highlights, DHHS Pub. No. (ADM) 91-1818, pp. 35-36, 1991.

Henningfield, J.E., Cohen, C., and Heishman, S.J. Quantitative comparison of drug self-administration in animals and humans. International Symposium on Drug Dependence: From the Molecular to the Social Level, Mexican Secretariat of National Defense. Mexico City, January 22, 1991.

Henningfield, J.E. Successful Programs: The need for increased minority participation in basic research and clinical programs. Substance Abuse Prevention Conference, Lincoln University. Lincoln, Pennsylvania, February 21, 1991.

Henningfield, J. E. Clinical pharmacology of nicotine addiction. Presented as part of symposium entitled: "Pharmacology and therapeutics, dental hygiene education, and council of students - quit smoking curriculum workshop for dental educators. The American Association of Dental Schools, New Orleans, March 11, 1991.

Henningfield, J.E. Pharmacologic basis of smokeless tobacco dependence. First International Conference on Smokeless Tobacco: Tobacco and Health, Columbus, Ohio, April 12, 1991.

Henningfield, J.E. Contributions of behavioral pharmacology research to the understanding of nicotine dependence. "Distinguished Alumnus Lecture" Neuropharmacology Training Programs, University of Minnesota, Minneapolis, Minnesota, April 17, 1991.

American Lung Association - American Thoracic Society: 1991 International Conference: Anaheim, CA, May 12-15, 1991.

Henningfield, J.E. Presentation on the scientific evidence demonstrating the addictive nature of nicotine and tobacco. World No Tobacco Day Ceremony at Palace of Nations (Palais des Nations), United Nations Office at Geneva. Note that presentation was given informally at the end of the ceremony due late arrival of flight to Geneva. The presentation was invited as I was awarded the Commemorative Medal from the World Health Organization, Tobacco or Health Programme: For "work having made a highly significant contribution to the understanding of the addictive nature of nicotine and tobacco, and your pioneering research on the treatment of nicotine addiction." Presented by the Deputy Secretary-General, WHO, Geneva, May 31, 1991.

Bunker, E.B., Pickworth, W.B., and Henningfield, J.E. Nicotine patch: Effect on spontaneous smoking. College on Problems of Drug Dependence 53rd Annual Scientific Meeting. Richmond, VA, June 1991.

Huestis, M., Sampson, A., Holicky, B., Henningfield, J., and Cone, E. The fast action pharmacodynamics of marijuana smoking. College on Problems of Drug Dependence 53rd Annual Scientific Meeting. Richmond, VA, June 1991.

Pickworth, W.B., Bunker, E.B., and Henningfield, J.E. Effects of commonly abused drugs on dynamic pupillometry, subjective and physiologic measures. College on Problems of Drug Dependence 53rd Annual Scientific Meeting. Richmond, VA, June 1991.

Cohen, C., Pickworth, W.B., Bunker, E.B., and Henningfield, J.E. Spontaneous EEG changes during tobacco abstinence are reversed by caffeine. College on Problems of Drug Dependence 53rd Annual Scientific Meeting. Richmond, VA, June 1991.

Henningfield, J.E., Heishman, S.J., Richards, L.M., Lee, H., Fudala, P.J., and Johnson, R.E. Human pharmacology of the opioid antagonist, nalmefene. College on Problems of Drug Dependence 53rd Annual Scientific Meeting. Richmond, VA, June 1991.

Heishman, S.J., Taylor, R.C., Francis-Wood, A., Cohen, C., and Henningfield, J.E. Comparison of agonist and antagonist sensitivity in opiate-naïve and opiate-experienced humans. College on Problems of Drug Dependence 53rd Annual Scientific Meeting. Richmond, VA, June 1991.

Henningfield, J.E. Clinical and Abuse Liability Testing Strategies. National Institute on Drug Dependence, Beijing Medical University, Beijing, China, September 10, 1991.

Henningfield, J.E. Program Chair, Introduction and Discussion: New Strategies in Smoking Cessation and Nicotine Dependence. The 43rd Annual Scientific Session of the American Academy of Family Physicians. Washington, D.C., September 24, 1991.

Henningfield, J.E. Program Chair, Introduction and Discussion: New Strategies in Smoking Cessation and Nicotine Dependence. The 57th Annual Scientific Assembly of the American College of Chest Physicians. San Francisco, November 4, 1991.

Henningfield, J.E. (With Former Surgeon General C. Everett Koop as Keynote Speaker) Program Chair, Introduction and Discussion: New Strategies in Smoking Cessation and Nicotine Dependence. The 64th Scientific Session of the American Heart Association. Anaheim, California, November 10, 1991.

Henningfield, J.E. Neuropharmacology of Nicotine. State of the Art in Addiction Medicine, California Society of Addiction Medicine. San Diego, November 22, 1991.

Henningfield, J.E. Pathophysiology of tobacco dependence. Smoking cessation Scientific Meeting. Hanbury Manor, Hartfordshire, England, March 2, 1992.

Henningfield, J.E. Smoking Cessation: Update 1992. Florida Osteopathic Medical Association, Annual Convention. Miami Beach, Florida, March 12, 1992.

Henningfield, J.E. Treatment of Smoking Addiction -- Agenda for the 90's. Reflections on the Bay, Miami, Florida, March 12, 1992.

Henningfield, J.E. Addressing Tobacco in Treatment of Other Addictions: Nicotine Pharmacology: The Physiological Basis for Nicotine Dependence and its Treatment. Princeton, New Jersey, March 19, 1992.

Henningfield, J.E. Pharmacotherapy for Nicotine Withdrawal. Symposium: New Pharmacologic Approaches for Detoxification. American Psychiatric Association, Washington, D.C., May 4, 1992.

Henningfield, J.E. New Strategies in Addiction Treatment -- Focus on Nicotine. American Lung Association Symposium on Nicotine Addiction : Agenda for the 1990's, Minneapolis, Minnesota, May 20, 1992.

Bunker, E., Pickworth, W., Nichols, J., Snidow, N., and Henningfield, J. Ocular measures and marijuana detection in humans. College on Problems of Drug Dependence 54th Annual Scientific Meeting. Keystone, CO, June 1992.

Pickworth, W.B., Bunker, E.B., Snidow, N., Nichols, J., and Henningfield, J.E. Ethanol, pentobarbital and indomethacin interactions in human volunteers. College on Problems of Drug Dependence 54th Annual Scientific Meeting. Keystone, CO, June 1992.

Evans, S.M., Cone, E.J., Marco, A.P., and Henningfield, J.E. A comparison of the arterial kinetics of smoked and intravenous cocaine. College on Problems of Drug Dependence 54th Annual Scientific Meeting. Keystone, CO, June 1992.

Heishman, S.J., Pickworth, W.B., Bunker, E.B., and Henningfield, J.E. Acute and residual effects of smoked marijuana on human performance. College on Problems of Drug Dependence 54th Annual Scientific Meeting. Keystone, CO, June 1992.

Stapleton, J.M., Henningfield, J.E., Wong, D.F., Phillips, R.L., Grayson, R.F., Dannals, R.F., and London, E.D. Nicotine reduces cerebral glucose utilization in humans. College on Problems of Drug Dependence 54th Annual Scientific Meeting. Keystone, CO, June 1992.

Kilbey, M.M. (Participants: Henningfield, J.E, Breslau, N., Clarke, P.B.S., and Hughes, J.) Smoking and nicotine dependence: Recent findings – summary. Symposium XII. College on Problems of Drug Dependence 54th Annual Scientific Meeting. Keystone, CO, June 1992.

Henningfield, J.E. Nicotine: The pharmacology of Addiction. Clinical Therapeutic Conference on Smoking Cessation Strategies. Conference by the American College of Clinical Pharmacology and the Department of Medicine, Chicago Medical School. North Chicago, Illinois, January 20, 1993.

Cheskin, L.J., Wiersema, L., Henningfield, J.E., and Gorelick, D.A. Caloric restriction, ketonemia, and nicotine consumption in cigarette smokers. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Keenan, R.M., Hatsukami, D.K., Pentel, P.R., and Henningfield, J.E. Cotinine: An active metabolite of nicotine. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Taylor, R.C., Keenan, R.M., Heishman, S.J., Neu, A.V., and Henningfield, J.E. Performance effects of smoked nicotine and cocaine in humans. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Jenkins, A.J., Keenan, R.M., Kivett, J.B., Demuth, K., Neu, A.V., Heishman, S.J., Henningfield, J.E., and Cone, E.J. A method for delivering smoked drugs of abuse in humans: preliminary findings. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Radzius, A., Carriero, N.J., Weinhold, L.L., Gorelick, D.A., and Henningfield, J.E. Cigarette smoking not affected by cocaine self-administration. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Weinhold, L.L., Gorelick, D.A., and Henningfield, J.E. Cocaine craving during a residential trial with cocaine-dependent humans. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Rothman, R.B., Gorelick, D.A., Guo, X., Heming, R.I., Pickworth, W.B., Gendron, T.M., and Henningfield, J.E. Cocaine-induced context-specific sensitization in humans:

Preliminary results. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Evans, S., Henningfield, J.E., and Johanson, C.E. Discriminative stimulus effects of tripeleminamine in humans. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Persico, A.M., Reich, S., Henningfield, J.E., Kuhar, M.J., and Uhl, G.R. Parkinsonian patients report blunted subjective effects of methylphenidate. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Pickworth, W.B., Keenan, R.M., Neu, A.V., and Henningfield, J.E. Pupillary effects of intravenous and smoked cocaine in humans. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Butschky, M., Pickworth, W.B., Bailey, D. and Henningfield, J.E. De-nicotinized cigarette reduces withdrawal scores and increases satisfaction in 12-hour abstinent smokers. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Singleton, E.G., Tiffany, S.T., Henningfield, J.E., and Haertzen, C.A. The multidimensional aspects of cocaine craving. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Gendron, T.M., Rothman, R.B., Cadet, J.L., Koeppl, B.S., Gorelick, D.A., Henningfield, J.E., and Pickworth, W.B. Possible conditioning effects of intravenous cocaine on pupillary diameter. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Gorelick, D.A., Weinhold, L.L., Cone, E.J., and Henningfield, J.E. Carbamazepine (CBZ) does not alter cocaine self-administration in human cocaine addicts. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Heishman, S.J., Francis-Wood, A., Keenan, R.M., Chiang, C.H., Terrill, J.B., Tai, B., and Henningfield, J.E. Safety and pharmacokinetics of a new formulation of depot naltrexone. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Cadet, J.L., Gendron, T., Lange, W.R., Henningfield, J.E., and Rothman, R.B. The clinical neurological examination in chronic cocaine abusers: Preliminary findings. College on Problems of Drug Dependence 55th Annual Scientific Meeting. Toronto, Canada, June 1993.

Henningfield, J.E. (delivered by Lars Ramström) Tobacco dependence: Nature and mechanisms. 37th International Institute on the Prevention and Treatment of Alcoholism and 20th International Institute on the Prevention and Treatment of Drug Dependence. Sao Paulo, Brazil, August 6, 1993.

Henningfield, J.E. (delivered by Thomas Glynn) Tobacco: A drug of dependence. Cancer Prevention and Control, The Maria Sklodowska-Curie Memorial Cancer Center and the Institute of Oncology. Warsaw, Poland, September 7, 1993.

Henningfield, J.E. Nicotine Addiction: Focus on Adolescence. The Second Ross Roundtable on Critical Issues in Family Medicine. Washington, D.C., October 14, 1993.

Henningfield, J.E. Pathophysiology of Nicotine Addiction. The International Congress on Smoking Cessation. Glasgow, Scotland, March 5-8, 1994.

Beal, J.M., Singleton, E.G., and Henningfield, J.E. Ethnic and gender factors in addiction research. College on Problems of Drug Dependence 56th Annual Scientific Meeting. Palm Beach, FL, June 18-23, 1994.

Evans, S.M., Cone, E.J., and Henningfield, J.E. Rapid arterial kinetics of intravenous and smoked cocaine: Relationship to subjective and cardiovascular effects. College on Problems of Drug Dependence 56th Annual Scientific Meeting. Palm Beach, FL, June 18-23, 1994.

Singleton, E.G., Tiffany, S.T., and Henningfield, J.E. Development and validation of a new questionnaire to assess craving for alcohol. College on Problems of Drug Dependence 56th Annual Scientific Meeting. Palm Beach, FL, June 18-23, 1994.

Gendron, T.M., Mahaffey, J., Thomson, L.E., Kahler, L., Henningfield, J.E., Gorelick, D.A., Cadet, J.L., and Rothman, R.B. Selegiline fails to alter cigarette consumption in cocaine-dependent subjects. College on Problems of Drug Dependence 56th Annual Scientific Meeting. Palm Beach, FL, June 18-23, 1994.

Cheskin, L.J., Hess, J., Wiersema, L., Henningfield, J.E., and Gorelick, D.A. Caloric restriction increases smoking in nicotine-dependent adults. College on Problems of Drug Dependence 56th Annual Scientific Meeting. Palm Beach, FL, June 18-23, 1994.

Schuh, L.M., Heishman, S.J., Lewis, B., and Henningfield, J.E. Discriminative stimulus effects of ephedrine and phenylpropanolamine. College on Problems of Drug Dependence 56th Annual Scientific Meeting. Palm Beach, FL, June 18-23, 1994.

Pickworth, W.B., Butschky, M.F., and Henningfield, J.E. A nicotine patch reduces subjective and objective measures of tobacco withdrawal. College on Problems of Drug Dependence 56th Annual Scientific Meeting. Palm Beach, FL, June 18-23, 1994.

Henningfield, J.E., Jenkins, A.J., Steinberg, K., Keenan, R.M., and Cone, E.J. The role of nicotine delivery rate in development of selectively targeted medications. College on Problems of Drug Dependence 56th Annual Scientific Meeting. Palm Beach, FL, June 18-23, 1994.

Heishman, S.J., Singleton, E.G., Lutz, J.M., and Henningfield, J.E. Measuring drug-induced behavioral impairment: Criterion-related validity. College on Problems of Drug Dependence 56th Annual Scientific Meeting. Palm Beach, FL, June 18-23, 1994.

Guyen, D.J., Singleton, E.G., and Henningfield, J.E. Standard Spanish version of the Addiction Research Center Inventory (ARCI) in a U.S. Hispanic population. College on Problems of Drug Dependence 56th Annual Scientific Meeting. Palm Beach, FL, June 18-23, 1994.

Henningfield, J.E. Pharmacological Determinants of Cigarette Smoking. International Symposium on Nicotine: The Effects of Nicotine on Biological Systems II. Satellite Symposium of the XII International Congress of Pharmacology. Montreal, Canada, July 21-24, 1994.

Henningfield, J.E. Pharmacological analysis of nicotine dosing issues. Food and Drug Administration. Drug Abuse Advisory Committee Meeting on the Abuse Liability of Nicotine Delivered via Cigarettes and Other Tobacco Products. Silver Spring, Maryland, August 2, 1994.

Henningfield, J.E. and Schuh, L.M. A critical review of the role of nicotine replacement therapy. The 9th World Conference on Tobacco and Health. Paris, October 10, 1992.

Henningfield, J.E. and Ramström, L.M. Tobacco dependence - scientific developments and implications for cessation practices. Satellite Symposia to the 9th World Conference on Tobacco and Health, organized by the Tobacco Dependence Section of the International Council on Alcohol and Addictions. Paris, October 9, 1994.

Henningfield, J.E. Regulating cigarette nicotine levels: Design and content (or Nicotine addiction facts to be reckoned with by regulation). American Society of Preventive Oncology. Houston, March 9, 1995.

Henningfield, J.E. Introduction to tobacco harm reduction as a complimentary strategy to smoking cessation. Presented at; Smoking Cessation: Alternative Strategies, A National Conference. Sponsored by the Society for Research on Nicotine and Tobacco and The Behavioral Biology Research Center of The Johns Hopkins University School of Medicine. With general introductions by John Pinney and Joseph V. Brady. Washington, D.C., April 10-11, 1995.

Schuh, L.M., Heishman, S.J., Lewis, B.D., and Henningfield, J.E. Discriminative stimulus effects of caffeine, ephedrine, and phenylpropanolamine. College on Problems of Drug Dependence 57th Annual Scientific Meeting. Scottsdale, AZ, June 10-15, 1995.

Henningfield, J.E., Funada, M., and Schuh, L.M. Threshold dose for nicotine discrimination and reinforcement in animals and humans. College on Problems of Drug Dependence 57th Annual Scientific Meeting. Scottsdale, AZ, June 10-15, 1995.

Funada, M., Henningfield, J.E., Schutz, C.G., Goldberg, S.R., and Shippenberg, T.S. Role of delta-opioid receptors on the aversive stimulus effects of morphine withdrawal in

rats. College on Problems of Drug Dependence 57th Annual Scientific Meeting. Scottsdale, AZ, June 10-15, 1995.

Pickworth, W.B., Baumann, M., Rothman, R.B., and Henningfield, J.E. Effects of a nicotine patch on endocrine measures of tobacco withdrawal. College on Problems of Drug Dependence 57th Annual Scientific Meeting. Scottsdale, AZ, June 10-15, 1995.

Beal, J.M., Douglass, T., Singleton, E., and Henningfield, J. Ethnic and gender factors in addiction research. College on Problems of Drug Dependence 57th Annual Scientific Meeting. Scottsdale, AZ, June 10-15, 1995.

Becketts, K.M., Bauman, M.H., Gendron, T.M., Gorelick, D.A., Henningfield, J.E., and Rothman, R.B. Effects of acute and repeated intranasal cocaine on plasma prolactin levels in human drug users. College on Problems of Drug Dependence 57th Annual Scientific Meeting. Scottsdale, AZ, June 10-15, 1995.

Heishman, S.J., Weingartner, H.J., Henningfield, J.E., Taylor, R.C., Ross, A.C., and Lutz, J.M. Impairment of reflective processing after acute alprazolam and amphetamine administration. College on Problems of Drug Dependence 57th Annual Scientific Meeting. Scottsdale, AZ, June 10-15, 1995.

Geyen D.J., Kass, J., Douglas, T., and Henningfield, J.E. The Spanish version of the Index of Core Spiritual Experience (INSPIRIT) in a Southwest U.S. Latino population. College on Problems of Drug Dependence 57th Annual Scientific Meeting. Scottsdale, AZ, June 10-15, 1995.

Henningfield, J.E. Nicotine dependence: Commonalties and differences with other drug dependencies. 37th International Congress on Alcohol and Drug Dependence, Major Session. San Diego, August 21, 1995.

Henningfield, J.E. FDA's proposed tobacco regulation: Scientific underpinnings. Nicotine Dependence, Eighth Annual Conference sponsored by the American Society of Addiction Medicine. Toronto, October 14, 1995.

Henningfield, J.E. Biological and behavioral bases of tobacco addiction. National Institutes of Health, Health and Behavior Seminar Series. Bethesda, November 30, 1995.

Henningfield, J.E. Adverse behavioral effects of nicotine? Safety and Toxicity of Nicotine Symposium, Society for Research on Nicotine and Tobacco. Atlanta, December 5-6, 1995.

Henningfield J.E. Nicotine deliveries and consumer acceptability. Canada's Expert Committee on Cigarette Modification. Toronto, Canada, March 1-3, 1996.

Henningfield, J.E. Smokeless Tobacco: Bioavailability of nicotine and addiction research. Symposium on Smokeless/Spit Tobacco. Joint meeting of the International Association for Dental Research and the American Association for Dental Research. San Francisco, March 13, 1996.

Henningfield, J.E. Smoking cessation in the workplace: An analysis of cost recovery. Smoking: Its Impact on Employers' Benefit & Health Costs. Intramedical Health Services. Toronto, Canada, April 12, 1996.

Henningfield, J.E., Vocci, F. and Sachs, D.P.L. Smoking cessation medications. Symposium on Tobacco Addiction. The American Society of Clinical Oncology and the National Cancer Institute. Bethesda, NIH Campus, June 21, 1996.

Jenkins, A.J., Keenan, R.M., Henningfield, J.E., and Cone, E.J. A pharmacologic profile of smoked heroin and cocaine in humans. College on Problems of Drug Dependence 58th Annual Scientific Meeting. San Juan, Puerto Rico, June 20-27, 1996.

Baumann, M.H., Becketts, K.M., Gorelick, D.A., Henningfield, J.E., and Rothman, R.B. Effects of repeated cocaine administration on fenfluramine-induced endocrine responses in human drug users. College on Problems of Drug Dependence 58th Annual Scientific Meeting. San Juan, Puerto Rico, June 20-27, 1996.

Singleton, E.G., Heishman, S.J., and Henningfield, J.E. Cognitive features of human drug craving. College on Problems of Drug Dependence 58th Annual Scientific Meeting. San Juan, Puerto Rico, June 20-27, 1996.

Rothman, R.B., Henningfield, J.E., Johanson, C.E., Schuster, C.R., Gendron, T.M., Thomson III, L.E., Kivett, J., Chenoweth, M., Lafko, D., and Gorelick, D.A. College on Problems of Drug Dependence 58th Annual Scientific Meeting. San Juan, Puerto Rico, June 20-27, 1996.

Nelson, R.A., Gorelick, D.A., Herning, R.I., Ziegelstein, R.C., Kahler, L.A., Jewell, J.L., Cadet, J.L., Schuster, C.R., Bolla, K.I., Keenan, R.M., Contoreggi, C., and Henningfield, J.E. Influence of infusion rate and dose on effects of IV cocaine in humans. College on Problems of Drug Dependence 58th Annual Scientific Meeting. San Juan, Puerto Rico, June 20-27, 1996.

Beal, J.M., Dean, M., Henningfield, J., Geyen, D., and Singleton, E. A study of the prevalence of substance abuse and a violent behavior among African American youth. College on Problems of Drug Dependence 58th Annual Scientific Meeting. San Juan, Puerto Rico, June 20-27, 1996.

Heishman S., Taylor, R., Ross, A., Lutz, J., Ohuoha, D., Rothman, R., Weingartner, H., and Henningfield, J.E. Cognitive and psychomotor performance after acute marijuana administration in humans. College on Problems of Drug Dependence 58th Annual Scientific Meeting. San Juan, Puerto Rico, June 20-27, 1996.

Schuh, L., Henningfield, J.E., Fant, R., Pickworth, W., Rothman, R., Ohuoha, D., and Keenan, R. Pharmacodynamic effects of cotinine. College on Problems of Drug Dependence 58th Annual Scientific Meeting. San Juan, Puerto Rico, June 20-27, 1996.

Lundahl, L.H., Lukas, S.E., and Henningfield, J.E. Mecamylamine blocks positive and negative behavioral effects of IV nicotine in human subjects. College on Problems of Drug Dependence 58th Annual Scientific Meeting. San Juan, Puerto Rico, June 20-27, 1996.

Goldberg, S.R. and Henningfield, J.E. A parametric study of intravenous nicotine self-administration by humans and squirrel monkeys. College on Problems of Drug Dependence 58th Annual Scientific Meeting. San Juan, Puerto Rico, June 20-27, 1996.

Henningfield, J.E. Public health policy foundation: Up in smoke - Nicotine research travails. Keynote address for the National Institute on Drug Abuse Conference on Drug Abuse at the Annual Meeting of the American Psychological Association. Toronto, August 11, 1996.

Henningfield, J.E. Tobacco Addiction: Science, medicine, and public policy. National Institutes of Health, Medicine for the Public Special Lecture. Bethesda, October 15, 1996.

Henningfield, J.E. Chair and Organizer, Nicotine and smoking through the life cycle. American Society of Addiction Medicine's Ninth National Conference on Nicotine Dependence. Washington D.C., November 14-17, 1996.

World Health Organization (WHO). Workshop on Strengthening Collaboration on Global Tobacco Control. Presentation: Smoking Cessation and Nicotine Replacement Therapy. Atlanta, Georgia, November 6-9, 1996.

Henningfield, J.E. Addictive mechanisms of tobacco. INSP Meeting. Cuernavaca, Mexico, March 3, 1997.

Henningfield, J.E. Comparing the abuse potential of nicotine delivery systems. International Meeting: Alternative Nicotine Delivery Systems. Harm Reduction and Public Health. Toronto, March 21-23, 1997.

Henningfield, J.E. Grass Traveling Speaker Presentation: Nicotine Addiction: Pharmacology, Medicine and Regulatory Policy. Neuroscience Research Day. School of Medicine, University of Louisville. Kentucky, April 10, 1997.

Robert Wood Johnson Foundation Conference: Partnerships and New Paradigms for Tobacco Prevention Research. Presentation: Prevention of Nicotine Addiction: Neuropsychopharmacological Issues. Sundance, Utah, May 6-9, 1997.

Henningfield, J.E. Nicotine Addiction: A Global Perspective on Public Health and Policy Issues. SmithKline Beecham Consumer Healthcare, Global Meeting of Respiratory Tract and Smoking Cessation, London, April 21, 1997.

Henningfield, J.E. Physicians, Pharmacology and the Treatment of Nicotine Dependence: Pharmacodynamics of Nicotine. American Society of Clinical Oncology, Denver, May 17-18, 1997.

Radzius, A., Henningfield, J.E., and Gorelick, D.A. Cigarette smoking during early cocaine abstinence. CPDD 59th Annual Scientific Meeting, Nashville, TN, 1997.

Henningfield, J.E. Tobacco Addiction: Pharmacological and Physiological Issues. National Institutes of Child Health and Human Development (NICHD). Conference on Smoking and Middle Childhood, Bethesda, Maryland, September 26, 1997.

Henningfield, J.E. Pathophysiology of Nicotine Dependence: Implications for the Regulation of Cigarettes and Treatment of Nicotine Dependence. Interactive Monoaminergic Basis of Brain Disease. Mojacar (Almeria), Spain, October 8-12, 1997.

Henningfield, J.E. Tobacco Addiction: Science, Medicine, and Public Health Policy. Given as the Annual Jellinek Lecture for the Yale School of Medicine, New Haven, Connecticut, November 7, 1997.

Henningfield, J.E., Shiffman, S., Burns, D.M. and Pinney, J.M. Exposure reduction therapy for cigarette smokers: principles of development and projected public health benefit. American College of Neuropsychopharmacology. Hilton Waikola, Kohala Coast, Big Island, Hawaii, December 10, 1997.

Henningfield, J.E. Smoking Cessation Methods. European Commission Round Table Discussion on Smoking Cessation, Luxembourg, December 12, 1997.

Henningfield, J.E. Nicotine Addiction: Basic Science, Medicine and Public Health. American Health Foundation Seminar, January 23, 1998.

Henningfield, J.E. Tobacco Addiction: Science, Medicine, and Public Health Policy. Joseph Cullen Memorial Lecture, American Society of Preventive Oncology. Bethesda, Maryland, March 4-6, 1998.

Henningfield, J.E. The Science of Tobacco: What is Known and What is Unknown. University of California, Irvine. The Tanner Lecture on Human Values. The Tobacco Wars: Risks and Rewards of a Major Challenge, California, March 9, 1998.

Henningfield, J.E. Tobacco Dependence Treatment Medication Regulation. The Food and Drug Law Institute. Conference on Tobacco Dependence: Innovative Regulatory Approaches to Reduce Death and Disease. (Conference Steering Committee and Presenter). Washington, D.C. April 8-9, 1998.

Taylor, R.C., Heishman, S.J., Weingartner, H.J., Henningfield, J.E., Ross, A.C., and Lutz, J.M. Effects of acute alprazolam, amphetamine, and codeine administration on reflective processing. College on Problems of Drug Dependence 60th Annual Scientific Meeting. Scottsdale, AZ, June 12-17, 1998.

Pickworth, W.B., Fant, R.V., Nelson, R.A., Nichels, J., Chenoweth, M., and Henningfield, J.E. Effects of standard and placebo cigarettes after 3 and 12 hours of

tobacco deprivation. College on Problems of Drug Dependence 60th Annual Scientific Meeting. Scottsdale, AZ, June 12-17, 1998.

Fant, R.V., Henningfield, J.E., Nelson, R.A., Chenoweth, M.E., and Pickworth, W.B. Pharmacokinetic and pharmacodynamic effects of oral snuff in humans. College on Problems of Drug Dependence 60th Annual Scientific Meeting. Scottsdale, AZ, June 12-17, 1998.

Henningfield, J.E. Pharmacology and Abuse Potential. American Cancer Society Conference. Cigar Smoking Health Risks: State-of-the-Science. (Conference Steering Committee and Presenter). Washington, D.C., June 15-16, 1998.

Henningfield, J.E. Smokeless Tobacco: Addiction, Treatment and Effects on Human Performance. National Athletic Trainer's Association. 49th Annual Meeting and Clinical Symposia. Baltimore, Maryland, June 17-20, 1998.

Henningfield, J.E. History of Pharmacology (Session Chair). Pharmacology of Nicotine (Presenter). National Institute on Drug Abuse and Centers for Disease Control and Prevention: Addicted to Nicotine Conference. Bethesda, Maryland, July 27-28, 1998

Henningfield, J.E. How Science has Promoted Tobacco Control in the US. Society for Research on Nicotine and Tobacco: First International Conference. Copenhagen, Denmark, August 22-23, 1998.

Henningfield, J.E. Tobacco: prevention, treatment and strategies: discussant. The International Council on Alcohol and Addictions (ICAA): The 42nd ICAA International Institute on the Prevention and Treatment of Dependencies. St. Julians, Malta, August 30-September 4, 1998.

Henningfield, J.E. An assessment of options for manipulating nicotine within the reduced harm context: maintain, increase, eliminate or reduce (pros and cons). Canada's Expert Committee on Cigarette Toxicity Reduction. Toronto, Canada, September 20-22, 1998.

Henningfield, J.E. Scientific Underpinnings of Tobacco Control in the US. National Cancer Research Center Conference Room. Tokyo, Japan, November 4, 1998.

Henningfield, J.E. The Science of Tobacco Dependence: The Changed Brain. Pan American Health Organization (PAHO): "Tobacco Control Critical Review and Scope of Treatment in the Americas". Washington, DC, January 10-14, 1999.

Henningfield, J.E. Current Issues in Nicotine Addiction. American Association of Health Plans: 2nd Annual Conference: Addressing Tobacco in Managed Care. San Diego, CA, January 31-February 2, 1999.

Henningfield, J.E. Options for the future regulation of tobacco products: Arguments for and against focusing on nicotine. II European, I Iberoamerican Conference on Tobacco or Health. Las Palmas De Gran Canaria, February 23-27, 1999.

Henningfield, J.E. (Chair and Discussant). Preventing Tobacco Use: Molecular to Marketplace Research Issues. Society for Research on Nicotine and Tobacco: 5th Annual Meeting. San Diego, CA, March 5-7, 1999.

Henningfield, J.E. Tobacco as the Primary Addicting Drug. Council to End Nicotine Addiction in Recovery: 5th Annual CENAR Conference. Holy Cross College. Worcester, MA, April 13, 1999.

Henningfield, J.E. Tobacco Policy: From Science and Medicine to Regulation and Public Health. The Lonnie E. Mitchell National HBCU Substance Abuse Conference. Baltimore, MD, April 28-May 1, 1999.

Henningfield, J.E. Pharmacological Basis for Nicotine replacement Therapy. Spanish Respiratory Society (SEPAR): Annual Congress. Barcelona, Spain, May 15-18, 1999.

Henningfield, J.E. Tobacco Dependence: Science, Medicine and Policy. National Institute of Respiratory Diseases: World No Tobacco Day Conference 1999. Mexico City, Mexico, May 31, 1999.

Henningfield, J.E. Tobacco Dependence Prevention and Treatment. Testimony to Joint meeting of the Pennsylvania Senate Public Health and Welfare and House Health and Human Services Committees, Harrisburg, Pennsylvania. June 22, 1999.

Henningfield, J.E. (with L. Ramstrom), Co Chair and presenter in Tobacco Dependence Section symposia on Cigarette Modification and Pharmacotherapy. International Council on Alcoholism and Addictions. Vienna, Austria, August 17, 1999.

Henningfield, J.E. Presentation on nicotine pharmacology and treatment to Committee on Treatment and Rehabilitation Models, Tobacco in Mexico working meetings and seminars. Cocoyoc, Morelos, Mexico, August 27, 1999.

Henningfield, J.E. Tobacco-delivered nicotine: How current regulatory loopholes allow the tobacco industry to maximize the addictive effects of nicotine. Expert Panel on Nicotine and Nicotine Policy, European Institute of Oncology, to provide guidance to European Commission regarding proposed Tobacco Directive. Milan, Italy, September 7 & 8, 1999.

Henningfield, J.E. (Chair); Workgroup: Ahluwalia, J., Boyd, R., Dalack, G., Burns, D., Etter, J.F., Fagerstrom, K.O., Kunze, M., Moolchan, E., Pillitteri, J., Richter, K.P., Schuh, L., Slade, J., Tyndale, R.F. and Windsor, R.A. Reduction of tobacco exposure. In SRNT Treatment Methodology Conference, Section I. Treatment Outcome Measures. Washington, DC, November 7 & 8, 1999.

Henningfield, J.E. and Henningfield, T.L. Tobacco and kids. Friends School third grade class. Baltimore, December 7, 1999.

Henningfield, J.E. Presentation and discussion of Conclusions from the Helsinki Conference on the Regulation of Tobacco Products (Oct. 1999). Advancing Knowledge on Regulating Tobacco Products, World Health Organization. To provide guidance for WHO policy and the Tobacco Control Framework Convention. Oslo, Norway, February 9, 2000.

Henningfield, J.E. Tobacco addiction and treatment. 40th Annual Conference on Cardiovascular Disease Epidemiology and Prevention. La Jolla, California, March 4, 2000.

Henningfield, J.E. Tobacco product regulation. The 31st Annual Medical Scientific Conference of the American Society of Addiction Medicine. Chicago, April 13-16, 2000.

Henningfield, J.E., Pillitteri, J. and Hughes, J.R. Clinical trial considerations. Committee to Assess the Science Base for Tobacco Harm Reduction, National Academy of Sciences, Institute of Medicine. Washington, D.C., April 25, 2000.

Henningfield, J.E. Pharmacotherapy for tobacco dependence. Mayo Clinic Nicotine Dependence Seminar. Rochester, Minnesota, May 8, 2000.

Henningfield, J.E. Tobacco addiction: science, medicine and public health policy. Johns Hopkins University 18th Annual Summer Institute of Epidemiology and Biostatistics. Baltimore July 6, 2000.

Henningfield, J.E. and Fant, R.V. How addictive is smokeless tobacco? Second International Conference on Smokeless/Spit Tobacco. Chicago, August 5, 2000.

Henningfield, J.E., Moderator, Nicotine Plenary Session, Nicotine: From Science to the Marketplace (with Alan Leshner, Greg Connolly and the simulated global launch of Clean Cut cigarette by Arnold Communications, and Jordon McGrath Case & Partners Euro RSCG, and Pinney Associates). 11th World Conference on Tobacco or Health. Chicago, August 8, 2000.

Henningfield, J.E. Why is quitting so hard? Understanding tobacco addiction, and Course Coordinator and Instructor (along with Joseph Gitchell), Cessation Programs at State and Local Levels. Tobacco use Prevention Training Institute Centers for Disease Control and University of North Carolina. Denver, September 17-22, 2000, with Internet Provided Distance Learning supplemental course.

Henningfield, J.E. Presentations on Nicotine Bioavailability, Dose and measurement of nicotine, and Should we progressively reduce the dose? Meeting on Nicotine Policy, Nicotine Advisory Board. European Institute of Oncology, Milan, Italy, October 5 & 6, 2000.

Henningfield, J.E. Why do people keep starting to smoke? Why is quitting so hard? What can we do to help? Ministers of the European Parliament (Jules Maaten, Chris Davies, Robert Goodwill). Brussels, Belgium, October 11, 2000.

Henningfield, J.E. FTC/ISO cigarette testing: history and perspective. World Health Organization First meeting of the Scientific Advisory Committee on Tobacco Product Regulation (SACTob), World Health Organization, Geneva, October 12-13, 2000.

Henningfield, J.E. Conclusions of the Helsinki conference on regulation of tobacco dependence treatment products, and summary and conclusions of Barcelona meeting (as rapporteur). Second World Health Organization European Meeting on the Regulation of Tobacco Dependence Treatment Products, Barcelona, Spain, October 27, 2000.

Henningfield, J.E. Neuronal nicotine receptor research: Implications for understanding and treating tobacco addiction. Annual Investigator Meeting, Tobacco-Related Disease Research Program, San Diego, California, November 30, 2000.

Henningfield, J.E. Agonist treatments for substance abuse: nicotine. American College of Neuropsychopharmacology. San Juan, Puerto Rico, December 12, 2000.

Henningfield, J.E., Slade, J. Tobacco industry approaches to regulation efforts. World Health Organization, Second WHO Scientific Advisory Committee on Tobacco Product Regulation (SACTob). Atlanta, January 31-February 2, 2001.

Henningfield, J.E. (Reactor to FDA Controlled Substance Staff Presentation) Abuse liability and scheduling considerations in drug development. Temple University School of Pharmacy Conference on Creating New Knowledge: FDA and Industry in Dialogue. Philadelphia, April 3, 2001.

Henningfield, J.E. (Rapporteur) Regulation of nicotine replacement therapies. World Health Organization. Copenhagen, April 6, 2001.

Henningfield, J.E. (Panelist) Reducing tobacco harm, moderated by D.A. Kessler. Reducing Tobacco Harm Conference. Crystal City, VA, May 10-11, 2001.

Henningfield, J.E. (Plenary Speaker and Rapporteur) Current state of pharmacotherapy for nicotine addiction. National Cancer Institute – National Institute on Drug Abuse Working Group on Pharmacologic Approaches to Nicotine Addiction. Crystal City, VA, May 17-18, 2001.

Henningfield, J.E. (Presenter and Rapporteur) Mission of SACTob. World Health Organization, Third WHO Scientific Advisory Committee on Tobacco Product Regulation (SACTob). Penang, Malaysia, July 4-6, 2001.

Henningfield, J.E. (Meeting Co-Chair with B. Garrett, Presenter, and Conclusions) Ammonia treatment of cigarettes: implications for nicotine addiction. Panel on Ammonia and other facilitators of nicotine delivery. Centers for Disease Control and Prevention, Office on Smoking and Health, Atlanta, August 8, 2001.

Henningfield, J.E. Tobacco addiction science: Implications for prevention, treatment and health care policy. Interagency Committee on Smoking and Health. U.S. Department of Health and Human Services, Humphrey Building, Washington, D.C., August 14, 2001.

Henningfield, J.E. (Presenter and Course Co-Chair with C. Husten). Cessation programs at state and local levels. Centers for Disease Control and University of North Carolina Tobacco Use Prevention Training Institute, Portland, Oregon, August 19-24, 2001.

Henningfield, J.E. (Presenter and Co-Chair with C.A. Rose) Symposium: Behavioral Science Foundation of Tobacco Product Modification; Presentation: Regulatory challenges to reducing tobacco addiction: A behavioral science foundation. American Psychological Association, San Francisco, August 24, 2001.

Henningfield, J.E. (Presenter and Co-Chair with C.A. Rose) Symposium: Behavioral Science Foundation of Tobacco Product Modification; Presentation: Regulatory challenges to reducing tobacco addiction: A behavioral science foundation. American Psychological Association, San Francisco, August 24, 2001.

Henningfield, J.E. New developments in nicotine addiction: treatment implications. American Society of Addiction Medicine. Atlanta, September 16, 2001 (to be rescheduled due to September 11).

Henningfield, J.E. and Melihan-Cheinin, P. Global policy issues and research needs in tobacco control. Third Society for Research on Nicotine and Tobacco Conference: Advance on Neuroscience and Pharmacology of Nicotine, Paris, September 19, 2001 (presented by Dr. Cheinin due to September 11-caused flight cancellations).

Henningfield, J.E. (with William Corr, Executive Vice President, Campaign for Tobacco Free Kids). Science Policy Fellowship Orientation Symposium: The FDA and Tobacco Regulation: When Politics and Science Have Different Agendas; Present and discuss: Tobacco addiction science foundation for public health policy : American Association for the Advancement of Science, Washington, D.C. September 19, 2001.

Henningfield, J.E., Rose, C.A. and Slade, J. New nicotine delivery devices – assessment using biomarkers (presentation); Panel Discussion (with D. Hatsukami, N. Benowitz, D. Hoffman, and M. Zeller): Biomarkers for the assessment of cigarettes. Biomarkers for Tobacco Exposure: Application to Clinical and Epidemiological Studies, University of Minnesota, Minneapolis, October 25-26, 2001.

Henningfield, J.E. Drug abuse prevention, treatment, training, and research opportunities. Dartmouth College and Koop Institute, November 8, 2001.

Henningfield, J.E. Tobacco use: epidemiology, pathogenesis and treatment. Ethics Research Consortium on Smoking and Genetics. Georgetown Public Policy Institute, Georgetown University. Washington, D.C., November 30, 2001.

Henningfield, J.E. (Rapporteur) Present summary and conclusions. Regulation of tobacco products and regulation of treatment products. World Health Organization. Prague, Czech Republic, December 14, 2001.

Henningfield, J.E., The use, risks and benefits of tobacco industry presentations and data. Modification of the reinforcing effects of cigarettes by chemical manipulations such as ammonia and menthol treatment. Scientific Advisory Committee on Tobacco Product Regulation, World Health Organization, Oslo, Norway, Feb. 4-6, 2002.

Henningfield, J.E. Reflections on John Slade: images, feelings, thoughts, future. Annual meeting of the Robert Wood Johnson Foundation Developing Leadership in Substance Abuse and Innovators Combating Substance Abuse Program, New Orleans, March 13-15, 2002.

Henningfield, J.E. and Garrett, B.E. Racial differences in smoking behavior: The current debate regarding menthol cigarettes. Ethical Issues in Smoking and Genetics, Institute for Health Care Research and Policy, Georgetown University, Washington, D.C., March 19, 2002.

Henningfield, J.E. Presenter: Addiction concepts and potential mechanisms of altering addiction prevalence, and moderator: The biochemistry and physiologic impact of menthol. The First Conference on Menthol Cigarettes: Setting the Research Agenda, Centers for Disease Control and Prevention, Atlanta, March 2, 2002.

Henningfield, J.E. The current state of epidemiological data on trends in prescription drug abuse. The Dr. Lonnie E. Mitchell National HBCU Substance Abuse Conference. Baltimore, April 4, 2002.

Henningfield, J.E. New nicotine delivery systems: harm reduction or public health menace – scientific, public health and regulatory challenges. Tobacco Topic Luncheon Meeting. U.S Department of Health and Human Services, Humphrey Building, Washington D.C., April 10, 2002.

Henningfield, J.E. Safer cigarettes: science, policy, and regulatory challenges. Transdisciplinary Tobacco Use Research Center, special lecture series. University of California, Irvine, April 11, 2002.

Henningfield, J.E. Senator Frank R. Lautenberg Annual Lecture in Public Health and Convocation Address. Public health the John Slade way. Convocation ceremony, class of 2002. University of Medicine and Dentistry of New Jersey, School of Public Health. Woodbridge Hilton, Iselin, NJ. May 20, 2002.

Johanson, C.E. and Henningfield, J.E. (co-chair and introduction) Human drug abuse liability assessment: research and drug development challenges. Workshop at the College on Problems of Drug Dependence, Quebec City, Canada, June 10, 2002.

Henningfield, J.E. Pharmacotherapy and behavioral therapies to treat tobacco dependence. Global Policy for Smoking Cessation, World Health Organization, and Ministry of Health of the Russian Federation. Moscow, June 14-15, 2002.

Henningfield, J.E. Keynote address: The future of treatment. Global University on Tobacco Control sponsored by GlaxoSmithKline. Warsaw, Poland, June 19, 2002.

McNeil, A. and Henningfield, J.E. (invited co-chairs) Co-regulation of tobacco products and treatment products – roundtable symposium. Third European Conference on Tobacco or Health, World Health Organization Collaborating Center. Warsaw, Poland, June 20, 2002.

Henningfield, J.E., Wilkenfeld, J. and Zeller, M. U.S. case study and history: FDA attempt to co-regulate tobacco and treatment. In: Co-regulation of tobacco products and treatment products – roundtable symposium. Third European Conference on Tobacco or Health, World Health Organization Collaborating Center. Warsaw, Poland, June 20, 2002.

Foreit, J., Henningfield, J.E. and Rose, C.A. Availability and marketing of novel nicotine products in the U.S. in the absence of regulation. In: Co-regulation of tobacco products and treatment products – roundtable symposium. Third European Conference on Tobacco or Health, World Health Organization Collaborating Center. Warsaw, Poland, June 20, 2002.

Henningfield, J.E. Reducing tobacco-caused disease: scientific and regulatory challenges. In: Health consequences of smoking and reducing its risk, co-chaired by Martin Jarvis, Richard Peto and Vesna Kerstin-Petric. Third European Conference on Tobacco or Health, World Health Organization Collaborating Center. Warsaw, Poland, June 20, 2002.

Henningfield, J.E. Johns Hopkins University 19th Annual Summer Institute of Epidemiology and Biostatistics. Tobacco addiction by design: implications for health policy, and harm reduction issues. June 24, 2002.

Henningfield, J.E., Moolchan, E.T. and Zeller, M. Reducing addiction and other tobacco-caused diseases in the young: biological, public health and regulatory issues. Innovations in Youth Tobacco Control, University of Michigan Tobacco Research Network, The Robert Wood Johnson Foundation, The Ted Klein Youth Tobacco Research Project. Santa Fe, New Mexico, July 8-11, 2002.

Henningfield, J.E. History of tobacco control, nicotine addiction and public policy. Tobacco Control and the Law, University of Maryland Law School, Baltimore, Sept. 3, 2002.

Henningfield, J.E. Dynamics of nicotine addiction. Third International Conference on Smokeless Tobacco: Advancing Science and Protecting Public Health. Stockholm, Sept. 22-25, 2002.

Connolly, G. and Henningfield, J.E. New smokeless tobacco products. Third International Conference on Smokeless Tobacco: Advancing Science and Protecting Public Health. Stockholm, Sept. 22-25, 2002.

Henningfield, J.E. Tobacco product regulation. Plenary Session: Addressing the tobacco epidemic in the 21st century: major challenges and future horizons. World Forum on Drugs. Montreal, Sept. 25, 2002.

Henningfield, J.E. Bridge to compassion: A scientist's perspective on addiction and art. Opening press conference to the American Visionary Art Museum's Exhibition: High on Life: Transcending Addiction. Baltimore, October 20, 2002.

Henningfield, Expert Panel, Co-Convener, Conference on the Assessment of the Abuse Liability of CNS Drugs on October 27-29, 2002 in Bethesda, MD

Henningfield, J.E. Harm reduction: Lessons learned from past experiences, current environment, and future directions. National Conference on Tobacco or Health. San Francisco, November 20, 2002.

Henningfield, J.E. Science foundation for tobacco harm reduction. University of Minnesota Transdisciplinary Tobacco Use Research Center. Minneapolis, December 6, 2002.

Henningfield, J., Di Marino, M., Rohay, J., Clayton, R., Jones, S., Wilcox, P., Ousey, G., Hunt, S. and Reeder, K. Prescription Drug Abuse Patterns in Youth and Adults: Implications for Prevention Programming. Presented at the Annual Meeting of the American College of Neuropsychopharmacology. San Juan, December 11, 2002.

Henningfield, J.E. Chair Drug Addiction in America: A 21st Century Agenda for Science, Policy and Innovation. Innovators Awards Program. National Press Club, Washington, D.C., February 12, 2003.

Henningfield, J.E. Introduction to C.E. Koop, Keynote Address: Drug Addiction in America: A 21st Century Agenda for Science, Policy and Innovation. Innovators Awards Program. National Press Club, Washington, D.C., February 12, 2003.

Henningfield, J.E. Moderate Panel and summarize state of science and policy; Innovations in the Prevention and Treatment of Addiction: Challenges for Research and Policy Development. Panelists: J.V. Brady, C. DiClemente, S. Headen, R. Hingson and H. Jones. Innovators Awards Program. National Press Club, Washington, D.C., February 12, 2003.

Henningfield, J.E., Moolchan, E.T. and Zeller, M. (Presented by M. Zeller). Regulatory strategies to reduce tobacco addiction in youth. Society for Research on Nicotine and Tobacco. New Orleans, February 20, 2003.

Henningfield, J.E. Introduction to C. E. Koop for Keynote Lecture. Society for Research on Nicotine and Tobacco. New Orleans, February 20, 2003.

Henningfield, J.E. and Santora, P. Reducing drug addiction and abuse: innovations, issues and questions. The Dr. Lonnie E. Mitchell National HBCU Substance Abuse Conference. Baltimore, April 4, 2003.

Henningfield, J.E. and Henningfield, V.B. Tobacco and kids. Friends School third grade class. Baltimore, April 7, 2003.

Henningfield, J.E. and Santora, P. Vaccines and depot medications: Discussion of science foundation, regulation and actual use considerations. Workshop on Immunotherapies and Depot Medications for Treating Drug Addiction. National Academies of Science. Washington DC, April 22, 2003.

Henningfield, J.E. Keynote address: Nicotine addiction as a brain disorder: Implications for public health and policy. Addiction Treatment Providers of New Jersey. Atlantic City, April 29, 2003.

Henningfield, J.E. and Santora, P. Tobacco addiction: Science, Medicine and Policy. Department of Psychiatry and Behavioral Sciences Biennial Program. Baltimore, May, 1, 2003.

Henningfield, J.E. (along with Carlo DiClemente, Mark Fishman, and Terry Fitzgerald, with host Andy Bienstock). The nature of addiction and methods of treatment. The Marc Steiner Show, WYPR-FM, 88.1, radio. Baltimore, MD, May 13, 2003.

Henningfield, J.E. Invited testimony for hearing: Reduce exposure/reduced risk tobacco products: An examination of the potential public health impact and regulatory challenges. U.S. House of Representatives, Committee on Government Reform. Washington, DC, June 3, 2003.

Henningfield, J.E. New tobacco and nicotine products: snake oil or harm reduction? Tobacco Control Research: Investing in Science for the Public's Health. Washington DC, June 19, 2003.

Henningfield, J.E. Tobacco addiction and treatment: The science foundation. An educational briefing for the Health, Education, Labor and Pensions Committee Staff of the United States Senate concerning Senate staff involved in development of the "Family Smoking Prevention and Tobacco Control Act" and other tobacco legislation. Hart Senate Building, Washington, DC, July 31, 2003.

Henningfield, J.E. International tobacco product regulation, scientific issues and questions: Bridging scientific uncertainty. World Health Organization workshop: Protocols to the Framework Convention on Tobacco Control (FCTC). 12th World Conference on Tobacco or Health. Helsinki, Finland, August 4, 2003.

Henningfield, J.E. Plenary Session Keynote: Tobacco addiction: control by product regulation. 12th World Conference on Tobacco or Health. Helsinki, Finland, August 6, 2003.

Anderson, P. and Henningfield, J.E., Co-chairs, Defining and measuring a good quality service for the treatment of tobacco dependence. 12th World Conference on Tobacco or Health, Helsinki. Finland, August 6, 2003.

Henningfield, J.E. Tobacco harm reduction products: Core principles. 12th World Conference on Tobacco or Health, Helsinki, Finland. August 7, 2003.

Henningfield, J.E. Tobacco addiction, regulation and policy. University of Maryland Law School, Baltimore, Maryland, September, 2, 2003.

Henningfield, J.E. and Markou, A. (with G.F. Koob as co-author). Implications of Neurobiology for tobacco control (presented by JEH), and Neurobiology of nicotine addiction (presented by AM). World Bank and World Health Organization Global Workshop on Nicotine Addiction (Sponsored by University of Toronto, Tata Institute for Fundamental Research, NIH, and Bill and Melinda Gates Foundation), Mumbai, India, September 22-23, 2003.

Henningfield, J.E. and Zeller, M. Regulatory issues to be considered in light of the WHO Framework Convention on Tobacco Control (FCTC). World Health Organization Scientific Advisory Committee on Tobacco Regulation, 6th Session, Goa, India, September 25-27, 2003.

Henningfield, J.E. Tobacco dependence and other drug dependencies. International Council on Alcohol and Addictions, Toronto, Canada, October 20, 2003.

Henningfield, J.E. Introduction, moderator and closing comments. First Annual Innovators Awards Program Lectureship – Addiction treatment in the 21st century: lessons from mainstream medicine, by A. Thomas McLellan. Johns Hopkins University School of Medicine, Baltimore, November 10, 2003.

Henningfield, J.E. Tobacco and other addictions: Research and policy issues. Morgan State University, Center for Health Disparities Solutions Lecture Series. Baltimore, December 4, 2003.

Henningfield, J.E. FDA Regulation: Laboratory Capacity and science needs. National Conference on Tobacco or Health, Boston, December 11, 2003.

Henningfield, J.E. New tobacco and nicotine products: Snake oil or harm reduction. National Conference on Tobacco or Health, Boston, December 11, 2003.

Henningfield, J.E. Contributions of John Slade to the control of substance abuse and tobacco addiction. National Conference on Tobacco or Health, Boston, December 12, 2003.

Henningfield, J.E. Smokeless tobacco: Product science and actual use issues. National Conference on Tobacco or Health, Boston, December 12, 2003.

Henningfield, J.E. The changing cigarette and harm reduction. The Johns Hopkins Bloomberg School of Public Health, Institute for Global Tobacco Control lecture series, Baltimore, January 28, 2004.

Henningfield, J.E. Panelist/Discussant. 40 years of progress on smoking and health: Lessons from the past, opportunities for the future. Scottsdale, Arizona, February 18, 2004.

Henningfield, J.E. and Zeller, M. Science base for regulating tobacco addiction liability. Society for Research on Nicotine and Tobacco, Annual Meeting. Scottsdale, Arizona, February 19, 2004.

Wayne, G.F., Connolly, G.N. and Henningfield, J.E. Tobacco industry documents as a roadmap for exploring the neurobiology of tobacco dependence. Society for Research on Nicotine and Tobacco, Annual Meeting. Scottsdale, Arizona, February 19, 2004.

Henningfield, J.E. Tobacco addiction and disease: A public health framework. Who's in Control: Cigarettes or Citizens? Tobacco and Disease, Behavior at the Crossroads of Public Health Lecture Series. The Johns Hopkins Bloomberg School of Public Health, Baltimore, March 5, 2004.

Henningfield, J.E. Science base for tobacco regulation, disease control and treatment. Dean's lecture and visiting professor program, University of Kentucky College of Medicine, Lexington, March 9, 2004.

Henningfield, J.E. Nicotine Pharmacology. Medical Pharmacology Course, Johns Hopkins University School of Medicine, Baltimore, March 11, 2004.

Henningfield, J.E. Drug Addiction: Developing compassion for people afflicted by drug addiction. World Addiction Foundation Inaugural Dinner and Conference, Livingston, New Jersey, March 24, 2004.

Henningfield, J.E. Tobacco research, testing, and capacity building needs. International Network for Tobacco Testing, Research and Regulation (INTTRR), World Health Organization and National Cancer Institute Joint Meeting, Rockville, Maryland, March 25, 2004.

Santora, P., Dorsey-Jackson, M. and Henningfield, J.E. Co-curator's and moderators: Addiction and Art – a juried exhibition. The Dr. Lonnie E. Mitchell National HBCU Substance Abuse Conference, Baltimore, March 30 – April 2, 2004.

Henningfield, J.E. The importance of mentoring in drug addiction control including comments from Dr. C. Everett Koop. Reckitt Benckiser Inaugural Mentor/Speaking Program. New Orleans April 17, 2004.

Henningfield, J.E. Tobacco and Disease Overview. Charting a New Course: The Way Forward, Behavior at the Crossroads of Public Health Lecture Series. The Johns Hopkins Bloomberg School of Public Health, Baltimore, May 17, 2004.

Henningfield, J.E. Controlling substance abuse and addiction: 21st century challenges. Developing Leadership in Substance Abuse and Innovators Combating Substance Abuse Joint Annual Meeting, Chicago, May 19, 2004.

Henningfield, J.E., Rose, C.A. and Zeller, M. Judge for yourself: An analysis of tobacco industry's statements to juries on matters of addiction. Depositions and Trial Testimony Archive (DATTA) and Tobacco Products Liability Project Joint Meeting, San Diego, June 1, 2004.

Henningfield, J.E. Introduction and Moderator. First Innovators Awards Program Think Tank: Protecting the privacy of drug addicted persons in treatment can serve as a barrier to diagnosis and treatment: Intended and unintended consequences of Federal Regulation 42 CFR Part 2 and the Health Insurance Portability and Accountability Act. Robert Wood Johnson Foundation, April 22, 2004.

Henningfield, J.E. Introduction and Moderator. Second Innovators Awards Program Think Tank. Drug addiction treatment in the 21st century: Issues and challenges to making addiction treatment as accessible as addictive drugs. Adjunct to the Annual Meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico, June 15, 2004.

Henningfield, J.E. Reducing tobacco addiction and disease: Science, medicine and policy. Tobacco Control Research Seminar and Visiting Professor Series, Center for Tobacco Research and Intervention, University of Wisconsin School of Medicine, Madison, June 24, 2004.

Henningfield, J.E. Discussant: Medications for tobacco addiction treatment: expanding the options. National Cancer Institute, National Institute on Drug Abuse, and National Institute on Alcohol and Alcoholism. Bolger Center, Potomac, Maryland August 24, 2004.

Koop, C.E. and Henningfield, J.E. Developing leadership in public health. Dartmouth College, Hanover, October 22, 2004.

Henningfield, J.E. Introduction and Moderator: Treating tobacco addiction: Effective Strategies for the 21st Century. Second Annual Innovators Awards Program Lectureship by Michael C. Fiore with commentary by Scott J. Leischow. The Johns Hopkins University School of Medicine, Baltimore, November 10, 2004.

Henningfield, J.E. Tobacco Addiction: Science Foundation for Public Health Policy. Columbia School of Medicine and School of Public Health joint conference. New York, February 10, 2005.

Henningfield, J.E. Nicotine Pharmacology. Medical Pharmacology course, The Johns Hopkins University School of Medicine, Baltimore, March 15, 2005.

Henningfield, J.E. New Tobacco and Nicotine Products: Snake Oil or Harm Reduction. Medical University of Vienna, Institute for Social Medicine, Nicotine Institute. Vienna, March 18, 2005.

Henningfield, J.E., Fant, R. Zeller, M., Gitchell, J., and Pinney, J. How might FDA apply principles of risk management prior to permitting health claims for smokeless tobacco as part of a harm reduction strategy? Society for Research on Nicotine and Tobacco. Prague, March 23, 2005.

Henningfield, J.E. Discussant. Opioid Risk Management. Tufts Health Care Institute. Boston, March 29, 2005.

Henningfield, J.E. Moderator and Introduction: Expecting the Unexpected: Effective Utilization of Risk Management. Also presenting: Risk Management Issues: an Overview; Risk Management: An FDA Perspective as Interpreted by Jack E. Henningfield. With J.D. Haddox and R.S Morey. Food and Drug Law Institute Meeting. Washington DC, April 8, 2005.

Henningfield, J.E., Cone, E.J, Fant, R.V. Sees, K. and Pinney, J.M. Risk Management Solutions for Novel Formulations: Path to More Flexible CSA Scheduling Options? Impact of Drug Formulation on Abuse Liability Safety and Regulatory Decisions Conference. College on Problems of Drug Dependence. Bethesda, April 19-20, 2005.

Henningfield, J.E. and Santora, P.B. Co-Chair and Moderate Judges Session for 2nd Annual Addiction Art Juried Competition at the American Visionary Arts Museum for The 7th Annual Dr. Lonnie E. Mitchell National HBCU Substance Abuse Conference. Baltimore, April 22, 2005.

Henningfield, J.E. and Zaatari, G. Recommendations for WHO scientific advisory on the health effects of waterpipe smoking. WHO TobReg 2nd Meeting, Rio de Janeiro, Brazil, June 7-9, 2005.

Henningfield, J.E. and Stolerman, I. Co-Chairs and Introduction to Plenary Symposium: Nicotine Psychopharmacology and Policy – A Look Behind and a Look Ahead. American Psychological Association, National Meeting, Washington, DC, August 18, 2005.

Henningfield, J.E. and Zeller, M. Psychopharmacology Research Implications for National and Global Tobacco Regulation. Presented in Plenary Symposium: Nicotine Psychopharmacology and Policy – A Look Behind and a Look Ahead. American Psychological Association, Washington, DC, August 18, 2005.

Henningfield, J.E. Tobacco Addiction: Interface Between Tobacco and Cancer. Symposium on Tobacco Carcinogenesis. American Chemical Society, National Meeting, Washington, DC, August 30, 2005.

Henningfield, J.E. Changing Nature of Nicotine. Keynote at American Osteopathic Academy of Addiction Medicine, Annual Scientific Convention of the American Osteopathic Association, Orlando, October 24, 2005 – Delivered via telephone remote with Dr. Sees presenting abbreviated slide set due to Hurricane Wilma.

Henningfield, J.E. Moderator and Introduction to Alcohol screening, intervention and confidentiality requirements in trauma centers and emergency departments. Johns Hopkins University School of Medicine Third Annual Symposium of the Innovators Awards Program, Baltimore, October 26, 2005.

Henningfield, J.E. Nicotine Pharmacology. Medical Pharmacology Course, Johns Hopkins University School of Medicine, Baltimore, November 15, 2005.

Henningfield, J.E. Chairman, Expert Committee on Health and Smoking, Japan-U.S. Seminar for Treating Smokers. Tokyo Prince Hotel Park Tower, Tokyo, November 21, 2005.

Henningfield, J.E. The neurophysiology of tobacco dependence and implications for treatment. Tokyo Prince Hotel Park Tower, Tokyo, November 21, 2005.

Henningfield, J.E. Nicotine maintenance for the future. Plenary Session. Third Australian Tobacco Control Conference, Sydney, November 24, 2005.

Henningfield, J.E. Nicotine facts versus fiction. Breakfast session: Does nicotine need a new publicist? Third Australian Tobacco Control Conference, Sydney, November 25, 2005.

Henningfield, J.E. Discussant. Tobacco Harm Reduction Strategic Dialogue and Network Meeting, Boston, December 5-7, 2005.

Henningfield, J.E. Distinguished Visiting Scholar, Kansas University Medical Center Series. Tobacco addiction in the 21st century: Science, health, product change and global regulation, Kansas City, Kansas, January 11, 2006.

Henningfield, J.E. All tobacco products are deadly and addictive: Product diversity challenges for regulation and communication. In Technical Briefing for the 1st Session of the Conference of Parties to the World Health Organization Framework Convention on Tobacco Control, Technical Briefing: Tobacco Product Regulation and its Ramifications for Implementation. International Conference Centre Geneva (CICG), Geneva, February 7, 2006.

Henningfield, J. Djordjevic, M., Dybing, E. and Bettcher, D. World Health Organization Tobacco Laboratory Network (WHO TobLabNet). Society for Research on Nicotine and Tobacco, Orlando, February 16, 2006.

Henningfield, J.E. The courtroom is not a laboratory: How science is used in the court of law. In Workshop 2: Science and the courts: How science impacts tobacco litigation. Society for Research on Nicotine and Tobacco, Orlando, February 17, 2006.

Henningfield, J.E. Reducing tobacco use in the 21st century: Virginia from a national and global perspective. Keynote address, The Forum on Youth Tobacco Use: Translating Research into Practice, Richmond, March 29-30, 2006.

Henningfield, J.E. Science Base for Tobacco Control Policy. Seminar on Health Services Research in Policy. George Washington University School of Public Health, Washington, D.C., April 10, 2006.

Henningfield, J.E. What form of scenario planning will be most helpful to overall effort? Strategic dialogue on tobacco harm reduction. Harrison Conference Center, Lake Bluff, IL, May 1-3, 2006.

Schnoll, S.H., Fant, R.F. and Henningfield, J.E. Prescription drug abusers: Abuse is not abuse is not abuse. College on Problems of Drug Dependence. Scottsdale, Arizona, June 21, 2006.

Henningfield, J.E., Fant, R.F. and Schnoll, S.H. Risk management and drug abuse research: challenges and opportunities. College on Problems of Drug Dependence. Scottsdale, Arizona, June 21, 2006.

Henningfield, J.E. Discussant and working group chair: Ingredients and design features related to addictiveness. World Health Organization Tobacco Product Regulation Study Group (TobReg). International Conference Center, Kobe, Japan, June 28-30, 2006.

Henningfield, J.E. Nicotine and mental acuity. Global University on Smoking Control, for GlaxoSmithKline Consumer Healthcare. Lansdowne, VA, July 11, 2006.

Henningfield, J.E. Harm reduction by nicotine delivery (session chair and introduction). 13th World Conference on Tobacco OR Health. Washington, DC, July 14, 2006.

Henningfield, J.E. World Health Organization Consultation on Tobacco Harm Reduction (Rapporteur). Washington, DC, July 15-16, 2006.

Henningfield, J.E. Prescription opioid abuse: science, public health and policy. American Psychological Association. New Orleans, August 12, 2006.

Henningfield, J.E. (Planning Committee Co-Chair with Michael Fiore) Healthcare for the 21st Century: A Celebration of Dr. C. Everett Koop's 90th Birthday. Event Co-Chairs: Senator Orrin G. Hatch and Senator Hillary Rodham Clinton. Cosmos Club, Washington, DC, September 13, 2006.

Henningfield, J.E. Can we reduce the addictiveness of tobacco products? Science, health and policy considerations. Can We Make Smoking History in our Lifetime? Science and Policy Needs. Harvard School of Public Health, Boston, September 18, 2006.

Henningfield, J.E. Tobacco product contents and design: Implications for initiation, addictiveness and toxicity. Third Meeting of the Key Facilitators, Interim Convention of the Secretariat, World Health Organization Tobacco Free Initiative, Framework Convention on Tobacco Control. Ottawa, Canada, October 26, 2006.

Henningfield, J.E. Introduction and Discussion: Innovators Awards Annual Lectureship by Mark W. Parrino: Opioid addiction treatment in the criminal justice system;

commentary by The Honorable Karen Freeman-Wilson and Chief of Corrections, Orange County, FL, Timothy P. Ryan. The Johns Hopkins University School of Medicine, Baltimore, November 8, 2006.

Henningfield, J.E. Drug abuse liability assessment, drug scheduling and risk management. Breakfast Roundtable Lecture and Discussion for the Gerson Lehrman Group, New York, November 15, 2006.

Henningfield, J.E., Passik, S., Dhingra, L., Schnoll, and Shiffman, S. Cigarette smoking predicts opioid abuse among pain patients: Clinical and research issues. American College of Neuropsychopharmacology, Hollywood, Florida, December 5, 2006.

Henningfield, J.E. Science base for tobacco addiction and treatment. Smoking Cessation Consensus Panel, National Medical Association. Sonoma, California, December 8, 2006.

Henningfield, J.E. Harm reduction: Promise and peril. Translational medication development for nicotine dependence workshop. National Institute on Drug Abuse and National Cancer Institute, Chevy Chase, Maryland. January 8, 2007.

Henningfield, J.E. Addiction biology and tobacco product design: Formidable barriers to cancer control. President's Cancer Panel: Promoting Healthy Life Styles to Reduce the Risk of Cancer. Jackson, Mississippi, February 12, 2007.

Henningfield, J.E., Passik, S., Dhingra, L., Schnoll, S.H. and Shiffman, S. Tobacco Dependence Marks Prescription Opioid Misuse: Theoretical Basis and Research Agenda. Society for Research on Nicotine and Tobacco, Austin, TX, February 22, 2007.

Henningfield, J.E. with McHugh, P.R. Tobacco addiction: psychiatric considerations before the Motivated Behaviors Medical Rounds Seminar, Johns Hopkins Hospital, Baltimore, March 7, 2007.

Henningfield, J.E. Tobacco Addiction: Science, Medicine and Regulatory Policy. Medical Pharmacology and First Day Series, The Johns Hopkins University School of Medicine, Baltimore, March 13, 2007.

Henningfield, J.E. Tobacco Addiction and Disease Control in the 21st Century: Science, Health and Regulatory Issues. National Institute on Drug Abuse, Intramural Research Program Seminar Series, Baltimore, May 1, 2007.

Henningfield, J.E. Introduction to 6th Annual Marian W. Fischman Memorial Lectureship Award winner, Dorothy K. Hatsukami. College on Problems of Drug Dependence, Quebec City, June 18, 2007.

Fant, R.V., Green, Y., Schnoll, S.H., Henningfield, J.E., Ertischek, M.E. and Cone, E.J. Monitoring the Internet for prescription drug misuse and tampering. College on Problems of Drug Dependence, Quebec City, June 19, 2007.

Schnoll, S.H., Ertischek, M.D., Henningfield, J.E., Fant, R.V., and Rohay, J.M. Prescription drug abuse: Looking beyond the hyperbole. College on Problems of Drug Dependence, Quebec City, June 19, 2007.

Henningfield, J.E. Introduction to Art and Addiction Exhibition and Meet the Artists Sessions: Nancy D. Campbell, Ph.D., historian, and Samuel T. Barnes, M.D., sculptor artist at the Quebec Hilton, College on Problems of Drug Dependence, Quebec City, June 18-19, 2007.

Henningfield, J.E. Introduction to Dorothy K. Hatsukami for the 6th Annual Marian W. Fischman Memorial Lectureship Award College on Problems of Drug Dependence, Quebec City, June 18, 2007.

Henningfield, J.E. Presentation: Post 13th World Conference on Tobacco or Health World Health Organization Consultation on Tobacco Harm Reduction. Discussant: Presentation by WHO's Willem Scholten on The WHO Expert Committee on Drug Dependence and its Intersection with the WHO TobReg on the Matter of Nicotine. Chair: Working Group II, TobReg Recommendation on Harm Reduction, PREPS, and Smokeless Tobacco Products. Fourth Meeting of the WHO TobReg, Stanford, California, July 25-27, 2007.

Henningfield, J.E. Discussant, Strategic Dialogue on Tobacco Harm Reduction. Englewood, Colorado, August 1-3, 2007.

Henningfield, J.E. Presenter and Discussant (with David Ashley, David Burns, Erik Dybing, Antoon Opperhuizen and Gemma Vestal, WHO TobReg). Fourth Meeting of the Working Group Convened to Elaborate Guidelines for the Implementation of Articles 9 and 10 of the WHO Framework Convention on Tobacco Control. European Commission Centre Albert Borschette, Brussels, Belgium, September 26-28, 2007.

Henningfield, J.E. Keynote Address: Tobacco Addiction: Science Base for Treatment and Policy. American College of Osteopathic Internists, Boston, October 11, 2007.

Henningfield, J.E., and Vestal, G., Representing World Health Organization Study Group on Tobacco Product Regulation (TobReg). Global Perspective: WHO Study Group on Tobacco Product Regulation. National Conference on Tobacco or Health, Preconference by the Strategic Dialog on Harm Reduction: Reduce the Harm From Tobacco: A Strategic Vision and Blueprint for Action, Minneapolis, 23, 2007.

Henningfield, J.E., Jarvis, M., Dybing, E., Vestal, G., and Bettcher, D. (on behalf of the World Health Organization Study Group on Tobacco Product Regulation – TobReg). Society for Research on Nicotine and Tobacco, Annual Meeting, Portland, OR, February 28, 2008.

Henningfield, J.E., and Vestal, G. (on behalf of the World Health Organization Study Group on Tobacco Product Regulation – TobReg). Global Perspective: WHO Study Group on Tobacco Product Regulation, presented in Symposium: Reduce the Harm From Tobacco: A Strategic Vision and Blueprint for Action. Society for Research on Nicotine and Tobacco, Annual Meeting, Portland, OR, February 27, 2008.

Henningfield, J.E. on behalf of Purdue Pharma. Prescription drug abuse trends, definitions and concepts. Food and Drug Administration, Center for Drug Evaluation and Research (CDER), Joint Meeting of the Anaesthetic and Life Support Drugs Advisory Committee and the Drug Safety and Risk Management Advisory Committee hearing to consider a New Drug Application for an Extended Release Formulation of OxyContin, Rockville, MD, May 5, 2008.

Santora, P. and Henningfield, J.E. Addiction Art Exhibition. Substance Abuse and Mental Health Services Administration, Rockville, MD, May 6-16, 2008.

Schnoll, S.H., Fant, R.V., Ertischek, M.E., Buchman, A.C., Henningfield, J.E. Monitoring of federal surveys as part of a risk evaluation and mitigation strategy component: applications and limitations. Presented at the annual meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico, June 14-19, 2008.

Fant, R.V., Schnoll, S.H., Buchman, A.C., Henningfield, J.E. Fentanyl-related deaths: abuse and off-label use of licit and illicit sources of fentanyl. Presented at the annual meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico, June 14-19, 2008.

Henningfield, J.E. Introduction for the presentation of the Mentorship Award to Joseph V. Brady. College on Problems of Drug Dependence 70th Annual Meeting. San Juan, Puerto Rico, June 14-19, 2008.

Henningfield, J.E. Smokeless tobacco use and nicotine dependence. Presented at The Cigarette Industry's Entry into the Smokeless Tobacco Market. Harvard School of Public Health, Boston, July 10, 2008.

Koop, C.E. and Henningfield, J.E., Co-Chairmen, Insights and Images of the Brain in Withdrawal: Clinical Strategies to Improve Outcomes in Smoking Cessation. Satellite symposium to the Annual Meeting of the American Academy of Family Physicians, San Diego, September 17, 2008.

Henningfield, J.E. Cognitive deficits from smoking cessation. In: Insights and Images of the Brain in Withdrawal: Clinical Strategies to Improve Outcomes in Smoking Cessation. Satellite symposium to the Annual Meeting of the American Academy of Family Physicians, San Diego, September 17, 2008.

Schuster, C.R. and Henningfield, J.E. Introduction to the Conference and Co-Chairs Expert Panel. College on Problems of Drug Dependence Conference on Risk Management and Postmarketing Surveillance of CNS Drugs (R.L. Balster and J.E. Henningfield, Planning Committee), Rockville, Maryland, October 27-28, 2008.

Henningfield, J.E. and Schuster, C.R. Commentary on risk management of CNS drugs. College on Problems of Drug Dependence Conference on Risk Management and Postmarketing Surveillance of CNS Drugs, Rockville, Maryland, October 27-28, 2008.

Henningfield, J.E. Electronic nicotine delivery systems. World Health Organization Tobacco Regulation Study Group (WHO TobReg). Durban, South Africa, November 12-14, 2008.

Henningfield, J.E. Risk evaluation and mitigation strategies (REMS): Focus on CNS Drugs. American Course on Drug Development and Regulatory Sciences, University of California, San Francisco. Presented in Washington, DC, January 14, 2009.

Henningfield, J.E. Nicotine Pharmacology – Tobacco addiction: science, medicine and regulatory policy. The Johns Hopkins University School of Medicine, March 3, 2009.

Henningfield, J.E. FDA Opioid REMS development: Implications of CPDD special meeting on risk management and post-marketing surveillance. Center for Drug Evaluation and Research (CDER), Food and Drug Administration, Public Meeting on Risk Evaluation and Mitigation Strategies (REMS) for Certain Opioids, Gaithersburg, MD, May 28, 2009.

Hatsukami, D. and Henningfield, J.E. (Co-chairs). Regulating nicotine in tobacco products: State of the science and future policy. Symposium presented at the Annual Meeting of the College on Problems of Drug Dependence, Reno, NV, June 24, 2009.

Sellers, E.M. and Henningfield, J.E., (Co-chairs). Fit to be tied: Abuse potential of antiepileptics. Workshop presented at the Annual Meeting of the College on Problems of Drug Dependence, Reno, NV, June 21, 2009.

Lo, S.J., Collins, C., Henningfield, J.E., Moolchan, E. Adolescent tobacco initiation, use and ongoing nicotine addiction: Perspectives on a reduced nicotine content policy. Presented at the Annual Meeting of the College on Problems of Drug Dependence, Reno, NV, June 25, 2009.

Henningfield, J.E. Are e-cigarettes a bridge product to smoking or abstinence? Or neither? Position of the World Health Organization, Tobacco Product Regulation Study Group. Legacy 10-Year Anniversary Thought Leader Series, Kenneth Warner Lecture Series at the American Legacy Foundation. Washington D.C., Webcast September 16, 2009.

Henningfield, J.E. Keynote address: Smokeless tobacco: The true risks, new challenges and opportunities. Fifth National Summit on Smokeless and Spit Tobacco, Madison, WI, September 21, 2009.

Henningfield, J.E. Menthol cigarettes: scientific, public health, social and regulatory issues. A Town Hall Meeting on Menthol Cigarettes. The Howard University College of Medicine, Washington DC, October 19, 2009.

Henningfield, J.E. Menthol in tobacco: FDA considerations. Second Conference on Menthol Cigarettes, Washington, DC, October 20, 2009.

Henningfield, J.E. Tobacco product characteristics: Implications and challenges for labelling. Cigarette Warning Labels, Packaging & Product Labelling: Current Science & Practice to Identify Research Priorities. National Cancer Institute, Rockville, Maryland, October 21, 2009

Henningfield, J.E., Addiction and Art. Madness and Obsession: Series Celebrating Poe's 200th Anniversary. Baltimore Museum of Art and Art on Purpose, Baltimore, Maryland, November 1, 2009.

Henningfield, J.E., Zaatari, G.S. and Vestal, G. "E-Cigs" are electronic nicotine delivery systems (ENDS): Conclusions and recommendations for research and policy by the World Health Organization Tobacco Regulation (WHO TobReg) Study Group. Presented at the annual meeting of the Society for Research on Nicotine and Tobacco, Baltimore, February 26, 2010.

Henningfield, J.E. (Presenter and Discussant/Rapporteur. The science of abuse liability assessment applied to tobacco products. Conference on Abuse Liability and Consumer Appeal of Tobacco Products: Science and Future Directions. Rockville, Maryland, April 8-9, 2010.

Henningfield, J.E., Fant, R., and Heal, D.J. Comparison of European and U.S. approaches to the evaluation of abuse liability and drug scheduling for new chemical entities (NCEs). College on Problems of Drug Dependence. Scottsdale, Arizona, June 13-17, 2010.

Henningfield, J.E., Threading the needle: Translation from science through regulation to marketing. In symposium entitled: Hair of the dog: Agonists for stimulant dependence. College on Problems of Drug Dependence. Scottsdale, Arizona, June 13-17, 2010.

Henningfield, J.E., Fant, R., Schnoll, S., and Sembower, M. Prescription opioids: Managing the risks while maintaining appropriate patient access. College on Problems of Drug Dependence. Scottsdale, Arizona, June 13-17, 2010.

Schuster, C.R., Henningfield, J.E., Balster, R.L., Barthwell, A.G., and Johanson, C.E. The CPDD special conference on risk management and post-marketing surveillance of CNS drugs: Implications for Opioid REMS. College on Problems of Drug Dependence. Scottsdale, Arizona, June 13-17, 2010.

Henningfield, J.E. Smokeless tobacco: Addictive by nature and design. Governor's Oral Health Summit. North Little Rock, Arkansas, June 18, 2010.

Henningfield, J.E. FDA Brady-Schuster Award Lecture: Tobacco Science, Public Health and Policy: It Takes a Community. American Psychological Association, San Diego, August 12, 2010.

Henningfield, J.E. Tobacco Addiction: Science, Public Health & FDA Regulation. Charles Drew University Substance Abuse Research Day, Los Angeles, CA, August 13, 2010.

Henningfield, J.E. FDA Tobacco Regulation: Policy Implications of Behavioral Research. Presented in the Symposium: Psychopharmacology and Public Policy. American Psychological Association, San Diego, August 14, 2010.

Henningfield, J.E. Tobacco Addiction: Science, Public Health, and Policy. The Johns Hopkins Bloomberg School of Public Health, Video Lecture, Baltimore, September 8, 2011.

Henningfield, J.E. Discussion of the Rationale Basis for a Regulatory Framework to Reduce the Dependence Potential of Tobacco Products. World Health Organization, Tobacco Product Regulation Study Group, 6th Meeting, Buenos Aires, Argentina, November 22-24, 2010.

Henningfield, J.E. FDA Tobacco Regulation: Policy Implications of Behavioral Research. The Johns Hopkins University School of Medicine, Baltimore, January 19, 2011.

Henningfield, J.E., Fant, R.V. and Buchhalter, A. Evaluation of Complex Drug Formulations and Tobacco Products: Challenges to Traditional Behavioral Pharmacology. Behavioral Pharmacology Society. Washington, D.C., April 9, 2011

Henningfield, J.E. Advancing Public Health: Promoting Healthy Behavior. Introduction to topic and to the State of Maryland Deputy Secretary for Behavioral Health and Disabilities, Renata J. Henry. Advancing Public Health and Safety – It's All About Behavior. 50th Anniversary Conference, the Joseph V. Brady Institutes for Behavioral Resources. The Johns Hopkins University School of Medicine, Baltimore, May 2, 2011.

Henningfield, J.E. Behavioral Science Contribution to Drug Regulation – Assessing Abuse Potential. Introduction to topic and to Dr. Silvia Calderon, Controlled Substances Staff, Food and Drug Administration. Advancing Public Health and Safety – It's All About Behavior. 50th Anniversary Conference, the Joseph V. Brady Institutes for Behavioral Resources. The Johns Hopkins University School of Medicine, Baltimore, May 2, 2011.

Henningfield, J.E. Tobacco is Naturally Harmful and Addictive: Cigarettes are Deceptive and Far More Addictive by Design. Campaign for Tobacco Free Kids, Washington, D.C., May 18, 2011.

Henningfield, J.E. Tobacco Addiction Science Advances: Implications for Treatment, Regulation and Research. The Johns Hopkins University School of Medicine, Baltimore, May 17, 2011.

Henningfield, J.E., Tobacco Product Abuse Liability Assessment: The State of the Science and Challenges to Regulation. Harvard School of Public Health, Boston, May, 25, 2011.

Henningfield, J.E., Fant, R.V. and Buchhalter, A. International Study Group Investigating Drugs as Reinforcers. Hollywood, Florida, June 17, 2011.

Henningfield, J. Gray, N, Zaatari, G. and Bettcher, D. Tobacco Product Dependence Liability Assessment to Support the WHO Framework Convention on Tobacco Control (WHO FCTC). College on Problems of Drug Dependence, Hollywood Florida, June 18-23, 2011.

Hatsukami, D. and Henningfield, J. (Co-chairs) Symposium on Abuse Liability and Product Appeal Assessment of Tobacco. College on Problems of Drug Dependence, Hollywood Florida, June 18-23, 2011.

Henningfield, J.E. – in collaboration and on behalf of Charles R. Schuster. Post Marketing Surveillance Risk Management Approaches Applied to Tobacco. In the Symposium on Abuse Liability and Product Appeal Assessment of Tobacco. College on Problems of Drug Dependence, Hollywood Florida, June 18-23, 2011.

Schnoll, S., Fant, R.V., Ertischek, M.E., and. Henningfield, J.E. Risk Evaluation and Mitigation Strategies (REMS): New Opportunities and Challenges for Drug Abuse Investigators. College on Problems of Drug Dependence, Hollywood Florida, June 18-23, 2011.

Fant, R., Cone, E.J., and Henningfield, J.E. The role of tamper testing in the assessment of abuse potential. College on Problems of Drug Dependence 73rd Annual Meeting. Hollywood, FL, June 18-23, 2011.

Henningfield, J.E., The Science Base and Regulatory Precedent for Regulating Tobacco Product Addictiveness. Harvard School of Public Health, Boston, June 22, 2011.

Henningfield, J.E. Novel Drug and Tobacco Formulations: Challenges to Behavioral Pharmacological Analysis. Training in Behavioral Pharmacology of Drug Dependence, 21st Annual Scientific Trainee Retreat. University of Vermont, Burlington, August 16-17, 2011

Henningfield, J.E. Advancing Public Health by Regulating the Addictiveness of Tobacco Products. The Johns Hopkins Bloomberg School of Public Health, FAMRI Center of Excellence Lecture. Johns Hopkins, Baltimore, September 29, 2011.

Henningfield, J.E. Tobacco Addiction Science: Implications for International Control Under the Framework Convention. Premeeting Symposium: Reducing the Harm Caused by Abused Drugs: Putting Science into Public Policy, American Academy of Clinical Toxicology, North American Congress of Clinical Toxicology, Washington, D.C., September 21, 2011.

FDA Regulatory Authority Over Tobacco: A Science and Advocacy Success Story – Keynote Lecture Following Presentation of Presidential Citation Award by APA President Melba Vasquez. American Psychological Association, Science Leadership Conference. Washington D.C., October 23, 2011.

Henningfield, J.E., Cone, E., Schnoll, S., Buchhalter, A., Fant, R. and Webster, L. Human subject abuse potential studies: evaluation of complex formulations and its special challenges. Science of Abuse Liability Assessment Conference, convened by the FDA, NIDA and CPDD, Rockville, November 10, 2011.

Henningfield, J.E. and Santora, P.B. Art and Addiction. Sponsored by MICA's Community Arts Partnership and Tuerk House Substance Abuse Treatment and Recovery. Maryland Institute College of Art, Falvey Hall, Brown Center, Baltimore, November 10, 2011.

Henningfield, J.E. Determinants of the addictiveness of tobacco products: implications for reducing addiction risk. Campaign for Tobacco Free Kids, Washington, D.C., November 29, 2011.

Henningfield, J.E. Tobacco product dependence potential reduction by control of content and design. World Health Organization Framework Convention on Tobacco Control. Seventh Meeting of the Working Group on Articles 9 and 10 of the WHO FCTC, World Health Organization, Geneva, Switzerland, January 24-26, 2012.

Webster, L. and Henningfield, J.E. Regulatory and scientific challenges in abuse liability assessment. Association of Clinical Pharmacology Units Annual Meeting, Bethesda, MD, April 25-27, 2012.

Henningfield, J.E. Testimony to provide comment on social science methodologies to assess goals related to knowledge: Strategies for recruitment and sample size considerations. Food and Drug Administration, Public Workshop: Risk Evaluation and Mitigation Strategies (REMS) Assessments: Social Science Methodologies to Assess Goals Related to Knowledge. FDA, Center for Drug Evaluation and Research, Silver Spring, MD, June 7, 2012.

Henningfield, J.E. Bringing NIAAA and NIDA together: Finally – the promise and the peril. In the President's Symposium: Addressing the challenges of tobacco and alcohol use. College on Problems of Drug Dependence, La Quinta Resort, Palm Springs, CA, June 10, 2012.

Henningfield, J.E. Do we under-treat the most prevalent form of substance abuse among pregnant women, Co-Chair (with S.T. Higgins) and Discussant. College on Problems of Drug Dependence, La Quinta Resort, Palm Springs, CA, June 11, 2012.

Cone, E.J., Henningfield, J.E., and Fant, R.V. In Vitro Assessment of Abuse (Tamper) Deterrent Formulations. College on Problems of Drug Dependence, La Quinta Resort, Palm Springs, CA, June 11, 2012.

Henningfield, J.R. (Moderator and Discussant). Nicotine reduction. Workshop on endgame strategies in tobacco control. University of Michigan School of Public Health, Ann Arbor, MI, June 19-21, 2012.

Henningfield, J.E. (Moderator and Presenter, with M. Djordjevic). Scientific basis for regulating novel products being developed/pursued by the tobacco industry. Tobacco Product Regulation, Strategic Planning Meeting. World Health Organization, Geneva, October 11-12, 2012.

Henningfield, J.E. Dissolvable smokeless tobacco products. Tobacco Product Regulation, Strategic Planning Meeting. World Health Organization, Geneva, October 11-12, 2012.

Henningfield, J.E. Abuse liability assessment of opioid analgesics. Closed session of the State Food and Drug Administration, and the Peking University National Institute of Drug Dependence. Beijing, November 4-6, 2012.

Henningfield, J.E., Hursh, S.R., Roma, P.G., Cone, E.J., Buchhalter, A.R., Fant, R.V., and Schnoll, S.H. Behavioral economics for standardized metrics in CNS drug development and regulation. American College of Neuropsychopharmacology. Hollywood, Florida, December 5, 2012.

Henningfield, J.E. (Moderator). Meeting of the Expert Advisory Board to the Center for the Evaluation of Nicotine in Cigarettes (CENIC). Rockville, Maryland December 17, 2012.

Henningfield, J.E. Comments on the contributions of Joseph V. Brady and the Institutes for Behavioral Resources to the improvement of public health. Institutes for Behavioral Resources, Baltimore, December 18, 2012.

Henningfield, J.E., Schnoll, S.H., and Gerlach, K.K. Testimony and comment on proposed modified labeling of opioid analgesics. Food and Drug Administration, Public Hearing and Request for Comments: Impact of Approved Drug Labeling on Chronic Opioid Therapy, Bethesda, Marriott Hotel, February 7-8, 2013 (written comments on PROP Petition to FDA Docket No. FDA-2012-N-1172).

Henningfield, J.E. Introduction to Keynote Lecture by Nigel Gray. Society for Research on Nicotine and Tobacco, Boston, March 14, 2013.

Benowitz, N.L. and Henningfield, J.E. Reducing the nicotine content to make cigarettes less addictive. In Symposium: An Endgame for Tobacco? K.E. Warner, Chair. Society for Research on Nicotine and Tobacco, Boston, March 15, 2013.

Henningfield, J.E. Discussant for the regulatory science of nicotine reduction: new perspectives, data, and opportunities for animal research. Society for Research on Nicotine and Tobacco, Boston, March 16, 2013.

Henningfield, J.E., Buchhalter, A.R., Cone, E.J., Fant, R.V. and Schnoll, S.S. Abuse-Deterrence Science: Why, When, and What? Roundtable on FDA's Abuse Deterrence

Guidance: A Dialogue on Challenges and Opportunities. (Other roundtable participants were: Douglas C. Throckmorton, Andrea G. Barthwell, Paul Coplan, Carlo J. DiFonzo, and Jason Money.) Controlled Substances Regulation. Food and Drug Law Institute Conference. Washington, D.C., March 28, 2013.

Henningfield, J.E. (Reactor) Critical Issues in Scheduling: Case studies. Controlled Substances Regulation. Food and Drug Law Institute Conference. Washington, D.C., March 28, 2013.

Roma, P.G., Henningfield, J.E., Hursh, S.R., Cone, E.J., Buchhalter, A.R., Fant, R.V. and Schnoll, S.H. Applied behavioral economics for evaluating potential labeling claims of abuse-deterrent opioids: A pilot study. International Study Group Investigating Drugs as Reinforcers (ISGIDAR). San Diego, CA, June 15, 2013

Henningfield, J.E. Emerging tobacco products: Perils and potential promise. Presented in Workshop XII: Novel Tobacco and Nicotine Products and Regulatory Science. Co-Chairs: D. Hatsukami and S. Sigmon. Other Participants D. Ashley, L. Carter and D. Shurtleff. College on Problems of Drug Dependence. San Diego, CA, June 18, 2013.

Webster, L.R., Smith, S., Silowsky, J., Gogas, K., Odinecs, A., Eldon, M. Abrouk, N., Medve, R. Henningfield, J., Buchhalter, A., Cone, E., Fant, R., and Schnoll, S. Abuse potential assessment of a novel opioid analgesic NKTR-181: Implications for labeling and scheduling. College on Problems of Drug Dependence. San Diego, CA, June 20, 2013.

Henningfield, J.E. Human abuse liability testing in CNS drug development: Science foundation for drug scheduling. Drug Information Association (DIA) Annual National Meeting. Boston, MA June 25, 2013.

Henningfield, J.E. Tobacco is naturally harmful and addictive: Cigarettes are deceptive and far more addictive by design. Global Seminar, Campaign for Tobacco Free Kids. Washington DC, June 26, 2013.

Henningfield, J.E. Roundtable Discussion, invited participant. Tobacco Product Analysis: A Scientific Public Workshop. Food and Drug Administration, Center for Tobacco Products. Rockville, MD, July 30-31, 2013.

Henningfield, J.E. Nicotine Reduction: How a “radical idea” got mainstream; What might make it possible; and, What we Can Learn From Opioid Regulation? Centers for Disease Control and Prevention Listening Session: E-Cigarettes and Endgame Options. Atlanta, GA. August 19-20, 2013.

Henningfield, J.E. Drug Labeling, Introduction and Session Chair. Abuse Deterrent Formulation Science Meeting: Discussion of the FDA Draft Guidance for Industry: Abuse Deterrent Opioids – Evaluation and Labeling. Organized by the Cross Company Abuse Liability Consortium (CCALC); facilitated with the Aid of the College on Problem of Drug Dependence (CPDD); with presentations by the FDA representatives. Bethesda, MD, September 30- October 1, 2013.

Fant, R.V., Cone, E.J., Henningfield, J.E., Buchhalter, A.R., and Schnoll, S.H. Abuse liability assessment: methods and challenges. Pain Week Annual Meeting. Las Vegas, NV, September 4-7, 2013.

J.E. Henningfield, Tobacco use as an exemplar of what can be accomplished with behavior change: Challenges ahead. Behavior Change, Health, and Health Disparities. Vermont Center on Behavior and Health, University of Vermont, Burlington, VT, September 26, 2013.

Henningfield, J.E. Session and Panel Chair. Drug Labeling Panel Summary, Conclusions and Recommendations. Abuse Deterrent Formulation Science Meeting: Discussion of the FDA Draft Guidance for Industry: Abuse Deterrent Opioids – Evaluation and Labeling. Organized by the Cross-Company Abuse Liability Consortium, Facilitated by the College on Problems of Drug Dependence, and with Presentations by the Food and Drug Administration. Bethesda, MD, September 30 – October 1, 2013.

Cone, E.J. and Henningfield, J.E. Implications of In Vitro Testing Of ADFs For Industry And Real World Abusers. Abuse Deterrent Formulation Science Meeting: Discussion of the FDA Draft Guidance for Industry: Abuse Deterrent Opioids – Evaluation and Labeling. Organized by the Cross-Company Abuse Liability Consortium, Facilitated by the College on Problems of Drug Dependence, and with Presentations by the Food and Drug Administration. Bethesda, MD, September 30 – October 1, 2013.

Henningfield, J.E. Cigarettes: How The Tobacco Industry Made A Bad Product Worse – Implications for Electronic Nicotine And Lessons to Improve Public Health. Philanthropies, New York, October 23, 2013.

Henningfield, J.E. and Wayne, G.F. Reducing the dependence potential of manufactured cigarettes by reducing their nicotine content to levels that cannot cause or sustain addiction. 7th meeting of the WHO Study Group on Tobacco Product Regulation (TobReg), 04-06 December 2013, Rio de Janeiro, Brazil

Henningfield, J.E. and Grana, R. Electronic Nicotine Delivery Systems: Update on Public Health Implications and Recommendations for Research and Policy (based on report by Rachel Grana, Neal Benowitz and Stanton Glantz). 7th meeting of the WHO Study Group on Tobacco Product Regulation (TobReg), 06 December 2013, Rio de Janeiro, Brazil

Henningfield, J.E. (Panelist and Program Committee member) Drug Scheduling: A Roundtable on Challenges and Opportunities --Focus on the Science Base (Panel included: Michael Klein, Ph.D., Director, Controlled Substance Staff, CDER, OCD, FDA, Andrea C. Masciale, Vice President, Regulatory Affairs, Johnson & Johnson, Angela M. Ostrom, Esq., Vice President Public Policy & Advocacy, Epilepsy Foundation, and was moderated by Ginny Beakes- Read, Executive Director, Global Regulatory Policy and Intelligence, Global Regulatory Affairs, Eisai, Inc. February 19, 2014, Washington, DC.

Henningfield, J.E. (Consultant). FDA Tobacco Products Scientific Advisory Committee. Rockville, MD, April 16, 2014.

Henningfield, J.E. Postmarketing Requirements: Challenges to Instrument Validation. FDA Public Meeting on the Postmarketing Requirements for the Extended-Release/Long-Acting Opioid Analgesics. FDA, Silver Spring, MD, May 19, 2014.

Henningfield, J.E. Buchhalter, A.R., Cone, E.J., Fant, R.R. and Schnoll, S.S. FDA Draft Guidance on Abuse Deterrent Opioids – Limiting Reinforcing Effects by Slowing Speed of Delivery to the Brain: Implications for In Vitro, Nonclinical and Clinical Abuse Liability Assessment. International Study Group Investigating Drugs as Reinforcers (ISGIDAR), San Juan, June 14, 2014.

Johnson, M.W., Griffiths, R.R., Henningfield, J.E. and Fant, R.V. Psilocybin Abuse Liability Assessment: Implications for Scheduling if FDA Approves Psilocybin for Medical Use. International Study Group Investigating Drugs as Reinforcers (ISGIDAR), San Juan, June 14, 2014.

Cone, E.J., Henningfield, J.E., and Fant, R.V. In Vitro Assessment of Abuse (Tamper) Deterrent Formulations. College on Problems of Drug Dependence, Workshop Symposium, San Juan, June 15, 2014.

Henningfield, J.E. Marketing E-Cigarettes and Other Tobacco Products to Youth and Young Adults. Texas Tobacco Summit, Houston, June 27, 2014.

Henningfield, J.E., Fant, R.R., Buchhalter, A.R., Cone, E.J., and Schnoll, S.S. FDA 2013 Guidance Encourages Novel Approaches to Abuse Deterrent Drug Development: Challenges and Opportunities in Abuse Liability Science. American Psychological Association, Washington D.C., August 9, 2014.

Henningfield, J.E. Pharmacology and dependence potential of transdermal buprenorphine: Discussion and Conclusions. Recent Advances in Anesthesia and Perioperative Medicine, 2014 Annual Meeting of Taiwan Society of Anesthesiologists, Tungs' MetroHarbor Hospital, Taichung, Taiwan, September 27, 2014.

Henningfield, J.E. Electronic nicotine delivery systems (ENDS): Scientific, public health, and regulatory challenges. Division of Behavioral Biology, Department of Psychiatry and Behavioral Sciences, The Johns Hopkins University School of Medicine, Baltimore, October 8, 2014.

Henningfield, J.E. Comment on implications of FDA Category 1 findings for Category 2 and 3 testing of opioids for potential abuse deterrence. FDA Public Meeting: Development and regulation of abuse-deterrent formulations of opioid medications. Silver Spring, MD, October 31, 2014.

Henningfield, J.E. Menthol cigarettes and electronic cigarettes: Fact, fiction and policy. First Annual Conference of the Morgan State University Communities Engaged in

Advocating for a Smoke Free Environment (CEASE), Baltimore, MD, 21210, November 8, 2014.

Cone, E.J. and Henningfield, J.E. (Split presentation) Methodology and implications of in-vitro testing of abuse deterrent formulations (ADFs) for industry, real world abusers, and the design of human abuse liability studies. Human Abuse Liability and Abuse-Deterrent Formulations Conference. Silver Spring. MD, November 8, 2014.

Nichols, D.E., Johnson, M.W., Griffiths, R.R., and Henningfield, J.E. The path toward making psilocybin available for medical use. American College of Neuropsychopharmacology, Phoenix, AZ, December 10, 2014.

Henningfield, J.E. Electronic nicotine delivery systems: The promise, the peril, and the urgent need for regulation. University of Texas, MD Anderson Cancer Center, Division of Cancer Prevention and Population Sciences, Cancer Control Grand Rounds. Houston, January 16, 2015.

Henningfield, J.E. Continuum of Risk/Harm Reduction: History and lessons from other areas of substance abuse and addiction control. Workshop: Continuum of Risk: Exploring the boundaries of nicotine use and regulation. Society for Research on Nicotine and Tobacco. Philadelphia. February 25, 2015.

Henningfield, J.E. Tribute to Nigel Gray. Plenary Session, Society for Research on Nicotine and Tobacco. Philadelphia. February 25, 2015.

Henningfield, J.E., Cone, E.J., Buchhalter, A.R., Fant, J.G., Gitchell, J.G., and Pinney, J.M. FDA performance standards for electronic nicotine delivery systems: Perspectives from the FDA 2013 Draft Guidance for Abuse-Deterrent Opioids. Society for Research on Nicotine and Tobacco. Philadelphia. February 26, 2015.

Henningfield, J.E. Discussant, Addiction Panel. Electronic Cigarettes and the Public Health: A Public Workshop. Center for Tobacco Products, Food and Drug Administration. Hyattsville, MD, March 9-10, 2015.

Henningfield, J.E. Buprenorphine pharmacology and epidemiology: Conclusions and implications for controlled substance scheduling. Malaysia Association for the Study of Pain. And the National Pharmaceutical Bureau ("FDA") Division of Pharmacy and Division of Compliance. Update on Controlled Drug Practice Guidance and Policy. The Majestic Hotel, Kuala Lumpur, Malaysia, March 26, 2015.

Henningfield, J.E. Electronic nicotine delivery systems: The promise, the peril, and the urgent need for regulation. Virginia Commonwealth University. Center for the Study of Tobacco Products, Richmond, VA, March 30, 2015.

Henningfield, J.E. Discussant: Approaches to identify and classify adverse events and aberrant behaviors related to abuse, misuse and diversion during clinical drug development. Advances in Abuse Potential Assessments – Building on the FDA Draft Guidance for Industry. Organized by the Cross-Company Abuse Liability Consortium,

(C-CALC), with scientific support from the National Institute on Drug Abuse, and presentations by FDA and NIDA representatives. Bethesda, North Marriott, April 16-17, 2015.

Henningfield, J.E. Towards E-Vapor product standards: US Standards. Evidence Based Science and Regulation of the Tobacco and E-Vapor Industries. 100th Annual Meeting and Williamsburg X Conference. Tobacco Manufacturers Association (TMA). Kingsmill Resort & Conference Center, Williamsburg, VA, May 18-20, 2015.

Henningfield, J.E. “Lessons from elsewhere”; what can the vapour industry learn from other sectors? Can a system like the U.S. OTC monographs work for ENDS? Satellite 2: Product Standards - Progress towards standards for nicotine delivery devices. Global Forum on Nicotine, Warsaw, Poland, June 5-6, 2015

Henningfield, J.E. Discussant: A Different Kind of Endgame. What does the science tell us? Global Forum on Nicotine, Warsaw, Poland, June 5-6, 2015.

Henningfield, J.E., Cone, E.J., Buchhalter, A.R., and Fant, R.V. Abuse liability assessment of electronic nicotine delivery systems: Regulatory precedents from the FDA 2015 Guidance for Abuse-Deterrent Opioids: It’s All About Response Cost. International Study Group Investigating Drugs as Reinforcers (ISGIDAR). Satellite to the College on Problems of Drug Dependence Annual Meeting. Arizona Biltmore, Phoenix, June 13, 2015.

Henningfield, J.E., Buchhalter, A.R., Fant, R.V., Gitchell, J.G., and Pinney, J.M. Evaluation of electronic nicotine delivery systems: Regulatory precedents from the FDA 2013 draft guidance for abuse-deterrent opioids. College on Problems of Drug Dependence 77th Annual Meeting. Phoenix, AZ, June 13-19, 2015.

Cone, E.J., Buchhalter, A.R., Wang, D.W., and Henningfield, J.E. ALERRT™ visual analog scale: Assessing “work” requirements associated with tampering of abuse-deterrent opioid formulations. College on Problems of Drug Dependence Annual Meeting. Arizona Biltmore, Phoenix, June 13-18, 2015.

Henningfield, J.E. Pharmacokinetic and dynamic factors in abuse potential: Historical perspectives from research on opioids, stimulants and nicotine. In Symposium X: The Interplay of pharmacokinetics and pharmacodynamics in abuse potential: Modeling Madness? College on Problems of Drug Dependence Annual Meeting. Arizona Biltmore, Phoenix, June 13-18, 2015.

Henningfield, J.E., Chair and Introduction: New Analgesic and Abuse Deterrent Approaches: Kappa Opioid Receptor Agonists (KORAs). Satellite Symposium to College on Problems of Drug Dependence Annual Meeting. Arizona Biltmore, Phoenix, June 17, 2015.

Henningfield, J.E. Electronic Cigarettes: Introduction, Public Health Perspectives and Policy Implications. In Special Symposium: Clearing the Air About E-Cigarettes.

National Conference of State Legislatures Legislative Summit. Seattle, WA, August 3-5, 2015.

Henningfield, J.E. Factors Related to the Relative Abuse Potential of *Mitragyna Speciosa* (Kratom) and Mitragynine in the form of VivaZen. Oral Testimony for the State of Wisconsin Controlled Substances Board. Madison, Wisconsin, August 14, 2015.

Henningfield, J.E. Keynote: In Search of Harm Reduction. Global Tobacco and Nicotine Forum. Palazzo Re Enzo, Bologna, Italy. September 16-18, 2015.

Henningfield, J.E. Science for Regulation. Global Tobacco and Nicotine Forum. Palazzo Re Enzo, Bologna, Italy. September 16-18, 2015.

Henningfield, J.E. Special Report: An Update on the FDA Regulations on E-Cigarettes. Second Annual CEASE (Communities Engages in Advocating for a Smoke-Free Environment). Morgan State University. Baltimore, October 10, 2015.

Henningfield, J.E. Moderator and Introduction: E-Cigarette Trends and Patterns of Use. FDA Regulation of Tobacco Products. Food and Drug Law Institute (FDLI), Ronald Regan Building, Washington DC, October 21, 2015.

Henningfield, J.E. Tobacco Harm Reduction: Brief History and Overview. 5th Dialog on Tobacco and Nicotine Harm Reduction ("Morven Dialogs"). Sponsored by the Institute for Environmental Negotiation, University of VA. National Youth 4-H Conference Center, Chevy Chase, MD, October 22-23, 2015.

Henningfield, J.E. (with Scott Ballin) Performance Standards for E-Vapor Products: Draft Conclusions and Guiding Principles. Emerging Consensus Across Diverse Stakeholders. Tobacco Manufacturers First Consensus: Vapor Product Performance Standards Summit, Lansdowne Resort, Leesburg, VA, October 27-28, 2015.

Henningfield, J.E. The Impact and Influence of George E. Bigelow. A Celebration of George E. Bigelow, PhD. and the Creation of the George E. Bigelow, PhD Professorship. Johns Hopkins Bayview Medical Center. Baltimore, December 2, 2015.

Henningfield, J.E. (Discussant) Tobacco Regulatory Science and Vulnerable Populations (chaired by Stephen Higgins and Terry Pechacek). Society for Research on Nicotine and Tobacco. Chicago, March 2-5, 2016.

Henningfield, J.E., Fant, R.V., Buchhalter, A.R., and Cone, E.J. Abuse Deterrence Assessment: It's all About Response Cost. International Study Group Investigating Drugs as Reinforcers, Satellite to College on Problems of Drug Dependence, Palm Springs, La Quinta, June 11, 2016.

Lanier, R., Fant, R.V., Cone, E.J, and Henningfield, J.E. Assessment of the Abuse Potential and Benefits of Kratom and its Mitragynine Alkaloids: Implications for Regulation. College on Problems of Drug Dependence, Palm Springs, La Quinta, June 11-17, 2016.

Henningfield, J.E. Untangling Dependence, Tolerance, and Addiction – An Examination of Definitions and Diagnostic Criteria in the Context of Abuse Potential Assessment. Presented in Workshop: Regulatory and Methodological Considerations in the Evaluation of Drug Dependence in the Preclinical and Clinical Setting, Co-chaired by Setnik, B. and Klein, M. College on Problems of Drug Dependence, Palm Springs, La Quinta, June 11-17, 2016.

Carter, L.P., Sellers, E., Henningfield, J.E., Wang, G., Lu, Y., Kelsh, D., and Vince, B. Evaluation of Human Abuse Liability of JZP-110. College on Problems of Drug Dependence, Palm Springs, La Quinta, June 11-17, 2016.

Henningfield, J.E. Introduction of Dr. Marilyn A. Huestis for the 6th Annual Marian W. Fischman Memorial Lectureship Award. The Great US Cannabis Experiment: Research & Education to Enable Informed Public Decisions. College on Problems of Drug Dependence, Palm Springs, La Quinta, June 11-17, 2016.

Henningfield, J.E. Symposium Discussant: Using behavioral science to evaluate the feasibility of a national nicotine reduction policy. American Psychological Association. Denver, August 5, 2016.

Carter, L.P., Wang, G., Sellers, E., Henningfield, J.E., Keish, D., and Vince, B. A randomized, double-blind, placebo-controlled, cross-over study for evaluation of human abuse liability of JZP-110. 23rd Congress of the European Sleep Research Society. Bologna, Italy, September 13-16, 2016.

Henningfield, Panel Moderator and Introduction. Day 1 Public health panel: Nicotine reduction strategy: the promise and the peril. Panelists: Niaura, R., Levy, D., Sweanor, D., Lutz, R., and discussants, Bates, C. and Trani, M. Brussels Hotel Metropole, Belgium. September 28, 2016.

Henningfield, Panel Moderator and Introduction. Day 2 Public health panel: Advancing Public Health with New Products and Regulatory Frameworks. Panelists: Adams, G., Bates, C., Fagerstrom, K.O., Ogden, M. and Barba, G. Brussels Hotel Metropole, Belgium. September 28, 2016.

Henningfield, J.E. Yanagita Tomoji-san Memorial Seminar: International Perspective from my perspective with great appreciation for Yanagita-san. Memorial Scientific Symposium in Honor of Dr. Tomoji Yanagita. The Japanese Medical Society of Alcohol and Addiction Studies (JMSAAS), in Funabori, Tokyo, Japan, October 7, 2016 – Followed by predinner toast speech.

Henningfield, J.E. Overview on tobacco harm reduction - background, status today, and what needs to happen next. The Japanese Medical Society of Alcohol and Addiction Studies (JMSAAS), in Funabori, Tokyo, October 8, 2016.

Henningfield, J.E. Global nicotine reduction strategy - personal insights on the view from FDA and the WHO TobReg Study Group. Keynote Workshop on Nicotine Reduction at

the CORESTA Congress, Berlin, Germany, October 11, 2016.

Henningfield, J.E. Public Comment: The science base for abuse deterrent opioids and need for comprehensive strategies to address opioid abuse and overdose. FDA Public Meeting on Pre-Market Evaluation of Abuse-Deterrent Properties of Opioid Drug Products. October 31, 2016.

Henningfield, J.E. Introduction and moderator: Nicotine: rethinking and evaluating the role of nicotine – public health benefit, pathway to addiction or both? Food and Drug Law Institute. Tobacco Conference; Tobacco and Nicotine Policies and Products at a regulatory and legislative crossroads. Washington DC, October 27, 2016.

Henningfield, J.E. Brown, L.S., Cadet, J.L., Comer, S.D., Garza, R.D.L., Hart, C.L., and Singleton, E.G. Increasing Minority Participation and Diversity in ACNP Meetings and Membership: Barriers and Best Practices. American College of Neuropsychopharmacology, Hollywood, Florida, December 5, 2016.

Henningfield, J.E., Discussant and Moderator: Symposium on product standards for cigarettes: Models to achieve maximum public health benefit. Society for Research on Nicotine and Tobacco. Florence, Italy, March 11, 2017.

Henningfield, J.E. and Fant, R.V. Abuse liability of a marketed electronic nicotine delivery system: what is the right level for an effective product? ISGIDAR Satellite to the College on Problems of Drug Dependence, Montreal, Canada, June 17, 2017.

Henningfield, J.E., Chair, Introduction and Conclusions. Assessment of Abuse Potential in Clinical Trials in the Context of the Finalized 2017 FDA Guidance. With Silvia Calderon, Shannon Smith, Nathaniel Katz, and Katherine Bonson (Note: originally submitted and listed with Mike Klein as Co-Chair but he was unable to attend. College on Problems of Drug Dependence, Montreal, Canada, June 18, 2017.

Odinecs, A., Webster, L., Henningfield, J., Buchhalter, A., Siddhanti, S., Lu, L., Gel, X., Silowsky, J., Di Fonzo, C.J., and Eldon, M.A. NKTR-181 Produces Full CNS μ -Opioid Agonism With Significantly Lower Abuse Potential. International Conference on Opioids, Boston, MA. June 11–13, 2017.

Henningfield, J.E. Comments on Opioid Formulation Surveillance Science. Food and Drug Administration. Center for Drug Evaluation and Research Conference: Data and Methods for Evaluating the Impact of Opioid Formulations with Properties Designed to Deter Abuse in the Postmarket Setting” A Scientific Discussion of Present and Future Capabilities. Silver Spring, July 10-11, 2017.

Henningfield, J.E., Markman, J., Gudin, J., Rauck, R. Gimbel, J. Gergel, I, Tagliaferri, M., Lu, L., Katz, N.P., Siddhanti, S. and Schnoll, S. Measuring Withdrawal in a Phase 3 Study of a New Analgesic, NKTR-181, in Subjects with Moderate to Severe Chronic Low-Back Pain. Pain Week Annual Meeting, Las Vegas, September 7, 2017.

Henningfield, J.E. Chair, Plenary Panel: Nicotine policy and public health. Global Forum on Tobacco and Nicotine, New York, NY, September 13, 2017

Henningfield, J.E. Co-Chair Panel on very low content nicotine cigarettes. Vermont Center on Behavior and Health (VCBH) Annual Conference, Burlington, VT October 5-6, 2017

Henningfield, J.E. Co-Chair Panel on challenges/potential benefits of facilitating substitution of non-combustible products for conventional cigarettes among persistent cigarette smokers. Vermont Center on Behavior and Health (VCBH) Annual Conference, Burlington, VT October 5-6, 2017.

Schwartz, L.P., Roma, P.G., Henningfield, J.E., Hursh, S.R., Cone, E.J., Buchhalter, A.R., Fant, R.V., Schnoll, S.H. Behavioral economic demand metrics for abuse liability quantification and clinical treatment prediction. Society for Neuroscience, Washington DC, November 11-15, 2017.

Ge, X.S., Lin, L., Jobes, J., Ziola, M., Xie, S., Gergel, I., Henningfield, J.E., and Eldon, M.A. Abuse potential of NKTR-181 in recreational opioid users: results from a randomized, double-blind crossover oral study. Presented at the Annual Meeting of the American College of Neuropsychopharmacology, Palm Springs, CA, December 5, 2017.

Henningfield, J.E., Gerlach, K.K., Hufford, M., Sembower, M.A., and Pillitteri, J.L. Kratom and its mitragynines: A path away from opioids? Presented at the Annual Meeting of the American College of Neuropsychopharmacology, Palm Springs, December 6, 2017.

Henningfield, J.E. Science in service of public health: From behavioral pharmacology to policy. Exploring Careers Lecture Series, National Institute on Drug Abuse, Intramural Research Program, Baltimore, January 12, 2018.

Henningfield, J.E., Discussion of vulnerabilities to tobacco product use and strategies to reduce use among women of reproductive age. Society for Research on Nicotine and Tobacco, Baltimore, February 23, 2018.

Henningfield, J.E., Discussion of demand modeling to inform tobacco regulatory science: Transdisciplinary and international perspectives. Society for Research on Nicotine and Tobacco, Baltimore, February 23, 2018.

Henningfield, J.E., Markman, J., Gudin, J., Rauck, R., Gimbel, J., Tagliaferri, M., Lu, L., Katz, N.P., Siddhanti, S., and Schnoll, S. Measuring withdrawal in a phase 3 study of a new analgesic, NKTR-181, in subjects with moderate-to-severe chronic low-back pain. American Academy of Pain Medicine. Vancouver, BC, Canada, April 26 - 29, 2018.

Henningfield, J.E., Introduce and moderate Roundtable on kratom regulatory strategies and standards. Kratom Leadership Summit, Atlanta, Georgia, April 30, 2018.

Henningfield, J.E., Keynote Address: Keeping kratom legal: Why I have hope – the scientific and public health foundation for regulation. Kratom Leadership Summit, Atlanta, Georgia, April 30, 2018.

Henningfield, J.E. and Wang, D.W. A GPS for THC: Looking for a science-based regulatory framework for cannabinoid medicines. In symposium: Pharmacodynamic and cognitive evaluation of CNS drugs in clinical trials of cannabis and driving impairment. With Talar Hopyan, Beatrice Setnik (Chair) and Daniel Wang (Moderator & Discussant). American Society of Clinical Pharmacology, Miami, May 29, 2018.

Henningfield, J.E., Webster, L., Kelsh, D., Vince, B., Lu, L., Jobes, J., Buchhalter, A.R., Siddhanti, S., Ziola, M., Silowsky, J., Odinecs, A., Xie, S., Di Fonzo, C.J., Eldon, M.A., Ge, X.S. NKTR-181 demonstrates low abuse potential in recreational opioid users in two double-blind, randomized crossover human abuse potential studies. College on Problems of Drug Dependence, San Diego, June 9-14, 2018.

Henningfield, J.E. Breakfast with Champions, Introduction and Moderator. College on Problems of Drug Dependence, San Diego, June 9-14, 2018.

Henningfield, J.E., Raffa, R., Garcia-Romeu, A., and Doshi, T. Kratom and its mitragynines in the opioid crisis: A path to or away from opioids. College on Problems of Drug Dependence, San Diego, June 9-14, 2018.

Baxter, S., Campbell, L.R., Jin, T., Henningfield, J.E., Fant, R.V., and Stiles, M.S. Abuse Liability Assessment of ENDS: What is the right level to support a public health benefit? College on Problems of Drug Dependence, San Diego, June 9-14, 2018.

Sigmon, S., Hatsukami, D., Reissig, C., LeSage, M., Donny, E., Villanti, A. and Henningfield, J.E., Tobacco product abuse liability: State of the science and major challenges. College on Problems of Drug Dependence, San Diego, June 9-14, 2018.

Lanier, R.K., Markman, J.D., Katz, N.P., Gudin, J., Rauck, R., Mohanty, M., Elder, H., Lawal, O., Gimbel, J., Tagliaferri, M., Lu, L., Siddhanti, S., Schnoll, S., and Henningfield, J.E. Analgesic assessment of drug abuse-related events related events with MADDERS in SUMMIT -07: A Phase -3 Study of NKTR 181 in Patients with moderate to severe chronic low back pain. College on Problems of Drug Dependence 80th Annual Meeting. San Diego, CA, June 9-14, 2018.

Henningfield, J.E. (Co-Chair and Introduction) and Hatsukami, D.K. (Co-Chair and Discussion), Jackson, K.L., Benowitz, N.L., Higgins, S.T., Donny, E.C., Villanti, A.C. Tobacco Product Abuse Liability Assessment: Challenges for FDA & Behavioral Science. American Psychological Association, San Francisco, August 10, 2018.

Henningfield, J.E. (Co-Chair with Setnik, B.) and Introduction to: Assessing physical dependence and drug withdrawal symptoms: Understanding the evolving clinical and regulatory requirements. Symposium with Co-Presenters: Setnik, B. McDonnell, M. and Lerner, A. American College of Clinical Pharmacology (ACCP), Bethesda, MD, September 25, 2018.

Henningfield, J.E. The future of pain control: Lower abuse potential pain relievers. In Symposium on Next Generation Non-Opiate Pain Management. Safety Pharmacology Society annual meeting, Washington DC, October 1, 2018.

Henningfield, J.E. (Co-Chair with McLellan, A.T. Panel on Pain and Addiction Management,) and present Pain Management, Addiction, and Medication Development – In the Context of the Opioid Epidemic. Vermont Center on Behavior and Health, 2018 Conference: US Opioid Epidemic: The Need for Greater Innovation and Greater Treatment Capacity, Burlington, October 11, 2018.

Henningfield, J.E., Brown, L.S., Comer, S.D., Garcia-Romeau, A., Hatsukami, D.L., and Furr-Holden, D. Increasing Minority Participation and Diversity in ACNP Meetings and Membership: 2018 Status and Recommendations. American College of Neuropsychopharmacology, Hollywood, FL, December 10, 2018.

Henningfield, J.E. Keynote Address: Regulation of Kratom to the Benefit of Public Health. 2nd International Symposium on Kratom, University of Florida, Orlando, FL, February 8-10, 2019.

Henningfield, J.E. Psychedelics in Mainstream Medicine: How Do We Get There? International Forum on Consciousness, Psychedelic Therapy in Society: Exploring the Mechanisms of Action and Delivery of Care. BioPharmaceutical Technology Center, Madison, WI, May 16-17, 2019.

Henningfield, J.E. (with Utah Sen C. Bramble, former Congressman M. Salmon, and C.M. Haddow). Kratom science, policy and regulation. Bureau of Narcotics (BNN); Ministry of Health; Ministry of Trade; Ministry of Finance; US Embassy, and other organizations. Jakarta, Indonesia, May 27-29, 2019.

Henningfield, J.E. and Haddow, C.M. The AKA Kratom Standards Program – How to Produce, Label, and Sell Safe Kratom Products. 2nd Annual Kratom Leadership Summit, June 9-11, 2019.

Henningfield, J.E., Brown, L.S., Comer, S.D., Garcia-Romeu, A., Hatsukami, D.L., and Furr-Holden, D. Increasing Minority Participation and Diversity in CPDD and ACNP Meetings and Membership: 2019 Status and Recommendations, College on Problems of Drug Dependence, San Antonio, TX, June 16-19, 2019.

Ashworth, J., Hufford, M., Simone, S., Schnoll, S., Cone, E., Arthur, A., Pinney, J., and Henningfield, J. Increasing Access to Naloxone: The Scientific Strategy Needed to Bring Naloxone Over-the-Counter. College on Problems of Drug Dependence, San Antonio, TX, June 16-19, 2019.

Lanier, R.K., Gudin, J., Rauck, R., Elder, H., Erpelding, N., Gimbel, J., Doberstein, S.K., Tagliaferri, M., Lu, S., Siddhanti, S., Schnoll, S.H., Henningfield, J.E., Katz, N.P. Prospective Assessment of Potentially Abuse-Related Events in Two Phase 3 Studies of NKTR-181, a Novel Opioid Analgesic using the Misuse, Abuse and Diversion Drug

Event Reporting System (MADDERS®). College on Problems of Drug Dependence, San Antonio, TX, June 16-19, 2019.

Henningfield, J.E., with Setnik, B. Exploring the evolving requirements for the clinical assessment of abuse and dependence potential of CNS-active drugs. Drug Information Association (DIA), Global Annual Meeting, San Diego, CA, June 26, 2019.

Henningfield, J.E. (with Utah Sen C. Bramble and C.M. Haddow). Kratom science, policy and regulation. National Institute of Health, Research and Development (NIHRD) including Director General, Dr. Siswanto, and NIHRD Center for Research and Development of Medicinal Plants and Traditional Medicine, Director Dr. Akhmad Saikhu; IPB University Institute of Agriculture including Professors Berry Juliandi and Diah Ratnadewi; National Food and Drug Control; Ministry of Industry; Ministry of Foreign Affairs; Ministry of Agriculture, Quarantine Division; Ministry of Trade; US Embassy, and other organizations. Jakarta (and Bogor), Indonesia, July 22-26, 2019.

Henningfield, J.E., Moderator (with Higgins, S.T.) Panel on Goals of Tobacco Control and Regulatory Science and the Tools to Achieve Them, including Ashley, D.M., Cummings, K.M., Schroeder, S.A., Donny, E.C. Vermont Center on Behavior and Health, 7th Annual Conference: Complementary Contributions of Tobacco Control and Regulatory Science Research to Protecting the Public Health. Burlington, VT, October 10, 2019.

Henningfield, J.E., Public comments on health care disparities related to opioids, addiction, and pain. Food and Drug Administration, Office of Minority Health and Health Equity Public Meeting on Strategies to Improve Health Equity Amidst the Opioid Crisis. November 21, 2019.

Goldenson, N.I., Buchhalter, A.R., Rubinstein, M.L., Augustson, E.M., and Henningfield, J.E. (PRESENTER) (2020). Abuse liability assessment of JL electronic nicotine delivery system (ENDS) in two nicotine concentrations compared to usual brand cigarette, nicotine gum and a comparator ENDS. Late-breaking paper presented at the 82nd annual scientific virtual meeting of the College on Problems of Drug Dependence, June 22-24, 2020.

Buchhalter, A.R., Goldenson, N.I., Bailey, P., Kim, E., Chan, S., Cohen, G., and Henningfield, J.E. (2020). Pharmacokinetics and subjective effects of the JL electronic nicotine delivery system (ENDS) compared to five ENDS, a heated tobacco product, and a combustible cigarette. Poster presented at the 1st virtual scientific meeting of the College on Problems of Drug Dependence, June 22-24, 2020.

Henningfield, J., Babin, J., Grundmann, O., Schnoll, S., Ashworth, J., Beck, R., Cone, E., and Willem Scholten. Misattribution of substance overdose deaths can be deadly: Lessons from opioids, vaping, and kratom, and a perspective from HIV AIDS. Poster presented at the 1st virtual scientific meeting of the College on Problems of Drug Dependence, June 22-24, 2020.

Goldenson, N.I., Buchhalter, A.R., Rubinstein, M.L., Augustson, E.M., and Henningfield, J.E. (Presenter, 2020). Abuse liability assessment of JL electronic nicotine delivery system (ENDS) in two nicotine concentrations compared to usual brand cigarette, nicotine gum and a comparator ENDS. Poster presented at the 1st virtual scientific meeting of the College on Problems of Drug Dependence, June 22-24, 2020.

Henningfield, J.E., Introduction to Targeting Differences: Strategies to Demonstrate the Benefits of Novel CNS-active Analgesics, 14th Annual Pain Therapeutics Summit, September 20-21, 2020.B With presentations by Drs Judy Ashworth, Reginald Fant and David Heal.

Goldenson, N.I., Fearon, I.M., Buchhalter, A.R., and Henningfield, J.E. (2020). Nicotine pharmacokinetics and subjective assessment of the JUUL System with three nicotine concentrations relative to combustible cigarettes in adult smokers. Poster presented at the 3rd Scientific Summit on Tobacco Harm Reduction: Novel products, Research & Policy (virtual event), September 24-25, 2020.

Henningfield, J.E., Sembower, M.A., Foxon, F., and Wang, D.W. Kratom Science Update. 2020 Kratom Leadership Summit. Tampa Airport Marriott Hotel, virtual presentation November 12, 2020.

Henningfield, J., Barr, M., Wang, D. and Huestis, M. Social Media Monitoring versus a Consumer Survey to Elucidate Reasons and Patterns of Intake among Kratom Users. American College of Neuropsychopharmacology, virtual meeting, Poster presented virtually, December 9, 2020.

Goldenson, N.I., Buchhalter, A.R., Rubinstein, M.L., Augustson, E.M., and Henningfield, J.E. (2021). Differences in the appeal of the JUUL System in four flavors between smokers of mentholated and nonmentholated combustible cigarettes. Paper presented at the 27th annual meeting of the Society for Research on Nicotine and Tobacco (virtual event), February 24-27, 2021.

Henningfield, Panelist. Kratom Forum. Tennessee Association of Alcohol & other Addiction Services, virtual meeting, March 26, 2021.

Henningfield, J.E. Discussant/participant, Development and Regulation of Psychedelics for Therapeutic Use. Duke-Margolis Center for Health Policy, virtual workshop, April 12-13, 2021.

Henningfield, J.E. Presenter – Discussant. Hot Topics in Psychedelic Drug Development: From Successful Clinical Trials to Maximizing Benefits in the Post-approval World. Psychedelic Therapeutics and Drug Development Conference, virtual meeting, May 4-6, 2021.

Henningfield, J.E. Abuse potential related science and regulatory perspectives for psychedelic drug product development. NIH Psilocybin Research Speaker Series, June 4, 2021. Participation on final panel discussion of the series, June 10, 2021.

Hood, C.O, Garcia-Romeu, A., Moreland, M., Fields, S., Henningfield, J.E., Correa-Fernandez, V., de Dios, M.A., Heads, A., Hudzik, T., Regan, T., Skinstad, A.H. Results of the 2020 CPDD Membership Survey: We are More Diverse Than Suggested by Earlier Survey Approaches. College on Problems of Drug Dependence, virtual meeting, June 21, 2021. Late-Breaking Session.

Henningfield, J., Gauvin, D., Bifari, F., Fant, R., Caron, J., Buchhalter, A., Ashworth, J., Pappagallo, M., Folli, F., and Manfredi, P.L. REL-1017 (esmethadone) Showed No Reinforcing Properties Compared to Oxycodone in Rat Self-Administration Study.

Gauvin, D., Henningfield, J., Fant, R., Buchhalter, A., Ashworth, J., Caron, J., Pappagallo, M., Bifari, F., Folli, F., and Manfredi, P.L. REL-1017 (esmethadone) Demonstrates No Withdrawal Effects or Evidence of Physical Dependence in a Rat Study. College on Problems of Drug Dependence, virtual meeting, June 21, 2021.

Fields, S., Henningfield, J.E., Regan, T., Correa-Fernandez, V., de Dios, M.A., Garcia-Romeu, A., Heads, A., Hood, C., Hudzik, T., Morehead, A., and Skinstad, A.H. The 2020 CPDD Membership Survey: A New Approach to Assessing Diversity and Inclusion in Scientific Organizations. College on Problems of Drug Dependence, virtual meeting, June 22, 2021.

Henningfield, J.E., Goldenson, N.I., and Buchhalter, A.R. Effects of nicotine concentration and flavor on subjective responses to use of the JUUL System. College on Problems of Drug Dependence, virtual meeting, June 23, 2021.

Henningfield, J. and Heal, D. (Co-Chairs) Meeting the Challenge of the Psychedelics and Drugs with Novel Mechanisms – Building on the Foundation of the FDA 2017 Guidance on the Assessment of the Abuse Potential of Drugs. Introduction. College on Problems of Drug Dependence, virtual meeting, June 23, 2021.

Henningfield, J.E. Kratom safety research – From the 8-factor analysis perspective. 2021 Emergency Kratom Leadership Summit. Tampa Airport Marriott, June 23-25, 2021.

Henningfield, J.E., Huestis, M.A. Henningfield, J. E., Rodricks, J. V., & Magnuson, A. Preliminary findings from application of FDA's respiratory animal respiratory depressant model to evaluate the respiratory effects and pharmacokinetics of oral mitragynine and oxycodone. FDA staff briefing (virtual), July 8, 2021.

Henningfield, J.E., Huestis, M.A. Henningfield, J. E., Rodricks, J. V., & Magnuson, A. Preliminary findings from application of FDA's respiratory animal respiratory depressant model to evaluate the respiratory effects and pharmacokinetics of oral mitragynine and oxycodone. NIDA staff briefing (virtual), July 14, 2021.

Henningfield, J.E. Abuse potential related science and regulatory perspective for psychedelic drug product development and post-approval challenges. Pain Therapeutic Summit, Panel Session – The Potential Role for Psychedelic Drugs in the Treatment of Chronic Pain, with J.A Ashworth (Moderator), R. Lanier and R. W. Dworkin. Virtual meeting November 1, 2021.

Henningfield, J., Gauvin, D., Bifari, F., Fant, R., Buchhalter, A., Ashworth, J., Lanier, R., Pappagallo, M., Shram, M., Caron, J., Inturrisi, C., Folli, F., Traversa, S., and Manfredi, P. REL-1017 (esmethadone; d-methadone): Assessment of Reinforcement-type Behavior, Physical Dependence, and Withdrawal in Sprague Dawley Rats. Neuroscience Education Institute (NEI) Congress (hybrid event), Colorado Springs, CO, November 4-7, 2021.

Henningfield, J., Apseloff, G., Gorodetzky, C., Pappagallo, M., Shram, M., De Martin, S., Fant, R., Vocci, F., Sapienza, F., Kosten, T., Huston, J., Buchhalter, A., Ashworth, J., Lanier, R., Folli, F., Traversa, S., Inturrisi, C.E., and Manfredi, P.L. No Meaningful Opioid Abuse Liability of REL-1017 (esmethadone; d-methadone), a Rapid-acting Antidepressant in Clinical Development: A Human Abuse Potential Study. Neuroscience Education Institute (NEI) Congress (hybrid event), Colorado Springs, CO, November 4-7, 2021.

Henningfield, J.E., Huestis, M.A., and Laredo, G. American Kratom Association Leadership Meeting. Workshop on the World Health Organization's Expert Committee on Drug Dependence (WHO, EDD), Information Session on the WHO Pre-Review Report: Kratom (*Mitragyna speciosa*), mitragynine, and 7-hydroxymitragynine, Forty-fourth Meeting, October 11, 2021. Tampa, Florida, November 8, 2021.

Henningfield, J.E. Tobacco Harm Reduction (THR) and Electronic Nicotine Delivery Systems (ENDS) in the Context of FDA Regulation – the Promise and the Peril. Johns Hopkins University School of Medicine, Department of Psychiatry and Behavioral Sciences, Behavioral Pharmacology Research Unit Lecture Series. November 11, 2021

Coe, M., Ashworth, J., Schnoll, S. and Henningfield, J. Psychedelic Drugs in the Post-Approval World: Important Components of Risk Evaluation and Mitigations Strategy (REMS) Programs to Protect Public Health While Ensuring Widespread Access. American College of Neuropsychopharmacology Annual Meeting in San Juan, Puerto Rico, December 4-7, 2021

Coker, A., Yazar-Klosinski, B., Emerson, A., Doblin, D., Coe, M., and Henningfield, J. Making MDMA a Medicine: Analysis of the 8-factors of the Controlled Substances Act for the Abuse Potential of MDMA. American College of Neuropsychopharmacology Annual Meeting in San Juan, Puerto Rico, December 4-7, 2021.

Fields, S., Henningfield, J.E., Correa-Fernandez, V., Davis, D., de Dios, M.A., Garcia-Romeu, A., Heads, A., Hood, C.O., Hudzik, T., Martinez, S., Moreland, A., Skinstad, A.H., and Wilkerson, J.M., Jr. Comparison Between the 2020 CPDD Membership Survey and Meeting Attendance: Transition from Meeting Attendance to Membership. American College of Neuropsychopharmacology Annual Meeting in San Juan, Puerto Rico, December 4-7, 2021.

Henningfield, J., Apseloff, G., Gorodetzky, C., Pappagallo, M., Shram, M., De Martin, S., Fant*, R., Vocci, F., Sapienza, F., Kosten, T., Huston, J., Buchhalter, A., Ashworth, J., Lanier, R., Folli, F., Traversa, S., Inturrisi, C.E., and Manfredi, P.L. No Meaningful

Opioid Abuse Liability of REL-1017 (esmethadone; d-methadone), a Rapid-acting Antidepressant in Clinical Development: A Human Abuse Potential Study. American College of Neuropsychopharmacology, San Juan Puerto Rico, December 4-8, 2021. American College of Neuropsychopharmacology Annual Meeting in San Juan, Puerto Rico, December 4-7, 2021.

Henningfield, J.E. Kratom Abuse Potential Issues Update: Controlled Substances Act Basics, Current State of the Science, and Current State of Regulation. Kratom Abuse Potential Summit. Virtual Meeting, April 27, 2022.

Henningfield, J.E., Introduction and Moderator. Abuse Potential of MDMA and Implications for Controlled Substance Scheduling. Presenters: Michael Bauman, Matthew Banks, and Allis Coker. International Study Group Investigating Drugs as Reinforcers, Satellite Meeting to CPDD. Minneapolis, Minnesota, June 11, 2022.

Henningfield, J.E. Kratom Policy in the Context of Abuse Potential and public Health. In symposium - From Bench to Bedside to Policy, Updating Our Understanding of Kratom, with Kirsten Smith, Oliver Grundmann, Christopher McCurdy and Kelly Dunn. College on Problems of Drug Dependence, Minneapolis, Minnesota, June 13, 2022.

Henningfield, J., Apseloff, G., Gorodetzky, C., Pappagallo, M., Shram, M., De Martin, S., Fant*, R., Vocci, F., Sapienza, F., Kosten, T., Huston, J., Buchhalter, A., Ashworth, J., Lanier, R., Folli, F., Bifari, F., Riberiro, S., Traversa, S., Inturrisi, C.E., and Manfredi, P.L. REL-1017 (esmethadone; d-methadone), a rapid-acting antidepressant has no meaningful opioid abuse liability in nonclinical and clinical abuse potential studies. College on Problems of Drug Dependence, Minneapolis, Minnesota, June 14, 2022.

Huestis, M.A., Henningfield, J.E., and Wang, D. Absence of withdrawal symptoms upon discontinuation of daily kratom use in three formulations in a controlled clinical study. Late Breaking Presentation. College on Problems of Drug Dependence, Minneapolis, Minnesota, June 12-16 virtual, 2022.

Under Represented Populations (URPop) Committee poster led by Sherecce A. Fields and members of URP. 2020 CPDD Membership Survey: Transition from Meeting Attendance to Membership. College on Problems of Drug Dependence, Minneapolis, Minnesota, June 12-16, 2022.

Henningfield, J.E. and Huestis, M.A. (Moderators) Global kratom science forum addressing physical dependence, withdrawal and abuse potential. Convened virtually on two dates to accommodate diverse schedule and time zone challenges. Participants include representatives of most research organizations that had conducted kratom related physical dependence/withdrawal studies in animals and/or humans in the five prior years. Wednesday, June 24th, 2022 at 7:00 EDT / 18:00 WIB – 9:00 EDT / 20:00 WIB and Friday, July 15th, 2022 at 7:00 EDT / 18:00 WIB – 9:00 EDT / 20:00 WIB. See Henningfield, Chawarski et al. 2023 for resulting publication.

Henningfield, J.E. Kratom Science that Might inform the 2024 BNN Recommendation to ban Kratom as a Schedule I Drug or Consider Alternative Approaches. the Tanjung Pura University (UNTAN) and UNTAN Kratom Research Centre. Pontianak, West Kalimantan Province, Borneo, Indonesia. August 12, 2022.

Henningfield, J.E. and Huestis, M.A. (Moderators) Global kratom science forum addressing physical dependence, withdrawal and abuse potential. Convened virtually on two dates to accommodate diverse schedule and time zone challenges. Participants include representatives of most research organizations that had conducted kratom related physical dependence/withdrawal studies in animals and/or humans in the five prior years. Wednesday, June 24th, 7:00 EDT / 18:00 WIB – 9:00 EDT / 20:00 WIB and Friday, July 15th, 7:00 EDT / 18:00 WIB – 9:00 EDT / 20:00 WIB. See Henningfield, Chawarski et al. 2023 for resulting publication.

Henningfield, J.E. Framework for abuse potential assessment of new drug products. American Society for Clinical Pharmacology & Therapeutics (ACPT) webinar. With Drs. Bonson, Rocha, Sellers. April 28, 2023.

Henningfield, J.E. Kratom Safety & Abuse Potential: New Studies. In Symposium: Advancing Kratom Science: New data on kratom's pharmacology, safety, pharmacokinetics, abuse potential and real-world surveys. International Conference on the Science of Botanicals, Oxford University, Oxford, Mississippi, April 25, 2023.

Moline, M., Cheng, J.Y., Durgin, C., Pype, S., Buchhalter, A.R., and Henningfield, J. Abuse potential differs between hypnotic classes: Real-world data. Paper presented at the 34th annual meeting of the International College of Neuropsychopharmacology (CINP) World Congress of Neuropsychopharmacology, Montreal, Quebec, Canada, May 7-10, 2023.

Moline, M., Juday, T.R., Cheng, J.Y., Henningfield, J.E, Buchhalter, A.R., Sembower, M.A., Pype, S., Wickwire, E.M., and Procyshyn, R. Trazodone for treating insomnia: Abuse and safety risks. Poster presented at the annual meeting of the American Society of Clinical Psychopharmacology, Miami Beach, FL, May 30-June 2, 2023.

Henningfield, J.E. Psychedelics: The history of therapeutic use: Lessons learned from 1960s studies and from the renaissance in clinical development beginning in the first decade of the 20th century. Plenary Policy Forum addressing Psychedelic Science and Regulatory Issues. College on Problems of Drug Dependence, Denver, Colorado, June 18, 2023.

Henningfield, J.E., Buchhalter, A., Durgin, C., Lanier, R. & Ashworth, J. Psychedelic Drug Abuse Potential Assessment Challenges to Scientific Validity and Real World Predictivenss: Current Approaches and Research Gaps. College on Problems of Drug Dependence, Denver, Colorado, June 18, 2023.

Moline, M.L., Cheng, J.Y., Durgin, C., Pype, S., Buchhalter, A.R., Sembower, M.A., and Henningfield, J.E. Abuse potential similarities between hypnotic classes: Real-world

data. Poster presented at the 85th annual scientific meeting of the College on Problems of Drug Dependence, Denver, CO, June 17-21, 2023.

Henningfield, J.E. Panel: Psychedelic Science 2023 -Psychedelic Science Abuse Potential Pan Panel - Elephant in the Room? Safety and Abuse Liability in the Development of Psychedelic Drugs and Psychoactive Foods. Psychedelic Science 2023, Denver Colorado, June 21, 2023.

Moline, M., Juday, T.R., Cheng, J.Y., Henningfield, J.E., Buchhalter, A.R., Sembower, M.A., Pye, S., Wickwire, E.M., and Procyshyn, R. Trazodone for treating insomnia: Abuse and safety risks. Poster presented at the annual meeting of the Canadian Neurological Sciences Federation, Banff, Alberta, Canada, June 6-9, 2023.

Henningfield, J.E. The Current Regulatory 8-Factor Analysis (8FA) and Its Use on Substance Abuse Liability. Symposium 6, Clinical Drug Development & Investigations Track: The tight rope of substance abuse potential – the pre-clinical and clinical factors that make or break the scheduling of a substance, using Kratom (*Mitragyna speciosa*) as an example. American College of Clinical Pharmacology, Bellevue, Washington., September, 11, 2023.

Moline, M., Juday, T., Cheng, J., Henningfield, J., Buchhalter, A., Sembower, M., ... Procyshyn, R. (2023). P.052 Trazodone for treating insomnia: abuse and safety risks. Canadian Journal of Neurological Sciences / Journal Canadien Des Sciences Neurologiques, 50(s2), S72–S72. doi:10.1017/cjn.2023.156

Moline, M., Juday, T.R., Cheng, J.Y., Henningfield, J.E., Buchhalter, A.R., Sembower, M.A., Pye, S., Wickwire, E.M., and Procyshyn, R. Trazodone in the off-label treatment of insomnia: Abuse and safety risks. Poster presented at the 73rd annual meeting of the Canadian Psychiatric Association, Vancouver, British Columbia, Canada, October 19-21, 2023.

Moline, M., Juday, T.R., Cheng, J.Y., Henningfield, J.E., Buchhalter, A.R., Sembower, M.A., Pye, S., Wickwire, E.M., and Procyshyn, R. Trazodone in the off-label treatment of insomnia: Abuse and Safety Risks. Poster presented at the XXVI annual meeting of the World Congress of Neurology, Montreal, Quebec, Canada, October 15-19, 2023.

Henningfield, J.E. Panelist addressing Considerations in Discordant Findings from Nonclinical, Clinical and Epidemiological Data. Cross Company Abuse Liability Counsel – FDA Stakeholder Meeting: Advancements and Challenges in Abuse Potential Evaluation. Rockville, Maryland, September 27-28, 2024.

Henningfield, J.E. Latest developments in psychedelic medicines for PTSD, Addiction, Chronic Pain & Consciousness. Virginia Commonwealth University/NIDA International Humphrey Scholars program dinner lecture, Baltimore, Maryland. December 1, 2024

Henningfield, J.E. Kratom Science Update: Abuse Potential –Public Health Implications in the Context of the Drug Overdose Epidemic – Regulatory Needs. Congressional Kratom Science and Regulatory Needs Briefing. With NIDA Director, Dr. Nora Volkow;

Johns Hopkins BPRU, Dr. Kirsten Smith; Thomas Jefferson University & Smith Toxicology, Dr. Marilyn Huestis & former White House Office of National Drug Control Director, Mr. James Carroll. U.S. Capital, Washington D.C., December 13, 2024

Henningfield, J.E. Kratom Science Update: Abuse Potential / Controlled Substances Act 8-Factor Analysis and Regulatory Needs. National Kratom Summit. Washington D.C., December 14, 2023.

Moline, M., Cheng, J.Y., Henningfield, J.E., Sembower, M.A., Pype, S. & Buchhalter, A. R. Nonclinical Studies of Abuse Potential with Dual Orexin Receptor Antagonists: Concordance with Real-World Use. American College of Neuropsychopharmacology, Tampa, Florida, December 4, 2023.

Moline, M., Cheng, J.Y., Henningfield, J.E., Sembower, M.A., Pype, S., and Buchhalter, A.R. Nonclinical studies of abuse potential with dual orexin-receptor antagonists: Concordance with real-world use. Abstract submitted to the annual meeting of the American Society of Clinical Psychopharmacology, Miami Beach, FL, May 28-31, 2024.

Moline, M., Cheng, J.Y., Henningfield, J.E., Sembower, M.A., Pype, S., and Buchhalter, A.R. Nonclinical studies of abuse potential with dual orexin-receptor antagonists: Concordance with real-world use. Abstract submitted to the annual meeting of the Canadian Neurological Sciences Federation, Toronto, Ontario, Canada, May 21-24, 2024.

Henningfield, J.E. Chair & Introduction. Abuse Potential Assessment of Novel Substances and Products with Putatively Low Abuse Potential. With: with Discussant Sandra Comer & panelists Justin Strickland, James Rowlett & Ziva Cooper. International Study Group Investigating Drugs as Reinforcers (ISGIDAR), Satellite to CPDD. Montreal, Canada, May 15, 2024.

Durgin, C., Lanier, R., Buchhalter, A., Henningfield, J. & Ashworth, J. The Development of Effective and Safe Analgesics and Potential Combination Therapy Approaches: Guidances, Gaps, and Going Forward (poster S82). College on Problems of Drug Dependence, Montreal, Canada, June 15-19, 2024.

Lanier, R. (Presenter), Co-authors: Durgin, C., Buchhalter, A. Ashworth, J. & Henningfield, J. Collecting Abuse-related Adverse Event Information in Clinical Trials of Psychedelics and Novel Psychoactive Drugs to Inform Scheduling and Labeling: Issues, Methods, and Recommendations. In Oral session: Licit and Illicit Use of Psychedelics. College on Problems of Drug Dependence, Montreal, Canada, June 15-19, 2024.

Henningfield, J.E. (Chair) & Lukas, S. (co-moderator). Roland R. Griffiths Memorial Symposium. Speakers: George Bigelow (virtual), Elise Weerts, Theresa Carbonaro, Chad Reissig (virtual) & Scott Lukas; With Video comments by Maxine Stitzer, Eric Strain, Bridgette Garrett, Albert Garcia-Romeu, Fredrick Barrett, David Yaden & Marla Weiner. College on Problems of Drug Dependence, Montreal, Canada, June 15-19, 2024.

Henningfield, J.E. and Rieckenberg, R.L Image-induced awe – research and therapeutic opportunities and challenges. Hopkins Oxford Psychedelic Ethics (HOPE) Summit, the Johns Hopkins University Bloomberg Center, Washington D.C., August 17-18, 2024.

Henningfield, J.E. Congressional Briefing; Kratom Science & Policy – We have come a long way: Where we are Now and What we Need to Do. Bi-Partisan chairs, Congressman Jack Bergman (R) and Congressman Mark Pocan (D). United States Capital, Washington, DC.

Henningfield, J.E. Seven-Hydroxymitragynine (7-OHMG) The Path Forward to Protect Consumers. American Kratom Association AKA Leadership Summit, Warwick Rhode Island November 7-8, 2024

Henningfield, J.E. Regulatory pathways of drug development & implementation of psychedelic therapies: Focus on Schedule I drugs for FDA approval for therapeutic use, e.g., LSD, MDMA & psilocybin. In Plenary Symposium III – Psychedelic therapy for substance use disorders: neurobiology, evidence base, regulatory considerations and unintended consequences. With Stephen Ross (Chair) and Bertha Kalifon Madras. American Academy of Addiction Psychiatry, Naples, Florida, November 16, 2024.

Coe, M., Huestis, M. and Henningfield, J.E. Abuse Potential of Encapsulated, Dried Kratom Leaf Powder: Results from a Randomized, Double-Blind, Placebo-Controlled, Dose Escalation, Phase I Study. American College of Neuropsychopharmacology, Dec. 11, 2024, Phoenix, Arizona.

Moline, M., Cheng, J.Y., Henningfield, J, Sembower, M.A., Pype, S. Wickwire, E.M. and Procyshyn, R. Trazodone in the Off-label Treatment of Insomnia: Abuse and Safety Risks. American College of Neuropsychopharmacology, Dec. 11, 2024, Phoenix, Arizona.

Henningfield, J.E. Opening Conference Keynote Address: Kratom Science – A Remarkable decade of Progress: Building on the foundation for regulation, policy & kratom derived dietary products and pharmaceuticals. International Kratom Symposium, University of Florida, Lake Nona, Florida Feb. 4-6, 2025.

Henningfield, J.E. Roundtable Discussion: Beyond the Shadows of Prohibition: From Supply Reduction to Supply Regulation. Organized by Czech Republic, Co-Sponsored by Columbia, Malta, Switzerland Office of the United Nations High Commissioner for Human Rights, Harm Reduction International, International Drug Policy Consortium (DPC), Mainline, Transform Drug Policy Foundation. United Nations Vienna, Sixty-eighth session of the Commission on Narcotic Drugs. Vienna International Center (VIC), March 11, 2025.

Henningfield, J.E. Invited comment on the international controlled substances scheduling implications of the current state of kratom science. In Kratom Science Side Event in conjunction/collaboration with the American Kratom Association. United Nations Vienna, Sixty-eighth session of the Commission on Narcotic Drugs. Vienna International Center (VIC), March 14, 2025.

Henningfield, J.E., Smith, K., Zamarripa, A. and Coe, Marion. Kratom Use in the Context of Addiction Treatment. Poster presented at the annual Kahlert Institute for Addiction Medicine Research Symposium, University of Maryland, School of Medicine, Baltimore, MD May 28, 2025.

Henningfield, J.E., Graziosi, M., Rieckenberg, R.L. and Garcia-Romeu, A. Image-induced awe: Research and therapeutic opportunities and challenges. Presented at the College on Problems of Drug Dependence, Annual Meeting, New Orleans, LA, June 16, 2025.

Coe, M., Durgin, C.J., Lanier, R. and Henningfield, J.E. Challenges in Assessing Abuse Potential of Novel Substances and Low-Abuse-Potential Drugs. Poster presented at the College on Problems of Drug Dependence, Annual Meeting, New Orleans, LA, June 15-18, 2025.

Sciascia, T., Hawi, A., Henningfield, J.E., Setnik, B., Shram, M. and Cassella, J. Assessment of Human Abuse Potential of Nalbuphine in Nondependent Recreational Drug Users. Poster presented at the College on Problems of Drug Dependence, Annual Meeting, New Orleans, LA, June 15-18, 2025.

Henningfield, J.E. Behavioral Pharmacology & Economics: From Humble Beginnings to Advancing Health, Abuse Potential Assessment, and Neuropharmacology. Keynote lecture for the Vermont Center of Behavior and Health, 13th Annual Conference – Contributions of Behavioral Economics & Behavioral Pharmacology to Advancing Addiction Science, Burlington, Vermont, October 9, 2025.

APPENDIX B

DOCUMENTS REVIEWED

- Case Documents:
 - Third Amended Complaint
 - Plaintiff's Initial Disclosures
 - Plaintiff's Answers to Defendant JOpen, LLC's First Set of Interrogatories, dated 1/2/2025
 - Plaintiff's Supplemental Responses to Requests for Production of Documents, dated 9/9/2025
 - Plaintiff's Supplemental Answers to Interrogatories, dated 9/9/2025
 - Plaintiff's Expert Reports, produced November 18, 2025
- Third Party Productions
 - St. Tammany Parish Sheriff's Office Incident Report, STPSO000001-18
 - St. Tammany Parish Coroner's Office Records
 - Crime Scene Photos produced by St. Tammany Parish Sheriff's Office
 - TRUEPILL000001-03
 - 911 call made by Kathleen Moller
 - NMS Labs Records
 - St. Tammany Fire District #4, Patient Care Record
 - Paradigm Health System (certification of lack of records)
 - ASPEN0000001-12
 - LIFENET000001-08
 - The following records from the Louisiana Organ Procurement Agency:
 - LNH Chart
 - Audio Recording of call between Kathleen Moller and LOPA Representative
 - Cardiectomy Report
 - Louisiana Organ and Tissue Donor Registry Verification
- HIPAA Compliant Authorization for Release of Protected Health Information/Records
- MOLLER_000023-24
- MOLLER_000025-26
- Obituary, Harmony Anne Moller,
<https://www.dignitymemorial.com/obituaries/covington-la/harmony-moller-11148925>
- *Mother Blames Companies Behind Kratom for Daughter's Death*, LEGAL NEWSLINE, Chris Dickerson, <https://www.legalnewsline.com/louisiana-record/mother-blames->

[companies-behind-kratom-for-daughters-death/article_7c3ae0f1-0293-548c-9556-fd7911ae275e.html](https://www.dignitymemorial.com/obituaries/covington-la/harmony-moller-11148925) (February 28, 2024)

- The following Facebook Posts
 - Mande's Restaurant, dated February 15, 2023, linking Harmony Moller Obituary, <https://www.dignitymemorial.com/obituaries/covington-la/harmony-moller-11148925>, and comments
 - Kathi Moller's post, dated August 6, 2023, and comments
 - Kathi Moller's post, dated February 8, 2023, and comments
 - Kathi Moller's post, dated April 13, 2024, and comments
 - Kathi Moller's post, dated April 12, 2024
 - Kathi Moller's post, dated December 5, 2023
 - Kathi Moller's post, dated November 12, 2023
 - Kathi Moller's post, dated April 7, 2023
 - Kathi Moller's comment on Mande's Restaurant's post, dated February 15, 2023
 - Kathi Moller's post, dated May 29, 2023, and comments

Coe, M. A., Pillitteri, J. L., Sembower, M. A., Gerlach, K. K., & Henningfield, J. E. (2019). Kratom as a substitute for opioids: Results from an online survey. *Drug and Alcohol Dependence*, 202, 24–32. <https://doi.org/10.1016/j.drugalcdep.2019.05.005>

Eckhardt, L. L., & Nickel, A. C. (2023). *The changing complexities of opioid-related sudden death*. *Journal of the American College of Cardiology*, 81(23), 2269–2271. <https://doi.org/10.1016/j.jacc.2023.04.024>

Garcia-Romeu, A., Cox, D. J., Smith, K. E., Dunn, K. E., & Griffiths, R. R. (2020). Kratom (*Mitragyna speciosa*): User demographics, use patterns, and implications for the opioid epidemic. *Drug and Alcohol Dependence*, 208, 107849. <https://doi.org/10.1016/j.drugalcdep.2020.107849>

Giroir B. P. (2018). 2018 letter from the assistant secretary of health to the administrator of the drug enforcement administration to rescind previous support to permanently place mitragynine and 7-hydroxymitragynine in schedule I of the controlled substances Act. Retrieved from https://images.go02.informamarkets.com/Web/Informa02/%7b548e6d56-2ea4-4da4-9404-0348b56e9a88%7d_dhillon-8.16.2018-response-letter-from-ash-radm-giroir.pdf on April 24, 2025

Giroir, B. [@DrGiroir]. (2021, May 21, 6:49PM). FDA doesn't schedule; it only recommends. FDA's recommendation was rejected because of embarrassingly poor evidence and data, and a failure to consider overall public health. Retrieved from [Tweet]. X. <https://x.com/DrGiroir/status/1395874443726102533> on April 24, 2025.

Gottlieb, S. [@ScottGottliebMD]. (2021, May 21, 6:17PM). We were prevented by HHS from moving forward with the scheduling of Kratom, and I'm convinced it's fueling the opioid addiction crisis. Retrieved from [Tweet]. X. <https://x.com/ScottGottliebMD/status/1395866461776891908X>, on April 24, 2025.

Grundmann O. (2017). Patterns of Kratom use and health impact in the US-Results from an online survey. *Drug and Alcohol Dependence*, 176, 63–70. <https://doi.org/10.1016/j.drugalcdep.2017.03.007>

Grundmann, O., Green, M., Berthold, E., Yoon, S. L., & Ray, D. (2025). Prevalence and Use Patterns of Kratom (*Mitragyna speciosa* Korth.) in a US Nationally Representative Sample. *Journal of Psychoactive Drugs*, 1–9. <https://doi.org/10.1080/02791072.2025.2474249>

Henningfield, J.E. & Fant, R.V. (2016 Dated November 28, Submitted to DEA docket by Hogan Lovells November 30). Assessment of kratom under the CSA Eight Factors and scheduling recommendation. Published on DEA Docket No. DEA-442W. Retrieved April 24, 2025 from [file:///C:/Users/JackHenningfield/Downloads/DEA-2016-0015-23186_attachment_2%20\(2\).pdf](file:///C:/Users/JackHenningfield/Downloads/DEA-2016-0015-23186_attachment_2%20(2).pdf)

Henningfield, J. E., Grundmann, O., Babin, J. K., Fant, R. V., Wang, D. W., & Cone, E. J. (2019). Risk of death associated with kratom use compared to opioids. *Preventive Medicine*, 128, 105851. <https://doi.org/10.1016/j.ypmed.2019.105851>

Henningfield, J. E., Fant, R. V., & Wang, D. W. (2018a). The abuse potential of kratom according to the 8 factors of the controlled substances act: implications for regulation and research. *Psychopharmacology*, 235(2), 573–589. <https://doi.org/10.1007/s00213-017-4813-4>

Henningfield, J.E., Babin, J., Boyer, E.W., Brown, P., Garcea-Romeu, A., Griffiths, R.R., Grundmann, O., Hemby, S.E., McCurdy, C.R., Raffa, R.B., Swogger, M.T., & Walsh, Z. (2018b). Comment on the FDA 8 factor analysis of kratom (mitragynine and 7-hydroxymitragynine) included in the Acting Secretary of Health's October 17, 2017 letter to the Acting Administrator of the Drug Enforcement Administration recommending placement in Schedule I of the Controlled Substances Act. The comment was submitted to Brett P. Giroir, Assistant Secretary for Health, Uttam Dhillon, Acting Administrator of the DEA, Scott Gottlieb, Commissioner, FDA, and Nora D. Volkow, Director, National Institute on Drug Abuse.

Henningfield, J. E., Rodricks, J. V., Magnuson, A. M., & Huestis, M. A. (2022b). Respiratory effects of oral mitragynine and oxycodone in a rodent model. *Psychopharmacology*, 239(12), 3793–3804. <https://doi.org/10.1007/s00213-022-06244-z>

Henningfield, J. E., Wang, D. W., & Huestis, M. A. (2022a). Kratom Abuse Potential 2021: An Updated Eight Factor Analysis. *Frontiers in Pharmacology*, 12, 775073. <https://doi.org/10.3389/fphar.2021.775073>

Henningfield, J. E., Grundmann, O., Huestis, M. A., & Smith, K. E. (2024). Kratom safety and toxicology in the public health context: research needs to better inform regulation. *Frontiers in Pharmacology*, 15, 1403140. <https://doi.org/10.3389/fphar.2024.1403140>

Hill, R., Kruegel, A. C., Javitch, J. A., Lane, J. R., & Canals, M. (2022). The respiratory depressant effects of mitragynine are limited by its conversion to 7-OH mitragynine. *British Journal of Pharmacology*, 179(14), 3875–3885. <https://doi.org/10.1111/bph.15832>

Kruegel, A. C., Gassaway, M. M., Kapoor, A., Váradi, A., Majumdar, S., Filizola, M., Javitch, J. A., & Sames, D. (2016). Synthetic and Receptor Signaling Explorations of the Mitragyna Alkaloids: Mitragynine as an Atypical Molecular Framework for Opioid Receptor Modulators. *Journal of the American Chemical Society*, 138(21), 6754–6764.

Kruegel, A. C., Uprety, R., Grinnell, S. G., Langreck, C., Pekarskaya, E. A., Le Rouzic, V., Ansonoff, M., Gassaway, M. M., Pinar, J. E., Pasternak, G. W., Javitch, J. A., Majumdar, S., & Sames, D. (2019). 7-Hydroxymitragynine Is an Active Metabolite of Mitragynine and a Key Mediator of Its Analgesic Effects. *ACS Central Science*, 5(6), 992–1001. <https://doi.org/10.1021/acscentsci.9b00141>

Leong Abdullah, M. F. I., Tan, K. L., Narayanan, S., Yuvarashnee, N., Chear, N. J. Y., Singh, D., Grundmann, O., & Henningfield, J. E. (2020). *Is kratom (Mitragyna speciosa Korth.) use associated with ECG abnormalities? Electrocardiogram comparisons between regular kratom users and controls.* *Clinical Toxicology*. Advance online publication. <https://doi.org/10.1080/15563650.2020.1812627>

Macko, E., Weisbach, J. A., & Douglas, B. (1972). Some observations on the pharmacology of mitragynine. *Archives internationales de pharmacodynamie et de therapie*, 198(1), 145–161.

McCurdy, C.R., Sharma, A., Smith, K.E., Veltri, C.A., Weiss, S.T., White, C.M., & Grundmann, O. (2024) An update on the clinical pharmacology of kratom: uses, abuse potential, and future considerations. *Expert Rev Clin Pharmacol* 17(2):131-142. <https://doi.org/10.1080/17512433.2024.2305798>

Murray, A., & Traylor, J. (2025). Caffeine toxicity. In StatPearls. StatPearls Publishing. Retrieved April 15, 2025, from [https://www.ncbi.nlm.nih.gov/books/NBK532910/​;contentReference\[oaicite:0\]{index=0}](https://www.ncbi.nlm.nih.gov/books/NBK532910/​;contentReference[oaicite:0]{index=0})

Nair, A.B. & Jacob, S. (2016). A simple practice guide for dose conversion between animals and humans. *Journal of Basic Clinical Pharmacology* 7(2):27–31. <https://doi.org/10.4103/0976-0105.177703>

National Institute on Drug Abuse. (2022). Kratom. National Institutes of Health. <https://nida.nih.gov/research-topics/kratom>.

Papsun, D., Schroeder, W, Brower J, et al. (2023). Forensic implications of kratom toxicity, correlation with mitragynine concentrations, and polypharmacy. *Curr Addict Rep.*;10(2):272–281. doi:10.1007/s40429-023-00477-4.

Prozialeck, W. C., Avery, B. A., Boyer, E. W., Grundmann, O., Henningfield, J. E., Kruegel, A. C., McMahon, L. R., McCurdy, C. R., Swogger, M. T., Veltri, C. A., & Singh, D. (2019). Kratom policy: The challenge of balancing therapeutic potential with public safety. *The International Journal on Drug Policy*, 70, 70–77. <https://doi.org/10.1016/j.drugpo.2019.05.003>

Prozialeck, W. C., Edwards, J. R., Lamar, P. C., Plotkin, B. J., Sigar, I. M., Grundmann, O., & Veltri, C. A. (2020). Evaluation of the Mitragynine Content, Levels of Toxic Metals and the Presence of Microbes in Kratom Products Purchased in the Western Suburbs of Chicago. *International Journal of Environmental Research and Public Health*, 17(15), 5512. <https://doi.org/10.3390/ijerph17155512>

Reissig, C. J., Setnik, B., Milovan, D., McCurdy, C. R., Sharma, A., Hawkins, G., Bonson, K., Galati, S., Chiapperino, D. (2024) A pilot, placebo controlled, dose-finding, pharmacodynamic and pharmacokinetic study of orally administered botanical kratom in non-dependent, recreational polydrug users with opioid experience under fed conditions. Presented at the 2024 86th Annual Meeting of the College of Problems of Drug Dependence, Montreal, Quebec, Canada.

Sharma, A., Smith, K. E., Kuntz, M. A., Berthold, E. C., Elashkar, O. I., Guadagnoli, N., Kanumuri, S. R. R., Mukhopadhyay, S., Panlilio, L. V., Epstein, D. H., & McCurdy, C. R. (2025). Chemical Analysis and Alkaloid Intake for Kratom Products Available in the United States. *Drug testing and analysis*, 10.1002/dta.3906. Advance online publication. <https://doi.org/10.1002/dta.3906>

Smallets, S., Litvin, S., Abele, G., Kirsh, S., & Paustenbach, D. (2025). *The acute adverse health effects of kratom: An evaluation of case reports*. *Frontiers in Pharmacology*, 16, 1620601. <https://doi.org/10.3389/fphar.2025.1620601>

Smith, K. E., Boyer, E. W., Grundmann, O., McCurdy, C. R., & Sharma, A. (2025). The rise of novel, semi-synthetic 7-hydroxymitragynine products. *Addiction*, 120(2), 387–388. <https://doi.org/10.1111/add.16728>

Smith, K. E., Feldman, J. D., Dunn, K. E., McCurdy, C. R., Weiss, S. T., Grundmann, O., Garcia-Romeu, A., Nichols, J., & Epstein, D. H. (2023a). Examining the paradoxical effects of kratom: a narrative inquiry. *Frontiers in Pharmacology*, 14. <https://doi.org/10.3389/fphar.2023.1174139>

Smith, K. E., Feldman, J. D., Schrieffer, D., Weiss, S. T., Grundmann, O., Dunn, K. E., et al. (2023b). Diagnostic ambiguities and underuse of clinical assessment tools: a systematic review of case reports on kratom addiction and physical dependence. *Current Addiction Reports*. 10, 282–292. doi:10.1007/s40429-023-00474-7s

Smith, K. E., and Lawson, T. (2017). Prevalence and motivations for kratom use in a sample of substance users enrolled in a residential treatment program. *Drug and Alcohol Dependence*. 180, 340–348. doi:10.1016/j.drugalcdep.2017.08.034

Smith, K. E., Panlilio, L. V., Feldman, J. D., Grundmann, O., Dunn, K. E., McCurdy, C. R., et al. (2024). Ecological momentary assessment of self-reported kratom use, effects, and motivations among US adults. *JAMA Network. Open* 7, e2353401. doi:10.1001/jamanetworkopen.2023.53401

Smith, K. E., Rogers, J. M., Dunn, K. E., Grundmann, O., McCurdy, C. R., Schrieffer, D., et al. (2022d). Searching for a signal: self-reported kratom dose-effect relationships among a sample of US adults with regular kratom use histories. *Frontiers in Pharmacology*. 13, 765917. doi:10.3389/fphar.2022.765917

Smith, K. E., Rogers, J.M., Schrieffer, D., and Grundmann, O. (2021). Therapeutic benefit with caveats? Analyzing social media data to understand the complexities of kratom use. *Drug and Alcohol Dependence*. 226, 108879. doi:10.1016/j.drugalcdep.2021.108879

Smith, K. E., Rogers, J. M., Sharma, A. McCurdy, C. R., Weiss, S. T., Dunn, K. E., et al. (2023c). Responses to a “typical” morning dose of kratom in people who use kratom regularly: a direct-observation study. *Journal of Addiction Medicine*. 10, doi:10.1097/10.1097/ADM.0000000000001259

Swogger, M. T., Hart, E., Erowid, F., Erowid, E., Trabold, N., Yee, K., Parkhurst, K. A., Priddy, B. M., & Walsh, Z. (2015). Experiences of Kratom Users: A Qualitative Analysis. *Journal of Psychoactive Drugs*, 47(5), 360–367. <https://doi.org/10.1080/02791072.2015.1096434>

Swogger, M. T., Smith, K. E., Garcia-Romeu, A., Grundmann, O., Veltri, C. A., Henningfield, J. E., & Busch, L. Y. (2022). Understanding Kratom Use: A Guide for Healthcare Providers. *Frontiers in Pharmacology*, 13, 801855. <https://doi.org/10.3389/fphar.2022.801855>

Turner AR, Spurling BC, Agrawal S. Marijuana Toxicity. [Updated 2023 Jul 31]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK430823/>

U.S. Drug Enforcement Administration, Office of Diversion Control. (2015). National Forensic Laboratory Information System. Special Report: Opiates and related drugs reported through NFLIS, 2009-2014. Springfield, VA.

VA: U.S. Drug Enforcement Administration. U.S. Drug Enforcement Administration (2016a). Schedules of controlled substances: temporary placement of mitragynine and 7-Hydroxymitragynine into schedule I – Proposed Rule. Federal Register, August 31, 2016: 59929-59934. Retrieved April 24, 2025 from <https://www.federalregister.gov/documents/2016/08/31/2016-20803/schedules-of-controlled-substances-temporary-placement-of-mitragynine-and-7-hydroxymitragynine-into>
<https://www.federalregister.gov/>

U.S. Drug Enforcement Administration (2016b). Withdrawal of Notice of Intent to Temporarily Place Mitragynine and 7-Hydroxymitragynine into Schedule I – Proposed Rule. Federal Register, October 13, 2016: 70652-70654. Retrieved April 24, 2024 from <https://www.federalregister.gov/documents/2016/10/13/2016-24659/withdrawal-of-notice-of-intent-to-temporarily-place-mitragynine-and-7-hydroxymitragynine-into>

U.S. Drug Enforcement Administration. (2020). Drug Fact Sheet: Kratom. U.S. Department of Justice. Retrieved April 24, 2025, from https://www.dea.gov/sites/default/files/2020-06/Kratom-2020_0.pdf

U.S. Drug Enforcement Administration, Diversion Control Division. (2016). National Forensic Laboratory Information System - 2015 Midyear Report. Springfield, VA.

U.S. Drug Enforcement Administration, Diversion Control Division. (2017). National Forensic Laboratory Information System: Year 2016 Annual Report. Springfield, VA: U.S. Drug Enforcement Administration.

U.S. Food and Drug Administration. (2024). FDA and Kratom. U.S. Food and Drug Administration. Retrieved April 15, 2025, from <https://www.fda.gov/news-events/public-health-focus/fda-and-kratom>

U.S. Food and Drug Administration. (July 29, 2025a). FDA takes steps to restrict 7-OH opioid products threatening American consumers [Press release]. Retrieved July 31, 2025, from <https://www.fda.gov/news-events/press-announcements/fda-takes-steps-restrict-7-oh-opioid-products-threatening-american-consumers>

U.S. Food and Drug Administration. (July 29, 2025b). Preventing the next wave of the opioid epidemic: What you need to know about 7-OH [Brochure]. Retrieved July 31, 2025, from <https://www.fda.gov/drugs/information-consumers-and-patients-drugs/hiding-plain-sight-7-oh-products>

U.S. Food and Drug Administration, Author: Makary, M. A. (July 29, 2025c). Dear colleague letter: Warning about 7-hydroxymitragynine (7-OH) [Letter]. U.S. Food and Drug Administration. Retrieved July 31, 2025, from <https://www.fda.gov/media/187898/download?attachment>

U.S. Food and Drug Administration, Authors: Reissig, C. J., Chiapperino, D., Seitz, A., Lee, R., Radin, R., & McAninch, J. (July 29, 2025d). 7-Hydroxymitragynine (7-OH): An assessment of the scientific data and toxicological concerns around an emerging opioid threat. U.S. Food and Drug Administration, Center for Drug Evaluation and Research. Retrieved July 31, 2025, from <https://www.fda.gov/media/187899/download?attachment>

Váradi, A., Marrone, G. F., Palmer, T. C., Narayan, A., Szabó, M. R., Le Rouzic, V., Grinnell, S. G., Subrath, J. J., Warner, E., Kalra, S., Hunkele, A., Pagirsky, J., Eans, S. O., Medina, J. M., Xu, J., Pan, Y. X., Borics, A., Pasternak, G. W., McLaughlin, J. P., & Majumdar, S. (2016). Mitragynine/Corynantheidine Pseudoindoxyls As Opioid Analgesics with Mu Agonism and Delta Antagonism, Which Do Not Recruit β -Arrestin-2. *Journal of Medicinal Chemistry*, 59(18), 8381–8397. <https://doi.org/10.1021/acs.jmedchem.6b00748>

World Health Organization, Expert Committee on Drug Dependence (2021). Annex I. 44th WHO ECDD Summary assessments, findings and recommendations. Retrieved April 24, 2025 from https://cdn.who.int/media/docs/default-source/controlled-substances/44ecdd_unsg_annex1.pdf

Xu, L., Chockalingam, A., Stewart, S., Shea, K., Matta, M.K., Narayanasamy, S., Pilli, N.R., Volpe, D.A., Weaver, J., Zhu, H., Davis, M.C., & Rouse, R. (2020). Developing an animal model to detect drug-drug interactions impacting drug-induced respiratory depression. *Toxicology Reports* 7:188–197. <https://doi.org/10.1016/j.toxrep.2020.01.008>

Xu, L., Krishna, A., Stewart, S., Shea, K., Racz, R., Weaver, J.L., Volpe, D.A., Pilli, N.R., Narayanasamy, S., Florian, J., Patel V, Matta, M.K., Stone, M.B., Zhu, H., Davis, M.C., Strauss, D.G., & Rouse R. (2021) Effects of sedative psychotropic drugs combined with oxycodone on respiratory depression in the rat. *Clinical and Translational Science* 14(6):2208–2219. <https://doi.org/10.1111/cts.13080>

Yue, K., Kopajtic, T.A., & Katz, J.L. (2018). Abuse liability of mitragynine assessed with a self-administration procedure in rats. *Psychopharmacology*, 235(10), 2823–2829. <https://doi.org/10.1007/s00213-018-4974-9>