UNITED STATES DEPARTMENT OF JUSTICE

DRUG ENFORCEMENT ADMINISTRATION

Hearing

IN THE MATTER OF:	DEA Docket No. 1362
Schedules of Controlled Substances: Proposed Rescheduling of Marijuana	Hearing Docket No: 26-96

Tuesday,
July 7, 2026

700 Army Navy Drive
Arlington, Virginia 22202

The above-entitled matter came on for hearing, pursuant to notice, at 9:00 a.m. EDT.

BEFORE:

THE HONORABLE DEREK C. JULIUS,
Chief Administrative Law Judge

APPEARANCES:

On Behalf of the Government:

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DAVID C. MALEY, ESQ.
KAYLA L. KREINHEDER, ESQ.
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[redacted]

On Behalf of the National Drug and Alcohol Screening Association:

DAVID G. EVANS, ESQ.
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On Behalf of Smart Approaches to Marijuana:

JOHN M. McNICHOLS, ESQ.
CHASE T. HARRINGTON, ESQ.
Torridon Law PLLC
[redacted]

On Behalf of the States of Nebraska, Idaho, and Indiana:

JOHN M. McNICHOLS, ESQ.
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APPEARANCES: (continued)

On Behalf of DUID Victim Voices:

PATRICK D. KENNEALLY, ESQ.
CONNOR MIGHELL, ESQ.
Burke Law Group, PLLC
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DAVID G. EVANS, ESQ.
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On Behalf of Kenneth Finn, M.D.:

PATRICK D. KENNEALLY, ESQ.
Burke Law Group, PLLC
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DAVID G. EVANS, ESQ.
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ALSO PRESENT:

GRAYSON E. PHILLIPS, ESQ., Law Clerk
LUKE NIFORATOS, Executive Vice President of Smart Approaches to Marijuana (SAM)
DECLAN HURLEY, Torridon Law summer associate

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(9:00 a.m.)

JUDGE JULIUS: On the record. Today is July 7th, 2026. This is Day 6 in the matter of Schedules of Controlled Substances: Proposed Rescheduling of Marijuana, DEA Docket Number 1362, Hearing Docket Number 26-96.

I'll start with taking appearances today. Government Counsel, who do you have here on behalf of the Government?

MR. LONICH: Yes, Your Honor. For the Government, Jarrettd Lonich, David Maley, Kayla Kreinheder, and Mack Swan.

JUDGE JULIUS: Thank you, Counsel.

And on behalf of Smart Approaches to Marijuana, who do we have?

MR. McNICHOLS: Good morning, Your Honor. John McNichols, Chase Harrington, and Luke Niforatos on behalf of Smart Approaches to Marijuana.

JUDGE JULIUS: And for the opposed states?

MR. McNICHOLS: For the opposed states, John McNichols, Chase Harrington, accompanied by Declan Hurley.

JUDGE JULIUS: Thank you, Counsel.

On behalf of Kenneth Finn, M.D.?

MR. KENNEALLY: Good morning, Your Honor. Patrick Kenneally for the record, K-E-N-N-E-A-L-L-Y, along with Connor Mighell, M-I-G-H-E-L-L.

JUDGE JULIUS: Okay.

MR. EVANS: And David Evans, Your Honor.

JUDGE JULIUS: Thank you, Counsel.

And on behalf of DUID Victim Voices?

MR. KENNEALLY: Good morning, Your Honor. Patrick Kenneally on behalf of DUID Victim Voices, as well as Connor Mighell.

JUDGE JULIUS: And on behalf of National Drug and Alcohol Screening Association?

MR. EVANS: I -- I'm also with DUID.

JUDGE JULIUS: My apologies, Mr. Evans.

MR. EVANS: David Evans.

JUDGE JULIUS: And on behalf of National Drug and Alcohol Screening Association?

MR. EVANS: David Evans, Your Honor.

JUDGE JULIUS: Thank you very much. And I have, according to our attendance sheet, that Tennessee Bureau of Investigation is not planning on attending today, nor is Phillip Drum, PharmD.

Anyone here on behalf of either of those parties?

(No response.)

JUDGE JULIUS: Okay. That's consistent with our attendance roster. Thank you, everyone.

We were ready for Witness 2 on Smart Approaches to Marijuana. Are you ready to call your second witness?

MR. McNICHOLS: We are, Your Honor. Smart Approaches to Marijuana calls Dr. Luli Akinfiresoye.

JUDGE JULIUS: Okay. If someone can go get her.

MR. McNICHOLS: Can you show her to the witness stand?

THE COURT OFFICER: Yes. If you will follow me, ma'am.

JUDGE JULIUS: Good morning, ma'am. Go ahead and step up on the witness stand. And before you have a seat, let me swear you in. Please raise your right hand.

WHEREUPON,

LULI R. AKINFIRESOYE

was called as a witness by Counsel for Smart Approaches to Marijuana and, having been first duly sworn, assumed the witness stand, was

examined and testified as follows:

JUDGE JULIUS: Thank you very much. You may have a seat. Let me give you some quick instructions about the process of testifying, just for clarity of the record. Please wait until any question is fully asked before beginning your answer.

Please pause before beginning your answer to see if the question draws an objection. If you hear the word "objection," just pause. I'll deal with the objection, and then I'll instruct you whether you should answer or not. If you need the question repeated at that time, you can ask for repetition.

If at any time you get a question you don't understand, just say that you don't understand the question before you try to answer. If you answer a question, the Court will assume that you understood the question. Okay?

THE WITNESS: Okay.

JUDGE JULIUS: Thank you very much.

THE WITNESS: Thanks.

JUDGE JULIUS: Mr. McNichols?

DIRECT EXAMINATION

BY MR. McNICHOLS:

Q Ma'am, can you please state your full name for the record?

A Luli Akinfiresoye.

Q Okay. Can you speak a little bit closer to the microphone --

A Yes.

Q -- just for purposes of the record? Thank you, ma'am. Can you verify for the record and for the Court that you and I have never met before today?

A Yes.

Q And you and I have made no effort to coordinate your testimony or what you're going to say today. Is that correct?

A Correct.

Q How long have you worked for the Drug Enforcement Administration, ma'am?

A Over 10 years.

Q Okay. And do you work in a particular section or unit or division of the Drug Enforcement Administration?

A I work with the Diversion Division, specifically with the Drug and Chemical Evaluation Section.

Q In very summary and general terms,

ma'am, what does the Drug and Chemical Evaluation Section do?

A We evaluate drugs and chemicals for abuse liability, and we also draft regulations to place those within the CSA, the Controlled Substances Act.

Q Thank you. And is the Drug and Chemical Evaluation Section sometimes referred to as DOE?

A Currently, yes, it is referred to as DOE. Yes.

Q Okay. If I refer to it by that shorthand, will you know what I'm talking about today?

A Yes, sir.

Q All right. Thank you. What is your highest level of education, Dr. Akinfiresoye?

A I have a Ph.D. in pharmacology.

Q And where did you get that from, ma'am?

A From Howard University.

Q Okay. And in general terms, ma'am, what is the science of pharmacology?

A Pharmacology deals with the study of drug interaction within the body and how the body responds to the drug, so pharmacodynamics and pharmacokinetics.

Q Okay. Do you teach pharmacology, ma'am?
A Yes, sir.
Q Where?
A At Northern Virginia Community College.
Q And how long have you been teaching there?
A Over 15 years.
Q Okay. And have you authored publications on pharmacology as well, ma'am?
A Yes, sir.
Q Approximately how many?
A More than 15.
Q Okay. And have you previously testified as an expert witness on pharmacology as well?
A Yes, sir.
MR. McNICHOLS: Okay. At this point, Your Honor, we would tender Dr. Akinfiresoye as an expert in the science of pharmacology.
JUDGE JULIUS: She will be provisionally accepted as an expert in compliance with the preliminary order that this Court issued regarding expert witness testimony.
MR. McNICHOLS: Thank you.
JUDGE JULIUS: Thank you, Mr. McNichols.
MR. McNICHOLS: Thank you.

BY MR. McNICHOLS:

Q And in your role in the Drug and Chemical Evaluation Section, or DOE, do you evaluate drugs of abuse?

A Pretty much, yes.

Q Okay. And you evaluate them for purposes of scheduling under the Controlled Substances Act as well?

A Yes.

Q Okay. And in the course of doing so, do you prepare something called an eight-factor analysis?

A Yes.

Q All right. And in broad strokes, ma'am, what is an eight-factor analysis?

A It's an analysis required under the Controlled Substances Act to evaluate the abuse potential and liability of a drug before it can be placed within the -- a given schedule of the CSA.

Q Okay. And in 2024, ma'am, in connection with this rescheduling, did you prepare an evaluation of marijuana?

A I provided a scientific document on the science of marijuana.

Q Okay. And did that scientific document take the form of an eight-factor analysis?

A Correct.

Q All right. And in preparing that document, did you review the published scientific literature on marijuana?

A Yes.

Q Did you review the literature on its potential for abuse?

A Yes.

Q Did you also review the literature on its potential medical uses?

A Yes.

Q And did you also review information from databases, for example, on the diversion and distribution of marijuana?

A Yes.

Q And did you also review information from databases on its societal effects?

A Yes.

Q Okay. And did you also, in the course of preparing your eight-factor analysis, review the eight-factor analysis that had been prepared by the Department of Health and Human Services on marijuana?

A I looked at it, yes.

Q And you're familiar with its contents, are you not, ma'am?

A To an extent.

Q All right. I've placed in front of you a document that says on the front of it SAM Exhibit 7. Do you have that in front of you, ma'am?

A Yes, sir.

MR. McNICHOLS: And could you please pass that up, those binders? Thank you. And we have one coming for Your Honor as well. And you'll -- I think you'll find it behind Tab 2, Your Honor.

JUDGE JULIUS: Oh.

MR. McNICHOLS: Thank you.

BY MR. McNICHOLS:

Q And, Dr. Akinfiresoye, do you recognize SAM Exhibit 7?

A Yes.

Q And what is that document, ma'am?

A It's the scientific review that we conducted on the science of marijuana.

Q Okay. And it's the one that you prepared in December of 2024?

A Yes. It's the one we submitted, yes.
Q Did you say, "The one we submitted"?
A Correct.
Q Okay. And it's also accompanied by a sworn declaration from you and a curriculum vitae of yours. Is that also correct?
A Correct, yes.
MR. McNICHOLS: All right. And at this point, Your Honor, we would move SAM Exhibit 7 into evidence.
JUDGE JULIUS: Any objection?
MS. KREINHEDER: No objection, Your Honor. The Government would like to request if the witness would like some water.
JUDGE JULIUS: Oh, certainly. Ma'am, would you like -- do you have some over there? Would you like some?
THE WITNESS: There is some, yes.
JUDGE JULIUS: Oh, perfect.
THE WITNESS: Thanks.
JUDGE JULIUS: Do you have a cup as well?
THE WITNESS: Yes.
JUDGE JULIUS: Okay. SAM Exhibit 7 will be admitted, without objection.

(Whereupon, the above-referred to document was received into evidence as SAM Exhibit No. 7.)

MR. McNICHOLS: Thank you. May we publish it electronically?

JUDGE JULIUS: Yes.

MR. McNICHOLS: Thank you.

BY MR. McNICHOLS:

Q All right. We'll -- we'll go through it as we -- and, ma'am, did you prepare this document in your role as a DEA employee?

A Yes.

Q All right. And before you submitted it, to use your word, did you get sign off from other people in the Drug and Chemical Evaluation Section?

A Yes.

Q And you prepared it in coordination with other colleagues from within DEA, correct?

A Correct, yes.

Q Okay. And the first page on the report, page 13, and is this the first page of the report, ma'am?

A Yes, sir.

Q Okay. And you see at the front of it it has the logo of the Drug and Enforcement Administration and the U.S. Department of Justice, correct?

A Correct.

Q Okay. Is this an official DEA document?

A Yes.

Q All right. And do the contents of this document correspond to the scheduling factors that the DEA is supposed to consider under the Controlled Substances Act?

A The content or the -- the add-ins?

Q Say again?

A Can you clarify your question, please?

Q Do the contents of this document, the materials that you put together that comprise it, do they correspond to the eight scheduling factors that DEA considers under the Controlled Substances Act?

A The document was drafted to mimic the eight -- the factors required for control.

Q And you -- did you say "mimic the factors"?

A Using the same titles, correct. Yes.

Q Okay.

A Of the eight factors.
Q It provides -- it provides information as to each of those factors, correct?
A To an extent, yes.
Q All right. Okay. And does -- and you prepared this for the Notice of Proposed Rulemaking on marijuana, correct?
A No.
Q You did not?
A Yes.
Q Could you go to page 4 of this document, ma'am? And this is part of your -- no. All right. And I'm on paragraph 13. This is -- you -- are you -- are you with me, ma'am?
A Yes, sir.
Q Okay. And this is paragraph 13 of a declaration that you swore to in December of 2024, correct?
A Correct, yes.
Q Okay. And what you wrote here in paragraph 13 is, "The attached document, titled Marijuana: Scientific Knowledge, serves to provide the information sought by the NPRM." Do you see that, ma'am?
A Yes, sir.

Q Okay. And NPRM refers to Notice of Proposed Rulemaking. Does it not?

A Correct, yes.

Q And in this case, the NPRM was the NPRM for marijuana, correct?

A Correct.

Q All right.

A Your question was, did I prepare this for the NPRM? No, I did not.

Q Okay. Well, in light of what you have written there in paragraph 13, ma'am, why do you say that you did not prepare this for the NPRM?

A It said to provide the information sought by the NPRM. So the NPRM had gaps in data, and ideally, when we publish an NPRM, we also publish an eight-factor analysis. In this case, that did not happen because one was not done.

Q What was not done, ma'am?

A The scientific -- the eight-factor analysis was not complete at the time of the NPRM, and we needed more data. Data was lacking. We needed more information. So the scientific document provided the general knowledge of the science of marijuana.

Q I see. And you provided it because in the DEA you saw gaps in what -- in the information that was already part of the record.
A Correct.
Q Correct?
A Yes.
Q Okay. And you and -- and the document that you're providing or that you created was intended to fill those gaps.
A Correct.
Q Is that correct?
A Correct.
Q Thank you, ma'am. Thank you. And does this document represent -- that -- that is -- go to the report, please. To use your phrase, ma'am, scientific document, does this scientific document represent the DEA's current state of knowledge on marijuana as it existed in December of 2024?
A Correct, yes.
Q Okay. Which was just a year and a half ago, correct?
A Yes.
Q Okay. And does this document attempt to summarize the DEA's knowledge on marijuana as it

relates to the Controlled Substances Act?

A Correct, yes.

Q All right. And do you stand by everything that you wrote in this document, ma'am?

A Yes.

Q Okay. Has this document ever been superseded by another eight-factor analysis by DEA since you created this?

A Not to my knowledge.

Q Okay. The first part of this document I want to go to, ma'am, is the section on currently accepted medical use, which appears at page 36. And did you cover the currently accepted medical use of marijuana under factor 3 of the eight-factor analysis, ma'am?

A Yes, sir.

Q Okay. And at the time that you wrote this, as we established, you possessed HHS's eight-factor analysis, which was prepared a year earlier or so, correct?

A Yes.

Q All right. And you knew at the time you wrote this that HHS's eight-factor analysis applied a two-part test to the question of

currently accepted medical use.

A Correct.

Q Correct?

A Yes.

Q Okay. But, nevertheless, in your analysis in this document, you applied the five-factor test, correct?

A Correct.

Q All right. And you did that even knowing that there was a memorandum from the Office of Legal Counsel that said you could use the two-factor test, correct?

MS. KREINHEDER: Objection, Your Honor.

JUDGE JULIUS: What's the objection?

MS. KREINHEDER: That's a leading question.

JUDGE JULIUS: It is a leading question. Do you want to rephrase, Counsel?

MR. McNICHOLS: Your Honor, under -- I understand the federal rules of evidence are not -- are guiding rather than binding here. But under the Federal Rule 611, because this witness is currently employed by my adversary, I'm allowed to ask leading questions.

And, moreover, she is testifying here

consistent with a Touhy notice. It will be much easier for me to keep this examination within the confines of the things she's allowed to testify to if I'm allowed to be very direct with these questions.

JUDGE JULIUS: I can give you some leeway there. Do I understand that there is a Touhy letter out there that provides the scope of what she's allowed to testify to? Have we been provided, as the Tribunal, a copy of that? It might be helpful for our records to -- to have a copy of that.

MR. McNICHOLS: We have a copy. We will provide it now to Your Honor.

JUDGE JULIUS: Thank you. Just in case there are any objections related to that, I want to be able to --

MR. McNICHOLS: Yeah.

JUDGE JULIUS: -- see the scope. Thank you.

So overruled. I'll allow the question as the circumstances make sense to me.

MR. McNICHOLS: Thank you, Your Honor.

BY MR. McNICHOLS:

Q At the time you did your analysis of

currently accepted medical use, ma'am, as you wrote in your report, you were aware that the Office of Legal Counsel had issued a memorandum stating that the two-factor analysis was okay, correct?

A Yeah. That it can be -- it can be accepted if DEA chooses to.

Q I -- I'm sorry. A little slower?

A It can be accepted if DEA chooses to. It was -- it was my understanding that, you know, DEA could use it if they want to.

Q Or not use it if they wanted to, correct?

A That's my own personal opinion.

Q Okay. But in this particular analysis here, you didn't use the two-factor analysis, correct?

A Correct.

Q You used the five-factor analysis, correct?

A Correct.

Q Right. Which was the analysis that you -- you've used in all other evaluations for currently accepted medical use, correct?

A Correct.

Q Okay. And the decision to apply the five-factor analysis rather than the two-factor analysis, that was a decision that you made in conjunction with your other colleagues within the DEA, correct?

MS. KREINHEDER: Objection, Your Honor.

JUDGE JULIUS: Hold on.

MS. KREINHEDER: That's outside the scope of the Touhy authorization. The declaration doesn't discuss the decision-making process behind which test was used.

JUDGE JULIUS: And ~~dud~~did you have a response to the objection, Mr. McNichols?

MR. McNICHOLS: Yeah. There is a discussion on the page that we're showing here, under the paragraph that begins April 11, 2024, where the witness -- the document that the witness prepared explains that they were in possession of the opinion by the Office of Legal Counsel that said they could use a two-part test, but then they decided not to, right? And they decided they were not bound by that.

What I'm trying to understand here, consistent with the phrasing in this paragraph, is, how did they come to the decision to apply

the five-part test rather than the two-part test? And the current question that's under objection is simply, was this a collective decision, or was it an individual decision?

JUDGE JULIUS: I do see that, number 2, the December 2024 declaration of the doctor and its attachments marked in a separate but related proceeding as Government Exhibit 4 in Hearing 24-44. It is -- this question is related to information that is contained in that attachment, so I'll allow the question.

MR. McNICHOLS: Thank you.

BY MR. McNICHOLS:

Q Dr. Akinfiresoye, the -- the decision to apply the five-factor test rather than the two-factor test, was that a decision that you made by yourself or in conjunction -- in discussion with your colleagues at DEA?

A It was in conjunction with my colleagues within the Drug and Chemical Evaluation Section.

Q Okay. And you and your colleagues decided to apply the five-factor test because it was consistent with what you've always done, correct?

A Correct. And it's been upheld in court

previously.

Q Correct. And you thought it was a better test than the two-factor test, correct?

MS. KREINHEDER: Objection, Your Honor.

MR. McNICHOLS: You may answer. Oh, sorry.

JUDGE JULIUS: Hold on.

Basis of the objection?

MS. KREINHEDER: Again, this is outside the Touhy authorization letter.

JUDGE JULIUS: Response?

MR. McNICHOLS: This is entirely consistent with the -- with the fact that they did an analysis of both the two-factor and the five -- or at least as they explained the decision-making here, chose one over the other.

We've established this was a collective decision. We've established DEA did not think it had to follow the two-factor test, and I'm trying to understand the logic behind this organization's decision to apply that rather than the other one. This is directly within the scope of what's covered in this particular paragraph.

MS. KREINHEDER: Your Honor, may we add something?

JUDGE JULIUS: Go ahead, Counsel.

MS. KREINHEDER: Within the scientific data review that is subject to the Touhy authorization letter, there's no discussion of this topic besides this one paragraph that we can see on the screen right now.

MR. McNICHOLS: The -- this is --

MS. KREINHEDER: There's no discussion of why the decision was made to use one test over the other.

JUDGE JULIUS: Mr. McNichols?

MR. McNICHOLS: This paragraph explains the basis for thinking they could depart from the two-factor test. This is included within the scope of what she's allowed to testify to. In the course of asking her questions about this, as I understand it, I'm not limited to just asking her to read from what she wrote and can ask for the logic underlying these decisions and the decision to apply the test that they did.

And my only question at this point is whether they chose this particular test rather than the other one, which was an option to them because it was better.

JUDGE JULIUS: I do tend to agree with

you, Mr. McNichols. I think number 2 is more expansive than just asking her to read the document, so I will allow the question.

MR. McNICHOLS: Thank you, ma'am.

BY MR. McNICHOLS:

Q My question to you, Dr. Akinfiresoye, is you and your colleagues in the Drug and Chemical Evaluation Section decided to apply the five-factor test rather than the two-factor test because you thought it was a better test, correct?

A "Better" is not the right word. It was -- it's a -- it's a more comprehensive test.

Q I'll settle for more comprehensive. Thank you, ma'am. And you were aware, though, in general terms, of the confines of the two-factor test. Were you not?

A Yes.

Q Did that test make sense to you as a pharmacologist?

A Scientifically, no.

Q And why didn't it make sense?

A It lacked chemistry. It lacked consideration for safety. It lacked consideration for efficacy.

Q And those were all things that you hoped to provide by conducting your analysis under the five-factor test, correct?

A Correct.

Q And it's fair to say that those were all things that you thought should have been provided in the HHS's analysis but which were not provided. Correct, ma'am?

A I can't --

Q I apologize. I think you had said that the HHS's two-factor analysis lacked information on efficacy and safety and chemistry. Is that what you said?

A Correct, yes.

Q And you thought the HHS should have provided analyses of those subjects, correct?

A For drug approved for medicine, it's a -- it's an important requirement.

Q Exactly. And -- and you were filling that gap, correct?

A Correct, yes.

Q Right. And under the five-factor test that you applied, ma'am, in order for a drug to have a currently accepted medical use, it has to pass all five factors. Is that correct?

A To an extent, yes.

Q Okay. And am I right, then, that if it fails even one of the factors, even one of the five factors, it does not have a currently accepted medical use, correct? Let me withdraw the question.

Let me -- I think I can help you with this, Dr. Akinfiresoye. May I direct you into your report?

A Yeah.

Q Thank you. If you go down to the -- up there, the paragraph begins "Historically," which is now on display here.

The sentence that begins, "Specifically," and you tell me if I read this correctly. It states, "Specifically, with respect to a drug that has not been approved by FDA, in order for that drug to have a currently accepted medical use in treatment in the United States, DEA and HHS have required that the substance demonstrate all five of the following elements," and then you list the elements. Do you see that, ma'am?

A Yes, sir.

Q Okay. So my -- my question to you is,

then, if a drug fails any one of the five factors of the five-factor test, it does not have a currently accepted medical use, correct?

A There's a designation that may differ, but in general, yes.

Q Okay.

A Yes.

Q Okay. And just to reiterate here, you conducted an analysis of marijuana based on the scientific evidence as to all five of these factors, correct?

A Correct.

Q And then you set them forth in your findings in the report, correct?

A Correct.

Q And these were the findings of the DEA, correct?

A Of the Drug and Chemical Evaluation Section.

Q The Drug and Chemical Evaluation Section of the Drug Enforcement Administration, correct, ma'am?

A Correct, yes.

Q Okay. And am I correct in reading this report that as to all five of the factors, as to

each of them, marijuana failed. Is that correct?

A On the chemistry and -- and for it to be reproducible, yes. Adequate safety studies, yes. Adequate and well-controlled studies proving efficacy adequate, yes. The drug must be accepted by qualified experts, that can be debated. And the science -- the scientific evidence must be widely available, that can also -- can be debated.

Q Okay. So if I understand your testimony correctly, ma'am, you're saying that by your analysis, marijuana passed factors 1, 2, and 3, and whether it passed 4 and 5 could be debated. Is that a fair summary of your testimony?

A Yes.

Q All right. Well, let's walk through these. All right? The first one is that of the drug's chemistry being known and reproducible. Do you see that, ma'am?

A Yes, sir.

Q Okay. And do we now have up on screen here at page 37 of the document your analysis on factor 1, correct?

A Yes, sir.

Q All right. And on the subject of the

drug's chemistry being known and reproducible, what you wrote is, "The chemical constituents in marijuana, including Delta-9-THC and other cannabinoids, vary significantly across different marijuana strains. Marijuana has many strains with high variability in the concentrations of Delta-9-THC, the main psychoactive component, as well as other cannabinoids and compounds. In addition, the concentrations of Delta-9-THC and other cannabinoids may vary between strains."

And then you wrote, "Due to the variation of the chemical composition in marijuana strains, it is not possible to derive a standardized dose. Marijuana is not a single chemical and does not have a consistent and reproducible chemical profile with predictable or consistent clinical effects." Is that what you wrote, ma'am?

A Yes.

MS. KREINHEDER: Objection, Your Honor.

MR. McNICHOLS: Okay.

JUDGE JULIUS: What's the nature of the objection?

MS. KREINHEDER: Again, this is a leading question. He's just reading from her

report straight to her.

JUDGE JULIUS: And the question was just, is that what it says? It is leading, but I'll allow it. She --

MR. McNICHOLS: Thank you, Your Honor.

JUDGE JULIUS: The Court can read as well.

BY MR. McNICHOLS:

Q Is that what you wrote, ma'am?

A Yes, sir.

Q Okay. Now, as I read this, at no point in this discussion in your paragraph do I see any finding by DEA that this substance -- marijuana -- actually passes the test of known and reproducible chemistry. Do you see that language in here anywhere?

A Yes, because marijuana is not a substance.

Q Where did you -- what do you mean marijuana is not a substance, ma'am?

A A substance is a single molecular entity.

Q I see. And a single molecular entity, it -- in order to be a drug that you're evaluating, it has to be a singular molecular

entity. Is that correct?

A Under the Controlled Substances Act, yes.

Q Right. And marijuana is not that, correct?

A Correct, yes.

Q Okay. Now let's go on to your discussion, in other words, of the safety studies, which is below that, begins on page 37 of 106 and then goes over to page 38. Are you there, ma'am?

A Yes, sir.

Q Okay. And in this section, you wrote that there were considerable -- there is -- withdrawn.

You wrote, "The considerable variation in the chemistry of marijuana results in differences in safety, biological, pharmacological, and toxicological parameters among the various marijuana samples."

And then at the end of this paragraph, you noted, "One observed trend is the increased use of high Delta-9-THC and low CBD material in recreational and medical marijuana markets."

And then you also wrote, "Additional

findings highlight that state markets are dominated by high THC products."

Do you see that, ma'am?

A Yes, sir.

Q And do you agree with me, ma'am, that THC is the intoxicating substance within marijuana, correct?

A Delta-9-THC, yes.

Q I'm sorry?

A Delta-9-THC, yes.

Q Delta-9-THC. Thank you for the correction. Right. And am I correct in understanding, ma'am, that the increased use of high Delta-9-THC and markets dominated by high THC products, that's inconsistent with safety. Is it not, ma'am?

A Correct, yes.

Q Okay. And in this section of your report, ma'am, did you document any finding that marijuana had adequate safety studies?

A Marijuana, again, is not a drug, so no.

Q Right. And got it. Now, on the subject of the third factor -- that is, adequate and well-controlled studies proving efficacy -- the first line you wrote there was, "There are no

adequate and well-controlled studies that determine marijuana's efficacy." Do you see that, ma'am?

A Yes, sir.

Q Did you -- what did you say?

A Yes.

Q Okay. And that was the DEA's finding as to marijuana. Was it not?

A Our finding within the Drug and Chemical Evaluation Section.

Q Got it. And based on that finding, therefore, marijuana -- and also because, as you testified, it's not a drug; therefore, it failed the third factor of efficacy. Did it not, ma'am?

A It failed the third factor of well-controlled and sufficient studies to prove it's efficacious.

Q Right. It failed the third factor of the currently accepted medical use analysis, correct?

A Yes.

Q Okay. And you went on from there actually to talk about some of the conditions that were currently being treated by marijuana in state programs in -- in the remainder of the

paragraph. Do you see that, ma'am?

A Yes.

Q And among the conditions that you observed were then being treated by marijuana in state programs were: chronic pain, glaucoma, anxiety, and nausea. Do you see that?

A Yes.

Q Okay. And at the time you wrote this -- well, withdrawn.

What you went on to say, though, was that the fact that marijuana is being used to treat those conditions without FDA approval can have serious safety risks. That was what you wrote, correct?

A Correct, yes.

Q And in writing that, you were quoting directly from the FDA. Were you not?

A Yes.

Q And that fact -- that is, the use of unapproved marijuana, right, to -- to treat these conditions, was a matter of great concern to the FDA as well. Was it not?

A I would imagine at the time they wrote that, yes.

Q And in fact, you actually wrote that in

your report, did you not, ma'am?
A Correct.
Q On the first page.
A Correct, yes.
Q Right. Now, at the time that you wrote this, you were aware that HHS had concluded that ~~as --~~ at least as to some of those indications that you have listed here, that there was, in fact, a currently accepted medical use for marijuana, correct?
A Correct.
Q Okay. But you disagreed with that, correct?
A Correct.
Q And you disagreed with that as to each of their findings of currently accepted medical use, correct?
A Correct. As I was -- when I was -- when I did this, it's to evaluate cannabis in general, not just the FDA-approved drug product that we have.
Q Right. Cannabis in general.
A Correct.
Q And then, also, just still on the subject of efficacy, you went on to a later

section in your report, at pages 41 and 42, where you discussed several clinical studies on marijuana in particular for the pain indication. Are -- are you at the bottom of page 41, ma'am?

A Yes, sir.

Q Okay. And is this the section of your report where you discussed marijuana and -- and the clinical trials on marijuana as it pertained to the pain indication?

A Correct.

Q All right. Now help me -- just walk through this with me, ma'am. But it looked like -- withdrawn.

When you reference a name in one of the citations, is that the name of the author of the study or the researcher?

A Yes.

Q Okay. And here -- let's go through and count these up. I saw the name Abrams, Wallace, and Strand on page 41. And then over on page 42, I saw additional names of Schuster, Thomas, Zhang-James, Boehnke, Maskal, and Olfson. And are those all studies that you cited in this particular discussion on clinical research assessing marijuana's therapeutic effects?

A As related to pain, yes.
Q Okay. And I -- I counted them up to be about nine different studies. Is that consistent with your recollection, ma'am?
A Yeah.
Q Okay. And am I right that at least the -- the DEA's read, or the Drug and Chemical Evaluation Section's read, of all these studies is that as to the pain indication they show that marijuana did not work and in some instances actually made things worse. Correct?
A Yeah. The data wasn't clear enough. There wasn't clear data to support the use of marijuana for the treatment of chronic pain.
Q Right. But at least the studies that -- that you found showed that in some cases it actually made chronic pain worse, correct?
A Yes.
Q And in listing these particular studies in your report, ma'am, were you going out of your way to find negative studies on marijuana as a treatment for pain?
A No.
Q Now another study that you cited in your report over on page 55 actually showed that not

only did marijuana not help, but it frequently resulted in cannabis use disorder when offered as a treatment. Do you recall that?

A Yes.

Q Okay. And in -- in -- withdrawn.

Now, as part of this analysis of marijuana as a therapy, you also analyzed whether using marijuana could reduce reliance on opioids, did you not?

A Did I evaluate to see if marijuana could reduce -- reduce reliance on opioid?

Q Yeah. Did you evaluate data on -- or studies on that issue, ma'am?

A Yeah. There were studies that were reviewed that made that conclusion.

Q Okay. Well, let's go down to that, to page 42 of your report. And this is the section of your report where you discuss the studies which analyze the relationship between marijuana use and opioid use. Correct?

A Correct.

Q Okay. And as I read this section, again, the names of the authors here were Cano, Bryson, Fleisthler, Phillips and Gazmararian, Hasin, Kim, Tormohlen, Neilson, and Nguyen. Were

those all authors whose studies you cited here, ma'am?

A Yes, sir.

Q And, again, I'm counting them up. You tell me if I have it wrong. I counted nine different studies in this section. Does that sound right?

A Correct.

Q Okay. And based on your read of these studies, they all appeared to show that marijuana did not work in reducing opioid overdose deaths, correct?

A Yes. There were mixed findings.

Q Okay. And they also showed that marijuana -- excuse the -- that marijuana did not work in reducing the adverse effects of opioid use, correct?

A Some studies, yeah, did say that.

Q Right. And -- and they also show that marijuana did not work in reducing opioid use, correct?

A Correct.

Q And those were all findings by the Drug and Chemical Evaluation Section, correct?

A Correct.

Q Right. And here again, in reviewing these studies and putting them in your report, were you going out of your way to find negative studies on marijuana and its relationship to opioid use?

A Not at all.

Q Did you say not at all?

A Yes.

Q And on the fourth factor of currently accepted medical use, which you addressed at page 38 of 106, what you wrote there, beginning at the bottom of page 38, was that "Currently, there is no consensus of opinion among experts concerning the medical utility of marijuana for use in treating specific recognized disorders." Do you see that, ma'am?

A Yes, sir.

Q And for that reason, therefore --

THE COURT REPORTER: Sorry.

BY MR. McNICHOLS:

Q -- you would have --

THE COURT REPORTER: Sorry.

MR. McNICHOLS: I'm sorry.

THE COURT REPORTER: I didn't hear the response to that question.

JUDGE JULIUS: Could you just repeat your last answer?

THE WITNESS: Oh. Yes.

MR. McNICHOLS: Okay.

JUDGE JULIUS: Thank you.

BY MR. McNICHOLS:

Q And for that reason, ma'am, as to factor 4 -- that is, the acceptance of qualified experts -- marijuana did not pass that factor either, correct?

A My own scientific opinion, yes.

Q And then the last factor -- well, hold on. You say -- you say "my own scientific opinion." But, ma'am, the -- the document that you prepared represented the consensus view of you and your colleagues in the Drug and Chemical Evaluation Section. Did it not, ma'am?

A Yes, sir.

Q Right. So, in other words, the consensus opinion of you and your colleagues in the Drug and Chemical Evaluation Section was that marijuana did not pass the fourth factor of the five-factor analysis, correct?

A We didn't write that there, but --

Q But that was your opinion, correct?

A That's -- that's why I said it's my own scientific opinion. But in the document we drafted, it's not -- we didn't write that there.

Q Right. But --

A But in my own scientific opinion, yes, because marijuana is not a drug. It's -- it's a -- yes. It's not an approved drug. It's not a drug. As such it cannot -- it does not have -- a doctor cannot write a prescription for it.

Q Right.

A It's not a drug.

Q And because it's not a molecule, it can't pass the test, correct?

A It could if -- if you find -- if -- if it becomes a drug, but it's not a drug. So, yeah, I don't see how it can.

Q Got it. Got it. And then on the fifth factor of the scientific evidence being widely available, what you wrote there in the first sentence was, "The currently available data and information on marijuana is not sufficient to address the chemistry, pharmacology, toxicology, and effectiveness," correct?

A Correct.

Q And that was a finding by the Drug and

Chemical Evaluation Section. Was it not, ma'am?

A Correct.

Q Which meant that marijuana, again, can't pass this factor, correct?

A It can.

Q But it didn't, correct?

A Because the data is just -- it's -- it's not consistent.

Q Right. And because the data on marijuana as to this factor is not consistent, therefore, marijuana did not pass this factor of the test, correct?

A The factors say scientific evidence must be widely available.

Q Right. And it's not, correct?

A Because there's no drug tied to it, yes.

Q Now, in the course of preparing your findings on the five-factor analysis, did you notice that your findings appeared to be in tension or conflicting with the findings of HHS on currently accepted medical use?

A Correct.

Q And is it fair to say, then, that in coming to the conclusions that you did, you rejected HHS's conclusions, correct?

A I didn't --

MS. KREINHEDER: Objection.

THE WITNESS: -- make any conclusion.

JUDGE JULIUS: Hold on. What's the objection?

MS. KREINHEDER: Again, this is outside of the scope of the written document that she's authorized to testify to, outside of the Touhy authorization.

JUDGE JULIUS: Mr. McNichols?

MR. McNICHOLS: Well, she's acknowledged that there was some tension between the conclusions that she reached and those that she was aware that HHS reached. It appears as though, based on the discussion that we've recently had, that in fact it didn't pass any of the five factors that she's outlined. What I want to value or understand at this point is whether in the course of reaching this opinion they were actively rejecting the HHS analysis as unsound and unfounded.

JUDGE JULIUS: I do think it's within the scope of number 2. I will allow it.

MR. McNICHOLS: Thank you.

BY MR. McNICHOLS:

Q Just my question, ma'am, in the course of reaching your findings, or the Drug and Chemical Evaluation Section's findings, on marijuana and a currently accepted medical use -- in the course of reaching those conclusions and findings, you were rejecting HHS's conclusions and findings. Were you not?

A We didn't -- we didn't have to make that comparison. We just conducted our own five-factor analysis that we've always applied to every drug that we have to evaluate within the CSA.

Q In your report, after your discussion of currently accepted medical use, you had a discussion of state medical marijuana programs as well. And just to help direct you, Dr. Akinfiresoye, I think it begins over on page 39 of your report under the heading State Programs for Marijuana. Let me know when you're there, ma'am.

A I'm there, sir.

Q Okay. And what you observed was that in many states they had programs for both medical and recreational use, correct?

A Correct.

Q Okay. And according to the data that you reviewed, there was roughly 86 percent overlap between people who were using marijuana for medical purposes and those who were using it for recreational purposes. Is that right?

A Correct.

Q Okay. And just to put this in layman's terms, ma'am, what that means is that roughly 86 percent of the people who are using marijuana for medical purposes are also using it to get high, correct?

MS. KREINHEDER: Objection.

JUDGE JULIUS: Basis of the objection?

MS. KREINHEDER: Calls for speculation.

JUDGE JULIUS: Mr. McNichols?

MR. McNICHOLS: No, I -- I think recreation, that that's what "recreation" means, and I'm just wanting to make sure that I understand it in lay terms.

JUDGE JULIUS: I mean, I do see that there is a distinction in the document between medicinal and recreational cannabis use.

MR. McNICHOLS: Let me withdraw the question.

JUDGE JULIUS: Okay. I think the

document speaks for itself on that issue.

BY MR. McNICHOLS:

Q Okay. Let me ask this. But am I right then, ma'am, that as a DEA official in the Drug and Chemical Evaluation Section that recreational use of a drug is considered abuse. Is it not?

A Correct.

Q Okay.

MS. KREINHEDER: Objection.

BY MR. McNICHOLS:

Q And, therefore, 86 percent of the people who are using marijuana for recreational purposes -- excuse me, for medical purposes are also abusing it, correct?

MS. KREINHEDER: Objection, Your Honor. That's outside the scope of her Touhy authorization.

JUDGE JULIUS: You're asking in general, Mr. McNichols?

MR. McNICHOLS: No, I'm just -- what I'm trying to find out, Your Honor, is whether the statement here talking about the overlap between medicinal or medical and recreational use, in fact, implies abuse by a significant portion of the people who are ostensibly using it

medicinally.

JUDGE JULIUS: To the extent you're trying to get clarity on what the statement means, I will allow the question.

MR. McNICHOLS: Thank you.

BY MR. McNICHOLS:

Q Am I right to interpret your report, ma'am, as a statement that in 86 percent of the cases the people who are using marijuana for medical purposes are also abusing it, correct?

A I would have to defer to the authors of the study in this case, and you would have to go find that publication.

Q Okay. But --

A My memory is not --

Q I thought we had established a moment ago that, at least to your understanding, recreational use and abuse are the same thing, right?

A Correct. Correct.

Q Okay.

A I agree.

Q All right. All right.

A But the sentence can be subjective, and that's why I want to defer to the author in this

case.

Q Oh. All right. In the -- go to -- over to -- in the same or the immediately following section over on page 41 of your report, Dr. Akinfiresoye, you have a section there titled Medical Advice by Dispensary Staff. Do you see that, ma'am?

A Yes, sir.

Q And I notice that in writing that report, you put medical advice in quotes. Do you see that, ma'am?

A Yes, sir.

Q Okay. And you're -- you're smiling, am I right, ma'am?

A Yes.

Q Okay. And am I right that the reason you put medical advice in quotes, and the reason you're smiling now, is because you did not consider the advice being given by dispensary staff to be medical, correct?

MS. KREINHEDER: Objection, Your Honor.

JUDGE JULIUS: What's the basis of the objection?

MS. KREINHEDER: Again, this is a leading question.

MR. McNICHOLS: I think I'm allowed to ask those, Your Honor.

JUDGE JULIUS: We've discussed that. Overruled.

MR. McNICHOLS: Thank you.

JUDGE JULIUS: I'll allow the objection.

BY MR. McNICHOLS:

Q Am I right, ma'am, that the --

JUDGE JULIUS: Or I'll allow the question.

BY MR. McNICHOLS:

Q -- that the reason you're smiling, and that the reason you put medical in quotes in this report, is that advice by dispensary staff is not medical, correct?

A Correct, yes.

Q Right. Right. And that was a finding by DEA. Was it not?

A By the -- by Drug and Chemical Evaluation Section, yes.

Q By you and your colleagues in that section, correct?

A Correct, yes.

Q Okay. And among the other shortcomings of dispensary staff advice that you document

here, it appears as though by some studies dispensary staff are giving advice that is actually harmful to patients, correct?

A Yeah. Medical -- dispensary staff should not be giving medical advice, yes.

Q They should not be giving advice?

A Correct.

Q And they -- the reason they shouldn't be giving it is at least because, as to some studies have it, it's harmful, correct?

A Yeah. Because, you know, you have to consider the pharmacokinetics of the drugs, drug-to-drug interaction. You -- you're unsure what the other -- what the patients are taking. We don't have that data. You cannot advise. You cannot -- staff cannot simply advise anyone coming to the dispensary on what product they should get or how often they should use it.

Q And --

A They can't do that. It's -- because, you know, it's -- it's ~~tantamount~~ detrimental to safety also. It's -- yeah.

Q Right. And -- and for that reason, ma'am, it was your observation that the dispensary -- that the advice being given by

dispensary staff was actually harmful, wasn't it?

A Correct, yes.

Q Okay. And you also observed in this section of your report that there was frequently a gap between the medical advice that patients were receiving and the advice that they were actually getting from their doctors, correct?

A From the dispensary staff and the doctor, correct. Yes.

Q Right. And that was also a finding by the Drug and Chemical Evaluation Section, correct?

A Based on published data, yes.

Q Right. And -- and that was a finding that you thought had been omitted from the HHS report, correct?

A It was not -- yeah, it was not considered by HHS.

Q Okay. And something they should have considered, correct?

A To our knowledge, yes.

Q Right. And the studies that you're citing here in this section of your report on the bad advice being given by dispensary staff, it looks like they date to 2022, 2020, 2019, and

2021. Are those consistent with the general date range of the studies that you looked at?

A Yes, sir.

Q So all this information, in other words, was available to HHS at the time they wrote their eight-factor analysis, correct?

MS. KREINHEDER: Objection.

THE WITNESS: I almost --

JUDGE JULIUS: Hold on.

THE WITNESS: -- want to change my response.

JUDGE JULIUS: We have an objection. Hold on, ma'am. Hold on.

THE WITNESS: I almost want to change my response.

JUDGE JULIUS: Ma'am? Hold on. We have an objection.

THE WITNESS: Okay. Sorry.

JUDGE JULIUS: Basis of the objection?

MS. KREINHEDER: It's speculation. She doesn't know what was available to them at the time.

MR. McNICHOLS: Well, no, this is just a date range question, Your Honor. I mean, she knows the date on which the eight-factor analysis

was written by HHS. If not, we can certainly provide it. She says she reviewed it. She's -- in this well-documented report, she's outlined the dates on the studies that she relied on. I think she's allowed to draw the inference here that, in fact, this information, because it's from public reports, was available to HHS but ignored by the agency.

JUDGE JULIUS: I'll allow the question as to chronology and dates. She can't really testify as to what HHS actually knew about or ignored, so sustained in part.

BY MR. McNICHOLS:

Q At least as to the publication dates on the studies that you've cited, ma'am, most of the studies on the bad advice being given by dispensary staff were out there in the public domain at the -- before HHS published its analysis of marijuana, correct?

A Yes. And I also want to take back my response to you earlier. Within the confines of the Controlled Substances Act under the eight-factor analysis, there are several factors to consider. And when HHS decides to use one data or the other, it's left to the scientist in

charge.

And so it's true for DEA, too. When we receive HHS scientific document, we have to conduct a comprehensive analysis, rely on scientific data and stuff like that. And that's why we do that, because we tend to have more that they may have omitted. It's not -- it's not uncommon. It's actually common that, you know, depending on the scientist that drafted a document from the HHS side, they may not consider certain data.

And when we do, and it's subjective as well, too. I, as a pharmacologist, may believe this data is -- is strong enough, it's needed, and it should go within the eight-factor analysis. A colleague of mine may not consider that data because they don't think it's -- it's needed or warranted to meet the burden of the eight-factor analysis as described within the CSA.

Q But the information that you put in your report, ma'am, represented the consensus view of you and your colleagues in the Drug and Chemical Evaluation Section, correct?

A Correct, yes.

Q Okay. Right. And the consensus view of you and your colleagues, as you've already testified to, was that the eight-factor analysis by HHS was missing analysis of chemistry and safety and efficacy, correct?

A It was in there. They did -- they did factor 3. Factor 3 requires you to look at the chemistry. They did.

Q Okay. But you've already testified that you saw gaps in their analysis.

A Correct. Yes.

Q Okay. All right.

A Yes.

Q Here we go. Now, also on the subject of state medical marijuana programs, one of the things that you consider under factor 1 of the eight-factor analysis and the abuse potential of a drug is diversion. Is that right?

A Correct.

Q And just so we all know, what is diversion?

A The use of a drug other than what it was intended for.

Q Okay. And one of the observations you made in your report, ma'am, was that the state

medical marijuana programs that we've been talking about were a significant source of diversion of marijuana in the United States, correct?

A Correct.

Q Right. And, in fact, they appear to be the primary source of diversion and the availability of marijuana in the United States, correct?

A To an extent.

Q To an extent? And -- and --

JUDGE JULIUS: Give me a verbal answer on --

THE WITNESS: I said to an extent.

JUDGE JULIUS: And then he asked for clarity, I believe.

THE WITNESS: No. He just repeated what I said.

JUDGE JULIUS: Okay. I just want to make sure if there was a question that we got an answer to it.

MR. McNICHOLS: Thank you, sir.

JUDGE JULIUS: Thank you.

MR. McNICHOLS: Yeah.

BY MR. McNICHOLS:

Q And in your report, you went on to discuss, among other things, evidence of thefts from dispensaries when you were on the subject of diversion. I think it's on page 18. I'm wrong, ma'am, page 15 of your report.

A 15?

Q 15, yes. In the upper right-hand corner of the page. Are you on page 15, ma'am?

A Yes, sir.

Q Okay. Thank you. And what you wrote on 15 at the -- in the paragraph we're highlighting now was that "Individuals have reported that a primary source for marijuana is through other individuals with access to state medical and recreational programs." Do you see that, ma'am?

A Yes, sir.

Q And that's an example of diversion. Is it not?

A Correct.

Q Okay. And that analysis or that information on diversion was something that HHS omitted from its analysis of marijuana, correct?

A It was not within the document.

Q It was not within the document that they prepared, correct?

A Correct.
Q And so this was a gap that you were filling that they had omitted, correct?
A Correct.
Q Right. And the information that you cited here on diversion included like newspaper articles on thefts from dispensaries, correct?
A Correct.
Q And that information was publicly available. Was it not?
A Yeah.
Q And you found it just by looking on the internet, did you not, ma'am?
A Correct.
Q And on the subject -- we can go to the subject of abuse next. How are you doing, Dr. Akinfiresoye? We've been going about 45 minutes. Are you comfortable?
A Yeah.
MR. McNICHOLS: All right. If it's fine with the Court, I'll proceed for about another 30 minutes, and we may finish up at that point.
JUDGE JULIUS: Yeah. That'll be --
MR. McNICHOLS: Thank you. All right. Very good.

JUDGE JULIUS: Works for the Court.

BY MR. McNICHOLS:

Q On the subject of abuse, Dr. Akinfiresoye, am I right that the DEA found in the document we're looking at that marijuana is the most commonly used illicit drug in the United States?

A Correct, yes.

Q Right. And you had an extensive discussion in your scientific document of the effects of use, both acute effects and chronic effects, correct?

A Correct.

Q And did you say "correct"?

A Yes.

Q Okay. Do you need some water, ma'am? Okay. Okay. And the -- the chronic and acute effects of marijuana are relevant to the eight-factor analysis in that they speak to the risks of abuse and also the risks to the public health, correct?

A Correct, yes.

Q And those are both factors that you're supposed to consider under the eight-factor analysis, right?

A When the data is available.
Q When the data is available? Okay. And in the case of marijuana, it was available, right?
A Correct, yes.
Q Right. Okay. Now, one of the effects of use that you mentioned in your scientific document was something called cannabis use disorder, which you pick up with on page 55. Let me know when you're at that place in the document, ma'am. Okay. And what is cannabis use disorder?
A It's a -- it's like -- it's a condition characterized by psychological dependence of cannabis, psychological dependence on cannabis.
Q And "psychological dependence" means, among other things, that a person is trying to quit using but can't quit?
A Correct.
Q Is that fair? Okay.
A Yeah.
Q Okay. And one of the figures that you cited here in your report, that roughly 10 percent of the 193 million individuals in the U.S. who have ever used cannabis meet the

criteria for lifetime cannabis dependence. Do you see that, ma'am?

A Correct.

Q Okay. Right. And that was a finding by the Drug and Chemical Evaluation Section. Was it not?

A Correct.

Q Right. And, in fact -- but that's just 10 percent of -- of anyone who's ever used cannabis, correct?

A Correct, yes.

Q And, in fact, the -- the percentage of people with cannabis use disorder among regular users or daily users is much higher than 10 percent. Is it not?

A Correct, yes.

Q And, in fact, the prevalence of cannabis use disorder is among the highest of all drugs in the United States, correct?

A It's about 30 percent.

Q Thirty percent. And in terms of how -- how does that compare in terms of the other drugs of abuse that you evaluated in your career?

A It's not as high as some others.

Q But it's higher than some.

A Correct, yes.
Q Okay. All right. Now, and just in terms of the sheer numbers of people affected by cannabis use disorder, at least in comparison to all the other illicit substances, it affects more people, correct?
A Yeah. Millions of people are -- are diagnosed with cannabis use disorder.
Q 19.2 million, at least according to your report, correct?
A Correct, yes.
Q Right. And that's higher than any other drug, any other illegal drug, correct?
A Correct, yes.
Q Right. Right. Okay. Now, another point that you made in this report is that cannabis use disorder is a problem in its own right, but it's also linked to other health risks as well. Is that fair?
A Correct, sir.
Q And among the other health risks that cannabis use disorder is linked to are psychiatric disorders, correct?
A Correct.
Q In other words, things like psychosis,

correct?

A Correct.

Q Schizophrenia?

A Correct.

Q Depression?

A Correct.

Q Suicidal ideation?

A Correct.

Q Bipolar disorder?

A Correct.

Q Okay. And there's -- in other words, the link between cannabis use disorder and those things has been established, has it not, ma'am?

A Correct.

Q Okay. And in the course of your review of the adverse effects of cannabis use, did you compare how strongly the link is between cannabis use and mental health disorders between -- with that of the link between other drugs of abuse and mental health disorders?

A I don't have a recollection. I would have to see that.

Q Yeah. Let me -- let me see if I can direct you on this here, ma'am.

MR. McNICHOLS: Can we go to page 56?

Yeah, that paragraph right there. Pop it up a little higher. No, no, no.

BY MR. McNICHOLS:

Q All right. And -- and this is at page 56 of your report, ma'am, on psychosis, which begins with the sentence from "Per Ganesh and D'Souza, 2022, available evidence supports that marijuana causes psychosis and that the risk for conversion to -- from -- of psychosis to schizophrenia is highest when the psychosis is marijuana induced." Do you see that, ma'am?

A Yes, sir.

Q And then about five sentences down, there's a sentence that begins -- or five lines down, there's a sentence that begins, "Numerous factors." Let me know when you're there.

A I'm there.

Q Okay. And what you wrote there is, "Numerous factors, including genetic and environmental factors, increase the risk of developing schizophrenia and substance use disorder, and cannabis is associated with the strongest link and evidence." Do you see that, ma'am?

A Correct.

Q And was that a finding of the Drug and Chemical Evaluation Section? Well, let -- let me withdraw that question, ma'am.

My -- my next question to you is, based on the information that you reviewed in the course of preparing this, was it clear that of all drugs marijuana is the one that has the strongest link to psychosis and schizophrenia?

A We didn't compare with drugs. We compared marijuana. Yes, marijuana is linked. It can induce psychosis or exacerbate psychosis. That's -- yes, that's a scientific fact, but we did not do comparison to other substance.

Q And in the course of writing this discussion on psychosis on page 56, and on schizophrenia on page 58, did you notice that those effects of chronic marijuana use were not covered by HHS in its eight-factor analysis?

A I -- without seeing the document, I cannot answer. I don't -- I don't have a recollection.

Q Okay. Well, in the course of writing this up, ma'am, did you perceive yourself, and did you and your colleagues in the Drug and

Chemical Evaluation Section perceive yourselves to be filling a gap in HHS's analysis when it came to the mental health effects of cannabis use?

A To an extent.

Q To an extent?

A Yeah.

Q To what extent, ma'am?

A We weren't going back and forth comparing documents when we were drafting this, so it may have been there or not. I -- I don't know.

Q Now, did you -- in the course of preparing your analysis and your scientific document, ma'am, did you observe that the psychotic instances or the number of psychotic episodes attributable to marijuana had been resulting in an increase in demonstrated harms?

A Demonstrated~~ing~~ increase in psychotic~~sis~~ episode~~s~~, yes.

Q Yeah. But also demonstrating an increase in, for example, emergency room visits attributable to marijuana-induced psychosis, correct?

A Correct, yes.

Q And, in fact, in recent years, it had, I think, more than doubled in one study, correct?
A Correct, yes.
Q And gone up, I think, 67 percent in another study, correct?
A I don't know that number, but it's gone up, yes.
Q Right. And I think, to your testimony, it's more than doubled in some instances, correct?
A Correct, yes.
Q Right. And that's only in recent years, correct?
A Correct, yes.
Q Right. Okay. And did you also observe that the problem of psychosis in cannabis use was more prevalent and more pronounced in states that had relaxed cannabis laws?
A I believe so.
Q Right. And I think this is over on page 57, if we can go there. There's a paragraph that begins "Furthermore." And then the last sentence is what I want to direct your attention to, ma'am. It says, "The authors concluded that there was a higher proportion of hospital

discharges for psychosis associated with cannabis use in areas with more liberal cannabis legalization laws." Do you see that, ma'am?

A Yes.

Q Okay. And that was a finding of DEA, was it not? Or of -- that was a finding of you and your colleagues in the Drug and Chemical Evaluation Section, correct?

A Yeah. Relying on Crocker, et al. publication, yes.

Q Right. Okay. And the inference you were drawing from that was that relaxed restrictions on marijuana would increase the number of psychotic instances, correct?

MS. KREINHEDER: Objection, Your Honor.

JUDGE JULIUS: Hold on. What's the objection?

MS. KREINHEDER: Calls for speculation.

MR. McNICHOLS: Your Honor, I'm -- I'm just trying to figure out what their contemporaneous understanding was and why they put this language in here. I think it's a reasonable inference that can be drawn from the sentence.

MS. KREINHEDER: Additionally, it's

outside of the Touhy authorization. There's no language about the -- an opinion on this subject in the letter.

JUDGE JULIUS: Well, overruled. My -- my understanding of the question is we're trying to get clarity on what is meant by the sentence.

MR. McNICHOLS: Yeah.

JUDGE JULIUS: And what's the intent of this statement in the report, which is number 2 of the Touhy letter. So I'll allow the question.

MR. McNICHOLS: Thank you.

BY MR. McNICHOLS:

Q Ma'am, in -- in writing that there was a higher proportion of hospital discharges for psychosis in states that had relaxed their cannabis laws, were you inferring that relaxation of cannabis restrictions would lead to an increase in the number of psychotic episodes?

A I will not speculate on regulation, but as a scientist, more access to cannabis would lead to increase -- can lead to increase in psychosis.

Q Right. And that would occur if the relaxation occurred at the federal level as well, would it not, ma'am?

A That speak -- that's speaking regulation. I'm a scientist.

Q Yes. But as a scientist, you've observed the increase in psychosis due to relaxation of restrictions at the state level, correct? That was the point of this sentence, right?

A Because it gave more access to cannabis.

Q Right. And if there's increased access to cannabis as a result of relaxed restrictions at the federal level, you as a scientist would say, "We could expect to see more instances of psychosis." Correct, ma'am?

MS. KREINHEDER: Objection, Your Honor. Again, it's calling for speculation. She -- this is a conclusion of the study that she cited in her paper?

JUDGE JULIUS: Mr. McNichols?

MR. McNICHOLS: No, I -- I think this is the inference that a scientist can draw from the information she's already provided, and that's really the crux of the question here. It's omitted from the HHS analysis, and I think we're entitled to an answer as part of the decision-making process here.

MS. KREINHEDER: If she didn't make the inference in her written document, if -- he wants her to make an inference now.

JUDGE JULIUS: I think we are going a little bit beyond. I will sustain that one. If the -- if you want the Court to make an inference, you can make that argument.

BY MR. McNICHOLS:

Q I just have a very short number of questions left for you, ma'am, and I appreciate your patience this morning.

You -- in the course of preparing your -- well, in the course of writing about the higher proportion of hospital discharges for psychosis in states that had relaxed restrictions, did you observe that that was an observation or finding that had been omitted from HHS's analysis?

A I didn't go back to HHS's analysis, but I -- I thought it was important to be included in our analysis.

Q It was an important fact, correct?

A Correct, yes.

Q Right. And, in other words, if HHS omitted it, they omitted something important,

correct?

A If they'd covered it, I don't -- I don't recollect -- recollect. However, it's important information that should be included in our analysis and state its inclusion.

MR. McNICHOLS: I think that concludes my examination, Your Honor.

JUDGE JULIUS: Thank you, Mr. McNichols.

Before we take our break, the Court has just one question to -- for clarity of the record, and then we'll take our break, and then you can have cross-examination.

I just want to clarify, so you're -- you're familiar with the Controlled Substances Act --

THE WITNESS: Yes.

JUDGE JULIUS: -- definition of "marijuana" at 21 U.S.C. Section 802(16)(A)?

THE WITNESS: Yes, sir.

JUDGE JULIUS: Is -- in making your evaluation and your analysis here, is that the definition of "marijuana" that you used, or was there any variation in what you were looking at in analyzing marijuana for your purposes?

THE WITNESS: I just analyzed marijuana

as an agricultural product, as a plant, looking at the -- treating -- treating it as if it were a drug.

JUDGE JULIUS: Okay. So maybe -- is there any difference between what you looked at and the CSA definition of "marijuana"?

THE WITNESS: I believe so.

JUDGE JULIUS: And what is that difference?

THE WITNESS: I'm trying to find the CSA definition of "marijuana".

JUDGE JULIUS: Sure. Yeah. 21 U.S.C. Section 802(16)(A), "Subject to paragraph B, the terms 'marijuana' and 'marihuana,'" spelled variously with an H or a J, "mean all parts of the plant cannabis sativa L., whether growing or not, the seeds thereof, the resin extracted from any part of such plant, and every compound, manufacture, salt, derivative, mixture, or preparation of such plant, its seeds, or resin."

Subsection B excludes from that definition hemp and mature stalks of such plant, fiber produced from such stalks, oil or cake made from the seeds of such plant, any other compound, manufacture, salt, derivative, mixture, or

preparation of such mature stalks, except the resin extracted therefrom, fiber, oil, or cake, or the sterilized seeds of such plant, which is incapable of germination.

So that latter subsection is quite wordy, but those are -- just those two things, those last parts, are excluded from that definition. So really what we're looking at is, if I understand it, the Cannabis sativa L. plant.

THE WITNESS: Correct, yes.

JUDGE JULIUS: And so was that what you were analyzing in your report?

THE WITNESS: To an extent, because the -- you know, with the data we have on science, it's based on THC/CBD, which are components found in Cannabis sativa L.

JUDGE JULIUS: Okay. Thank you, ma'am.

THE WITNESS: Yes, ma'am.

JUDGE JULIUS: I appreciate it.

All right. We'll take a 15-minute recess. Ma'am, during the recess you're free to walk around, get some water, use the restroom if you need to. Just don't discuss your testimony with anyone during the break.

THE WITNESS: Okay.

JUDGE JULIUS: Thank you. We'll be in recess until 10:32. I'll see you all back here in 15 minutes.

(Whereupon, the above-entitled matter went off the record at 10:17 a.m. and resumed at 10:33 a.m.)

JUDGE JULIUS: Before we start cross, I just want to go ahead and say that we're going to designate the Touhy letter that was handed to the Court before testimony as ALJ Exhibit 61, just so that we have that on record.

(Whereupon, the document referred to was marked as ALJ's Exhibit No. 61, for identification and received into evidence.)

MR. McNICHOLS: Thank you.

JUDGE JULIUS: Thank you, everyone. And government cross-examination whenever you're ready.

MS. KREINHEDER: Your Honor, the government has no cross-examination.

JUDGE JULIUS: Okay. Thank you very much. With no cross, then there's no real redirect unless you have any follow-up questions from the questions the court asked.

MR. McNICHOLS: No, Your Honor.

JUDGE JULIUS: Okay. Thank you very much, ma'am. You are excused. I don't think there's any chance that she's going to be recalled.

MR. McNICHOLS: Correct.

JUDGE JULIUS: Okay. So you're excused, and you can discuss your testimony with anyone since you will not be recalled. Thank you very much for appearing today.

THE WITNESS: Thank you.

JUDGE JULIUS: Okay. So I think that concludes SAM's case in chief.

MR. MCNICHOLS: It does, Your Honor.

JUDGE JULIUS: Okay. I think we're scheduled next to move on to DUID Victim Voices. Is that correct, Mister?

MR. MIGHELL: Yes, Your Honor, it is, and we're prepared to move -- we're prepared to go now.

JUDGE JULIUS: Excellent. And your name again, sir?

MR. MIGHELL: My name is Connor Mighell, M-I-G-H-E-L-L, Mighell.

JUDGE JULIUS: Nice to meet you. I

think this is maybe the first day you've been at counsel table.

MR. MIGHELL: It is, Your Honor.

JUDGE JULIUS: Okay. Nice for you to join us.

MR. MIGHELL: Thank you.

JUDGE JULIUS: Please feel free to call your first witness whenever you're ready, sir. We may need a few minutes to organize exhibits up here at the bench, so take your time, Counsel. You can go off the record.

(Whereupon, the above-entitled matter went off the record at 10:34 a.m. and resumed at 10:36 a.m.)

JUDGE JULIUS: All right, let's go back on the record. Opening statement whenever you're ready, sir.

MR. MIGHELL: Thank you, Your Honor. My name is Connor Mighell. I represent DUID Victim Voices. May it please the Court. This case is about safety. It is about the government's obligation when it proposes a rule change of consequence to public safety to actually consider the safety implications of that change. The government requires seat belts in motor vehicles.

It requires airbags. It imposes speed limits, mandates licensing, and regulates road design, all because operating a motor vehicle is an inherently dangerous activity and the government has determined that protecting human life justifies those regulations. Yet when the government proposes to reschedule marijuana, an action that will foreseeably increase the number of impaired drivers on the road, safety is no longer a prime consideration. In fact, as the government's own witnesses have admitted in this very proceeding, they did not consider the impact of rescheduling on drunk driving fatalities at all. That omission is of consequence to the determination of this action.

(Technical interference.)

JUDGE JULIUS: One minute. I'm not sure where that sound is coming from.

MR. MIGHELL: Yes, Your Honor. I don't know if it's on or not.

JUDGE JULIUS: Okay. It seems to have fixed itself. I'm so sorry. Please continue, sir.

MR. MIGHELL: Am I still on the record? Can everyone hear me?

JUDGE JULIUS: Yes.
MR. MIGHELL: Okay. As I said, that omission is of consequence to the determination of this action. Under the Administrative Procedure Act, agency action is arbitrary and capricious -- is it me, Your Honor?
JUDGE JULIUS: I don't know.
MR. MIGHELL: I don't know what's wrong.
COURT REPORTER: I can't tell where it's coming from, to be honest.
JUDGE JULIUS: Okay, maybe try adjusting the mic just a little bit away from your mouth.
MR. MIGHELL: Away.
JUDGE JULIUS: I don't know if there's an electronic device over there that may be interfering.
MR. MIGHELL: Nothing that would be on, Your Honor.
JUDGE JULIUS: Okay.
MR. MIGHELL: Yeah.
JUDGE JULIUS: I'm so sorry. Please continue, sir.
MR. MIGHELL: Can you still hear me?
JUDGE JULIUS: Yes.
MR. MIGHELL: Thank you. Agency action

is arbitrary and capricious when the agency entirely fails to consider --

JUDGE JULIUS: Let's take a break and try to figure out what's happening with the audio.

MR. MIGHELL: Thank you, Your Honor.

JUDGE JULIUS: Thank you. But we'll go off the record and reconvene when we can isolate that, because that's distracting, I'm sure, not only to the Court, but to both litigants.

THE BAILIFF: All rise.

JUDGE JULIUS: Oh, yeah. We'll be in recess till we figure that out. Thank you, everyone.

(Whereupon, the above-entitled matter went off the record at 10:38 a.m. and resumed at 10:40 a.m.)

MR. MIGHELL: Testing. Testing -- testing -- testing. Hello, my name is Connor Mighell. May it please the court.

COURT REPORTER: Four score.

MR. MIGHELL: And seven years ago.

COURT REPORTER: Seems about right.

MR. MIGHELL: Yeah.

COURT REPORTER: I guess it was that mic

for some reason.

UNKNOWN MALE: I wasn't even sitting in front of it.

MR. MIGHELL: Yeah. That's weird.

COURT REPORTER: It didn't affect anything you said so far.

MR. MIGHELL: That's excellent. All right.

THE BAILIFF: All rise.

JUDGE JULIUS: All right. Thank you, everyone. Please be seated. Thank you for your patience with that, Counsel. I'm sorry that we had the audio tech issue. I've not ever heard that sound before today.

MR. MIGHELL: Me neither, Your Honor, and I appreciate it.

JUDGE JULIUS: All right.

MR. MIGHELL: Thank you.

JUDGE JULIUS: Please resume or pick up wherever you would like with your opening statement.

MR. MIGHELL: Thank you very much. Under the Administrative Procedure Act, agency action is arbitrary and capricious when the agency entirely fails to consider an important

aspect of the problem. The evidence that DUID Victim Voices will present through its witness, Ed Wood, the organization's founder and president, will demonstrate that the government's proposed rescheduling fails this standard for the following reasons. First, the government entirely failed to consider drugged driving safety implications of rescheduling. Neither the Attorney General's Order No. 6754-2026, nor the prior 2024 HHS assessment, directly address the risk that increased marijuana access poses to the driving public. The government's own witnesses confirmed this omission under cross-examination during the first days of this hearing.

Second, the evidence will show that past government actions relaxing restrictions on marijuana, including the 2009 Ogden memo and the 2014 opening of state licensed dispensaries, measurably increased marijuana use, and that increased use is strongly correlated with increased traffic fatalities. Three independent peer-reviewed studies project over 6,000 additional traffic deaths per year if marijuana is commercialized nationwide. That is the equivalent of two World Trade Center disasters

annually, all preventable.

Third, no scientifically valid per se safety net exists for marijuana like the one that exists for alcohol. THC, which is marijuana's impairing chemical, is fat soluble rather than water soluble. It redistributes rapidly from the blood to the brain, meaning blood THC levels do not always correlate directly with impairment. The AAA Foundation for Traffic Safety, the National Safety Council, NHTSA, the National District Attorneys Association, the National Sheriffs' Association, and the International Association of Chiefs of Police have all published policy statements confirming there is no scientific basis for THC per se limits. Without an objective safety net, law enforcement cannot effectively enforce drugged driving laws.

Fourth, rescheduling would force states to revise their drugged driving statutes, and experience demonstrates that states lack the competence to do so wisely. States that have attempted to adopt THC per se limits have adopted scientifically invalid standards that risk both convicting the innocent and exonerating the guilty. Colorado's data, the only state that

measures outcomes by substance, proves that these invalid limits do not work. Mr. Wood will testify as to each of these points in detail, grounding his opinions in peer-reviewed studies, official state data, and decades of personal research. He will explain the specific facts he relied upon, why those facts are important and reliable, and what inferences should be drawn from the government's failure to consider them. At the conclusion of his testimony, we will respectfully submit that the government has failed to carry its burden of justifying the proposed rule.

Mr. Wood's testimony is also deeply personal. He founded DUID Victim Voices after his own son was killed by a drugged driver. He represents not an abstract policy position, but the human cost of the government's failure to consider safety. The tribunal will hear from him about the practical consequences of that failure, the real world facts that are of consequence to the determination of this action because they demonstrate the government's rescheduling decision is arbitrary and capricious. Your Honor, at this time, DUID Victim Voices would

call its first witness, Edward “Ed” Wood.

JUDGE JULIUS: Thank you, Counsel. Good morning, sir.

MR. WOOD: Good morning.

EDWARD C. WOOD, JR., having been first duly sworn, testified as follows:

JUDGE JULIUS: I’m going to have you step up -- before you're seated, if you could please raise your right hand in order to be sworn. Do you swear or affirm that everything you say in these proceedings will be the truth, the whole truth, and nothing but the truth?

THE WITNESS: I do.

JUDGE JULIUS: Thank you very much. You may have a seat.

THE WITNESS: Thank you.

JUDGE JULIUS: I'll just give you a few brief instructions about the process of testifying to help keep the record clear.

THE WITNESS: Okay.

JUDGE JULIUS: Please wait until the entire question is asked before you begin your answer. Please pause for a moment after the full question is asked to see if it draws an objection. If you hear the word objection,

pause. I'll address the objection, and then I'll instruct you whether you should answer or not.

THE WITNESS: Okay.

JUDGE JULIUS: If at that point you need the question repeated, you can ask for repetition. If at any time you don't understand a question you've been asked, please state that you don't understand that question before you try to answer it, and we'll make sure it's rephrased in a way that you do understand. If you answer a question, we'll assume that you understood the question. Okay?

THE WITNESS: Sounds fair.

JUDGE JULIUS: All right.

THE WITNESS: Thank you.

JUDGE JULIUS: Thank you very much. Please proceed with direct examination, Counsel.

DIRECT EXAMINATION

MR. MIGHELL: Thank you, Your Honor. Mr. Wood, would you please state your full name, your title, and your contact information for the record?

THE WITNESS: Edward C. Wood, Jr. I live in [redacted] in the summertime. I live in [redacted] in the wintertime. I believe the Court has my

address. My phone number is [redacted].

BY MR. MIGHELL:

Q Thank you. Mr. Wood, prior to this hearing, DUID Victim Voices filed a pre-hearing statement identifying and submitting prospective exhibits in accordance with 21 CFR 1316.59. Is that correct?

A That's correct.

Q And are you familiar with each of these exhibits?

A I am indeed.

Q Did you review each of them?

A I did.

Q And are they true and accurate copies of the documents that they purport to be?

A They are.

Q Are they exhibits of the type reasonably relied upon by experts in the fields of drugged driving research, traffic safety, and law enforcement?

A Yes, they are.

MR. MIGHELL: Your Honor, consistent with 21 CFR § 1316.59, all exhibits identified in our pre-hearing statement were timely submitted as prospective exhibits in advance of this

hearing, and the witness has confirmed their authenticity and the accuracy and his reliance upon them, so we move for the admission of Exhibits 1 through 86 into evidence.

(Whereupon, the document referred to was marked as DUID Victim Voices' Exhibit Nos. 1 through 86, for identification.)

JUDGE JULIUS: Any objection from government counsel?

MR. LONICH: No objection, Your Honor.

JUDGE JULIUS: Okay. DUID Victim Voices 1 through 86 will be admitted without objection. Thank you.

(Whereupon, the above-referred to document marked as DUID Victim Voices' Exhibit Nos. 1 through 86 were received into evidence.)

MR. MIGHELL: Your Honor, I have an electronic copy of Exhibit 86, which is a demonstrative that will be used during our presentation. May I approach to deliver that electronic copy to the clerk?

JUDGE JULIUS: Yes.

MR. MIGHELL: Thank you.

JUDGE JULIUS: Let's see if it downloads. It's a bunch of documents.

MR. MIGHELL: I believe the Court should have it because there is a bunch of them.

JUDGE JULIUS: Yeah. If you don't have it, please ask. While we're waiting, Counsel, I just want to confirm something. Is this going to be your only witness for DUID Victim Voices?

MR. MIGHELL: Yes, Your Honor. This is the only witness.

JUDGE JULIUS: Okay. I just wanted to confirm my understanding.

MR. MIGHELL: Thank you.

JUDGE JULIUS: Thank you very much. So you have four hours with him if you --

MR. MIGHELL: I doubt --

JUDGE JULIUS: If you would like.

MR. MIGHELL: It will take that long, but I thank you very much.

JUDGE JULIUS: Sure.

MR. PHILLIPS: I think that's what this is. Is it? Thank you.

JUDGE JULIUS: I'm informed by court staff that we had Exhibits 1 through 84. Is that what was submitted on JEFS or? Okay. So JEFS only has 1 through 84.

MR. PHILLIPS: And the binder's as

well.

JUDGE JULIUS: And the binder is also --

MR. MIGHELL: The binder should contain Exhibit 86. It was submitted to the government and all counsel. It should also contain Exhibit 85 and 84, which were previously submitted, I think, during cross-examination.

JUDGE JULIUS: Bear with us, Counsel. Yeah, they came up during cross and that's how they were admitted.

MR. PHILLIPS: However, we don't have electronic copies of it. They were never uploaded.

JUDGE JULIUS: May we remedy that now? Thank you.

MR. MIGHELL: May I have a moment just to --

JUDGE JULIUS: Sure.

MR. MIGHELL: Remedy that issue? Thank you.

JUDGE JULIUS: Do you have a sense of how long? We can just take a quick break.

MR. MIGHELL: I would say no longer than three to four minutes.

JUDGE JULIUS: Oh, okay. We can just go

off the record while you accomplish that.

MR. MIGHELL: Thank you.

JUDGE JULIUS: I can stay up here.

MR. MIGHELL: Thank you. We'll just submit it to the docket?

MR. PHILLIPS: To the JEFS link, yes.

MR. MIGHELL: To the JEFS link.

(Whereupon, the above-entitled matter went off the record at 10:50 a.m. and resumed at 11:04 a.m.)

JUDGE JULIUS: All right. I think we got all of our tech issues resolved: microphones, PowerPoints. Excellent.

MR. MIGHELL: Yes, Your Honor. Thank you so much for your patience.

JUDGE JULIUS: Sure.

MR. MIGHELL: I'd like to clarify that Exhibit 86 should be numbered Exhibit 87, and I would also like to move for its inclusion into the record.

(Whereupon, the document referred to was marked as DUID Victim Voices' Exhibit No. 87, for identification.)

JUDGE JULIUS: Just so the Court is clear, you're talking about this?

MR. MIGHELL: The demonstrative.

JUDGE JULIUS: The document that I can see, DUID Victim Voices, the cover page, this document. Any objection from the government?

MR. LONICH: No objection, Your Honor.

JUDGE JULIUS: DUID Victim Voices Exhibit 87 will be admitted without objection.

(Whereupon, the above-referred to document marked as DUID Victim Voices's Exhibit No. 87 was received into evidence.)

MR. MIGHELL: Thank you, Your Honor. Mr. Wood, Exhibit 83 is a true and correct copy of your curriculum vitae, correct?

THE WITNESS: My resume, that's correct.

BY MR. MIGHELL:

Q Mm-hmm. What does it say that your current position at DUID Victim Voices is?

A I'm the founder and the President of DUID Victim Voices.

Q Mm-hmm. Where were you educated, Mr. Wood?

A I have a degree in chemistry from Harvey Mudd College in Claremont, California, and a degree in Masters of Business Administration from the University of Colorado in Boulder.

Q What boards have you served on, Mr. Wood?

A Well, I've served on a number of corporate boards and some homeowners association boards, which we won't count. The corporate boards include -- well, let's see if I can remember them now. Northfield Laboratories, which is a company that was developing a blood substitute. MonoGen was a company developing an automated Pap smear device. Cytologic (Phonetic.), a company developing a cancer therapy.

Q I believe that's sufficient, Mr. Wood.

A Okay.

Q What are some of the peer-reviewed publications that you have authored or participated in authoring?

A Sure. I'm the author of the study that we did on testing the delay time between a crash causing death or serious bodily injury and the time of drawing a blood sample for toxicological testing. That was published in Transportation Injury Prevention. I authored a study on the causes and consequences, judicial consequences, DUI in the State of Colorado. I have one paper

on the prevalence of drugged driving in Colorado. I've had a couple of chapters written that I wrote in books all on DUID as well.

Q Mm-hmm. And did the State of Colorado approach you to assist them with writing legislation on drugged driving?

A Yes, indeed. I drafted the legislation and carried that through the legislature. This was a bill to require the state to collect and publish the information on the causes and judicial consequences of DUI in the state, and Colorado is, to date, the only state that is doing that nationwide.

Q And why did the state approach you for that task?

A I had asked to have this done, and then I was approached by the folks at the Department of Public Safety that said, we know how to do that. Would you please draft the legislation, and we'll help support that?

Q Excellent. How long have you researched drugged driving and the pharmacokinetics of marijuana?

A I've been doing this since 2010.

Q And that's 16 years, correct?

A 16 years, yes.

MR. MIGHELL: Your Honor, at this time, we would like to tender Mr. Wood as an expert on drugged driving for this proceeding.

MR. LONICH: Pursuant to the tribunals' order, no objection at this time, but the government would reserve the right to challenge that in argument.

JUDGE JULIUS: Understood. Thank you, Counsel. We will provisionally accept him as the expert proffered. Thank you.

MR. MIGHELL: Thank you. Mr. Wood, what does the organization DUID Victim Voices do?

THE WITNESS: We educate people on the effects of drugged driving and try to educate folks on how to prevent drugged driving, how to prosecute cases, and so forth.

BY MR. MIGHELL:

Q And why did you start DUID Victim Voices? What happened?

A I did this after my son was killed by two drug-impaired drivers. That's two drivers at the wheel of one vehicle. This happened in the year 2010. Would you like me to explain that?

Q Yes, if you're comfortable.

A I'll do the best I can. This is sometimes hard to do. But in 2010, my son and his wife, Erin, were driving from their home in North Vancouver, British Columbia in Canada to Whidbey Island in the state of Washington. They were going to be spending some time with some friends of theirs at a vacation home owned by Erin's parents.

As they were driving south on Highway 20, US Highway 20 in Whidbey Island, Brian noticed an oncoming vehicle in his lane. He braked and swerved in a futile attempt to try to avoid the crash. He was limited in his ability to do so because of the embankment that was very steep on the right-hand side. Nevertheless, he swerved and braked in futile attempt to try to prevent the collision, and in so doing, he put himself between the oncoming vehicle and his wife. It was a Chevy Blazer that was coming at him, and the Blazer was upside down and airborne when it went through his windshield, killing him instantly. The airbag did not deploy since the Blazer went through the windshield, did not hit the frame of the vehicle.

This was caused by two women, as I said,

at the vehicle, the Blazer. Jordyn Weichert, 19 years old, was the driver, and she said that she felt uncomfortable and wanted to change her sweater. She asked the front seat passenger, who was Samantha Bowling, to please steer while she continued driving the car. So both of them were operating different parts of the car at the same time. A witness who had been leading Brian in the highway before the crash occurred said that the Blazer was so badly out of control that it was going perpendicular to the highway, which would explain why the car was upside down and airborne when it went through his windshield. As the roof of the Blazer slid off of the roof of my son's Subaru Outback, it bounced down the highway several times, ending up on its roof. In so doing, it disgorged both Bowling and Weichert, as well as Francis Malloy, who was in the backseat.

After ejecting Mr. Malloy, the Blazer bounced on Mr. Malloy, crushing all of his ribs. He suffocated before he bled out. Jacob Quistorff, who was also in the backseat, was strapped in, so only his head was ejected, which was scraped against the asphalt, and he died screaming. So, there were three people that were

killed in crash.

Q And who responded to the scene of this crash?

A Well, there were quite a few people who were responding. The local sheriff responded, and he informed the court during -- or not the -- not the court, he informed the prosecutor of the case, who also was at the scene -- that the people in the Blazer were the second largest drug distributor kingpin in the northern part of Whidbey Island.

Also, Jason Nichols responded. Jason was a certified drug recognition expert, but he was unable to complete the 12 points of the drug evaluation classification.

Q Why was that?

A Well, the other people that responded were some of the medical personnel. They had strapped both Weichert and Bowling onto backboards for transport to the hospital, and you cannot perform all of the procedures of the DEC program when somebody is strapped to a backboard. You can't do the walk and turn. You can't do the modified Romberg balance and so forth. So he only was able to complete part of 5 of the 12

steps. He received positive clues of drug impairment on all 5 but could not do all 12.

Q Did Mrs. Weichert and Mrs. Bowling, did they receive blood testing?

A They did. They were transported to the hospital, and they had blood drawn there, and their blood was tested. And it turns out that Weichert had been found to have been using marijuana, methamphetamine, and heroin. Bowling had been using marijuana and methamphetamine.

Q Were they charged due to this accident?

A They were both charged with vehicular homicide caused by driving under the influence. They were convicted, however, of a lower crime. Bowling confessed to vehicular homicide caused by driving with disregard for the safety of others and accepted a sentence of five years. Weichert went to a jury trial, and she was convicted of the same crime and was sentenced to eight years.

Q Did the jury at trial consider the DUI charge?

A The judge did not permit the DUI charge to be heard. He said that the both Weichert and Bowling did not exhibit signs of staggering and slurring words, which were, of course, the

typical symptoms of somebody who was drunk, but not somebody who was necessarily impaired by marijuana, methamphetamine, or heroin.

He also cited the fact that Jason Nichols, the DRE, was unable to opine that the two drivers were impaired by drugs. He neglected to say; however, or he did say that since the DRE was unable to opine on this, how could a jury? So, therefore he pulled that off of the case, and the jury was not able to consider that. The judge never did say, however, that the reason that Mr. Nichols could not opine was a Washington State Supreme Court ruling called the ~~Beatty~~Baity ruling, that required a DRE, before he could opine on the person being impaired by drugs, had to perform all 12 steps of the DRE protocol and in order, and that could not be done.

Q Which Ms. Weichert and Bowling could not do because they were strapped to backboards, correct?

A Exactly right.

Q What did the judge say on this matter during the sentencing hearing?

A Well, it seemed he made his ruling maybe partway through the trial. As he heard more and

more of the evidence during the trial, he seemed to change his mind a bit because he said, I do say that the fact that these defendants ingested drugs increased the chance that they would make these reckless decisions, he called them, that caused these deaths and injuries.

Q And what happened to your son's family and to Bowling and Weichert after the trial and sentencing?

A Well, Brian had developed a reputation as being a magnificent video game designer, something I know nothing about, but he became an expert in that area. And when his death was announced to the industry basically on 14 video game websites around the world that we are aware of, there was a -- we held his memorial service in North Vancouver, Canada. Even though he and Erin had only lived there for five years, he had 300 people at his memorial service. His friends had started a fund to support his unborn child. Erin was eight months pregnant at the time of the crash. And 5,000 people donated to the fund. Brian and Erin were traditionalists and chose to not know the sex of the child until the date of birth.

(Witness crying.)

Q It's all right, Mr. Wood. Take your time.

A So, Brian never knew he was a father of the baby girl he wanted.

Q Thank you, Mr. Wood. And when after that did you found DUID Victim Voices?

A Well, it was within months of that. I could not believe how this could possibly have occurred. I said, what went wrong? How can this possibly happen? So I spent the next 16 years becoming a serious student of drug-impaired driving. I learned from prosecutors, defense attorneys, other victims, judges, toxicologists, clinicians, DR~~V~~Es, other law enforcement officials. My mentor in all this case, in my learning process, included Dr. Robert DuPont, who was the founding Director of the National Institutes of Drug Abuse and the nation's second Drug Czar. He has guided me through many years of this process.

Q What does the term DUID refer to?

A Driving under the influence of drugs. It's a common but not exceptionally common term. In law, few states refer to it as DUID, they

refer to it as DUI. But I focused -- although, in my studies, of course, I have learned a great deal about alcohol DUI as well, but my focus has been DUID, drugs.

Q So DUID refers to drugged driving, not drunk driving?

A Drugged driving, correct.

Q Given all that, Mr. Wood, and thank you for going through the reason that you founded this organization, what is your position on the government's proposal to reschedule marijuana from Schedule I to Schedule III?

A Rescheduling is something that would dramatically increase the consumption of marijuana, which would therefore gradually dramatically increase also the number of people that would choose to drive after having been impaired by marijuana.

Q Can we have the next slide, please?

A And frankly, the government is not prepared to deal with this. We do not have laws in place that work effectively to enforce drugged driving laws as we do have for drunk driving. Marijuana should not be down classified to Schedule III because of this increased danger,

and this increased danger was not considered by the DEA or anyone else involved with the proposed rescheduling of this.

The government does need to understand that this will increase the number of DUID cases, and we have evidence from work that has been done by a number of researchers that we can expect that there can be over 6,000 additional deaths per year that are unnecessary. The reason for this is that although we have the DUI per se safety net to deal with drunk driving, we have no equivalent safety net for drugged driving. It just does not exist.

Until there is a reliable, objective, validated technology that enables us to define that somebody is impaired by drugs, it is my belief that it is illogical, it is immoral, and it is irresponsible to promote, enable, or assist the continued commercialization of marijuana.

Q Now, you mentioned that the government failed to consider the drugged driving impact.

A Absolutely correct.

Q What is your basis for that statement?

A Well, I looked at the -- if I can look at the next slide.

Q Yes. Next slide, please.

A Please. If we look at the attorney general's order, there were some comments in there about marijuana's contribution to certain risks to the user. There's not one word about drugged driving. If we look at the 2024 attempt the government made in rescheduling, there was some attempt to address this but very, very weak attempt.

There were two studies that were cited by ~~HSS~~HHS. These were self-report usage surveys about the use of marijuana, and they looked at the National Survey of Drug Use and Health and the Youth Risk Behavior Surveillance System. They showed that the prevalence of marijuana consumption has increased over the years. Nothing about what impact that would have on drugged driving, simply that there was a lot more people using the drug.

The DEA did slightly better, they cited two more papers. One from Dr. Wilson, Public Health Report, and another one from the Rocky Mountain High Intensity Drug Trafficking Area. Both of these cited the fact that there was an increased presence of THC, which is the delta-9

tetrahydrocannabinol, which is the impairing substance in marijuana. There was an increased presence of THC in the drivers involved in fatal crashes since commercialization in the state of Colorado. The problem with that is that since you had such a tremendous increase in the utilization of marijuana overall, you should expect to have an increase in THC presence in the drivers, even if THC had absolutely no effect on impairment. So, they proved nothing.

I will note too I've read the transcript of some of the earlier statements from one of the government witnesses who admitted that HHS focused only on scientific and medical outcomes, not on public safety harms. So, both what I've seen in the records and what the government witness had said, said the government did not look at this. The fact that DEA and ~~HSS~~HHS did include these reports that were cited indicates that the government knew at that time that these were appropriate things for consideration in rescheduling. But they did such a bad job of it that in my writing to the DOJ in 2024, I said, this does not even qualify to be called sophomoric.

Q Hmm. Now, how many deaths per year do you estimate rescheduling could lead to for drugged driving? Next slide, please. And what's the basis for that estimate?

A Well, let's look at the basis for it. We don't have good data on this from government sources, and I'll get into that a little bit later on if you want to. But the best way of understanding this is to look at the total traffic fatality rate in states that have commercialized the sale and use of marijuana and compare those with states that have no commercialized use of either recreational or medical marijuana. It really doesn't make any difference. If it's out there, it's out there.

There was a 2019 study by Jason Aydelotte from Texas, and he found that, of course, the numbers of traffic fatalities are going to vary depending upon the number of people in the state and so forth, so he normalized it as fatalities per billion vehicle miles traveled. He found that in the five years after the marijuana was legalized in Colorado and Washington, there were one point eight additional deaths per BVMT.

Russell Kamer did a similar study, and he said that there was a change in fatality rates in the first four states to legalize recreational marijuana of 2.1, just about the same number, 2.1 additional deaths per BVMT, billion vehicle miles traveled.

Q Mm-hmm.

A Dr. Adhikari, a few years later, using a little different model, said it was 2.22 in his revisiting study published in 2023. So all these come to about the same number, about two traffic fatalities for every billion vehicle miles traveled. Now, the Federal Highway Administration has reported that the U.S. drives about 3.3 trillion vehicle miles per year. So, 2 times 3.3 trillion gives you over 6,000 traffic deaths per year if all states were to commercialize recreational marijuana.

Q So why are those three studies important and reliable? Would you say there are any exceptions or limitations to the findings in those studies?

A Well, there are some limitations. We can't say that those 6,000 deaths were all due to marijuana. There's no intent to say that.

They're just looking at total traffic fatalities, and that is certainly a limitation. The fact that three independent studies came up with the same number is important. And also, I just want to correct something that all of these studies looked at times since the drug had been commercialized, not just legalized, but then commercialized. There have been some earlier studies, short-term studies, looking at the first few years after the drug was legalized but before it was commercialized, and of course, you wouldn't expect legalization in itself to cause additional traffic fatalities. It has to be actually sold and used before you get enough people out there on the road –

(Simultaneous speaking.)

Q But in your opinion --

A That shouldn't be.

Q But in your opinion, legalization would lead to greater commercialization, correct?

A Eventually it does, yes. It has in all states that have legalized it.

Q You've testified that marijuana use has increased as a result of past policy changes? What evidence --

A I have.
Q Do you have for that statement?
A Yes.
Q Next slide, please.
A There was some work that was published by Jonathan Caulkins shown here, and this is an interesting study. It goes back to 1992. You see a nadir in the use of daily and near-daily use of marijuana. That increased by a factor of 20 over the next 30 years.

If you look at the curve going from 1992 to 2022, which is what this curve shows, there were some inflection points there. One of the inflection points was in 1996 when California first adopted medical marijuana. The striking one, however, occurred in 2009. You see a big inflection curve there in the prevalence of daily and near-daily use, and that inflection curve occurred at the time after the Ogden memo came out, which is when the federal government said that they were no longer going to be emphasizing the enforcement of drug laws dealing with marijuana. Another inflection point occurred in 2014. That's when states began to commercialize the sale of marijuana. Now neither of these

change the classification of the drug, the schedule of the drug. They were just simply government actions, or in the case of the Ogden memo, inactions, that caused the inflection to increase dramatically. Any reasonable person looking at this would expect that if you now change the schedule of a drug from Schedule I, being the most dangerous category we have, to Schedule III saying, let's bless this as a medicine. It's going to be like Tylenol with codeine. Any reasonable person would expect that will increase more. It doesn't look like it can increase any more when you look at this curve, but realize that this is only 18 million people. That's still only about six percent of the adult population, so we have a long way to go.

Q Next slide, please. Now, which states currently have zero-tolerance DUI laws for impairing drugs, and how would they be affected by rescheduling?

A Well, we have some good information on that. There are 16 states that have zero-tolerance laws of one sort or another, and 11 of those deal with marijuana in one form or another. When I say in one form or another, some of them

are for THC. Some of them simply state marijuana, which is very unspecific. Some say THC and/or its metabolites. And there are some problems with these. As these states adopt legalized marijuana, whether it be medical or recreational -- and really that doesn't matter -- they generally tend to look at the laws and say, how can we have a law that prohibits somebody to use a legal substance in their blood?

Q Mm-hmm.

A That doesn't square. So they say, What can we do to address this? They have not covered themselves with glory. All of them have done a pretty poor job of it.

One example is Illinois. When Illinois legalized marijuana in the state, they said, well, we have zero tolerance, including for THC, but let's change that and we'll have a per se limit like what we have for alcohol. And the legislature said, let's make the per se limit 15 nanograms per milliliter. Governor Rauner at that time said, I've been advised by people, Dr. Huestis –

MR. LONICH: Objection, Your Honor.

JUDGE JULIUS: Basis?

MR. LONICH: I believe this is going a little bit outside the scope of the proffered expertise. These laws speak for themselves. If Your Honor wants to take them under consideration, he can also testify to what the laws say, but I think we're bordering into his analysis and editorialization of those laws.

JUDGE JULIUS: Counsel, any response to the objection?

MR. MIGHELL: My response would be that he's testifying to how these laws have performed, and I believe that's directly within the scope of his expertise.

JUDGE JULIUS: Do you have something more, Counsel?

~~DR. LIE~~MR LONICH: To that proffer, he was not proffered as a -- and I don't believe his CV illustrates any legal education or legal training, and our basis of the objection is that he's starting to now interpret and analyze these zero-tolerance laws. If they want to comment that they exist, I think that's fair, but any comment or analysis beyond that, I believe, is inappropriate.

JUDGE JULIUS: I tend to agree with

government counsel on this one. I'll give some leeway with regard to his discussion of them, but obviously he doesn't have a legal background and that has been brought to the Court's attention, so it may be venturing more into his personal opinion as opposed to an expert opinion, at least with regard to legal implications and legal issues. But I will allow him some latitude in discussing this.

MR. MIGHELL: Certainly.

JUDGE JULIUS: So sustained in large part.

MR. LONICH: Thank you, Your Honor.

MR. MIGHELL: Mr. Wood, how much research have you done into the laws associated with drugged driving?

THE WITNESS: I have studied the DUI laws of all 50 states and the District of Columbia. And these laws, of course, were written not just by lawyers. They're written by legislators that are not even as smart as lawyers.

BY MR. MIGHELL:

Q Well, some of them. I wouldn't say I'm too terribly smart. Maybe some legislators are

smarter than me.

A My point about Illinois was that they had passed the 15-nanogram limit. Dr. Huestis and I, and others I'm sure, but at least the two of us, brought this to the attention of Governor Rauner as to how irresponsible this would be. He vetoed the bill. Legislature went back and said, Okay, we'll compromise and make it 5 nanograms, and that's the current law.

Q Okay. Thank you. And next slide, please. So, which states have implemented THC per se or permissible inference limits?

A When Washington legalized recreational marijuana, they included a 5-nanogram THC per se limit for adults in the state of Washington, so that was the first one. Colorado followed with its permissible inference law, which is different from per se, but some people view it as being similar, and we'll see later on perhaps that it is not. Montana followed Washington's lead with 5 nanograms, and I've described Illinois. West Virginia fairly recently had 3 nanograms that they put in. Ohio, even before legalization, had a 2-nanogram THC per se limit but inexplicably also had a 35 nanograms carboxy THC per se in

urine.

Q Now, what is carboxy THC? How does it differ from --

A It is the inactive secondary metabolite of THC. THC metabolizes into a ~~mon~~hydroxy THC, and which is also psychoactive, which then in itself metabolizes into carboxy THC.

Q So, carboxy-THC is not psychoactive?

A It is not psychoactive at all, correct?

Q And yet it's being measured by that law.

A By Ohio, it is. That's correct.

Q Mm-hmm.

A That's correct. And they've tried to change that for about four years now they've been trying to change this, and their laws that they have tried to replace it with have not been suitable, and I have testified against them in all cases, and the laws have been withdrawn. They have continued it with another attempt this year with their Senate Bill 55. It is currently being held in committee, trying to redraft the law to overcome some of the objections that I have brought to the attention of the state's judiciary committee.

Q And what were those objections? What

was the substance of them?

A They were including additional THC per se limits in urine. THC is not even soluble in urine, so it's rarely found there, and when it is found it's found in only very, very small doses.

Q What is THC soluble in?

A It's fat soluble.

Q Not --

A Not –

Q liquid-soluble

A Not water soluble and not in urine.

Q Next slide, please. So you have estimated over 6,000 additional --

A Correct.

Q Deaths per year based on the studies that we went over. How reliable, in your opinion, are drugged driving fatality data?

A Generally speaking, they're very difficult to know and generally what people look at when they look at these kinds of things are the NHTSA reports, National Highway Traffic Safety Administration. NHTSA publishes something called FARS. They've been doing this since about 1976 or thereabouts. They report the fatalities by cause and they look at the time of day and the

age of the driver, the training, a whole host of things that they publish. And included in that, they also include drivers that have a blood alcohol content, BAC, greater than or equal to 0.08 grams per deciliter.

Q Mm-hmm.

A Which is a common -- it is the most common BAC level for BAC in the country.

Q Two slides ahead, please. But do some states have better data than others in your opinion?

A Yes, they do. Bear in mind that most of the states get their --

MR. LONICH: Objection, Your Honor.

JUDGE JULIUS: Hold on. Basis?

MR. LONICH: The relevance to that question, if the witness wants to testify about the states and their data, but the comparison of what's reliable and which one is better, I believe ~~i~~as the question was phrased. I don't see the relevance of the question.

MR. MIGHELL: I'm happy to rephrase, Your Honor.

JUDGE JULIUS: Go ahead and rephrase the question.

MR. MIGHELL: Do you consider the data from the state of Washington to be reliable on the subject of drugged driving?

THE WITNESS: On the subject of fatal crashes, yes. They are probably among the best, if not the best. For drugged driving, not so much, but for fatal crashes, yes.

BY MR. MIGHELL:

Q Mm-hmm. And what do those data show?

A Well, here you look at some data from 2008 through 2016 and bear in mind that these data are not perfect. They capture the drug testing data from about 90 percent of the deceased drivers involved in fatal crashes, but only 34 percent of the surviving cases. Again, it's not perfect because during this time period, they've changed their limit of quantification from 1 nanogram to 2 nanograms and then back down to 1 in 2013. But even so, this is considered to be one of the most reliable in the country. What you're seeing here is that in the orange line, you see the rate of presence of THC in fatal crashes rose from about 7 up to 27 over this time period. What's quite remarkable is the alcohol rate has dropped in the blue line, but the

polydrug case has just soared from 94 up to 137. The polydrug is a combination of two or more drugs at the same time.

Q Mm-hmm. And did those trends continue after 2016? Next slide, please.

A Yes, they did. In fact, if you look at the more recent data from Washington, polydrug impairment, now shown in the green line, exceeds a combination of a single drug or alcohol combined. So polydrug is a serious prevalence problem.

Q Next slide, please. Now, what does Washington's data show specifically about THC-positive drivers in fatal crashes?

A Well, here from the same agency, you'll see both the total crash fatalities and the THC presence fatalities. And the THC has more than doubled, going from 38 in 2013 up to 74 in the first year of their commercialization. And the total fatalities has gone up from 623 to 767 in the same two-year difference, indicating that the THC presence is not just because there's more of it out there; it's because they really are causing fatal crashes.

Q Two slides ahead, please. Now, some

proponents of rescheduling have argued, and testimony's been heard in this case to the effect, that marijuana-impaired driving is not a serious concern.

A Correct.

Q What is --

A Some people have said that.

Q What is your response to that?

A What I would say is that they're cherry-picking data when they report this. Let me look at the National Cannabis Injury Association report to the Congress that they published in 2018. They stated that there has been no increase in traffic fatalities as a result of marijuana legalization. Well, as I pointed out before, legalization itself is not going to affect traffic safety. It's going to be commercialization and use that does that. The data that the NCIA used to support their statement to Congress was based upon obsolete studies that were done very short-term after legalization, but prior to commercialization.

Q So prior to 2014?

A Prior to 2014, correct.

Q Mm-hmm.

A They also cited a NHTSA study, 2015 Virginia Beach study, saying that they found no statistically significant crash risk associated with marijuana use after controlling for age, gender, ethnicity, and the presence of alcohol. And that claim was also made by NORML, the National Organization for the Reform of Marijuana Laws, and those claims are just flat out false. They just -- they're not true and I'll go through that briefly with you because that is important to know.

Q Mm-hmm.

A They've also claimed that cannabis users tend to compensate effectively for the deficits by driving more carefully, and that's a direct quote from Sewell in Exhibit 22.

Q Mm-hmm.

A This is a perfect example of the way they have taken things out of context. The very next sentence in Sewell's report was that unexpected events are still difficult to handle under the influence of marijuana, however, and the combination of low-dose alcohol and low-dose cannabis causes much more impairment than either drug used alone. So if you extract what you want

to from studies, you can say whatever you want, but it's not really true.

Q You mentioned there were additional claims that were made that you wish to address. What were those claims?

A Well, you can see some from NORML.

Q Next slide, please.

A National Organization to Reform Marijuana Laws. They said that the inhaled cannabis influence is typically short-lived and subtle. Well, short is a relative term. Let's talk about real numbers. The work done by Dr. Thomas Marcotte in San Diego said that it's three and a half to four and a half hours before the impairment caused by marijuana subsides down to baseline levels. But he's pointed out importantly as well that during those same studies, that those subjects felt comfortable to drive after one and a half hours. So between that one and a half and either three and a half or four and a half depending upon where that subject happened to be, that's a dangerous period. It's even worse for cases of edibles because with edibles you find that the impairment time can last 6, 8, and up to 10 hours. As far

as being subtle. Subtle, yes, but that's sufficient to kill, as we have seen from some of the data.

The other point is to being subtle is that those subtle effects of marijuana's impairment are what makes it so difficult for the law enforcement officials to enforce the laws because the standard tests that they use to identify impairment for drunk driving don't work for drug driving.

Q Mm-hmm. Next slide, please. Now, you stated previously that NORML misquoted the Virginia Beach study?

A The Virginia Beach study was done by NHTSA. It was done actually by Pacific Institute for Research and Evaluation under contract to NHTSA. And NHTSA, first of all, reported on this in 2015, and John Lacey reported on the full report one year later as the author of the study. The study was based upon THC presence, not on THC impairment, and that's an important distinction that we'll be getting into a bit later on. The study did not say that there was no significant link. They said they failed to find a significant link. A failure to find a link is

not the same thing as finding there is no link. Absence of evidence is not evidence of absence. It's like when you can't find your keys, it doesn't mean they've disappeared, it means you didn't find them.

Q Mm-hmm.

A And the reasons they didn't find them is that the study was not designed to find them.

Q It is frequently said that keys are in the last place you look.

A That's right. That's right. They only studied volunteers. They didn't study everybody that came up. They had over 3,000 subjects in the study, but less than 2,700 crashes. So at least 413 of the subjects in the study were victims of somebody else's crash. They were not the people that necessarily caused it.

Q And the quotation in front of you from Mr. Lacey, could you please read it?

A This study should not be interpreted to mean that it is safe for individuals who have used substances to operate a vehicle.

Q Is that a quote from the study?

A That is a quote from John Lacey. Not from Compton, but from John Lacey. That's what

he said. That's correct.

Q Mm-hmm. Next slide, please. Mr. Wood, what is some of the real evidence that THC impairs driving?

A Well, we have lots of evidence despite the phony claim that we can't study this because it's a Schedule I drug. We've got reports that there have been over 15,000 marijuana studies published in the biomedical literature, despite it being a Schedule I, in less than one decade. The studies include experimental evidence and epidemiological evidence. These are two different types of studies, and they have different pros and cons of either type, but we look at all of it together to come with a conclusion.

Experimental evidence typically is very, very tightly controlled. You've got typically an individual is going to be acting as his or her own control, and I'm going to be looking at somebody's their attention span, their ability to small motor control and so forth, short-term memory, alignment skills. You test whatever study you want to study, whichever dimension you want to study. You test the subject when they're

baseline and then when they have consumed marijuana, and then after they have subsided back to baseline, and you can prove true cause and effect that THC does cause impairment.

Q And that's for laboratory experiments?

A That's for laboratory experiments.

Q Next slide, please.

A These describe some of the things that we would look at. Look at attentiveness, vigilance, perceptive time and speed, executive function, divided attention, cognition, psychomotor functions, risk-taking behavior, reaction time, short-term memory, motor skills and tracking. They've tested many, many different dimensions. Even the marijuana lobby, if you look at some of their pronouncements they have made in the reports I referred to earlier, admit that the laboratory experiments can cause impairment. But what they then ask is, okay, but what does that do to the tendency to cause crashes?

Q Mm-hmm.

A You can't do that with a laboratory experiment. You need other kinds of experiments.

Q Like on-road driving studies, for

instance?

A On-road driving studies.

Q Next slide, please.

A And on-road driving studies, those are difficult and dangerous to perform, and very few of them have been published, other than journalistic publicity stunts that we typically ignore, but well-controlled studies have not been very common. For safety considerations, they've used very low doses of THC. They have to because they don't want to put the test subjects and the monitor who's in the car with the study subject at risk. But they have, for example, tested 100 and 200 and 300 micrograms per kilogram THC dose per subject. And what these studies have proven, that the impairment is indeed dose-related, but that's about as far as they can go with on-road driving studies.

Q So with an on-road driving study, how is that typically performed?

A On-road studies, they have a monitor who's sitting in the passenger seat with an active brake so he can stop it, and even a steering wheel where he can overcome the person that's performing it. They will measure the dose

of marijuana in a marijuana cigarette and then have certain instructions as to how deep to inhale and so forth, and then the timing that they can smoke.

Q Mm-hmm.

A And then they measure the, what's called the lateral displacement. It's a measure of weaving in the road, and they have a car instrumented to do that.

Q Thank you for clarifying that. Lateral displacement is a very technical term. It means weaving in the road?

A Weaving in the road, yeah.

JUDGE JULIUS: Counsel --

MR. MIGHELL: Yeah.

JUDGE JULIUS: Just for your awareness, we're a few minutes away from the scheduled noon lunch break. So, if you want to start looking for a good place to pause, just be on the lookout for that, okay?

MR. MIGHELL: Yes, Your Honor. I think after the next slide from this one we can take a rest.

JUDGE JULIUS: Sounds good.

MR. MIGHELL: And after they've dosed

the drivers, surely they don't let them just drive on the road, right?

THE WITNESS: Well, they use a closed track. I'm sorry. I did not mention that.

BY MR. MIGHELL:

Q Well, thank goodness.

A All the ones I'm aware of have been on a closed track.

Q Hmm. Next slide, please. As for driving simulator studies, what about them? What do they show?

A Well, those are actually pretty good. There are a number of different kinds of simulators where you simulate the driving ability. Sometimes you just do it with a computer simulation and a steering wheel and a brake. The more involved simulators include getting somebody encased in a large device like what you see in a flight simulator or some of the Disneyland rides where you can actually feel the vehicle moving. These can be very well controlled, again, like you can with experimental studies, yielding very credible results.

All of these different kinds of laboratory studies, simulator studies use just a

handful of subjects. They may use 15 subjects, maybe 20, maybe 100. They measure fewer dimensions of impairment than lab studies but a lot more than on-road studies. They confirm that THC-induced driving impairment, it does exist, especially with occasional users, and they're fairly consistent, but not completely consistent because there are some differences in the protocols that are being used from one experimenter to the other. So you can find some that do not confirm this, but generally speaking, the majority of them will reach that conclusion.

Q When you say occasional users, can you define that term for us?

A Different experimenters have different cutoff points, but it's generally recognized that THC metabolizes relatively slowly, and it does so on a second-order kinetic reaction rate. So what happens is that you have a half-life like radioactivity.

Q Mm-hmm.

A It's not a linear metabolization like it is with alcohol. So what they look at is does somebody have enough time between their consumption of the dosing schedules, if you will.

Do they have enough time to allow that to subside? And if they only are using it maybe once a week, that generally is considered to be an occasional user. If they're using it daily or every other day, that usually is going to be a chronic user. Some people will say, I'll look at people if they use it monthly. If they use it less than that, generally they are considered to be naive users.

MR. MIGHELL: Okay. Your Honor, I'm happy to stop there.

JUDGE JULIUS: Sounds like a good place to stop for lunch. It is now just 12:00 on the dot. We will recess for an hour for lunch, and I'll see everyone back here at 1:00 p.m. During the recess, please don't discuss your testimony with anyone as you're still in the process of giving it. Okay?

(Whereupon, the above-entitled matter went off the record at 12:00 p.m. and resumed at 1:01 p.m.)

JUDGE JULIUS: We are back on the record. If you want to continue with your direct examination of Mr. Wood, feel free to do so at your convenience.

MR. MIGHELL: Thank you, Your Honor. Could we go forward two slides? Judge, just for the record, we are on slide 22 of Exhibit 87.

JUDGE JULIUS: Thank you, Counsel.

DIRECT EXAMINATION

MR. MIGHELL: Mr. Wood, you mentioned epidemiological studies and that one of those was culpability studies. What are culpability studies and what do they show?

THE WITNESS: Culpability studies compare drivers involved in a crash, usually they look at two drivers with a two-vehicle crash together, for example and identify the one driver that was culpable and one who was not culpable. Then they look at the drug presence in both of those two categories of individuals. From that, they determine something called an odds ratio or a relative risk after marijuana use. The metrics that they use sometimes are self-reports from the drivers. Sometimes they will use blood tests. Sometimes they'll use urine tests. But the point I want to emphasize that in all cases they are measuring THC presence, not necessarily impairment.

There are widely variable results from

the culpability studies because of the highly variable test protocols that are used. Some, for example, will specify that we will only rely upon blood testing; others rely only on self-reports and so forth. As a result of the different protocols that are used for testing, it's hard to compare the results one with the other. Generally, they find THC-positive drivers are more likely to cause fatal crashes, but not always.

What they have found fairly consistently is that the crash risk is highest for people that are impaired by alcohol plus THC, those people that are impaired by alcohol or have had alcohol present are the middle grade, and those that have the least propensity for being in a crash are those that are positive for THC only.

BY MR. MIGHELL:

Q Mm-hmm. Next slide, please. Your Honor, for the record, slide 23. Mr. Wood, what are case control studies, and how do they differ from culpability studies?

A Well, here you're looking at two different types of subjects. One is drivers that are involved in crashes, and the second is

drivers that are not involved with crashes but perhaps happen to be going by the same intersection maybe a week later, but at the same time of day. They typically, like the culpability studies, will typically report either odds ratio or relative risk after marijuana use. Again, they assess marijuana use, not impairment.

Q Next slide, please. Your Honor, for the record, slide 24. Mr. Wood, can you describe very briefly the most frequently cited meta-analysis of marijuana crash risk studies?

A Sure. Because of the wide variety of different kinds of studies that are done in crash risk studies, they're best understood with something called meta-analysis that I think was covered by an earlier witness here.

This is from a report that was done by Rogeberg and Elvik, a couple of Norwegian researchers and this is a list of the 28 different studies that they combined into one meta-analysis of a result. If you look at this, you'll find that there are 28 different studies here, and the odds ratio in each study is listed on the right-hand side, and they vary everywhere from 0.22 up to 13.4; 0.22 means that people that

are positive for THC in that study were 4.5 times more safe to drive than a sober driver. Now 13.4 says that they were 13.4 times worse than a sober driver. Then you combine all those very disparate studies into one number, and they come up with 1.36; and this is the number that NORML and some of the other marijuana lobby people have held onto it to say, this really is not very dangerous.

Q Mm-hmm.

A It's not much worse than just getting your blood drawn or maybe getting a measles shot or something like that. If you look at this, the second one from the bottom is the Compton study. That was one we were just discussing from West Virginia. That ended up with an odds ratio of 1.0. Well, actually, 1.0 was not from the Compton study, that was actually from the Lacey study. Compton showed 1.05. So there's some inconsistencies and irregularities in the way they've reported this, but that's an example of one study.

Q All right, thank you. Next slide, please. Slide 25, Your Honor. What can observational studies tell us? And this is the

third of the epidemiological studies, right?

A This is the third of the epidemiological type. That's correct. We've -- seen some. We've seen some of the examples of data from Washington, for example, are epidemiological studies. Instead of having controls, they simply look at massive numbers of case studies. You'll have, as I say, typically less than 100 people in a regular controlled study. Observational studies may have thousands of them. We've had 60-some odd thousand cases in Colorado of DUI, for example, that can show you some of our studies.

Q Next three slides on, please. There, that one. Slide 28, Your Honor. We're just going to move a little bit faster. Mr. Wood, what is the difference in your opinion based on your research between DUI and DUI per se?

A Excellent question. Many people misunderstand this. All states have both DUI laws as well as DUI per se laws, although they may not call them that. DUI is driving under the influence. They may have different terms for that as well, DWAI and so forth. I use DUI simply because it's the most commonly used. But DUI requires that the prosecutor proves that

somebody is impaired however that state happens to define impairment.

The level of alcohol or drugs in the blood or oral fluid or urine or whatever is not even an element of the crime. In fact, you can be convicted of DUI even if there are no toxicology results, which happens once when a subject refuses to comply with the state requirement that they furnish a biological sample.

DUI per se is quite different. It requires that the prosecutor prove that somebody is above the legal limit. For alcohol, that is typically .08 grams per deciliter of alcohol in whole blood, and no proof of impairment is required to be convicted of DUI per se. You do have to prove probable cause to take blood sample from that individual, but that's a much lower standard of proof than is proving somebody is incapable of driving, for example.

Q Okay, next slide, please. Your Honor, slide 29. What do officers look for when there's a roadside encounter involving DUI, and how effective are their observations at detecting impairment?

A Good. The first thing to look for --

MR. LONICH: Objection.

JUDGE JULIUS: Hold on, sir. We have an objection. Basis?

MR. LONICH: Once again, I believe this is going outside the scope of the expertise. The way the question was posed was what do they look for, how effective it is. I don't believe that this witness has any law enforcement background. I understand that he has read these studies, but how effective things are on a case-by-case basis, I believe, is outside the scope.

JUDGE JULIUS: All right, Counsel, do you have a response to the objection?

MR. MIGHELL: I'm happy to rephrase.

JUDGE JULIUS: Okay, I'll consider the question as withdrawn, and you can rephrase.

MR. MIGHELL: Mr. Wood, what is the typical test that an officer would perform to determine impairment during a roadside encounter?

THE WITNESS: Tests are typically specified in something called the Standardized Field Sobriety Tests and those are sanctioned by the International Association of Chiefs of Police to include three individual tests: horizontal

gaze nystagmus, the one leg stand, and walk and turn. These have been validated to be very effective for measuring and reporting and documenting impairment by alcohol. They've also been shown to be only moderately effective for impairment by marijuana.

BY MR. MIGHELL:

Q And they've been shown by what study?

A Been shown by studies done in the Con Stough in Australia, some people in the United States, some people in England -- worldwide it's been shown to be ineffective or moderately effective for marijuana.

Q Mr. Wood, why is the absence of a scientifically valid THC per se limit of consequence to the government's rescheduling decision?

A Yes. The dilemma that the law enforcement faces is that they know that it is illegal in all states to drive while under the influence of the drugs. Proving that is very difficult. Prosecutors find the same thing with alcohol, which is why they prefer to use the statute DUI per se rather than DUI. They're used to that, and it's very easy to do. It's not a

slam dunk, but it's much, much easier. It's an uphill struggle to convict somebody of DUI.

Q Why is it harder to convict someone of DUI than DUI per se?

MR. LONICH: Objection, Your Honor.

JUDGE JULIUS: Basis?

MR. LONICH: Once again, I believe it's outside the scope. This is getting into a legal analysis, a legal critique. Also, as you know, Your Honor, every case is different. Facts are different. There's conversations that are had between prosecutors and defendants. I just believe this is outside the scope. They want to talk about statistics and what results in a conviction, but the process behind it, the theories, and I would add a speculation objection to that as well, Your Honor.

JUDGE JULIUS: Response to the objection, Counsel?

MR. MIGHELL: My response would be that we're just talking about the statistics. We are talking about why prosecutors would use the per se as opposed to a normal DUI conviction. This is statistically. This is found in the statistics that are in our exhibits. We're

speaking to the statistics. We're not speaking -- we're not having him speculate on why states might do this.

JUDGE JULIUS: Did you have something more to add?

MR. LONICH: Yes. To that point, Your Honor, a statistic is a statistic. It is a number. It is a result. It's not the why something happened.

JUDGE JULIUS: That was my question as well.

MR. MIGHELL: That's fine. I can rephrase.

JUDGE JULIUS: Okay. So I'll consider that question previously withdrawn, and you can ask a new question.

MR. MIGHELL: Thank you. Withdrawn. Mr. Wood, what do these statistics say about convictions about -- withdrawn. Mr. Wood, what do the statistics say about DUI per se convictions in the States? How often do they occur?

THE WITNESS: I have no statistics on that. The states that do report convictions on DUI typically combine DUI and DUI per se

combined. I will show you some specific statistics on Colorado that speak to that question, but not as directly as you asked it.

Q Mm-hmm. Let's move on to slide 30. Mr. Wood, what is the DRE protocol?

A DRE protocol is 12 steps that an officer must go through to document that somebody is impaired, that enables a DRE-trained person to not only document impairment, but also provide an expert opinion as to what the likely causes of that observed impairment is.

Q Is DRE training -- withdrawn. Does DRE training take a long time?

A Yes, it does. It's considered to be extremely difficult to become a drug recognition expert. It takes two days of assessment for the officer just to show that he is going to be able to complete the what's called the DRE school. The school itself is seven days of eight hours a day of training, followed by a 40- to 60-hour period of time to achieve certification. Annual certification is required, and that DRE expert must have a minimum of four evaluations every two years to maintain their certification.

Q How many DRE experts -- or how many DREs

does the state of Colorado have?

A Last I saw was about 143.

Q In your expert opinion, is that enough DRE experts to cover the amount of drugged driving cases that come before the courts?

A It is enough to cover them. Is it enough to cover them well? That's an opinion. Different people have different answers. What I typically hear from people is, no, it is unlikely that any state will ever have enough that will satisfy the critics.

Q Mm-hmm. Next slide, please. Slide 31, Your Honor. Is there a THC equivalent for the BAC limit for alcohol, .08 famously?

A No, there is not. This slide will give us three expert statements, one from the AAA Foundation for Traffic Safety, one from the National Safety Council, and one was from NHTSA, and all of them say that legal limits for marijuana and driving are arbitrary and unsupported by science, which could result in unsafe motorists going free and others being wrongfully convicted for impaired driving.

Q And these are from Exhibits 8 and 23 of DUID Victim Voices submission?

A That is correct.

Q Next slide, please. Slide 32.

A Here are three more agencies that have reached the same conclusion, the National District Attorneys Association.

MR. LONICH: Objection, Your Honor

THE WITNESS: The National Sheriff's Association.

JUDGE JULIUS: We have an objection.

MR. LONICH: I didn't know if there was a question posed.

MR. MIGHELL: There was no question. What do the organizations on this slide say about THC per se limits?

THE WITNESS: One of the most interesting ones is from the National District Attorneys Association that gave us some numbers. They say that If a marijuana per se level is set at 5 nanograms, some estimates suggest 50 to 70 percent of individuals who display clues of impairment leading to arrest would test below the per se limit.

BY MR. MIGHELL:

Q Next slide, please. Mr. Wood, in your expert opinion, what are the specific problems

with a per se limit for THC?

A Well, it does not need to be my expert opinion because these other expert organizations have said the same thing. When you set an artificial THC per se limit that is not supported by science, you will have unimpaired drivers who are above the limit that can be convicted and impaired drivers below the limit who are not convicted. Now, you can solve that problem by, rather than using a per se level, use what Colorado calls a permissible inference structure, but it does not solve the second problem. You still have unimpaired drivers above the limit will no longer be convicted, but the impaired drivers below the limit are not convicted, even with a per se -- permissible inference -- law.

Q Yeah. Next slide, please. Your Honor, slide 34. Can you explain why a blood test for THC cannot serve the same purpose as a blood test for alcohol?

A Certainly. The issue is that neither alcohol nor THC impair a driver's blood. The only reason we test the blood is as a surrogate to find out what's in the brain. These and other drugs do impair the brain, but not the blood.

Now --

Q So why does the blood work so well as a surrogate for alcohol?

A Well, alcohol is water-soluble, so it establishes very quickly a uniform distribution throughout the body and throughout all highly perfused organs and tissues of the body. So what's in the blood is in the brain and vice versa. THC is fat-soluble. It's not soluble dissolved in the blood. It's suspended in it as it races through the blood vessels. When it hits the brain and other fatty tissues, those fatty tissues, since THC is fat-soluble, extract the THC from the blood. So very quickly, the THC level in the brain is much higher than it is in the blood.

Q Mr. Wood, what is the most fatty tissue in the body?

A The brain.

Q Next slide, please. Actually, two slides ahead. You've mentioned before the blood alcohol limit, I'm sorry, you mentioned that there's a relationship between blood alcohol limit and crash risk.

A That's correct.

Q What is the data that would confirm that statement?

A Well, there are several pieces of data, and I'll just show one here. And this is the data from -- and it's a study of Long Beach, Fort Lauderdale study and published in 2022, showing the relationship between blood alcohol content and relative crash risk. This is used to support the per se level but does not scientifically determine what that per se level ought to be. Numbers like this have been replicated around the world, and they all come up with similar but not identical graphs. But I will point out that these are average numbers and do not reflect each individual, like, there can be differences among individuals.

Q Mm-hmm. Two slides on, please. Your Honor, slide 38. Does a similar correlation exist for any drug other than alcohol for BAC crash risk correlation -- or crash risk correlation?

A No, it does not. Alcohol is the only drug with a proven correlation between blood levels and crash risk. For marijuana specifically, we have proof that there can never

be a correlation between blood levels and crash risk. The laws of chemistry and of human physiology prevent any possible correlation. Marijuana's not the outlier. Alcohol is the outlier. It's the only drug that has that.

Q Next slide, please. Your Honor, slide 39. Mr. Wood, can you define pharmacokinetic for us?

A Sure. Pharmacokinetics basically is the science of determining essentially what the body does to the drug, not what the drug does to the body, which is pharmacodynamics. But pharmacokinetic is the other way around, what the body does to the blood -- or what it does to the drug, rather.

Q And can you explain the pharmacokinetic differences between alcohol and THC? How are they different?

A On the left, you'll see a Widmark model, which basically shows how the BAC in an individual will decline in time. You can see it goes from -- it climbs from about .33, in this case, up to about .45 as somebody is consuming the alcohol, and then it declines in a very linear fashion at about 0.02 grams per deciliter

per hour. On the other hand, if you look at the graph on the right, you see in the solid red line the level of THC in the blood, and you can see that it very rapidly spikes in the blood. Within just a few minutes, you achieve the maximum level of THC after somebody begins smoking a joint. It declines rapidly, not because of metabolization, which is what's occurring on the left alcohol graph, but it's declining rapidly because of redistribution from the blood to the brain and other fatty tissues in the body.

Q When you say redistribution, can you explain that process?

A Yes. It's a process where the THC is in the blood, and the brain, the lungs, the heart, other fatty tissues extract that from the blood and redistribute it from the blood to the fatty tissues.

Q Mm-hmm. Two slides on, please. Mr. Wood, what is the data that shows the relationship between blood THC levels and subjective impairment?

A Well, there have been a number of them. Some of them are shown here in this graph, and they've been combined into one graph for ease of

understanding and comparison. If you look at the two lines that are marked by squares, that shows alcohol. What you're seeing is the alcohol milligrams per deciliter is in the line with the black squares, and the subjective effects are then shown in the line with the white squares. And they track very closely, as you might expect. As the alcohol level goes down, the impairment level or the subjective effects go down.

The other two lines that you see are for THC, and again, following the same technique, we have the line with the blackened in circles shows the THC level in the blood, whereas the line with the open circles shows the subjective effects. You'll see that for the first 30 minutes after consuming a joint, the subjective effects are going up at the same time that the level of THC is going down. This is what you would expect when the THC is being redistributed from the blood to the fatty tissues.

Q When you're talking about the subjective effects of impairment, can you define what those are for us?

A They typically are defined by the subject that's being tested, and they typically

ask the subject to rate how high you are on a scale of 1 to 10, called a VAS scale, visual analog scale.

Q Two slides on, please. Your Honor, slide 43. Mr. Wood, what do real world arrest data for DUI show about the distribution of blood THC levels?

A Well, they vary depending upon where the test was taken, and also they have varied over time as THC potency, if you will, has increased. This is a fairly old study from 2008 showing that 90 percent of the subjects that were arrested for DUI in Sweden tested below 5 nanograms.

Q Next slide, please. Is there similar data from the United States, Mr. Wood?

A There are. This is a graph from NMS Labs in Pennsylvania showing that 70 percent were below 5 nanograms. This is in a study of over 10,000 marijuana DUID cases.

Q Next slide, please. Your Honor, slide 45. Mr. Wood, what would Colorado's data show?

A Actually, very similar to the one from NMS at the same time period. This is about 2012, 72 percent of the cannabinoid-positive defendants tested below 5 nanograms.

Q Two slides on, please. Your Honor, slide 47. Mr. Wood, you testified that sometimes blood testing can be delayed.

A Yes.

Q How does that delay affect the measurement of blood THC in studies?

A It's huge, and this is a result from a study that I performed with my co-authors on a paper that we had published. What we've done is we have looked at the delay time between a crash that killed somebody or injured somebody, looked at both groups of cases, between the time of the crash and the time that blood was collected for toxicological testing.

Q Mm-hmm.

A And then we've put those into five quintiles shown here in the blue and the pink blocks. Quintile 1 shows that the mean time for that quintile is 1.1 hours. The median quintile, number 3, so the mean time was 2.1 hours between the crash and time you collect the blood. Quintile 5 was over 4 hours. Most of quintile 5 was cases where a warrant was required in order to be able to collect the blood. That's becoming more and more common with some of the recent

court rulings. So these data are somewhat dated. What I've done then, I've placed these quintiles against the graphs that you just saw earlier, the one graph showing the very rapid decline of THC. That's a very dark line shown on the graph.

Q Mm-hmm.

A The gold and gray lines are from a different study showing chronic users and occasional users and what their decline was respectively. And what you can see is that for quintile one, that is, the fastest 20 percent of all the cases, it's fairly easy to show that the person can be found to have THC that is measurable in the laboratory. But quintile three, which is just the median, you find that the only ones that are above the limit of quantification of most toxicology laboratories are those people that are chronic users. The occasional users will be below the limit of quantification, and they will be shown as no THC has been found. For quintiles four and five, they all fall below the level of quantification. Now, if somebody actually took a joint, say, an hour before they began to drive, you would just move all these blocks to the right, and you begin

to see that more and more of those people that you would test would be found negative just because of time delay.

Q Next slide, please. Mr. Wood, is there a study that directly compares crash risk as a function of blood concentration for alcohol to crash risk for a blood concentration of THC?

A There's only one study I've seen that fits that description, and that was the study that was done in Europe. It was a multinational study. You see the alcohol curve on the left-hand side and it follows by and large what you would see with the earlier graph we disclosed with the from NHTSA. On the right-hand side, you see THC, and you see there's no correlation whatsoever.

Q And in your expert opinion, what does that suggest about blood THC levels and impairment?

A Well, it says you better not use it to find out if somebody's impaired because it doesn't work.

Q Hmm. Next slide, please. Do the graphs that you showed apply to all users, including chronic users, or just to occasional users?

A Well, it's interesting that even with occasional users, you find wide differences. Same thing with chronic users. This shows just how wide the variation is from one individual to the next. If you look at the -- we saw this graph earlier -- and look at the vertical lines that are above and below the black solid line. You see that the black solid line says that the median blood THC level is about 62 nanograms per milliliter for that group.

Q Mm-hmm.

A The black lines, the vertical lines show the range, and even though the median was 62, among all the subjects that were studied, it ranged from 18 up to 112, so that's a pretty wide spread.

Q Two slides on, please. This is slide 51, Your Honor. So you've presented a great deal of scientific evidence about THC and blood content. Is there real-world data from a state that would measure the actual impact of a THC per se limit on DUI convictions?

A Yes. There are real-world data. They only come from Colorado, and this is pursuant to the law that I wrote and brought to the

legislature, as I described before.

Q Why does that data only come from Colorado?

A Well, it's hard to do. When you think about it, you want to be able to get data from the toxicology laboratories all the way through to the judicial outcome. Well, when somebody is arrested for DUI, the policeman will get the blood sample and will transfer that to the laboratory for testing, and he will put his law enforcement agency's number and the date on it and the person's name, but there's no uniform code that then travels with that sample all the way through the judicial process.

Once a case is filed with the prosecutor, then there is a stamp of a -- this is a case number. That case number wasn't assigned at the time of the test, and so that does not belong. So those two data fields exist in silos; they're not combined.

Q I see.

A What we had to do in Colorado was to find a way of combining the data from the two different data silos and that's what was done.

Q Three slides on, please. Your Honor,

slide 54. Mr. Wood, what do the Colorado data show about conviction rates for different substances?

A Well, overall, we find that we're very successful with alcohol convictions. We have a 94 percent conviction rate when somebody's been charged with driving under the influence of alcohol. On the other hand, if they've been charged of driving under the influence where THC was the only drug found, the conviction rate was 73 percent. Now, that may sound low, and it is, but it gets worse as you get down deeper into the data and you find that that's a 44 percent conviction rate for DUI and a 98 percent conviction rate for DWAI.

Q And again, what is DWAI? Do you know what it stands for?

A DWAI is driving while ability is impaired. It's just -- there's a statutory definition of DUI, which is incapable of safe driving. The statutory definition for DWAI is impaired to the slightest degree such that somebody is less safe to drive.

Q So DWAI has the lower standard, and DUI is the higher standard.

A It's a lower standard. It's a lower standard. It's also --

MR. LONICH: Objection, Your Honor.

JUDGE JULIUS: Hold on, sir.

MR. LONICH: Once again, we're getting into legal analysis. What is the burden of proof and what the standard is.

JUDGE JULIUS: Okay. Response to the objection?

MR. MIGHELL: That's fine. I'll withdraw the question.

JUDGE JULIUS: Okay.

MR. MIGHELL: Next slide, please. Based on your research and experience, Mr. Wood, how do prosecutors approach DUI cases when alcohol is involved?

THE WITNESS: They will, if they have the data on what the alcohol content is, and that's all I'm reporting here because this is based upon laboratory data. They will universally try to get a conviction on DUI per se. They will quite frequently negotiate that down in order just to get a conviction and to save court time and accept a conviction for DWAI --

MR. LONICH: Objection, Your Honor.
THE WITNESS: As shown by the data here.
JUDGE JULIUS: Hold on, sir.
MR. LONICH: Understanding he's talking about data, but once again, I feel like we're verging into almost irrelevant testimony here about why prosecutor and prosecutor decisions to negotiate charges down, and they, as he testified that they perceive that it may be easier. I believe that's just outside the bounds of his expertise, and also it's not relevant of separate cases of what may or may not have happened during those litigation process. I request we just stick to the data.
JUDGE JULIUS: Response to the objection?
MR. MIGHELL: Your Honor, this is relevant because it's comparing how prosecutors handle THC per se versus THC, how they handle those cases versus alcohol which is -- that's the distinction that Mr. Wood is testifying to.
JUDGE JULIUS: I'll allow it. It'll go to weight.
MR. LONICH: Yes, Your Honor.
MR. MIGHELL: Okay. Next slide, please

-- actually, two slides on from there. Thank you. One more slide on from that. Thank you. Mr. Wood, what do the Colorado data show about conviction rates above and below the 5 nanogram per milliliter threshold for THC?

THE WITNESS: Here, we're looking at a summary of five years of data, 2018 through 2022, which is the last year for which we have data published. And this is -- we've taken all of the cases for people who were charged with DUI or DWAI where THC was the only drug found in their blood and we've separated that into charges by DUI and DWAI, and also by above and below the 5 nanogram permissible inference rate.

What we find is that the 5 nanogram THC limit does not discriminate between impaired and non-impaired. Both categories of individuals have remarkably high conviction rates 99 percent for 5 nanograms and above and 93 percent for below 5 nanograms.

BY MR. MIGHELL:

Q Next slide, please. Now, what do these data tell us about the relative difficulty of proving DUI versus DWAI with respect to THC?

A If we look at the cases for individuals

who are just above 5 nanograms, we have an extraordinarily high 99 percent conviction rate for DWAI, that is, impaired to the slightest degree, and only 62 percent for DUI. This tells us two things: One, it's easier to prove that somebody is impaired to the slightest degree than it is to prove that they are incapable of safe driving.

Q And that's based --

A Well, it makes sense.

Q -- on the data for the conviction rates.

A That makes sense that's what the data say. But it also says one other thing that's very important. It also says that the permissible inference structure used in Colorado does appear to prevent convictions based on only toxicology results, otherwise we would have an extremely high conviction rate for DUI as well, and we don't.

Q Okay. Next slide, please -- next slide, please. This is next slide.

A I think you want to back up.

Q Yep. Oh, let's back up. Mr. Wood, what happens to impaired drivers who test below the threshold 5 nanograms per milliliter for THC?

A It depends upon whether or not they are charged with DWAI, in which case they have a 93 percent conviction rate, as we've already testified. Or if they're charged with DUI, where the conviction rate is a miserable 8 percent. I'm not sure why prosecutors would try to convict somebody of DUI when they're below the legal limit, but they do.

Q So, based on the data, the conviction rate changes based on the charge?

A It does, which is exactly what the National District Attorneys Association and the other expert groups said was going to happen. This proves it actually does happen.

Q Next slide, please. Mr. Wood, based on the data from these studies, is a THC legal limit necessary to achieve convictions for impairment?

A No, it absolutely is not. The keys to conviction based upon these data would tell us that you should, first of all, avoid the use of a THC legal limit because it'll get you in trouble and it'll prevent you from convicting somebody who is impaired, and you should also charge impairment. Don't charge incapability of safe driving.

Q Three slides on, please. Your Honor, slide 64. Mr. Wood, are there any additional noteworthy findings from the Colorado data?

A Yes, we have seen earlier data that half or more of the THC only cases test below 5 nanograms. Yet, if we look at this middle set of tables here, we see that very few of those are charged with either DUI or DWAI if they're 5 nanograms or below, telling us that with the current legal system that we have in Colorado, we are already not charging people when they probably should be charged if they were charged with DWAI. The prosecutors just aren't bothering to do it.

Q Mr. Wood, can you explain to the tribunal how human behavior factors into the opinion that rescheduling would increase marijuana usage and consequently drugged driving fatalities, which you've testified to?

A Can you ask the question a bit more clearly? I want to make sure I understand it.

Q Certainly, can you explain to the court how human behavior factors into your opinion that rescheduling would lead to an increase in drugged driving fatalities?

A Well, once a rescheduling occurs, one would expect that an individual might say, this is not as dangerous as they used to think it was, so I can now go ahead and drive. And so we might expect to have a higher number of drugged driving incidents than we have had in the past.

Q Mr. Wood, did the government assess this risk that this behavioral change would pose to the driving public?

A Absolutely not. There was nothing in -- nothing that -- that I presented here was included in any information from DER, from the DEA, from HHS, or the DOJ.

Q So the government did not assess this information?

A Didn't even touch it. Didn't even recognize it. This is published information, by the way.

Q Two slides on, please.

A It wasn’t secret.

Q Mr. Wood, how would you summarize your opinion regarding rescheduling and increased marijuana usage with respect to human behavior and with respect to the effect of rescheduling on increased marijuana usage, if it will increase?

A Sure. In summary, I would say that we have conclusive evidence that policy changes made by the government can impact the consumption prevalence in the population. We have seen that marijuana can indeed cause impairment, that it can indeed cause deaths and serious bodily injuries. We can expect that the intervention the government is proposing right now, which is to down classify from Schedule I to Schedule III, is likely to cause a greater increase in prevalence, as shown here on this graph. And we can expect that there will be a higher number of fatalities.

Q Mr. Wood, how many fatalities per year did you testify that that average would be?

A Well, we don't know what it is right now. I believe in an earlier testimony from one of the government witnesses was they expected 2,000 to 5,000 --

MR. LONICH: Objection.

MR. MIGHELL: Hold on, sir. We have an objection.

MR. LONICH: I request that the witness answer the question on his own knowledge and studies. He's referencing testimony previously

had in this proceeding. He should've been sequestered. I don't know where he got the information from or where he heard it, but I just request that he not comment on things that were said previously in the proceedings.

JUDGE JULIUS: I understand that objection. Sir, how do you know what was testified to earlier in this hearing?

THE WITNESS: I read the transcript.

JUDGE JULIUS: Okay.

MR. LONICH: Your Honor, we would just note for the record, pursuant to the tribunal's order, the witness should have been sequestered and not have read or heard any of the testimony.

JUDGE JULIUS: Understood. Go ahead, Counsel.

MR. MIGHELL: Certainly. Mr. Wood, two slides on, please. One more slide. Thank you. Mr. Wood, before we end today, do you have one final story for the tribunal of a victim of drunk driving?

THE WITNESS: Yes. Let me just highlight four cases that illustrate the problem we're dealing with here. I described the son, my son's case, in the upper left-hand corner.

That's Brian and his wife, Erin. The women that killed Brian were sentenced to five and eight years, respectively. They served three and five years respectively. Both were placed under a bench warrant because neither one of them complied with a court requirement that they provide a restitution for a partial payment for the burial expenses for my son. The Defendant Bowling has never been found in the last 10 years. We have found Wichert. Last I heard, she's now in jail awaiting a trial for killing another man and under a $5 million bail.

It turns out that had they been convicted of vehicular homicide due to DUI instead of driving with disregard for the safety of others, the recommended sentencing window in the State of Washington at that time would have suggested 12 to 15 years.

Below Brian is Paeyton Knowlton, 8 years old, killed by Kyle Couch as Paeyton was coming back from her second-grade graduation. Kyle was assessed by two drug recognition experts who both said, this man is unsafe to drive. He is incapable of safe driving. And his blood was tested at and showed 1.5 nanograms per milliliter

of THC. Now it turns out he had confessed to consuming an edible, not smoking, and the edible results in blood is much, much, much lower than it is if you are smoking. So 1.5 nanograms is about what you would expect for somebody who had just consumed an edible many hours before.

Because of the low level, Kyle Couch was convicted of careless driving resulting in death, which is a misdemeanor in Colorado, and he was sentenced to 60 days in jail. He also pled guilty to buying his marijuana using a fake ID, for which he was sentenced an additional 90 days in jail. 150 days for killing an 8-year-old girl.

Next to her is Rosemary Tempel. She was killed by Tim Durden, his blood was tested four hours after the crash at 4.2 nanograms per milliliter. He also received a lighter sentence. He was released after 3 years of a 4.5 year sentence.

Let me close with Tanya and Adrian Guevara, 25 years old, and her 5-week-old son, killed by Steven Ryan, who confessed to driving under the influence of marijuana at the time he killed Tanya immediately. Adrian suffered for

five more days before he died. He was convicted and sentenced to 10 years in prison. That sounds good, but this occurred in Colorado. Shortly after he was sentenced to prison, the Colorado passed its 5 nanogram law. His sentence was then appealed, and he was released.

All of these victims were people that have been victimized twice. Once by drug-impaired drivers, and secondly, by a legal system that showed greater sympathy for drug users than they did for drug victims.

MR. MIGHELL: Your Honor, that concludes the direct examination of Mr. Wood.

JUDGE JULIUS: Thank you, sir.

THE WITNESS: I thank the Court, for its time.

JUDGE JULIUS: Before we move on to cross, the court has at least one question I'd like to ask Mr. Wood.

THE WITNESS: Mm-hmm.

JUDGE JULIUS: Are you familiar with the Controlled Substances Act --

THE WITNESS: I am.

JUDGE JULIUS: Definition --

THE WITNESS: I am.

JUDGE JULIUS: Of marijuana?

THE WITNESS: Yes.

JUDGE JULIUS: Just for clarity of the record, it's at 21 U.S.C. § 802, § 16A. Subject to subparagraph B, the terms marijuana and marijuana, spelled variously with an H or a J, mean all parts of the plant Cannabis sativa L., whether growing or not, the seeds thereof, the resin extracted from any part of such plant, and every compound, manufacture, salt, derivative, mixture, or preparation of such plant, its seeds, or resin. Subsection B defines what is not included in that definition: hemp.

THE WITNESS: Right.

JUDGE JULIUS: And the mature stalks of the plant, things derived from the stalk, sterilized seeds, things like that. Is this the definition of marijuana that you've used to research and provide your opinions, or do you have a different definition of marijuana that you use in your study and in your opinions?

THE WITNESS: When speaking of marijuana, I use the definition that you have described. I typically don't refer to marijuana impairment. I typically in my work refer to it

as THC impairment because it's more specific.

JUDGE JULIUS: Okay. Thank you. Cross-examination for the government whenever you're ready.

MR. LONICH: Yes, Your Honor. The witness has been testifying for almost an hour at this point. Would now be an appropriate time for a quick comfort break?

JUDGE JULIUS: We can certainly do that.

MR. LONICH: Okay.

JUDGE JULIUS: We can take 15 minutes?

MR. LONICH: That works.

(Whereupon, the above-entitled matter went off the record at 1:51 p.m. and resumed at 2:06 p.m.)

JUDGE JULIUS: I understand from court staff that there may be a procedural issue that someone wanted to raise to the court's attention. Is that the case?

MR. HARRINGTON: Yes, Your Honor. I have a procedural question, but it can wait until after any cross or redirect.

JUDGE JULIUS: Okay.

MR. HARRINGTON: Unless, yeah.

JUDGE JULIUS: I wasn't sure how

pressing it was, but we can certainly wait.

MR. HARRINGTON: Not that pressing, thank you.

JUDGE JULIUS: Okay. Cross-examination from the government, sir, whenever you're ready.

MR. LONICH: Yes. Your Honor, at this time and with all due respect to Mr. Wood and the sensitive impact of some of his testimony, we would request and move at this time to strike or disregard this witness' testimony. As he testified on direct, he had read the transcript multiple times throughout the presentation. There's references to other witnesses' testimony. That is a direct violation of this tribunal's order, and it is clear that the testimony today was tailored based on that previous order.

JUDGE JULIUS: Counsel, do you have a response to that?

MR. MIGHELL: Thank you. Your Honor, we just learned about this now, but the court has been emailing out to all counsel and all parties uncorrected transcripts of each day's proceedings. And again, we just learned about this and just wanted to make Your Honor aware of that. We're prepared to give the government as

long a leash as they want on cross. We think that if he's read the transcripts, he's not being offered as a rebuttal witness to any of the government's witnesses. It goes to weight. It doesn't go to the substance. The substance is studies, it's materials that Mr. Wood -- that are independent of a rebuttal to the government's witnesses.

Again, they can examine him as closely as they want to on cross, but this court has been emailing transcripts out not only to counsel for the parties but to some of the parties themselves.

JUDGE JULIUS: Understood, Counsel. We looked into that. The court looked into it during the recess as well as to how Mr. Wood would obtain those, and because he is the party, parties are receiving the transcripts along with counsel, so we understand that that's how he got it. Anything further in support of the motion from government counsel?

MR. LONICH: Just the one point, Your Honor. We would maintain that although they're presenting it as not a rebuttal witness, based on the fact that he had previous knowledge of some

of the testimony than that was described in the presentation, it's a de facto rebuttal witness.

JUDGE JULIUS: I understand the arguments from both sides. I will deny the motion to strike the testimony in its entirety. I will consider arguments that go to weight of aspects of the testimony based on the indication that it was based on having read transcripts. But it'll go to weight as opposed to admissibility.

MR. LONICH: Yes, Your Honor.

MR. MIGHELL: Thank you.

JUDGE JULIUS: Cross-examination, whenever you're ready.

MR. LONICH: With that, Your Honor, no cross from the Government.

JUDGE JULIUS: Okay. Thank you. And with no cross, there's no need for any redirect. Thank you very much, Mr. Wood. That does conclude your testimony. Thank you so much for sharing with us.

THE WITNESS: Thank you, Your Honor.

JUDGE JULIUS: Yeah, so you are excused at this time.

THE WITNESS: Okay.

JUDGE JULIUS: All right, so we continue to move ahead of schedule. We are now, with that, on the schedule where we were planning to be at 3:00 p.m. tomorrow, so we are very much ahead of schedule. We will start tomorrow with Dr. Kenneth Finn's opening statement. I think at this point, that was supposed to start at 3:15 and 3:30 with the direct examination of Dr. Finn's first witness. I would just maybe ask that Dr. Finn's counsel perhaps be prepared to move forward with both witnesses if at all possible tomorrow.

MR. KENNEALLY: Judge, I do think that's possible. I'm prepared to give my opening statement now if it pleases the court. If you'd like to do it tomorrow, we can do it as well. The only request that I would have is -- Mr -- excuse me, Dr. Finn is coming from Arizona, and his flight gets in at 9:00 tonight. I would like to have a chance for him just to review the exhibits prior to court starting tomorrow. So with the court's indulgence, could we maybe move the start of court back until about 9:30? Just because there's a few exhibits that I wanted to get through, and I know the building opens up

generally around 8:30. I just want to have sufficient time in order to do that.

JUDGE JULIUS: Any objection to starting a little bit later tomorrow?

MR. LONICH: No objection from the government, Your Honor.

MR. McNICHOLS: None from us, Your Honor.

JUDGE JULIUS: Okay, and I haven't forgotten about your procedural issue. That's fine with the court. Let's go ahead and if you're prepared to do your opening statement today --

MR. KENNEALLY: Sure.

JUDGE JULIUS: Let's just go ahead and knock that out. That'll get us 15 minutes ahead of schedule further, and we'll go from there.

MR. KENNEALLY: May it please, Your Honor. On November 20th, 2019, a 19-year-old, Johnny Stack, sat down at a family dinner, and he told his Mother, Laura Stack, the truth. He said, you were right. You told me that weed would hurt my brain, and it's ruined my mind and my life. He said, you were right all along. I'm sorry and I love you. Three days later, Johnny, during a psychotic episode caused by the very marijuana that he was addicted to and had been

prescribed as medicine, climbed to the roof of a six-story building, and he jumped to his death.

Now, you're going to hear from one of the physicians who saw this coming, Dr. Ken Finn. And Dr. Finn has practiced for more than three decades. He's board certified in pain medicine. He's the past President of the American Board of Pain Medicine, and he served as a member of the Colorado Governor's Task Force that weighed marijuana legalization. He's the chief editor of the first comprehensive peer-reviewed medical reference ever written on the subject, Cannabis and Medicine: An Evidence-Based Approach. In other words, he literally wrote the book.

He has spent his career at the bedside of the very patients that this drug is marketed to. He knows the evidence and he knows the harm. Dr. Finn is going to testify that he lived through the opioid epidemic, and he believes that we're on the onset of another one. This one, a little bit harder to see because it's not measured by the unmistakable marker of overdose deaths, but silently through the suffering of those who have been rendered mentally ill.

Now, Dr. Finn believes what this Court

must ultimately do is make this a medical and scientific question. Hold to that standard, and Dr. Finn is going to tell you that the answer is not even close. His testimony will establish two things. First, marijuana has no accepted medical use. Second, it has a high potential for abuse and no accepted safety level. As to the second point, Dr. Finn will put in front of you the exact harm that the FDA avoided considering, which is what this drug does to the human mind.

Now let's start with the medical use. Marijuana has never been taken up into the ordinary practice of American medicine. The overwhelming majority of physicians in this country do not recommend it, least of all for pain, which is the field that Dr. Finn has worked in for 30 years. The numbers are stark. In New York and Florida, a little over 3 percent of physicians take part in the medical program. In Colorado, under 2 percent. In Colorado, 3 physicians, 3 out of more than 17,000 licensed state physicians, wrote a quarter of all marijuana recommendations in a single year. In Florida, 88 percent of certifications came from one-fifth of participating doctors, who, again,

made up a little over one-third of all licensed physicians in the state. In Oregon, 9 doctors approved more than half the patients in the entire program in the year. And Dr. Finn will tell you that the literature already has a name for this type of prescribing pattern. It's the profile of a pill mill.

In addition, Dr. Finn will tell you that when a doctor recommends or certifies marijuana, it carries none of the hallmarks of real medicine such as dose, frequency, route, or strength. Dispensary products swing wildly from very little THC to concentrates north of 90 percent and from products with very few chemical components to products with hundreds, and this is where the government's case breaks down. Dr. Finn is going to testify that the reviews the FDA leaned on never studied the actual products on the shelves. The studies predominantly considered low-potency preparations, sprays, and purified pharmaceutical cannabinoids. It's the equivalent of saying drinking a handle of Wild Turkey may have a medical application because there are some inconclusive and highly contested studies that a glass of red wine is good for your heart. On

pain, Dr. Finn will testify that HHS is out of step with far more rigorous science and out of step with the medical organizations that treat the disease. The highest quality reviews land on low, very low, or insufficient evidence across the board. He will testify that not a single medical organization dealing with pain, including the International Association of Pain Medicine, the American Academy of Pain Medicine, the American Chronic Pain Association, endorses dispensary marijuana, and neither do credible medical organizations dealing with pain. He will note that when every authority outside of D.C. that treats this illness does not recommend it, that's not a currently accepted medical use. It's a currently rejected one and exposes the HHS recommendation and how they got there for what it actually is.

Now, if the first half of Dr. Finn's testimony's about what marijuana cannot do, the second half is about what it does do, and here the harm is grave, documented, and growing. He starts with addiction. Recent NIDA and CDC estimates put cannabis use disorder at up to 30 percent of users, rates that meet or beat alcohol

and opioids. And Dr. Finn will reframe what addiction even means in this context because the government gets it wrong. The threat is not through withdrawal that's rough, or calls to poison control, or overdose counts. The threat is that the steady use—more and more, and higher and higher potency—leads to disease, most starkly in the form of psychosis.

A 2023 nationwide study of nearly 6.9 million people, built on five decades of records, found a strong link between cannabis use disorder and schizophrenia and estimated that as many as 30 percent of the schizophrenia cases in young men may have been prevented but for cannabis use. Let me say that again. Nearly one-third of the cases of this devastating disease that immiserates the afflicted and everyone around them could have been prevented but for marijuana use. Study after study says the same, with frequency of use and, above all, potency driving the risk.

Dr. Finn wants this Court to understand that at some point the science must stop being abstract and understand that findings and judgments, they have consequences, and that's why

he's offering Laura Stack. She's going to tell you the story of her son, Johnny, which I mentioned, how he began using marijuana in Colorado after it was legalized, how he became addicted, how he became psychotic, how he was hospitalized time and time again, how a psychiatrist told him that all he needs to do is to switch strains, and how he ultimately killed himself, how he's gone now, forever. And she's going to tell you what it's like for a mother to have to live with that fact and she's not going to testify alone.

Through the sworn affidavits of more than 80 other parents, her testimony will establish that Johnny was no outlier: mothers and fathers who watched healthy, gifted kids come across, mind and soul, the same way from the same cause, often tragically to the same end. Dr. Finn will tell you that rescheduling marijuana, even though it will remain scheduled, is in fact a big deal. As stated by Dr. Rossheim, professor at the University of Texas, in one of the supporting affidavits to Dr. Finn's testimony, rescheduling ratifies the industry's central sales pitch that this is medicine when the very

best the science can show is that perhaps some of the compounds might be medicine for a select few conditions, and it stamps that pitch with the seal of the United States government, and that means something.

In closing, Dr. Finn will establish that recreational marijuana as medicine is a lie, or at best unproven. Dr. Finn will ask that a judgment this grave, a judgment this deadly serious, must not be made on evidence the government itself calls mixed and inconclusive because the truth remains the truth, uncertainty and risk remain uncertainty and risk, and the burden remains the burden. The only question left for Your Honor is: Who is going to bear these things, the government and the industry or the Laura Stacks of the world? Thank you, Judge.

JUDGE JULIUS: Thank you, Mr. Kenneally. All right. Before we adjourn today, Mr. Harrington, did you have an issue you wanted to raise to the Court's attention?

MR. HARRINGTON: Yes, Your Honor. I'm not sure if this is even a procedural question, but next week I'm presenting Dr. D'Souza by BTC as an expert, and I've noticed that all of the

experts who have testified, you have asked them about the federal definition of cannabis. Just to make sure that the presentation's helpful and clear and doesn't leave lingering questions, is there anything I can do to accommodate that question?

JUDGE JULIUS: Nothing in particular. I just want to make sure that we -- because I asked that question of one of the first experts, I just want to be consistent in making sure that when we get an opinion with regard to marijuana, what definition we're using. Just want to make sure. People tend to speak a little loosely sometimes about medical marijuana or recreational marijuana. Just because what I'm interested primarily in is the CSA definition, I just want to make sure that we're all talking about the same concept.

MR. HARRINGTON: Thank you, Your Honor.

JUDGE JULIUS: Any other matters before we adjourn today?

MR. LONICH: Nothing from the government, Your Honor.

JUDGE JULIUS: All right. We will be adjourned until 9:30 tomorrow. We'll do a little

bit delayed start because we are so far ahead. Thank you, everyone. Have a good evening, and we'll be adjourned until 9:30.

(Whereupon, the above-entitled matter went off the record at 2:22 p.m.)

C E R T I F I C A T E

This is to certify that the foregoing transcript was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate record of the proceedings; and that I am neither counsel for, related to, nor employed by any of the parties to this action in which this matter was taken; and further that I am not a relative nor an employee of any of the parties nor counsel employed by the parties, and I am not financially or otherwise interested in the outcome of the action.

James Cordes