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THE SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF YOLO

DEPARTMENT 8

HON. DANIEL M. WOLK, JUDGE

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THE PEOPLE OF THE STATE OF CALIFORNIA,)

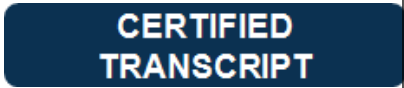
Plaintiff,)

-vs-

BRYCE OLIVER BOYD,

Defendant.)

) Yolo County No.
) CR2021-2549



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REPORTER'S TRANSCRIPT OF JURY TRIAL

(TESTIMONY OF JOHN PAUL LOPEZ)

WEDNESDAY, JULY 12, 2023

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A P P E A R A N C E S

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For the Defendant:

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Reported by:

GAYNELL JAMES, CSR NO. 12569

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FOR THE PEOPLE	DESCRIPTION	ID	EV
	(None were presented.)		

FOR THE DEFENSE	DESCRIPTION	ID	EV
	(None were presented.)		

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1 WEDNESDAY, JULY 12, 2023

2 (MORNING SESSION)

3 ---o0o---

4 The above-entitled matter came on regularly this day for
5 JURY TRIAL, before the Honorable DANIEL M. WOLK Judge of the
6 Superior Court of California, County of Yolo.

7 The PEOPLE OF THE STATE OF CALIFORNIA versus BRYCE
8 OLIVER BOYD.

9 The Plaintiff, The PEOPLE OF THE STATE OF CALIFORNIA,
10 was represented by ALOYSIUS PATCHEN, Deputy District Attorney.

11 The Defendant, BRYCE OLIVER BOYD, was present and
12 represented by BENJAMIN C. SCARFE, Attorney at Law.

13 GAYNELL JAMES, CSR, Shorthand Reporter, was present and
14 acting.

15 The following proceedings were then had and taken, to
16 wit:

17 P R O C E E D I N G S

18 THE COURT: Okay. Back on the record in People vs.
19 Boyd.

20 I have the jury -- all members of the jury are present.
21 The attorneys are present. The defendant is present.

22 Good to see everyone. Hope everyone had a nice evening
23 and are ready to go today.

24 And with that, Mr. Patchen, call your next witness.

25 MR. PATCHEN: Thank you, your Honor.

26 The People call John Lopez from the California
27 Department of Justice to the stand.

28 THE BAILIFF: Stand here and face Mr. Clerk and raise

1 your right hand, please.

2 THE CLERK: Do you solemnly swear the testimony you are
3 about to give in the cause now pending before this Court shall
4 be the truth, the whole truth, and nothing but the truth?

5 THE WITNESS: I do.

6 THE CLERK: Please have a seat.

7 And if you could please state and spell out your first
8 and last name and spell them both.

9 THE WITNESS: John Paul Lopez. J-O-H-N, P-A-U-L,
10 L-O-P-E-Z.

11 THE COURT: Thank you, Mr. Lopez. It was nice to meet
12 you. I'm Judge Wolk.

13 THE WITNESS: Good morning.

14 THE COURT: Mr. Patchen, your witness.

15 MR. PATCHEN: Thank you, your Honor.

16 JOHN LOPEZ,
17 having been called as a witness by the People, and having been
18 duly sworn to tell the truth, was examined and testified as
19 follows:

20 DIRECT EXAMINATION

21 BY MR. PATCHEN:

22 **Q. Good morning, Mr. Lopez.**

23 **A. Good morning.**

24 **Q. What's your occupation?**

25 **A. I work for the Department of Justice as a senior**
26 **criminalist.**

27 **Q. And what sort of experience and -- pardon me -- what**
28 **sort of training did you undergo in order to become a senior**

1 **criminalist?**

2 A. Well, my training includes, I graduated from the
3 University of California in Davis with a Bachelor of Science
4 in cell biology in 2000. I have a total of about 20 years
5 experience in the forensics field. I've worked for the DOJ
6 for the last 15 years now. Prior to that, I worked eight
7 years at a private forensics lab. My training includes
8 in-house training with the Department of Justice. That
9 includes required reading of proficiency tests. I also have
10 classroom training with CCI, California Criminalistics
11 Institute, on various topics of toxicology, pharmacology.
12 I've also attended both portions of the alcohol and drug
13 portions of the Borkenstein course in Indiana University.

14 (Court reporter interruption.)

15 Borkenstein, B-O-R-K-E-N-S-T-E-I-N course in Indiana
16 University, the effects of drugs and alcohol on human
17 performance.

18 I've also attended a DRE school, or the Drug Recognition
19 Expert school, at the CHP Academy in West Sacramento. With
20 them, we are able to visit the DRE certification sites where
21 we are able to physically witness people under the influence
22 of various drugs and their performance on field sobriety
23 tests. And I've also attended numerous seminars, workshops
24 with CAT, which is the California Association of
25 Toxicologists.

26 **Q. And when you say you had the opportunity to observe**
27 **people under the influence of drugs at a DRE class, what do**
28 **you mean?**

1 A. Well, with these DRE certification sites, they're the
2 newly-trained DRE officers, and their purpose of the DRE
3 certification sites is to perform the field sobriety tests on
4 different people under the influence of various drugs. And
5 we're actually there observing the officers actually
6 physically witnessing people under the influence.

7 **Q. So you don't just have lab experience then?**

8 A. That's correct, yes.

9 **Q. And what exactly does a forensic -- does a criminalist**
10 **do?**

11 A. The criminalist does different types of work. There's
12 the firearms, there's DNA. But my expertise is toxicology,
13 and toxicology is the analysis of blood and urine samples for
14 the presence of drugs.

15 **Q. And what's the difference between a criminalist and a**
16 **senior criminalist?**

17 A. The senior criminalist just has more years of
18 experience, but their duties are the same.

19 **Q. And you're a senior criminalist?**

20 A. That's correct, yes.

21 **Q. And how many trials have you testified at?**

22 A. Throughout the 23 years' experience, it's about
23 approximately 110 times.

24 **Q. And how many of those trials have you testified as an**
25 **expert in?**

26 A. Oh, it would be the 110 times.

27 MR. PATCHEN: Your Honor, I'd like to offer Mr. Lopez's
28 testimony as an expert in this matter.

1 THE COURT: Mr. Scarfe?

2 MR. SCARFE: Yes?

3 THE COURT: Voir dire on that?

4 MR. SCARFE: Yes.

5 VOIR DIRE EXAMINATION

6 BY MR. SCARFE:

7 Q. So, Mr. Lopez, I would like to talk to you about your
8 formal education, not weekend seminars that you attended, but
9 actual formal education where we require -- where we require
10 of science professionals, like a veterinarian or dentist,
11 where you went to a class, you had a textbook, you had a
12 professor, and you passed exams. You got a transcript. You
13 have transcripts of those classes that you took.

14 So it's true that you have no -- you have no formal
15 education in pharmacology?

16 A. That is correct. I have a BS in cell biology. The
17 pharmacology was part of the science courses, but it's not a
18 disciplined (sic). It was specific.

19 Q. And so the jury understands, pharmacology is defined as
20 the effect of drugs on the human body?

21 A. That is correct, yes.

22 Q. Okay. So your biology courses, your cell biology
23 courses, they touched on pharmacology; fair to say?

24 A. Yes. That is correct.

25 Q. Okay. It's true that physical education touches on
26 bones and movement, but that doesn't make you an orthopedic
27 surgeon?

28 MR. PATCHEN: Objection; relevance.

1 THE COURT: Sustained.

2 BY MR. SCARFE:

3 Q. You're here to talk about something that your education
4 touches, right?

5 A. Yes, and also my experience as well.

6 Q. Okay. It's true that in your college transcripts,
7 nowhere does the term pharmacology appear in the title of the
8 class that you took --

9 MR. PATCHEN: Objection; speculation.

10 BY MR. SCARFE:

11 Q. -- when you went to UC Davis?

12 THE COURT: Do you know the answer?

13 THE WITNESS: I do know the answer.

14 THE COURT: Then you may answer.

15 THE WITNESS: That is correct, yes.

16 MR. SCARFE: I'm going to re-ask it.

17 MR. PATCHEN: Objection; asked and answered.

18 THE COURT: Sustained. Yes, asked and answered.

19 BY MR. SCARFE:

20 Q. So the term pharmacology doesn't appear in your college
21 transcripts?

22 MR. PATCHEN: Objection; relevance.

23 THE COURT: Sustained; asked and answered.

24 BY MR. SCARFE:

25 Q. You've never attended a pharmacy school?

26 MR. PATCHEN: Objection; relevance.

27 THE COURT: Sustained.

28

1 Mr. Scarfe, let's keep the voir dire on whether he's an
2 expert.

3 BY MR. SCARFE:

4 **Q. Do you own any pharmacology textbooks?**

5 A. That, I don't recall.

6 **Q. Okay. Can you name a single pharmacology textbook that**
7 **you've read?**

8 MR. PATCHEN: Objection; relevance.

9 THE COURT: Sustained; and also asked and answered, 352.

10 BY MR. SCARFE:

11 **Q. Now, you indicated that your expertise is in -- your**
12 **expertise is in toxicology?**

13 A. That's correct, yes.

14 **Q. Okay. Cell biology is not toxicology, true?**

15 A. That is correct, yes.

16 **Q. Okay. Did you mention you went to UC Davis,**
17 **undergraduate?**

18 A. Correct, yes.

19 **Q. And you had a bachelor's from that program?**

20 A. That is correct, yes.

21 **Q. Okay. And which of the classes that you took -- was**
22 **there a forensic toxicology department there?**

23 A. There is, yes.

24 **Q. For the undergraduate work that you took?**

25 A. I believe not for the undergraduate. I think it's for
26 the upper class.

27 **Q. And you never took those classes?**

28 A. That is correct, yes.

1 Q. Okay. Have you ever attended a school in ophthalmology?

2 MR. PATCHEN: Objection; relevance. Mr. Lopez has not
3 testified as to anything regarding ophthalmology.

4 THE COURT: Overruled.

5 You can answer that.

6 THE WITNESS: I have not.

7 BY MR. SCARFE:

8 Q. Okay. So I just want to talk a little bit about your
9 curriculum vitae.

10 So you indicated that you attended the Borkenstein
11 Institute?

12 A. The Borkenstein course, yes.

13 Q. And that's -- I'm sorry, is it an institute? I thought
14 it was an institute according to the CV. Did I describe that
15 incorrectly?

16 A. I believe it's just called the Borkenstein course.

17 Q. Okay. So that's a five-day course?

18 A. Correct.

19 Q. Okay. And that course, you said, is in Indiana?

20 A. Yes. Both times I took it in Indiana, and there was, I
21 think, another one that I took in Sacramento.

22 Q. Then the conference in Indiana that you mentioned
23 earlier, you mentioned Indiana University, right?

24 A. Correct.

25 Q. And the course rents space from Indiana University?

26 A. I'm sorry, can you repeat the question?

27 Q. Yes. The course rents space from Indiana University?

28 A. That, I don't know.

1 Q. Okay. You were never admitted to Indiana University?

2 A. No, I was not.

3 Q. Okay. At the conclusion of this course, it's true that
4 you did not have to take any exams to prove what you learned?

5 A. That's correct. There is no final exam.

6 Q. And you did not get a transcript from attending this
7 course?

8 MR. PATCHEN: Objection; it's irrelevant, the
9 transcript.

10 THE COURT: Sustained.

11 BY MR. SCARFE:

12 Q. You received no academic credit?

13 MR. PATCHEN: Objection; relevance.

14 MR. SCARFE: Can I finish my question before he objects?

15 BY MR. SCARFE:

16 Q. You received no academic credit from attending this
17 course?

18 MR. PATCHEN: Objection; relevance.

19 THE COURT: Sustained.

20 BY MR. SCARFE:

21 Q. I just want to talk a little bit about your lab
22 training. You mentioned that you do all of your work in the
23 lab, right?

24 A. Most of the time it's in the lab, yes.

25 Q. Okay. So you've studied metabolites?

26 A. Yes, we do.

27 Q. Okay. You've never administered drugs to anyone?

28 A. That is correct, yes.

1 Q. You've never administered drugs to lab rats?

2 A. I have not.

3 Q. Okay. Some of your lab training, you have to have
4 master's degrees?

5 MR. PATCHEN: Objection; relevance.

6 THE COURT: Sustained.

7 BY MR. SCARFE:

8 Q. You mentioned that you passed a test?

9 MR. PATCHEN: Objection; unintelligible.

10 THE COURT: Sustained.

11 BY MR. SCARFE:

12 Q. You said you had a proficiency test?

13 A. Yes. That was with the in-house DOJ training. There's
14 a required meeting and proficiency test that we have to pass.

15 Q. And that test was about passing lab procedures, true?

16 A. It included lab procedure as well as knowledge of drugs
17 itself.

18 Q. Okay. You received no certificate for passing the test?

19 MR. PATCHEN: Objection; relevance.

20 THE COURT: Sustained.

21 Mr. Scarfe, that's 352.

22 BY MR. SCARFE:

23 Q. And you indicated before that you're familiar with --

24 THE COURT: I just want to make clear, Mr. Scarfe, that
25 was a 352 determination as well.

26 MR. SCARFE: Okay.

27 BY MR. SCARFE:

28 Q. You indicated before that you're familiar with people

1 being under the influence as part of your drug recognition
2 evaluation seminars that you've attended?

3 A. Yes. It's for the DRE school.

4 Q. And that's where you observed wet labs?

5 MR. PATCHEN: Objection; misstates facts.

6 THE COURT: Sustained.

7 You don't have to answer that.

8 BY MR. SCARFE:

9 Q. Have you attended a wet lab?

10 A. I have, yes.

11 Q. And it's true that a wet lab is where people are given
12 alcohol to a certain level?

13 A. That is correct, yes.

14 Q. And then they perform field sobriety tests?

15 A. That's correct.

16 Q. It's true that you don't do the same thing for drugs?

17 A. That is correct.

18 Q. So the subjects, they're not administered drugs and then
19 evaluated by the DRE process?

20 MR. PATCHEN: Objection; misstates facts.

21 THE COURT: Sustained.

22 We need to keep this as to qualifications, Mr. Scarfe.
23 Please direct as to whether he's an expert or not. I don't
24 want an argument on that. Just continue if you have any
25 further questions on whether he's an expert or not.

26 BY MR. SCARFE:

27 Q. So you test the blood, right?

28 A. I did, yes.

1 **Q. And the blood tells you the presence of drugs in the**
2 **system at the time of the arrest?**

3 A. Well, at the time of the blood draw. The blood draw
4 could be hours later.

5 MR. PATCHEN: I'm going to object under 352. This is
6 cross.

7 THE COURT: Sustained.

8 Mr. Scarfe, you're welcomed to ask these questions on
9 cross as to his substance of his testimony. We need to focus
10 on whether he's qualified as an expert now.

11 MR. SCARFE: Okay.

12 THE COURT: Do you have anymore questions on --

13 BY MR. SCARFE:

14 **Q. You're an expert in toxicology and pharmacology, right?**

15 THE COURT: Not an expert, period.

16 MR. SCARFE: Well, if it's pharmacology, then I still
17 have more questions that will need to be answered.

18 So have the People proffered him as an expert in
19 pharmacology and toxicology?

20 THE COURT: Mr. Patchen, you want to answer that?

21 MR. PATCHEN: He's been proffered as an expert with
22 regards to this matter.

23 MR. SCARFE: That's not going to answer it. It's a
24 nonanswer.

25 THE COURT: That's an answer.

26 BY MR. SCARFE:

27 **Q. So testing the blood doesn't teach you the effects of**
28 **the drugs --**

1 MR. PATCHEN: Objection; 352.

2 MR. SCARFE: Can I finish my question?

3 THE COURT: Sustained.

4 Why don't you approach.

5 (Off the record sidebar discussion.)

6 (Back on the record.)

7 THE COURT: Okay. Mr. Scarfe, anymore questions as to
8 whether the witness is qualified to testify as an expert?

9 MR. SCARFE: An expert in toxicology and pharmacology?

10 THE COURT: An expert in this case.

11 MR. SCARFE: No.

12 THE COURT: Specific as to whether someone's under the
13 influence.

14 MR. SCARFE: Under the influence. So would that include
15 impairment?

16 THE COURT: Are you asking me?

17 MR. SCARFE: Yeah.

18 THE COURT: It's whether he's an expert in this case in
19 rendering an opinion as to whether someone's under the
20 influence.

21 Mr. Patchen, is that what you're offering him for?

22 MR. PATCHEN: That's correct.

23 THE COURT: Are you objecting to him as an expert,
24 Mr. Scarfe, is my bottom line question to you.

25 MR. SCARFE: No.

26 THE COURT: Then I'm going to make a determination that
27 Mr. Patchen is going to continue, but I want to hear some
28 argument from Mr. Patchen.

1 MR. SCARFE: Yeah. That's fine.

2 Well, your Honor, I do believe -- I do have a relevant
3 question regarding impairment of whether he's an expertise in
4 impairment.

5 BY MR. SCARFE:

6 **Q. Do you know what system of the body is associated with**
7 **impairment?**

8 A. It will be a central nervous system.

9 **Q. Okay. It's not the neurological system?**

10 A. It's kind of all tied in together.

11 **Q. But it is -- more specifically, it's the neurological**
12 **system?**

13 MR. PATCHEN: Objection; asked and answered.

14 THE COURT: Sustained.

15 Mr. Patchen, do you want him qualified as an expert?

16 MR. PATCHEN: Yes, please, your Honor.

17 MR. SCARFE: Can we get the specific expertise, your
18 Honor?

19 THE COURT: Mr. Scarfe does not appear to be objecting.

20 MR. SCARFE: I would object.

21 THE COURT: You are objecting, okay.

22 Mr. Scarfe is objecting; nonetheless, the Court is
23 making a -- ladies and gentlemen of the jury, the Court is
24 making the determination that Mr. Lopez is qualified as an
25 expert to render an opinion in this matter, namely, whether
26 someone's under the influence. Okay. And that is a
27 determination by this Court. Okay. And that you do have to
28 take as a determination.

1 Now, I will be reading you an instruction later before
2 you deliberate regarding this, but I'm going to tell you
3 something -- I'm going to read from that now so you understand
4 how to analyze his testimony.

5 So he's being allowed to testify as an expert, and he's
6 being allowed to give an opinion or opinions. You must
7 consider the opinions, but you are not required to accept them
8 as true or correct. The meaning and importance of any opinion
9 are for you to decide. In evaluating the believability of an
10 expert witness, follow the instructions about the
11 believability of witnesses generally. In addition, consider
12 the expert's knowledge, skill, experience, training and
13 education, the reasons the expert gave for any opinion, and
14 the facts or information on which the expert relied in
15 reaching that opinion.

16 You must decide whether information on which the expert
17 relied was true and accurate. You may disregard anything that
18 you find unbelievable, unreasonable, or unsupported by the
19 evidence.

20 An expert witness may be asked a hypothetical question.
21 A hypothetical question asks the witness to assume certain
22 facts are true and to give an opinion based on the assumed
23 facts. It is up to you decide whether an assumed fact has
24 been proved. If you conclude that an assumed fact is not
25 true, consider the fact of the expert's reliance on that fact
26 in evaluating the expert's opinion.

27 Okay. Mr. Patchen?

28 MR. PATCHEN: Thank you, your Honor.

1 DIRECT EXAMINATION (RESUMED)

2 BY MR. PATCHEN:

3 **Q. Now, Mr. Lopez, after you graduated from UC Davis, did**
4 **you also attend a number of seminars and trainings?**

5 A. I did, yes, with the CAT, the California Associates of
6 Toxicologists.

7 MR. SCARFE: I'm going to object as asked and answered.

8 THE COURT: Overruled.

9 BY MR. PATCHEN:

10 **Q. And what sort of topics are covered at those trainings**
11 **and seminars?**

12 A. They're usually --

13 MR. SCARFE: Again, the same objection, we've covered
14 his qualifications. It's irrelevant at this point, and asked
15 and answered, a waste of court time.

16 THE COURT: Overruled.

17 THE WITNESS: Usually to cover drugs and how it affects
18 people. But they also cover new emerging drugs. They also
19 cover procedures to testing drugs. So everything about
20 toxicology, they would talk about.

21 BY MR. PATCHEN:

22 **Q. And did you learn things at those seminars?**

23 MR. SCARFE: I'm going to object, your Honor. He's
24 already been accepted as an expert. Why are we re-covering
25 his background?

26 THE COURT: Overruled.

27 Please continue, Mr. Patchen.

28 THE WITNESS: I believe we did, yes.

1 BY MR. PATCHEN:

2 **Q. I want to talk a little bit about lab procedure. How**
3 **exactly are samples received by your lab?**

4 A. Typically, it is sent from a regional lab that the --
5 that also did the alcohol analysis prior to our drug analysis,
6 or it could be sent directly to us from an agency.

7 **Q. And what happens to those samples after you receive**
8 **them?**

9 A. For all of the samples that come into the DOJ
10 laboratory, first they are screened presumptively for 6 to 12
11 classes of drugs, and that will give us a presumptive result
12 whether a sample is positive for a certain drug. After that,
13 it is then sent to confirmation where we do a confirmation
14 analysis on the blood sample using a separate test.

15 **Q. And why do you do the confirmation test?**

16 A. Because the presumptive test just screens for the class
17 of drugs. So you could have presumptive positive, presumptive
18 negatives, but the confirmation is a separate test where we're
19 actually going to identify what that specific drug is.

20 **Q. And does the confirmation test tell you quantity as**
21 **well?**

22 A. It can, yes.

23 **Q. And how do you test this blood samples -- these blood**
24 **samples?**

25 A. We use -- we test the blood using the instrument that we
26 call the LC-MS/MS, which is the Liquid Chromatography with
27 tandem mass spectrometry.

28 **Q. And what does that mean exactly?**

1 A. It just -- it's just an instrument that we use to
2 analyze the blood. So it's just for short, LC-MS/MS.

3 **Q. And did your laboratory receive a sample with Mr. Boyd's**
4 **name in this case?**

5 A. We did, yes.

6 **Q. And can you explain -- pardon me. Actually, I've got in**
7 **my hand People's Exhibit No. 4 that was previously discovered**
8 **over to defense counsel.**

9 **Do you recognize this exhibit?**

10 A. I do. It's the confirmation report that I prepared for
11 this case.

12 **Q. And who prepared that report?**

13 A. It was myself.

14 **Q. And I'm going to leave that with you for a second there.**
15 **What are the findings of this report?**

16 A. With the report, I found that it was contained to have
17 diazepam at 77 nanograms per mil. It also had nordiazepam at
18 15 nanograms per millimeter. And it was positive for
19 temazepam as well.

20 **Q. And did those findings accurately represent what you**
21 **found in the defendant's blood sample?**

22 A. It does, yes.

23 MR. SCARFE: I would object to the last answer as motion
24 to strike.

25 May we approach?

26 THE COURT: You want to approach, you said?

27 MR. SCARFE: Yes.

28 THE COURT: Okay.

1 (Off-the-record sidebar discussion.)

2 (Back on the record.)

3 THE COURT: Overruled.

4 Mr. Patchen, your next question.

5 MR. PATCHEN: Thank you.

6 BY MR. PATCHEN:

7 **Q. So what -- what is diazepam?**

8 A. Diazepam is also known as Valium. That is the trade
9 name.

10 **Q. And what effects can diazepam have on someone who takes**
11 **them?**

12 A. Well, diazepam is a CNS depressant drug. So typically
13 when a person takes a CNS depressant drug, some of the signs
14 and symptoms that you will see is when a light is shined on
15 the eyes, there's a slow reaction. Your pulse will be down.
16 Your blood pressure will be down. Also, when they examine the
17 eyes, you could have HGN, which is horizontal gaze nystagmus.
18 And they could also have VGN, which is vertical gaze
19 nystagmus. Or they could also have lack of convergence.
20 Typically, when people take a CNS depressant, you could have
21 slurred speech, droopy eyelids. They're more relaxed,
22 sometimes sleepy, lethargic. With that, they could be
23 unbalanced, uncoordinated, which would lead to the slower
24 reaction time. So those are the signs and symptoms that we
25 typically see with CNS depressants.

26 **Q. And you also mentioned nordiazepam. What's nordiazepam?**

27 A. Nordiazepam is typically found as a metabolite of the
28 diazepam itself.

1 **Q. What's a metabolite?**

2 A. So a metabolite is just a breakdown product of the
3 diazepam. So when a person takes a diazepam, or Valium, the
4 body will break down the diazepam into nordiazepam and other
5 metabolites.

6 **Q. And you also mentioned, is it temazepam?**

7 A. Temazepam, yes.

8 **Q. And what is that?**

9 A. That is also a metabolite of diazepam. But temazepam
10 can also be taken by itself as a separate drug.

11 **Q. And what does it mean that all three of those chemicals
12 are on that report?**

13 A. It just means that we found diazepam, which is a parent
14 drug, and we found its metabolites as well.

15 **Q. And when you say it's a metabolite, how long does it
16 take for diazepam to break down into, I guess we'll start with
17 nordiazepam?**

18 A. Usually it takes -- as soon as you take the drug, the
19 body is actively trying to break it down, but you won't see
20 the metabolites in the bloodstream for about maybe 30 minutes
21 afterwards.

22 **Q. And what about that temazepam; is that something that
23 also breaks down fairly quickly?**

24 A. That is correct, yes.

25 **Q. And can we tell how recently someone's taken diazepam
26 from these results?**

27 A. No. With the drug results by itself, we can't determine
28 how much they took or when they took.

1 Q. So what do you use in order to determine whether
2 somebody's under the influence of these drugs, aside from the
3 blood tests?

4 A. What we also use to determine if a person's under the
5 influence is we also look at a driving pattern. We're also
6 going to look at a --

7 MR. SCARFE: Your Honor, may we approach real quick?

8 THE COURT: Sure.

9 (Off-the-record sidebar discussion.)

10 THE COURT: Overruled.

11 Back on the record.

12 THE COURT: Mr. Patchen, your next question.

13 MR. PATCHEN: Thank you.

14 BY MR. PATCHEN:

15 Q. So will every person who takes diazepam display the same
16 signs and symptoms?

17 A. No, they won't. There's a whole list of signs and
18 symptoms of CNS depressants that we should see, but in real
19 life, not everyone will display all the symptoms.

20 Q. And if those signs and symptoms are present, even if
21 it's not all of them, can we say somebody's under the
22 influence of diazepam?

23 A. We can, yes.

24 Q. And would that just be a part of calculus in determining
25 whether or not somebody's under the influence?

26 A. That's correct.

27 Q. And I want to talk about how diazepam can affect
28 driving. How does a CNS depressant like diazepam affect

1 someone's ability to drive?

2 A. Well, when a person is taking CNS depressants, typically
3 they're tired, sleepy, lethargic, and they're going to have
4 slower reaction time. So when they're driving, it can affect
5 their driving, because it kind of stimulates a drunk-like
6 syndrome where they're slow to react. They're sleepy and
7 tired, so they could have varying speeds. They could be
8 weaving.

9 Q. And you mentioned it's a depressant and it can make you
10 tired. What happens if you take diazepam and you're already
11 tired?

12 A. Well, if you're already tired and you take a CNS
13 depressant, it's just going to make you more tired.

14 Q. Now, I've got a number of hypotheticals, and I was
15 wondering if you wouldn't mind sort of walking us through it.
16 I'm just going to ask, if I present you with a couple of
17 hypothetical situations, if you would be able to form an
18 opinion based off the information that I would give you?

19 A. Sure. Can I write this down?

20 Q. Absolutely, by all means. It's going to be a number of
21 questions. So you may need a large piece of paper.

22 A. Okay. Go ahead.

23 Q. Assuming somebody had 77 -- actually, before I even get
24 to that -- never mind.

25 Assuming somebody had 77 nanograms per milliliter of
26 diazepam in their blood system and they crashed into a parked
27 car, would that help you determine whether or not they were
28 under the influence?

1 A. It would, yes.

2 **Q. How so?**

3 A. Because it gives us a driving observation of whether
4 they could operate a vehicle properly, as well as kind of a
5 drug toxicology.

6 **Q. What if they had that same amount of diazepam and after
7 the crash, did nothing, just sat there?**

8 A. Can you elaborate more?

9 **Q. Sure. Like have no visible reaction to an actual
10 traffic collision.**

11 A. Well, it would be consistent with a CNS depressant where
12 they're kind of sleepy, lethargic, tired.

13 **Q. What if they had that amount of diazepam in their system
14 and couldn't be roused by repeated loud stimuli for about a
15 minute?**

16 A. That would be consistent with a CNS depressant.

17 **Q. What if they had that amount in their bloodstream and
18 couldn't identify their own California driver's license?**

19 MR. SCARFE: Objection; misstates the prior testimony.

20 THE COURT: Overruled.

21 You may answer.

22 THE WITNESS: That would be consistent with a CNS
23 depressant.

24 BY MR. PATCHEN:

25 **Q. What if they had had that amount and looked as if they
26 were beginning to fall asleep during the midst of a
27 conversation?**

28 A. That would be also consistent with a CNS depressant.

1 Q. What if they had that amount and couldn't remember being
2 in a traffic collision?

3 A. That would be also consistent with a CNS depressant.

4 Q. And what if they had that amount in their bloodstream
5 and couldn't identify the time?

6 A. That's also consistent with a CNS depressant.

7 Q. What if they had that amount and exhibited horizontal
8 gaze nystagmus?

9 A. That is consistent with a CNS depressant, having a
10 horizontal gaze nystagmus.

11 Q. And what if they had that amount and couldn't follow a
12 visual stimulus?

13 A. That is also consistent.

14 Q. And what if they had that amount and couldn't maintain
15 the starting position on a walk and turn test?

16 A. That is also consistent with a CNS depressant.

17 Q. And what if they had that amount and continuously lost
18 their balance during field sobriety tests?

19 A. That is also consistent with a CNS depressant, with the
20 unbalance, uncoordinated.

21 Q. And what if they had that amount and had gaps in their
22 steps during the walk and turn test?

23 A. That is also consistent.

24 Q. And what if they had that amount and didn't count out
25 loud during the walk and turn test despite being instructed to
26 do so?

27 A. That can be consistent with a CNS depressant as well.

28 Q. What if they had that amount, and rather than taking the

1 **9 steps in the test, took 15 steps?**

2 A. That is also consistent.

3 **Q. Would it change your opinion at all if I told you that**
4 **the officer said to turn 180 degrees at the end of the test**
5 **rather than taking a series of small steps?**

6 A. I don't think it would change my opinion, no.

7 **Q. What if I told you that somebody who had that amount in**
8 **their system didn't even get to the turn part of the walk and**
9 **turn?**

10 A. That can be consistent with a CNS depressant.

11 **Q. And what if they had that amount in their system and had**
12 **to repeatedly be reminded to count out loud during the walk**
13 **and turn test?**

14 A. That is also consistent.

15 **Q. And what if they estimated the modified Romberg at 18**
16 **seconds?**

17 A. That itself is not consistent with a CNS depressant.
18 Typically it's longer for depressants.

19 **Q. But what if I -- or would it change you opinion if I**
20 **told you that they decided to count to 20 when the officer**
21 **told them 30?**

22 MR. SCARFE: Objection; this calls for speculation.

23 THE COURT: Overruled.

24 You may answer.

25 THE WITNESS: Then it could be consistent with a CNS
26 depressant, as it's kind of a little bit slower -- or
27 actually, it's not consistent, because they're still faster in
28 their time.

1 BY MR. PATCHEN:

2 Q. And what about the -- what about if they had that amount
3 in their system and were unable to follow the instruction to
4 count to 30?

5 A. That is consistent with a CNS depressant.

6 Q. And what if they had that amount in their system and put
7 their foot down multiple times during the one leg stand?

8 A. That is consistent with a CNS depressant.

9 Q. What if they had that amount and couldn't even reach the
10 2 count on the one leg stand?

11 A. That is also consistent where they're unbalanced and
12 uncoordinated.

13 Q. What if they had that amount and randomly started doing
14 an entirely different task during the one leg stand?

15 A. That can be consistent, yes.

16 Q. What if I told you that they couldn't get past 3 when
17 using the other leg on the one leg stand?

18 A. That is also consistent.

19 Q. What if they had that amount and couldn't remember to
20 put their arm back down on the finger to nose test?

21 A. That is also consistent, yes.

22 Q. What if they started rubbing rather than just touching
23 their nose, when they had that amount in their system, despite
24 being instructed to just touch it?

25 A. It could be consistent that they're not following
26 instructions.

27 Q. What if somebody had that amount in their system and
28 they just missed their nose entirely?

1 A. That is consistent.

2 Q. Would it change your opinion if I told you that they had
3 that amount in their system and asked to use an entirely
4 different portion of their hands, despite being instructed to
5 use their index finger?

6 A. That could be consistent, yes.

7 Q. So what if you had every single one of those questions,
8 every single one of those little factors, and that amount of
9 diazepam in somebody's system, what would your opinion be as
10 to their level of intoxication?

11 A. In that hypothetical, my opinion would be that the
12 subject was under the influence and too impaired to drive a
13 motor vehicle. My opinion would be based on the driving
14 observation that there was a collision. It's also based on
15 the signs and symptoms observed that show that the subject was
16 under the influence. It's also based on the field sobriety
17 tests that showed impairment, mental impairment, where they
18 could not follow instructions or did not understand the
19 instructions, as well as physical impairment where they
20 physically could not perform the test as described, as well as
21 the toxicology report that showed the presence of drugs.

22 Q. Thank you.

23 MR. PATHCEN: No further questions.

24 THE COURT: Mr. Scarfe?

25 MR. SCARFE: Yes.

26 CROSS-EXAMINATION

27 BY MR. SCARFE:

28 Q. Good morning, Mr. Lopez.

1 A. Good morning.

2 Q. So I just want to go back to your wet lab training.
3 So a wet lab is where people are given alcohol to a
4 certain level and then they perform field sobriety tests?

5 A. That's correct, yes.

6 Q. And then, that is, they take their blood samples
7 throughout the tests?

8 A. They could take blood samples or they could also do the
9 breath test.

10 Q. Okay. It's true that you don't do the same thing for
11 drugs?

12 A. That is correct, yes.

13 Q. Okay. You know this is not an alcohol case?

14 A. Correct.

15 Q. Okay. Subjects are -- during the wet labs, subjects are
16 not administered drugs and then evaluated by the DRE process?

17 A. That is correct, yes.

18 Q. And when I say DRE, I'm talking about drug recognition
19 evaluation.

20 A. Correct.

21 Q. And you're aware that the drug recognition process is
22 only 40 percent accurate?

23 MR. PATCHEN: Objection; assumes facts not in evidence.

24 THE COURT: Overruled.

25 You can answer that.

26 THE WITNESS: I do not agree with that assessment.

27 BY MR. SCARFE:

28 Q. Okay. Did you bring any literature with you?

1 A. Well, the DRE program was embedded, because they saw how
2 useful the tool was for alcohol. So they thought how they
3 could use these same field sobriety tests for drugs. So in
4 1985, in the John Hopkins studies, they validated the DRE
5 program of the field sobriety tests. And in that study, they
6 were 91 percent able to accurately determine the drug class,
7 and it was repeated in 1994 in Arizona. And in that case,
8 they were able to repeat -- were able to accurately determine
9 the drug class 94 percent of the time.

10 **Q. And did you bring any of that literature with you?**

11 A. No, but it's the John Hopkins study of 1985, and they
12 were repeated in Arizona in 1994. And that's available
13 online.

14 **Q. So you didn't bring that with you?**

15 A. I did not, no.

16 **Q. So you test blood, right?**

17 A. I do, yes.

18 **Q. And it only tells you the presence in the system at the
19 time of the test?**

20 A. At the time of the blood draw, yes.

21 **Q. Right. And testing blood does not teach you
22 pharmacology?**

23 A. That's fair to say, yes.

24 **Q. And pharmacology is the effect of drugs on the human
25 body?**

26 A. That's correct, yes.

27 **Q. Okay. It's true that the -- you tested -- well, you
28 tested the blood in this matter?**

1 A. I did, yes.

2 **Q. And it's true that the person who tests the blood**
3 **is -- with respect to pharmacology, is the least qualified**
4 **person in the lab?**

5 MR. PATCHEN: Objection; it's an inappropriate question.

6 THE COURT: Overruled.

7 You may answer.

8 THE WITNESS: Well, with the drug result itself, like I
9 said earlier, we can't tell how much they took or when they
10 took, and we also can't determine whether a person is impaired
11 or under the influence solely based on the drug results.

12 BY MR. SCARFE:

13 **Q. So with respect to pharmacology, the person who tests**
14 **the blood is the least qualified person in the lab?**

15 MR. PATCHEN: Objection; argumentative.

16 THE COURT: Overruled.

17 You can answer that.

18 THE WITNESS: I don't think I understand the question.
19 If you could rephrase it, that would be great.

20 BY MR. SCARFE:

21 **Q. Regarding pharmacology and the effect that it has on the**
22 **human body, that is, the person who tests the blood, which is**
23 **what you did, is the least qualified person in the lab?**

24 MR. PATCHEN: Objection; unintelligible.

25 THE COURT: Do you understand the question?

26 THE WITNESS: I do not, no.

27 THE COURT: Okay.

28

1 BY MR. SCARFE:

2 Q. You don't have personal knowledge on -- well, I'm going
3 to rephrase.

4 The person who tests the blood, of everyone in the lab,
5 has the least knowledge regarding the effects of drugs on the
6 human body?

7 MR. PATCHEN: Objection; unintelligible. Why are they
8 testing the blood with the people in the lab?

9 THE COURT: Sounds like the same question.

10 Do you understand the question?

11 THE WITNESS: Not really, but --

12 THE COURT: Why don't you rephrase it, Mr. Scarfe.

13 BY MR. SCARFE:

14 Q. So you test blood?

15 A. I do, yes.

16 Q. And in the lab, the person that tests the blood is the
17 least qualified to give an opinion on the effects of
18 pharmacology -- the effects of drugs on the human body?

19 A. I do not agree with that statement, because whoever
20 tests the blood could be a different person. They could be
21 well-experienced or they could be a new person. It's a vague
22 question.

23 Q. Well, you're not the most -- there's people in the lab,
24 right? Do you have supervisors? There's people in the lab
25 that know about the effects of drugs on the human body than
26 you do, correct?

27 A. That's fair to say, yes.

28 Q. They're more qualified than you are?

1 THE COURT: I'm overruling the DA's objection, for the
2 record.

3 Keep going, Mr. Scarfe.

4 BY MR. SCARFE:

5 **Q. Can we get a read back on that? Sorry, I lost my train**
6 **of thought.**

7 THE COURT: On the question?

8 MR. SCARFE: Yeah.

9 MR. SCARFE: I'm sorry, is there more to the question?

10 THE COURT: Why don't you re-ask the question,
11 Mr. Scarfe.

12 BY MR. SCARFE:

13 **Q. Your supervisors are more qualified to talk about the**
14 **effects of human drugs on the body than you are?**

15 MR. PATCHEN: Objection; speculation.

16 THE COURT: Do you know? It would have to be within
17 your personal knowledge.

18 THE WITNESS: That is possible, yes, they can be.

19 BY MR. SCARFE:

20 **Q. They are, true?**

21 MR. PATCHEN: Objection; asked and answered.

22 THE COURT: Sustained.

23 You don't have to answer.

24 BY MR. SCARFE:

25 **Q. So I want to talk about different systems of the body**
26 **and how they are associated with, as you would phrase,**
27 **influence -- or under the influence. I'm just going to go**
28 **ahead and call it impairment. Okay?**

1 **I mean, if somebody takes a cup of coffee, they're**
2 **influenced by the coffee, right?**

3 A. That's correct.

4 **Q. But impairment is more than having under the influence,**
5 **right?**

6 A. That's correct.

7 **Q. Right. So which system of the body is associated with**
8 **impairment?**

9 MR. PATCHEN: Objection; asked and answered.

10 THE COURT: Sustained.

11 BY MR. SCARFE:

12 **Q. And you know it's neurological, right?**

13 MR. PATCHEN: Objection; asked and answered.

14 THE COURT: Sustained.

15 BY MR. SCARFE:

16 **Q. What is the basic functional unit of the neurological**
17 **system?**

18 A. The basic function is to operate the basic functions
19 from the brain --

20 **Q. Let me rephrase. What is the basic functional unit of**
21 **the neurological system?**

22 MR. PATCHEN: Objection; unintelligible.

23 THE COURT: Do you understand the question?

24 MR. SCARFE: Like measurement. We'll use measurement.

25 THE COURT: Sustained.

26 Maybe try to rephrase, Mr. Scarfe.

27 I see what you're getting at, Mr. Scarfe.

28

1 BY MR. SCARFE:

2 Q. Do you know the basic functional unit of the
3 neurological system?

4 A. The basic measurement unit, I do not know.

5 Q. And they're actually called -- they're called neurons,
6 right? You don't know?

7 A. There's neurons in the CNS, central nervous system, but
8 you were asking for measurement units.

9 Q. Okay. Do you have any formal education in
10 neurophysiology behind the tests?

11 MR. PATCHEN: Objection; relevance.

12 THE COURT: Sustained.

13 You don't have to answer.

14 BY MR. SCARFE:

15 Q. Can you tell us how drugs interact with the neurological
16 system to produce the effect?

17 MR. PATCHEN: Objection; vague.

18 THE COURT: Overruled.

19 I think you can answer that -- well, if you don't --
20 answer that if you can.

21 THE WITNESS: Sure. Well, basically for the CNS
22 depressants, or kind of more specifically, the
23 benzodiazepines, they kind of react with what we call the GABA
24 receptors. They kind of activate it and release units or
25 chloride ions, that kind of activate other systems in the
26 body, that kind of give the common effect or the sleepy,
27 lethargic. That's kind of the most simplest term.

28

38

1 BY MR. SCARFE:

2 Q. So, you indicated that you -- you are employed by the
3 Department of Justice?

4 A. I am, yes.

5 Q. And you would agree that it must be kept in line, that
6 there's limited scientific literature on impairment by drugs
7 other than alcohol?

8 MR. PATCHEN: Objection; misstates facts.

9 THE COURT: Sustained.

10 BY MR. SCARFE:

11 Q. Well, the Department of Justice has a position on drug
12 impairment other than alcohol?

13 MR. PATCHEN: Objection; vague.

14 THE COURT: If you know the answer.

15 THE WITNESS: I don't understand the question. Can
16 you --

17 BY MR. SCARFE:

18 Q. The Department of Justice puts out a publication
19 regarding drug impairment, correct?

20 A. I believe so, yes.

21 Q. And in this publication, they say, quote, "It must be
22 kept in mind that there is limited scientific literature on
23 impairment by drugs other than alcohol."

24 You agree with that?

25 A. I would have to re-read the whole literature to agree
26 with you or not.

27 Q. I have their position right here.

28 MR. SCARFE: May I approach the witness, your Honor?

1 THE COURT: Sure.

2 Mr. Patchen, have you seen this?

3 MR. PATCHEN: Nope.

4 THE COURT: Why don't you show him.

5 MR. SCARFE: (Complies.)

6 THE WITNESS: (Viewed document.)

7 BY MR. SCARFE:

8 **Q. So would you agree that it must be kept in mind that**
9 **there is limited scientific literature on impairment by drugs**
10 **other than alcohol?**

11 MR. PATCHEN: I'm going to object to this based off that
12 discovery that I was just handed. It looks like it's from
13 2001.

14 THE COURT: I'm going to overrule that.

15 MR. PATCHEN: It's 20 years old.

16 MR. SCARFE: Please answer the question.

17 THE COURT: The question is whether you agree with that
18 statement.

19 MR. SCARFE: Your Honor, if we can get a read back, too.

20 THE COURT: Overruled.

21 I think you understand the question.

22 THE WITNESS: Yes. It's an older publication, and I do
23 agree with it. It's just because there's a lot more studies
24 done with alcohol than there is for drugs, because there's a
25 lot of drugs out there as opposed to just alcohol, which is
26 just one.

27 BY MR. SCARFE:

28 **Q. So you would agree that it must be kept in line that**

1 there's limited scientific literature on impairment by drugs
2 other than alcohol?

3 A. I do agree, yes.

4 Q. And your own agency's policy is that there's limited
5 scientific literature on impairment by drugs?

6 MR. PATCHEN: Objection; misstates facts. That's from
7 2001.

8 THE COURT: Here's how I'm going to rule on that. I'm
9 going to conditionally sustain it.

10 The question -- and I want to be very clear -- is
11 whether you understand that that's the policy of the DOJ. If
12 you know the answer to that, you may answer.

13 THE WITNESS: If I know that that's the policy?

14 THE COURT: Yes.

15 THE WITNESS: I do not know that that's the current
16 policy.

17 BY MR. SCARFE:

18 Q. You do follow your agency's policy, correct?

19 A. I do, yes.

20 Q. And they're not some road science person, right?

21 A. That's correct, yes.

22 Q. And so it's true that your policy goes on to state,
23 quote, "Therefore, results will be interpreted as to how an
24 average individual would or could be theoretically affected by
25 a drug or drugs"?

26 A. I agree with that, yes.

27 Q. So you're here to testify about the average -- as to how
28 an average person could theoretically be affected by a drug?

1 A. Correct, yes.

2 Q. You're not here to talk about Mr. Boyd?

3 A. I am not, no.

4 Q. You're here to talk about how some theoretical average
5 person could theoretically be affected by a drug?

6 A. That's correct. My opinion is based on the
7 hypothetical.

8 Q. You're not here to testify that Mr. Boyd could
9 theoretically be affected by a drug?

10 A. I'm not sure if I understand the question.

11 Q. So it's true that your policy goes on to state, "No
12 attempt will be made by a toxicologist to interpret the effect
13 of a drug or drugs on an individual's thought process or
14 motivations, nor will there be any interpretation of the
15 possible effects of drugs on the intent of an individual"?

16 THE COURT: Objection; relevance. None of that's at
17 issue here.

18 THE COURT: Sustained.

19 You don't have to answer.

20 BY MR. SCARFE:

21 Q. Again, you have no opinion as to the effects of any drug
22 on Mr. Boyd on the date of the arrest?

23 MR. PATCHEN: Objection; misstates facts.

24 THE COURT: Sustained.

25 BY MR. SCARFE:

26 Q. Your policy -- the DOJ's policy is based on science,
27 right?

28 A. That's correct, yes.

1 Q. So your policy -- the DOJ's policy goes on to state,
2 quote, "Such testimony would be the responsibility of a
3 psychopharmacologist, a person who has a professional
4 background in both psychology and pharmacology"?

5 MR. PATCHEN: Objection; misstates facts.

6 THE COURT: Sustained.

7 MR. SCARFE: I'm cross-examining him on his department's
8 policy. He's deviating from the policy.

9 MR. PATCHEN: I was in the first grade when this was
10 published.

11 THE COURT: Sustained.

12 I'm just going to remind the jury of Jury Instruction
13 104 at this point. That the questions by the attorney are not
14 evidence, either attorney, only the witnesses' answers are
15 evidence. The attorney's questions are significant only if
16 they help you understand the witnesses' answers.

17 Do not assume that something is true just because one of
18 the attorneys asked a question that suggests it was true.

19 With that, please, Mr. Scarfe.

20 THE WITNESS: Your Honor, may I approach the witness
21 with his own department's policy?

22 THE COURT: Sure.

23 MR. PATCHEN: I'm going to object again just based off
24 the age of the policy. I just don't believe it's accurate.

25 THE WITNESS: (Viewed document.)

26 THE COURT: I'm going to overrule that objection.

27 BY MR. SCARFE:

28 Q. So would you agree with the policy that such testimony

1 would be the responsibility of a psychopharmacologist, a
2 person who has a professional background in both psychology
3 and pharmacology. If such testimony is needed, contact the
4 toxicology laboratory for a lists of potential experts?

5 A. I agree with that. What it's basically saying is as a
6 toxicologist or criminalist, based on the toxicology report,
7 you can determine whether someone's under the influence or
8 impaired based solely on the toxicology report. And also,
9 that bulletin, it refers to contempt of a crime. So their
10 intention, if it's a murder or some felony case, that's what
11 the bulletin is referring to.

12 BY MR. SCARFE:

13 Q. You're not a pharmacologist, true?

14 A. That is correct, yes.

15 Q. Scientifically, you should not be doing what you're
16 doing?

17 MR. PATCHEN: Objection.

18 THE COURT: Sustained.

19 You don't have to answer that.

20 BY MR. SCARFE:

21 Q. These are the policies of the DOJ and the Bureau of
22 Forensic Science, true?

23 A. That is correct, yes.

24 Q. Now, you've heard -- you're familiar with the
25 National Highway Traffic Safety Administration?

26 A. I am, yes.

27 Q. And you're also familiar that NHTSA used to say, that no
28 matter what was in the blood -- if any blood or alcohol -- if

1 any drugs or alcohol were in the blood, the crash risk was
2 higher?

3 A. Can you repeat the question, I'm sorry.

4 Q. In the past, NHTSA used to say, no matter what was in
5 the blood, if any drug or alcohol was in the blood, the crash
6 risk was way higher?

7 MR. PATCHEN: I'm going to object based off of
8 relevance, "used to say."

9 THE COURT: If you know the answer, you can answer.

10 THE WITNESS: I don't know what they used to say, sorry.

11 BY MR. SCARFE:

12 Q. Okay. Are you aware of a study by Compton & Burney?

13 A. You'd have to be more specific.

14 Q. They stratified the data that was accounted for, things
15 like people who get into a lot of accidents, such as young
16 males.

17 Are you familiar with the study?

18 A. I would have to read the article that you're referring
19 to.

20 Q. Okay. So currently, NHTSA's policy is, caution should
21 be exercised in assuming that drug's presence -- that drug
22 presence implies impairment -- that drug tests -- that's
23 NHTSA'S current policy, correct?

24 A. I don't know what their current policy is.

25 Q. You are familiar with their research, correct?

26 A. I'm familiar with who they are and some of their
27 research, yes.

28 MR. SCARFE: May I approach the witness, your Honor, and

1 have Defense F marked?

2 MR. PATCHEN: Again, I have not seen it and I'm
3 objecting, because it's former policy. It's from 2009.

4 THE COURT: What is it?

5 MR. SCARFE: It's a traffic safety -- it's a publication
6 regarding traffic safety facts.

7 THE COURT: Have you not seen this?

8 MR. PATCHEN: No.

9 THE COURT: We're going to take a break, ladies and
10 gentlemen. We're going to come back at 10:42, 15 minutes
11 exact, to continue with the testimony of Mr. Lopez. Okay.

12 I'll remind you of the admonition. Okay.

13 Have a nice break, everyone. Remember to come back.

14 (Whereupon, discussions were held outside the presence
15 of the jury.)

16 THE COURT: The jury are not present.

17 Both counsel are present.

18 The defendant is present still.

19 I just had a couple of things.

20 I did overrule an objection -- or number of objections
21 from the Defense regarding improper -- what I construed as
22 improper hypotheticals. I think speculation was in there as
23 well. I overruled that based on a question does not need to
24 include statement of all the evidence. It may assume facts
25 within the limits of the evidence.

26 Judges are supposed to provide considerable latitude in
27 asking -- or in the choice of facts for framing hypothetical
28 questions, and the Court did not view that to be the case

1 here. The expert's opinion was based on assumptions of facts
2 that were within the evidentiary support and not based on
3 speculation. So the Court did overrule defense counsel's
4 objections.

5 I just wanted to put on the record, there was a
6 discussion about impairment versus under the influence.

7 Mr. Scarfe, maybe you can clarify for the record. I was
8 a little unsure of what you meant.

9 MR. SCARFE: So I believe the legal standard to get a
10 conviction in this case is whether or not Mr. Boyd was
11 impaired by drugs.

12 The general umbrella term is "under the influence," but
13 then the jury instruction CALCRIM 2110 goes on to state that
14 impairment is defined as when his mental or physical abilities
15 are so impaired -- sorry -- I'll back up.

16 Under the influence goes on to read, that as a result of
17 taking a drug, that Mr. Boyd's mental or physical abilities
18 are so impaired that he is no longer able to drive a vehicle
19 with the caution of a sober person using ordinary care under
20 similar circumstances.

21 I think the People are lessening their burden by stating
22 repeated questions regarding under the influence. That's not
23 the standard. The standard is impairment.

24 The expert indicated already -- his expert testified
25 that having a cup of coffee means you're under the influence
26 of that coffee. So I guess everybody in this courthouse, if
27 they had coffee this morning should be convicted. So he's
28 lowering his own burden by using the terminology of "under the

1 influence." The standard should be impairment.

2 THE COURT: Okay. I get it.

3 Mr. Patchen?

4 MR. PATCHEN: It's a good thing I'm not the one giving
5 the instruction. I mean, the Court's going to give the
6 instruction that says impairment.

7 Mr. Lopez testified that somebody who had all those
8 signs and symptoms and had that much diazepam in their system
9 would be too impaired to drive.

10 MR. SCARFE: But there's more --

11 THE COURT: Mr. Scarfe, I've heard enough on this one.
12 I did overrule the objection at sidebar. I'm also overruling
13 it now.

14 I just want to make very, very, very clear, Mr. Scarfe,
15 that the law uses under the influence, and I'm just going to
16 read from just simply the jury instruction on 2110, which is
17 titled, literally, "Driving under the influence." The two
18 elements that must be proven is, 1, the defendant drove a
19 vehicle, and 2, when he drove, the defendant was under the
20 influence of a drug.

21 MR. SCARFE: But under the influence is further defined.

22 THE COURT: Okay. And then this NHTSA thing, what are
23 you seeking to introduce?

24 MR. SCARFE: He's familiar with it, and there's --

25 THE COURT: I get that. What are you trying to show?
26 I'm trying to understand from a 352 perspective what the
27 purpose is here.

28 MR. SCARFE: Their publication says that caution should

1 be exercised in assuming that drug presence implies driver
2 impairment; that drug tests do not necessarily indicate
3 current impairment. Also, in some cases, drug presence can be
4 detected for a period of days or weeks after ingestion.

5 THE COURT: Your objection on this, Mr. Patchen, was?

6 MR. PATCHEN: Two things, 1, that is from, looks like
7 2009. I just got to see it right now.

8 And 2, Mr. Lopez has testified on direct that it's not
9 just the blood. In fact, I asked him specifically, Is that
10 all you need, and he said, No, it's just one of the things we
11 look at. So I don't see the point of this thing that says the
12 exact same thing that he said.

13 THE COURT: I'll let you show him and ask him if that's
14 what it says.

15 MR. SCARFE: And I would encourage Mr. Patchen to
16 clarify on redirect if he wants instead of continuously
17 interrupting me.

18 THE COURT: We'll come back at 10:42.

19 (Whereupon, the morning recess was taken.)

20 THE COURT: Back on the record in People vs. Boyd.

21 All members of the jury are present.

22 Both counsel are present.

23 The defendant is present.

24 The witness remains on the witness stand.

25 I'll remind you that you are under oath.

26 Mr. Scarfe, your next question.

27 MR. SCARFE: Thank you, your Honor.

28 ///

1 CROSS-EXAMINATION (RESUMED)

2 BY MR. SCARFE:

3 Q. So good morning, Mr. Lopez.

4 A. Good morning.

5 Q. So you would agree that caution should be exercised in
6 assuming that drug presence implies driver impairment?

7 A. That's correct. Based on the toxicology report, I can't
8 determine if a person's impaired or under the influence.

9 Q. So you would agree that caution should be exercised in
10 assuming that drug presence implies drug impairment?

11 A. I'd agree, yes.

12 Q. You would agree that drug tests do not necessarily
13 indicate current impairment?

14 A. That's correct. With the drug results solely, you can't
15 determine if a person's impaired or under the influence.

16 Q. In some cases, drug presence can be detected for a
17 period of days or weeks after ingestion?

18 A. That is possible, yes.

19 Q. So now you testified earlier that several things affect
20 your opinion, but balance was one of the factors that you took
21 into consideration?

22 A. Yes, but my opinion was based on the totality of the
23 case.

24 Q. Right. So let's talk about balance for a little bit.
25 Okay?

26 So unable to maintain the start position during the walk
27 and turn; that was a factor, right?

28 A. Correct, yes.

1 Q. Okay. And so he had balance issues on the one leg
2 stand. That's another factor, right?

3 A. Correct.

4 Q. And you're aware that the brain mechanisms -- are you
5 aware of the brain mechanisms that help maintain balance?

6 A. I do not know.

7 Q. Okay. True that brain has three primary mechanisms to
8 help maintain balance?

9 A. I do not know.

10 Q. Do you know if visual perception of the horizon supports
11 orientation?

12 A. I do not know.

13 Q. You would agree that eyes have a horizontal view to
14 assist with balance?

15 A. I do not know.

16 Q. Do you know if the eyes are not looking straight ahead,
17 then the inner ear is affected?

18 A. I do not know.

19 Q. If the inner ear -- do you know if the inner ear is
20 affected, then balance is affected?

21 A. That is possible, yes.

22 Q. Okay. Agree that when standing, the brain receives
23 feedback from the feeling of the feet's location to determine
24 a person's center of gravity?

25 A. That is correct, yes.

26 Q. When standing, the brain receives feedback from the
27 feeling of the feet -- the feet's location to determine --
28 sorry, I already asked that.

1 **This is called proprioception?**

2 A. I do not know the term.

3 **Q. So when standing, the brain receives feedback from the**
4 **feeling of the feet's location to determine a person's center**
5 **of gravity?**

6 MR. PATCHEN: Objection; 352.

7 THE COURT: Sustained.

8 Mr. Scarfe, you've asked that now three times.

9 MR. SCARFE: Okay.

10 BY MR. SCARFE:

11 **Q. Agree that having both feet on the ground helps maintain**
12 **balance?**

13 A. I did agree with that, yes.

14 **Q. Agree that both feet approximately shoulder width apart**
15 **help with balance?**

16 A. I can agree with that, yes.

17 **Q. Agree that individuals normally use all three mechanisms**
18 **in tandem to balance, rather than using only one of the three**
19 **mechanisms?**

20 MR. PATCHEN: Objection; 352.

21 THE COURT: If you know the answer, you can answer.

22 THE WITNESS: I do not know.

23 THE COURT: Overruled.

24 BY MR. SCARFE:

25 **Q. So on the one leg stand, you're supposed -- the officer**
26 **tells the person to raise one leg six inches off the ground?**

27 A. That's correct, yes.

28 **Q. And to look down at the foot that is raised?**

1 A. Correct.

2 **Q. Agree requiring an individual to raise one leg off the**
3 **ground affects the ability to stand?**

4 A. I don't agree with that, because a normal person would
5 be able to do it.

6 **Q. Okay. Agree that staring at a raised foot also affects**
7 **the ability to stand?**

8 A. I don't agree with that, because a normal person should
9 be able to do it.

10 **Q. So I want to talk a little bit about the field sobriety**
11 **tests. Okay?**

12 **So would you agree that neurologists are the individuals**
13 **who are the most knowledgeable in the physiology of balance?**

14 MR. PATCHEN: Objection; speculation.

15 THE COURT: If you know the answer to that question.

16 THE WITNESS: I do not know.

17 BY MR. SCARFE:

18 **Q. Do you know if neuroophthalmologists and**
19 **ophthalmologists are the most knowledgeable in intraocular eye**
20 **movements such as the HGN?**

21 MR. PATCHEN: Objection; calls for speculation.

22 THE COURT: If you know the answer, you can answer.

23 THE WITNESS: I would be -- I do not know.

24 BY MR. SCARFE:

25 **Q. Regarding the field sobriety tests, it was the -- do you**
26 **know that research psychologists supervised and conducted**
27 **evidence of validation studies?**

28 A. It was validated, but I do not know exactly who reviewed

1 the validation.

2 Q. Are you -- you're familiar with the article, a 1994
3 article, written by Cole, from Clemson University, entitled
4 **Field Sobriety Tests, Are They Designed For Failure?**

5 A. I don't think I reviewed that article.

6 Q. You've never reviewed it or you haven't reviewed it
7 recently?

8 A. I do not recall. If I have, it was not recently.

9 Q. Are you aware of any studies where people were
10 videotaped doing the one leg stand and the walk-and-turn, and
11 then they played the videos to trained officers and asked the
12 trained officers, How many of these people do you think were
13 too impaired to drive?

14 A. I don't think there's a study where they actually
15 videotape it and ask the officers, no.

16 Q. You're not aware of a study that -- where officers
17 picked 50 percent of the people, that no one had drugs or
18 alcohol in their system?

19 A. I'm not aware of that study.

20 Q. You're not aware that the study was a false positive --
21 50 percent false positive?

22 A. I'm not aware of that study.

23 Q. Now, you are aware of -- you are aware of certain
24 studies that are -- the field sobriety tests, those are
25 validation studies?

26 A. Correct.

27 Q. And that was one factor that you took into consideration
28 in forming your opinion?

1 A. That is correct, yes.

2 **Q. Okay. And you are aware that the final phase of the**
3 **development of the field sobriety tests was conducted as a**
4 **field validation?**

5 A. That, I do not know.

6 **Q. Are you aware of a validation study in Colorado in 1995?**

7 A. I am not aware of that.

8 **Q. What about one in Florida in 1997?**

9 MR. PATCHEN: I'm going to object to this under 352, all
10 these random studies --

11 THE WITNESS: It's the basis of his opinion, your Honor.

12 THE COURT: You can answer this one question.

13 BY MR. SCARFE:

14 **Q. You're not aware of any of the studies -- or are you**
15 **aware of any studies at all?**

16 MR. PATCHEN: Objection; unintelligible, and vague.

17 THE COURT: Sustained.

18 THE COURT: Why don't you ask the question about the
19 Florida study.

20 THE WITNESS: The Florida in 1997, I'm not aware of the
21 study.

22 BY MR. SCARFE:

23 **Q. Okay. What about San Diego in 1998?**

24 MR. PATCHEN: Objection; vague.

25 THE COURT: Sustained.

26 MR. SCARFE: These are validation studies.

27 THE COURT: Sustained.

28

1 BY MR. SCARFE:

2 **Q. So these are correlation studies, right; these studies**
3 **regarding field sobriety tests?**

4 MR. PATCHEN: Objection.

5 THE COURT: Sustained.

6 BY MR. SCARFE:

7 **Q. These studies, the validated, the field sobriety**
8 **tests --**

9 MR. PATCHEN: Objection.

10 THE COURT: Sustained.

11 Mr. Scarfe, the witness has answered that he's not aware
12 of the studies.

13 MR. SCARFE: I thought he said he heard of one -- or I
14 thought he heard of one.

15 THE COURT: Did I misunderstand your testimony?

16 THE WITNESS: No. I was not aware of those studies.

17 BY MR. SCARFE:

18 **Q. Are you familiar with the NHTSA manual that says it on**
19 **page 5, that these tests were validated in these areas?**

20 A. Yes. The one I'm familiar with is the 1985 when they
21 first were developing the DRE program, and then the repeat
22 analysis in 1994 in Arizona. So those two I'm a little
23 familiar with.

24 **Q. So the field sobriety tests studies, those are not**
25 **peer-reviewed studies, correct?**

26 A. That, I do not know.

27 **Q. So you don't know if they're accepted or published**
28 **within the scientific community?**

1 A. They're accepted in the scientific community, I believe,
2 by NHTSA.

3 **Q. But they didn't go through the -- they're not published**
4 **scientific articles, true?**

5 MR. PATCHEN: Objection; speculation.

6 THE COURT: Sustained. Asked and answered, too.

7 BY MR. SCARFE:

8 **Q. Are you aware of the field sobriety tests under which**
9 **you used your -- scratch that. Are you aware that field**
10 **sobriety tests, in which you used your opinion to come to the**
11 **conclusion that he's under the influence, had no control**
12 **group?**

13 MR. PATCHEN: Objection; unintelligible, vague.

14 THE COURT: If you know the answer to that question.
15 I think you understand.

16 But overruled.

17 THE WITNESS: I do not know.

18 BY MR. SCARFE:

19 **Q. There's a -- regarding correlation, there's a**
20 **correlation between a rooster crowing and the sun coming up,**
21 **true?**

22 A. That is possible, yes.

23 **Q. But you'd have to do an experiment -- follow-up**
24 **experiment to determine if the rooster caused the sun to come**
25 **up, true?**

26 MR. PATCHEN: Objection; relevance.

27 THE COURT: Well, I'll allow it. Overruled.

28 You may answer that question if you can.

1 THE WITNESS: That -- I believe that would be true. You
2 would need to follow up to know if the rooster caused the sun
3 to come up.

4 BY MR. SCARFE:

5 **Q. And here there are no scientific studies for the field**
6 **sobriety tests, true?**

7 A. There are scientific studies. Like I mentioned before,
8 it was validated in 1985 and then redone in 1994 in Arizona.

9 **Q. Okay. The purpose of the control group is to**
10 **determine -- the control group is used to establish cause,**
11 **right?**

12 MR. PATCHEN: Objection; 352.

13 THE COURT: Sustained. Asked and answered, too.

14 BY MR. SCARFE:

15 **Q. Do you know if the field sobriety test studies had any**
16 **stratification when they were developed?**

17 MR. PATCHEN: Objection; 352, asked and answered.

18 THE COURT: Sustained.

19 BY MR. SCARFE:

20 **Q. Do you know if the field sobriety tests correlation**
21 **studies tested blood?**

22 MR. PATCHEN: Same objection.

23 THE COURT: Sustained.

24 BY MR. SCARFE:

25 **Q. Now, you've attended the course on alcohol for the**
26 **Borkenstein course?**

27 A. That's correct. I've attended both the alcohol and the
28 drug portions.

1 Q. In that course, don't they have the 1994 article --

2 (Court reporter interruption.)

3 I'll rephrase.

4 At the course that you attended, the five-day course,
5 they keep -- they teach you about the 1994 study that was
6 published, and the title of the study is called Field Sobriety
7 Tests, Are They Designed For Failure?

8 A. I don't recall if they brought that up or not.

9 Q. Okay. You're not aware of that study at all throughout
10 the course of your training or testifying?

11 A. Not that I recall, no.

12 Q. Okay. Are you familiar with a 1977 article by Burns and
13 Moskowitz?

14 (Court reporter interruption.)

15 B-U-R-N-S. M-O-S-K-O-W-I-T-Z.

16 Are you familiar with that?

17 A. I am familiar with the authors, but I'm not sure what
18 article you're referring to.

19 MR. SCARFE: May I approach the witness, your Honor, and
20 show him the article?

21 THE COURT: Yes.

22 Have you seen that, Mr. Patchen?

23 MR. PATCHEN: I have not seen it, and I'm going to
24 object under 352 again.

25 THE COURT: What is your question about this article,
26 Mr. Scarfe? Why don't you ask your question.

27 MR. SCARFE: Okay.

28

1 BY MR. SCARFE:

2 Q. Okay. The findings of this article are consistent with
3 other studies, reporting sizeable percentages of individuals
4 judged too impaired to drive when they were not?

5 MR. PATCHEN: Objection; 352, unintelligible.

6 THE COURT: Sustained.

7 You don't have to answer that.

8 That is -- the basis of that is 352, for the record.

9 Do you have any further questions, Mr. Scarfe?

10 MR. SCARFE: Yeah, I have some more questions.

11 THE COURT: You said you were not familiar with that
12 study, right, the study he's referring to?

13 THE WITNESS: I'm familiar with the author --

14 THE COURT: But not the study?

15 THE WITNESS: Yeah.

16 THE COURT: Okay.

17 BY MR. SCARFE:

18 Q. Now, regarding the horizontal gaze nystagmus test, in
19 this test, the officer looks for six queues, three in each
20 eye?

21 A. That's correct, yes.

22 Q. And they look for lack of smooth pursuit?

23 A. Correct.

24 Q. They also look for distinct and sustained nystagmus at
25 maximum deviation?

26 A. Correct.

27 Q. And they also look for onset of nystagmus prior to 45
28 degrees?

1 A. That's correct.

2 **Q. It's true that healthcare professionals, including**
3 **neurologists, neuroophthalmologists, and ophthalmologists,**
4 **assert that understanding eyes' physiology requires a more**
5 **detailed analysis of eye movements?**

6 MR. PATCHEN: Objection; speculation, 352.

7 THE COURT: If you know.

8 THE WITNESS: I do not know.

9 MR. SCARFE: Could we repeat the question?

10 THE COURT: Overruled.

11 Please keep going, Mr. Scarfe.

12 BY MR. SCARFE:

13 **Q. None of these professionals are recommending a cursory**
14 **roadside test, performed in the darkness, with a flashlight,**
15 **by a police officer, who has taken a three-day course?**

16 MR. PATCHEN: Same objection.

17 THE COURT: Sustained. That's 352.

18 BY MR. SCARFE:

19 **Q. Renowned scholars in the area --**

20 (Court reporter interruption.)

21 All of whom --

22 THE COURT: Mr. Scarfe, are you reading from something?

23 Is it the same line of questioning?

24 MR. SCARFE: No.

25 THE COURT: Okay. Keep going.

26 BY MR. SCARFE:

27 **Q. Renowned scholars in the area, all of whom have received**
28 **more training than police officers, recommend a**

1 **video-oculography to evaluate the occurrence and type of**
2 **nystagmus?**

3 MR. PATCHEN: Same objection; vague.

4 MR. SCARFE: If he knows, he knows. If he doesn't --

5 THE COURT: He doesn't know the answer to that.

6 Overruled.

7 THE WITNESS: I do not know.

8 BY MR. SCARFE:

9 **Q. Medical literature, including a leading ophthalmologists**
10 **textbook, criticize NHTSA's HGN test?**

11 A. That, I do not know.

12 **Q. Are you aware that roadside sobriety tests results from**
13 **the fact that the consumption of certain depressants can cause**
14 **horizontal gaze -- evoke nystagmus, even though normal**
15 **subjects can normally have physiologic pinpoint nystagmus?**

16 A. That, I do not know.

17 **Q. Agree that at low dosage, tranquilizers which do not**
18 **interfere with driving ability may also produce nystagmus?**

19 A. That is possible, yes.

20 **Q. Furthermore, nystagmus may be the result from neurologic**
21 **disease or may be congenital?**

22 MR. PATCHEN: Objection; speculation.

23 MR. SCARFE: If he knows, he knows.

24 THE COURT: Overruled.

25 If you know.

26 THE WITNESS: That is possible, yes.

27 BY MR. SCARFE:

28 **Q. Pathology cannot be determined by a roadside test, but**

1 **instead must be evaluated using sophisticated**
2 **neuroophthalmologists or an ophthalmol oculographer?**

3 MR. PATCHEN: Objection; speculation.

4 BY MR. SCARFE:

5 **Q. Do you agree or disagree?**

6 THE COURT: Overruled.

7 You can answer that.

8 The question is, Do you agree or disagree?

9 WITNESS: I disagree. For the purpose of what the
10 officers and the DRE, a field sobriety test is very
11 sufficient.

12 BY MR. SCARFE:

13 **Q. Would you agree that NHTSA protocols appear to view**
14 **nystagmus simply, indicating that intoxication likely causes**
15 **any present nystagmus?**

16 A. I'm sorry, can you repeat that?

17 **Q. Would you agree that National Highway Traffic Safety**
18 **Administration protocols appear to view nystagmus simply,**
19 **indicating that intoxication likely causes any present**
20 **nystagmus?**

21 A. I think I can agree with that.

22 **Q. Are you aware the sophisticated equipment to evaluate**
23 **and record eye movements have led to the discovery of 49 types**
24 **of nystagmus and the causes?**

25 A. There's different types, but the other types, I do not
26 know.

27 **Q. And what types are you aware of?**

28 A. Mainly the HGN, VGN.

1 Q. Those two?

2 A. Correct.

3 Q. You're not aware of 47 more?

4 A. Not off the top of my head, no.

5 Q. Okay. Are you aware that in 2001, researchers
6 determined more than 95 percent of police officers improperly
7 conducted the HGN test to use a criterion for placing drivers
8 under arrest?

9 A. That, I do not know.

10 Q. Are you aware of a research publication by JL Booker
11 entitled End-Position Nystagmus As An Indicator of Ethanol
12 Intoxication?

13 A. I'm not aware of that, no.

14 Q. Would you agree that the National Highway Traffic Safety
15 Administration transportation subdivision admits that these
16 tests are only accurate when performed according to the
17 manual's protocol?

18 A. That would be fair to say, yes.

19 Q. Would you agree that improper execution provides -- no.
20 I'm going to scratch that and move on.

21 I wanted to talk a little bit about -- talk a little bit
22 about the drug recognition evaluations. You've indicated that
23 you're familiar with the 12 steps of the drug recognition
24 evaluations?

25 A. That's correct, yes.

26 Q. Okay. And you learned about that during some of the
27 seminars that you went to?

28 A. That, and I also took the DRE school at the CHP Academy.

1 Q. Okay. Is that the one put on by CHP?

2 A. Correct.

3 Q. Did they teach you about 12 steps of drug recognition at
4 this academy?

5 A. They did, yes.

6 Q. So it'd be incorrect if somebody else said this -- is
7 this an ARIDE course?

8 MR. PATCHEN: Objection; asked and answered. He stated
9 it was a DRE course.

10 BY MR. SCARFE:

11 Q. I'd just like to clarify, was it an ARIDE course or was
12 it a DRE course?

13 A. No, it was an actual DRE course.

14 Q. So it's not ARIDE?

15 A. That is correct.

16 Q. Okay. I just want to thank you for that clarification.
17 Now, is that similar to some of the courses that are put
18 on by some of the local sheriff's offices?

19 MR. PATCHEN: Objection; speculation.

20 THE COURT: You need to answer it if it's within your
21 own personal knowledge.

22 THE WITNESS: That, I do not know.

23 BY MR. SCARFE:

24 Q. You don't know what's taught at the drug recognition
25 11550 courses?

26 A. The 11550 courses, no, I do not know.

27 Q. Okay. So I want to talk a little bit about the 12 steps
28 of the drug recognition evaluation.

1 MR. PATCHEN: Objection; relevance.

2 THE COURT: Sustained. 352.

3 Well, let me hear the question about the 12 steps. What
4 was the question?

5 BY MR. SCARFE:

6 **Q. In this case, 4 out of 12 steps were done, correct?**

7 MR. PATCHEN: Objection. There was no DRE.

8 THE COURT: Sustained. It's beyond the scope, too.

9 MR. SCARFE: Well, he's reviewed the material.

10 THE COURT: Sustained.

11 MR. SCARFE: Okay. That answer would go into the 12
12 steps.

13 THE COURT: 352.

14 MR. SCARFE: Your Honor, he has a 6th Amendment right to
15 cross-examination. There's no other witnesses left by the
16 People.

17 THE COURT: We'll do it on the record.

18 BY MR. SCARFE:

19 **Q. So would you agree that a drug recognition evaluation
20 should be done to determine drug impairment?**

21 A. It's definitely helpful. The more information you get,
22 the better understanding of the impairment you get.

23 **Q. Right. So the stronger the case becomes, the more steps
24 of the DRE that are completed, correct?**

25 A. That's correct.

26 **Q. And pulse rate is one of the things you look for,
27 correct?**

28 MR. PATCHEN: Objection; 352.

1 MR. SCARFE: It's testified to on direct.

2 THE COURT: Overruled.

3 You can answer.

4 THE WITNESS: That is correct, yes.

5 BY MR. SCARFE:

6 **Q. Blood pressure you'd look for?**

7 A. Yes.

8 **Q. Lack of convergence you'd look for?**

9 A. That's correct.

10 **Q. And the reaction to light is one of the things you'd**
11 **look for?**

12 A. Yes.

13 **Q. And muscle tone is something you'd look for?**

14 A. Correct.

15 **Q. Injection sight is something you'd look for?**

16 A. That's correct.

17 **Q. And so all these things would be helpful to gather and**
18 **form an opinion as to whether someone is under the influence**
19 **of a central nervous system depressant, true?**

20 A. They are helpful, yes.

21 **Q. It makes the case stronger, right?**

22 A. Correct.

23 **Q. And it's your opinion if those weren't done, the case**
24 **would be weaker?**

25 A. That's fair to say, yes.

26 THE COURT: Any other questions, Mr. Scarfe?

27 MR. SCARFE: Just a couple.

28 May I have one second, your Honor, five seconds? I'm

1 just trying to look --

2 Maybe the jury wants to stand up for a moment. It will
3 only be about 20 seconds.

4 BY MR. SCARFE:

5 Q. So would you agree that periodic sleep is necessary for
6 the restoration of both body and brain?

7 A. I would agree with that, yes.

8 Q. And you would agree that prolonged periods of
9 wakefulness produce attention deficit?

10 A. That's possible, yes.

11 Q. You would agree that prolonged period of no sleeping
12 produces slower reaction times?

13 A. That is possible, yes.

14 Q. And it's also associated with poor performance on field
15 sobriety tests?

16 A. That, I do not know.

17 Q. You would agree that sleep-deprived people lose their
18 ability to perform useful mental work with each 24-hour period
19 of sleep lost?

20 A. That is possible, yes.

21 Q. It's actually fairly well-known, correct?

22 A. I don't know if it's very well-known, but it's possible.

23 Q. Okay. Insufficient sleep can lead to motivational
24 detriment?

25 A. That's possible, yes.

26 Q. It could also lead to impaired attention?

27 A. That is correct, yes.

28 Q. It leads to short-term memory loss?

1 A. That, I do not know.

2 **Q. Reduced physical endurance?**

3 A. That is possible, yes.

4 **Q. Carelessness?**

5 A. That is possible, yes.

6 **Q. Degraded verbal communication skills?**

7 A. That's possible, yes.

8 **Q. Impaired judgment?**

9 A. That is correct, yes.

10 **Q. Would you agree that the fact that alcohol can produce**
11 **horizontal gaze evoked nystagmus has lead to a roadside**
12 **sobriety test conducted by law enforcement officers?**

13 MR. PATCHEN: Objection; unintelligible.

14 THE COURT: Sustained.

15 BY MR. SCARFE:

16 **Q. Now, what is -- are you aware of the term hysteresis?**

17 A. I am, yes.

18 **Q. And hysteresis is the pharmacology of a drug through the**
19 **body?**

20 A. That is in simpler terms, yes.

21 (Court reporter interruption.)

22 THE COURT: You can do it later.

23 Please continue.

24 BY MR. SCARFE:

25 **Q. So hysteresis is where the -- it's different than**
26 **alcohol absorption, correct?**

27 A. That is correct, yes.

28 **Q. And hysteresis essentially refers to the absorption of**

1 **drugs moving through the body?**

2 A. Correct. It's kind of like a plot of time versus how
3 the person feels the effect, how much the person feels the
4 effect.

5 **Q. And with alcohol, it's more like a curve, correct; like**
6 **an up-and-down curve?**

7 A. Correct. It's kind of like a clock-wise hysteresis, as
8 they say. It's kind of circled to the right.

9 **Q. Right. And so, for instance, both alcohol, as time goes**
10 **on, you have kind of a bell-shaped curve that goes up and**
11 **down?**

12 A. That is correct, yes.

13 **Q. And hysteresis goes the other way, in like a reverse**
14 **angle as time goes on, correct?**

15 A. That's correct.

16 **Q. And with hysteresis, concentration of the drugs doesn't**
17 **correlate to the effect on the body?**

18 A. That is correct. The concentration, each person is
19 different. I mean, there's no set concentration that would
20 determine if a person's impaired or not.

21 **Q. So it's virtually -- it's guesswork, essentially, by**
22 **correlating the drug concentration and trying to say that it**
23 **leads to impairment?**

24 A. There's no guesswork. For the concentration itself, we
25 are unable to tell whether the person's impaired or under the
26 influence, and we also cannot determine how much they took or
27 when they took based solely on the concentration itself.

28 **Q. Now, it's true that a benzodiazepine is a protein**

1 **binding?**

2 A. That is true, yes.

3 **Q. And depending on the drug and the person, it can range**
4 **from 80 to 98 percent?**

5 A. I don't know the exact percentage.

6 **Q. A huge amount is protein bound, agreed?**

7 A. In the system, yes; that's correct.

8 **Q. And the instrument cannot tell what is protein bound?**

9 A. Correct. Ours is just the free unbounded drugs present.

10 **Q. Protein bound -- a protein bound drug doesn't cross the**
11 **blood brain barrier?**

12 A. It does not, no.

13 **Q. So if it doesn't cross the blood brain barrier, it's not**
14 **affecting you?**

15 A. That's fair to say, yes.

16 **Q. And with protein bound drugs, 80 to 98 percent doesn't**
17 **cross the blood brain barrier?**

18 A. I don't know the exact percentage.

19 **Q. Benzodiazepine is a protein bound drug, correct?**

20 A. Most are, yes.

21 MR. SCARFE: No further questions, your Honor.

22 THE COURT: Thank you.

23 Anything?

24 MR. PATCHEN: Very quickly.

25 MR. SCARFE: One second, your Honor, just to move my
26 stuff.

27 THE COURT: All right. Sorry about that.

28 Please continue, Mr. Patchen.

1 MR. PATCHEN: Sure.

2 REDIRECT EXAMINATION

3 BY MR. PATCHEN:

4 Q. Mr. Lopez, you mentioned further that you have -- you've
5 been working for the Department of Justice for quite some
6 time. How many people in the office are just regular
7 criminalists, that you know of?

8 MR. SCARFE: Objection; lacks foundation.

9 THE COURT: Overruled.

10 THE WITNESS: I'm sorry, can I answer that?

11 THE COURT: Yes. I overruled the objection. I think
12 sufficient foundation is laid that you can give personal
13 knowledge.

14 THE WITNESS: I'd say there's more regular criminalists
15 than there are senior criminalists.

16 BY MR. PATCHEN:

17 Q. And you're a senior criminalist?

18 A. That's correct, yes.

19 Q. And in your experience, for the most part, are the
20 people who are criminalists, they have less experience than
21 you do?

22 A. That is correct, yes.

23 Q. So, then, you don't have the lowest experience in the
24 office?

25 A. That's correct, yes.

26 Q. And in the DOJ toxicology office, does everybody test
27 blood and drugs?

28 A. For the most part, yes.

1 Q. So there wouldn't be any reason that it would get
2 hoisted off onto somebody else then?

3 A. Correct.

4 MR. SCARFE: Objection.

5 THE COURT: Is there an objection?

6 MR. SCARFE: It needs to be rephrased, as far as it's
7 vague. Objection; vague.

8 THE COURT: Fair enough.

9 Overruled.

10 BY MR. PATCHEN:

11 Q. And you also on cross were asked a question about the
12 12 steps. In your experience, is that something that occurs
13 regularly in a drug DUI investigation?

14 A. It really depends on the department, whether they have a
15 DRE officer and they're able to do the full DRE, but the field
16 sobriety tests, that's out in the field.

17 Q. And the fact that an officer is not qualified to do a
18 DRE, does that have any impact on your opinion in the case?

19 A. Not in this case, no.

20 MR. SCARFE: Object to relevance.

21 THE COURT: Overruled. It was brought up on
22 cross-examination. It was elicited by defense counsel.

23 BY MR. PATCHEN:

24 Q. What -- are you a scientist?

25 A. Yes.

26 Q. And what does the -- when you're making a determination,
27 how many data points do you want?

28 A. The more, the better.

1 Q. The more, the better. And in this case, do you feel
2 like you have enough data points to make a determination
3 regarding Mr. Boyd's level of intoxication?

4 MR. SCARFE: Object, as to foundation.

5 THE COURT: Overruled.

6 THE WITNESS: I did, yes.

7 BY MR. PATCHEN:

8 Q. And what was that determination?

9 A. It was my opinion that the subject was under the
10 influence and too impaired to drive a motor vehicle.

11 Q. Thank you.

12 MR. PATCHEN: No further questions.

13 THE COURT: Any recross, Mr. Scarfe?

14 RE-CROSS-EXAMINATION

15 BY MR. SCARFE:

16 Q. You do agree that -- you testified earlier, the case
17 would be stronger had the 12 steps been actually performed in
18 this case?

19 A. That's correct, yes.

20 Q. And only -- was it 3 or 4 of the 12 that were done?

21 A. I'm not sure how many was done.

22 Q. But during the hypothetical that you were given, 3 out
23 of 4 were done?

24 A. Of the field sobriety tests, yes.

25 Q. And the data point that Mr. Patchen just discussed --
26 brought up, those are related -- those are related to lab
27 testing, true?

28 A. I don't think he was relating it to lab testing. I

1 think he was kind of relating it to --

2 MR. SCARFE: Basically I objected to foundation earlier,
3 or speculation, because I don't know where it's at either.

4 BY MR. SCARFE:

5 Q. But data points, what does that mean to you? Is that
6 like -- I'm sorry. Let me back up.

7 Data points is a lab term?

8 A. It is a lab term, yes.

9 Q. It's not a term used to determine the effects of a drug
10 on a human being?

11 A. That's correct, yes.

12 Q. So essentially it has to do with -- data points has to
13 do with concentration levels of the result?

14 MR. PATCHEN: Objection; misstates the facts in
15 evidence. And I don't know what he's referring to.

16 THE COURT: Sustained.

17 BY MR. SCARFE:

18 Q. Data points have to do with lab testing, true?

19 A. Yes. Lab testing has to do with concentration levels.

20 MR. PATCHEN: Objection. I don't know what he's
21 referring to.

22 THE COURT: Sustained.

23 MR. SCARFE: No further questions.

24 MR. PATCHEN: Nothing from me, your Honor. Thank you.

25 THE COURT: Mr. Lopez, thank you very much for your
26 testimony. You are excused.

27 THE WITNESS: Thank you, your Honor.

28 (Whereupon, the testimony was concluded.)

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