In The Matter Of:

Guillermo Sarabia-Sanchez
v.
United Parcel Service

Alan L. Hiti, M.D. VOL I

September 21, 2017

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THE SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

GUILLERMO SARABIA-SANCHEZ, an individual, by and through his guardian ad litem, ROGELIO SARABIA,	)	Case No.: BC617428
Plaintiff,	)	
vs.	)	
UNITED PARCEL SERVICE, INC., a corporation; and DOES 1 to 50, inclusive,	)	
Defendants.	)	

Deposition of ALAN L. HITI, M.D., taken at 2020 Zonal Avenue, Room 902, Los Angeles, California, commencing at 2:12 P.M., Thursday, September 21, 2017, before Sheryl Williams, CSR No. 7453.

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said he changed his mind.

Did I leave out anything?

MR. TAILLIEU: No. That's good.

MR. OKOROCHA: All right.

Q. Doctor, pronounce your full name for me. 02:15

A. My name Alan L. Hiti. H-i-t-i is the last name. First name is Alan, A-l-a-n.

Q. And you're an M.D., Ph.D.?

A. That is correct.

Q. And you attended medical school at USC?

A. No, I didn't. I attended medical school at the University of Miami in Florida. 02:16

Q. What year were you at that medical school?

A. From 1981 to 1983.

Q. Was that before the CIA people opened the lab there?

A. I don't know about the CIA people opening a lab there.

Q. Now, the University of Miami that was for medical school, and then I assume you went to a residency?

A. I did. 02:16

Q. In your residency -- let's start with medical school. In medical school did you use the textbook called Goodman & Gilman's?

A. Yes, we did.

Q. And do you understand that to be a textbook that's widely, widely used at most institutions of higher learning for pharmacology?

A. Yes, sir. 02:17

Q. Did you have textbooks in your residency for the pathology?

A. We did. Yes, I believe that we had a Robbins textbook.

Q. Do you recall any other textbooks?

A. It was a long time ago. Not in medical school. 02:17
I think the Robbins textbook was our textbook. Sorry. I can't recall. I'm sorry.

Q. Do you have textbooks or literature that you commonly refer to when you're trying to verify something or 02:18
look something up?

MR. SAROUKHANIOFF: Objection. Vague and ambiguous. Calls for speculation.

THE WITNESS: In the job that I'm currently in, we have textbooks that are authored by Tietze, T-i-e-t-z-e.

Q. BY MR. OKOROCHA: T-i-e-t-z-e?

A. Uh-huh.

Q. Okay. Are those in your own personal library, or are they part of the laboratory's library? 02:19

A. I think they are in both.

Q. Are you familiar with a pathology textbook called

Dimaio & Dimaio, D-i-m-a-i-o?

A. I have never read that textbook. That sounds like a forensic textbook in pathology. Our forensic training in residency and pathology is a small proportion encompassed by forensics so that wasn't one where we did a lot of reading. We did a lot of performing of autopsies but not a lot of reading that was assigned. 02:19

Q. You guys call it meat cutting; right?

A. No, I never did. I thought of it as a learning experience each time that I did my one-hundred-seventy-some autopsies. 02:19

Q. Wow. Do you know Dimaio & Dimaio as a pathology textbook that is commonly used by pathologists?

A. I do not. I'm not familiar with that book. I'm sorry.

Q. All right. Now, let me go over the medical things I wanted to go over. 02:20

Now, we have a urine screen for amphetamines. Are you familiar with that document?

A. Yes.

Q. All right. Now, it looks like his labs were not redone. They just incorporated the information in another part of the records. 02:20

MR. SAROUKHANIOFF: Objection. Vague and ambiguous.

THE WITNESS: I can't -- who is "they," and what are

we talking about?

Q. BY MR. OKOROCHA: Okay. We'll skip that one.

Now, blood -- blood gas. 02:21

Do you recall that Mr. Sarabia had very -- for 02:22
the urine that was tested it was very concentrated?

A. I remember looking at the specific gravity of the urine, and it was concentrated. It was a higher level than what we consider to be our reference interval.

Q. What effect does that have on the results?

MR. SAROUKHANIOFF: Objection. Calls for speculation. 02:22
Is an incomplete hypothetical as phrased.

THE WITNESS: It reflects the status of the urine and the components within the urine.

Q. BY MR. OKOROCHA: Would the amount of meth or amphetamines come out higher in more concentrated urine?

MR. SAROUKHANIOFF: Same objections. 02:22

THE WITNESS: Potentially if the urine is concentrated, very little urine is being put out, then the amphetamines that would be excreted would be in smaller volume and, therefore, would have higher concentrations.

MR. TAILLIEU: Why don't we start with the documents that he gave us. 02:23

MR. OKOROCHA: I'm sorry?

MR. TAILLIEU: He gave us a stack of documents.

MR. OKOROCHA: Yeah, I was -- but I have the medical

records tabbed for just a couple things.

Q. Do you remember what his creatinine level was?

A. No. I was not asked to review those records.

Q. I don't see it on -- this is page 276 of 524. 02:23

MR. TAILLIEU: Is that your red binder?

MR. OKOROCHA: Yes.

THE WITNESS: This does not have a creatinine value on 02:24
this report.

MR. OKOROCHA: Okay.

MR. SAROUKHANIOFF: And, for the record, we're looking at Mr. Sarabia's medical records from LA County USC Medical Center, and I think what you were referring to, Counsel, was at the bottom of the page it's referenced page 276 of 524; is that correct?

Counsel?

MR. OKOROCHA: Yes, that's what I was referring to. 02:24

MR. TAILLIEU: And we'll mark it as Exhibit 1 of this deposition.

(Exhibit 1 was marked for identification
is attached hereto.)

Q. BY MR. OKOROCHA; Would you agree that he had -- well, from these results would you agree that he had very concentrated urine?

A. Yes. 02:25

Q. Now, when it comes to amphetamines or any drug,

does the level of drugs, drugs in the blood have any prediction on the outcome or impairment of the patient?

MR. SAROUKHANIOFF: Objection. Incomplete hypothetical. Calls for speculation. Also calls for expert testimony which I don't believe we've established at this point.

THE WITNESS: I believe that a single determination of a drug in the urine does not speak to the intoxication or effect on the patient. It depends on a number of factors.

Q. BY MR. OKOROCHA: Okay. So regardless of what's in the urine, it's not something you can predict impairment based on?

A. That's correct.

Q. And even with blood it is difficult to correlate the outcome, the impairment with a drug level; right?

A. That's correct.

Q. Now, are you familiar with the two -- I call them hands -- but the chirality or the two parts of methamphetamine?

A. I believe I'm aware that there are a right rear and a left rear door, plus or minus optic stereoisomers of the drug.

Q. Would you agree that the L-methamphetamine is in cold medicine, nasal decongestants, things such as -- things of that nature?

A. Yes. And they have different effects on the body based upon whether they're D or L forms of the drug.

Q. Now, do we have any information on whether Mr. Sarabia had the D or the L form?

A. No, we do not have any information that is confirmed. 02:27

Q. So we can -- so what we can just say is that if, in fact, he has L-methamphetamine, that's not nearly as associated with impairment as D-methamphetamine; correct? 02:28

MR. SAROUKHANIOFF: Objection. Calls for speculation. Incomplete hypothetical. Also calls for expert testimony.

THE WITNESS: That is my understanding.

Q. BY MR. OKOROCHA: Now, assuming -- are you familiar with the literature on -- first, do you guys use your instrument is it the Roche or Cobas? What instrument do you guys use?

A. The sample was done on a Roche modular instrument, an actual P module. 02:28

Q. All right. A little bit of that here.

Now, the test is performed by enzymatic assay; correct?

A. It's actually a homogeneous competitive assay that utilizes two fragments of an enzyme that will then produce a colored product, yes. It's not like a strict enzymatic reaction that we put an enzyme in like with 02:29

ethanol, and when we put in alcohol dehydrogenase and that identifies alcohol and brings it to an assayable product. So it's an interesting sort of competitive assay in order to form an enzyme and then give us the answer by absorbance. 02:29

Q. We do need to talk about the absorbance. Before we go there. Now, the reagents you put in with the sample, do those react with antibodies produced by the body? 02:30

A. Some of the reagents that we use are both antibodies and antigens and indicator enzymes. So all of that is part of the reaction that we utilize in order to get a result as positive or negative for the analytes of interest.

Q. Okay. Are you familiar with the literature by the Department of Defense and in peer review journals about the use of methamphetamine to improve performance for helicopter pilots, for example, in combat? 02:30

A. No, I'm not familiar with that. I'm not an expert on that issue.

Q. Okay. You're aware that there's a prescription for methamphetamine given to young children to improve performance; correct? 02:31

A. Correct.

Q. Now I'm going to ask you if you're familiar with the Forensic Toxicology Laboratory guidelines by the U.S. 02:31

Department of Health & Human Services, Society of Forensic Toxicologists and the American Academy of Forensic sciences.

A. I have heard them referred to. I have not in depth read that article or that report.

Q. Now, you don't run a forensic lab; correct? 02:32

A. I do not.

Q. And for forensic purposes, which you don't do, the screening must be followed up by a confirmation per the national standards?

A. That is correct.

Q. Now, absorbants are we talking about 02:33 spectrophotometric absorbance?

A. Yes.

Q. And s-p-e-c-t-r-o-p-h-o-t-o-m-e-t-r-i-c.

And that works by shining a light through the sample and looking at the change if the light dims, or can 02:33 you explain how it works with the light?

A. So spectrophotometry works on the basis of a light of a specific wavelength that is shown through a cuvette which contains a reaction, and we measure the light 02:33 that's the incident light to the cuvette and we measure the light that is an exit, that exits the cuvette, and we can calculate the percent of transmittance light, and the absorbance is the inverse -- inverse of the log to the base

ten of the transmittance. So the absorbance is a reading that we get from the spectrophotometer that correlates to the concentration of the analyte of interest that changes, that absorbs that light as it is shown through the cuvette. 02:34

Q. Okay. And I wouldn't know this offhand, but do you happen to know what wavelength methamphetamine -- what wavelength of light is used to measure methamphetamine? 02:34

A. We measure the reaction wavelength of interest instead of looking just at methamphetamine. We don't look to see if the methamphetamine is present by the absorbance of the methamphetamine or the amphetamine molecule itself. We put together a reaction that allows us to easily read the absorbance of a colored metric indicator as to how much of the target is present. 02:35

Q. And would you agree that each wavelength may have other compounds that absorb -- multiple compounds can be, can absorb at the same wavelength? 02:35

A. Yes. Multiple compounds can absorb at the same wavelength.

Q. And so that can be a source of error if you have -- if you're measuring one thing and you have something else in the sample that absorbs at the same wavelength; correct?

MR. SAROUKHANIOFF: Objection. Calls for speculation. It's an incomplete hypothetical as phrased.

THE WITNESS: It may be. We usually worry more about reactions that occur from other analytes that provide a signal that we get as a measurement of reactive analyte that may be either nonspecific or may be from a different chemical. So it's not specific to the amphetamine, but specific to our color metric product that we are looking at to judge the concentration. 02:36 02:36

Q. BY MR. OKOROCHA: And how specific is that? Does it differentiate between multiple compounds at the same wavelength?

A. So we are looking for an activity that will produce a color change that we are then reading the absorbance of.

Q. And are there more than one things that can cause the color metric changes? 02:37

A. Yes.

Q. And so that can be an interference or source of error; correct?

A. Yes.

Q. All right. Now, let me just go back to this. Because we don't know if it was D- or L-methamphetamine, we don't know if Mr. Sarabia took cold medicine or Vicks inhaler that morning; correct? 02:37

A. I do not know that.

Q. And we actually don't know when the drug was

actually taken; correct?

A. That's correct.

Q. And that cannot be predicted by the urine; correct?

A. That's correct.

Q. All right. Now, I'm just going to ask you if you're familiar with a few of these papers. 02:38

This one is titled "False-Positive RIA for Methamphetamine Following Ingestion of an Ephedra Derived Herbal Product."

Are you familiar this paper?

A. No, I have not read that. We do not do radioimmunoassays in our clinical laboratory. 02:38

Q. Okay. Are you familiar with a paper titled "False-Positive Interferences of Common Urine Drug Screening Immunoassays" by Saitman, Park and Fitzgerald?

A. Yes, I have that read that article. UC San Diego, yes. Yes, I am. 02:39

Q. Can I attach that as Exhibit 2, please.

(Exhibit 2 was marked for identification is attached hereto.)

Q. BY MR. OKOROCHA: Is the a-met 2 is that the same type of assay that you use?

A. It is not. The one that we use is a CEDIA assay which is slightly different from the a-met 2 assay. We 02:39

provided my methodology in the paper that you just received today.

Q. Okay. Thank you.

Are you familiar with this paper differentiating medicinal from illicit use in positive methamphetamine results? 02:40

A. I have not reviewed that article. I'm sorry.

Q. By the way, for Exhibit 2 would you agree that it is in a reputable journal and uses proper scientific methods?

A. Yes, I do agree. 02:40

Q. Is it used by experts in the field, in your field?

A. I do believe that that's true.

Q. Now, the reaction that takes -- can you describe the reaction that takes place between the sample, the urine sample and the reagents you add to it. 02:41

A. Okay. So the CEDIA reaction that we utilize on the cuvette Roche modular instrument --

Q. CEDIA? I'm sorry to interrupt, but can you spell that, please.

A. Capital C, capital E, capital D, capital I, capital A. So it stands for Cloned Enzyme Donor Immunoassay.

So it is an assay that is a homogeneous

inactive fragment of the beta-galactosidase to combine with the other inactive fragment to form an active beta-galactosidase enzyme, and then that enzyme will work on our colored product which is chlorophenol red beta-d-galactoside -- beta-D-galactopyranoside, and that's a substrate for beta-galactosidase, and so we will be able to follow by absorbance the production of active beta-galactosidase, and that occurs when there is product in the urine that binds up with the antibodies that are directed against the amphetamine, the methamphetamine, or the MDMA, or any analyte that might cross-react. 02:44 02:44

Q. So is the reaction between the reagents and the actual drug itself, or is it dealing mostly with antibodies and antigens? 02:45

MR. TAILLIEU: I thought this depo was going to be in English.

MR. OKOROCHA: I know.

MR. TAILLIEU: This is a court reporter's nightmare.

MR. OKOROCHA: Sorry.

THE WITNESS: Could you repeat that question. I'm sorry.

MR. OKOROCHA: Sure.

Can you read it back?

(The question was read.)

THE WITNESS: I believe it's both. The reagents will

react with the analyte that we're talking about, either amphetamine, methamphetamine, or MDMA. These are all antigen antibody interactions. The system is an antigen antibody reactivity, and it's competitive. So it's the drug that would be in the urine competing with the reagent drug that is attached to the inactive fragment of beta-galactosidase. 02:46

Q. BY MR. OKOROCHA: Are you familiar with generally what is stated -- are you familiar with what the manufacturer Roche says about this, about testing for drugs of abuse? 02:46

A. We use Roche reagents for many of our toxicologic assays, and they identify that. Many of the assays which are immunoassays are screening assays, and the confirmation of those assays is recommended for identification of the drugs that have been picked up by the initial screen immunoassay. 02:47

Q. I have a case report here. "Amphetamine Positive Urine Toxicology Screen Secondary to Atomoxetine" which I think is Strattera.

Are you familiar with this paper?

A. I'm not familiar with that paper. I am aware that there are other drugs that various, various assays for amphetamines are known to cross-react and give a positive screen result.

Q. Cross-reaction meaning -- can you elaborate on what cross-reaction is?

A. So the antibodies that are directed against the drugs may recognize an epitope, and the structure of that epitope may be similar to the structure of other drugs and not exclusively to amphetamines or methamphetamines or MDMA. So even though we say that the antibodies within our system of the assay are specific for those three structures, those molecular structures, there are similar compounds that are able to be recognized by the antibodies in a, let's say, looser fit and still give a positive result. 02:48 02:48

Q. So that would be a -- if that happened, that would be a false-positive result?

A. That is correct. That would be a false-positive result, and your -- what do you call it -- document No. 2 has a listing of a number of situations where drugs, other drugs, whether they're antidepressants or whether they are antibiotics or whether they are different types of classes of drugs, interact and give false-positives in the amphetamine assay. They are often assay specific, and so one would have to test to make sure that the specific assay may have a sensitivity to cross-reactive compounds as well. 02:49 02:49

The procedure for the Roche assay for amphetamines lists a number of studies where they have

looked at -- I'm guessing -- 30 to 40 different compounds to see if they are potentially able to cross-react and give false-positives and what concentration those might be. So that's as their requirement to look at interfering substances that may cause false-positives. 02:50

Q. Okay. I have a Roche manual here, and it says that the test is for in vitro diagnostic purposes only. 02:50

Would you agree with that?

A. Yes, I do.

Q. And in vitro --

MR. TAILLIEU: I'm sorry. I was going to say can you explain what that means.

MR. OKOROCHA: Yes.

Q. And in vitro -- in vitro diagnostic use means a clinician taking the results, looking at the -- examining the patient and medical history -- well, actually can you, can you tell me? 02:51

A. That designation of an in vitro diagnostic use is one that's determined by the FDA. All of the support for the utilization of that assay as a diagnostic product has to go through review by the FDA, and when they approve the utilization on the test, they allow you to use that designation of an in vitro diagnostic test or device. 02:51

Q. And in vitro diagnostic tests are not designed to be used for forensic purposes or outside the hospital; is 02:52

that correct?

MR. SAROUKHANIOFF: Objection. Calls for speculation. Expert opinion.

THE WITNESS: I, I don't believe that there's an exclusion for it to be utilized for forensic purposes. It is an FDA approved test to be utilized to identify a result. There are many other things that are required for forensic drug testing that are not done in the process of preanalytical as well as analytical actions in a forensic drug testing lab. 02:52 02:53

Q. BY MR. OKOROCHA: Now, would you agree that the tests -- well, in a hospital setting there's a patient that needs to be treated urgently, and so the clinical laboratory is used as opposed to other methods such as gas chromatography or liquid chromatography which would take much longer. 02:53

A. I would agree with that. We have no gas chromatography or liquid chromatography systems in our core laboratory at the LAC-USC Medical Center at this time, and immunoassays are used commonly for any toxicologic preliminary testing.

Q. Okay. And they are screening tests; correct? 02:54

A. That is correct.

Q. I'm going to ask you if you agree with Demaio & Demaio. Let me get mine out. Specifically -- well, for 02:54

example --

MR. SAROUKHANIOFF: Can we identify on the record what you're having the doctor look at. I'm sorry.

MR. OKOROCHA: I'm sorry about that. This is "Forensic Pathology, Handbook of Forensic Pathology" by Demaio & Demaio.

MR. SAROUKHANIOFF: And it's which edition?

MR. OKOROCHA: Second.

MR. SAROUKHANIOFF: Is that the most recent edition if you know?

THE WITNESS: The copyright is 2007 on this third page.

Q. BY MR. OKOROCHA: Now --

MR. TAILLIEU: And we're looking at page 260; is that correct?

THE WITNESS: That is correct.

Q. BY MR. OKOROCHA: 260 -- and so this agrees with you that it's a drug screening; correct? 02:55

A. Yes. Uh-huh.

Q. Turning to page 262, and it's Roman numeral XI, would you agree when it says, "No scientist should go to court and testify a drug was definitely present in an individual or specimen based solely on a screening test"? 02:56

A. I agree.

Q. And the confirmatory test is absolutely necessary

to confirm a positive screening test; would you agree?

A. I would agree.

Q. So -- thanks. Unless you need to borrow it? 02:56

A. No.

Q. Now, are you familiar with -- did I hand you this 02:57
page?

MR. SAROUKHANIOFF: No. You handed it to me. Did you want it for the doctor or for me?

MR. OKOROCHA: I'm sorry. Both.

MR. SAROUKHANIOFF: Normally I get copies of this, but we're just kind of freelancing; right? You're just showing him stuff, and I get excluded, but that's fine. Go ahead and do your thing. I understand.

MR. TAILLIEU: Come on. Are your feelings being hurt, Nino?

MR. SAROUKHANIOFF: Not my feelings being hurt, but there's protocol, and protocol is that I get a copy of 02:57
what's being shown to the doctor, and perhaps we can attach the documents as exhibits.

MR. TAILLIEU: I hear that.

MR. SAROUKHANIOFF: We haven't done any of that. So it's an awkward situation, but if that's how you want to take your depo, go ahead and take your depo. It's fine.

MR. OKOROCHA: All right.

MR. TAILLIEU: Make sure you identify as exhibits

everything that the witness sees just sequentially especially if he reads from it.

I would like to actually attach the book that he read from, and we can go ahead and mark the pages, and we'll go ahead and make copies of those pages. We'll identify pages 260 and 262 of the "Handbook of Forensic Pathology," 2nd edition, and we'll attach those as the next exhibit in line which is what? 02:58

THE COURT REPORTER: 3.

MR. TAILLIEU: Exhibit 3. So leave the book out, and we can make copies after the deposition, and we'll make sure that counsel for the defense gets a copy.

(Exhibit 3 was marked for identification is attached hereto.)

MR. TAILLIEU: The witness is currently looking at? What is it? 02:58

MR. OKOROCHA: The California Regulations Title 17 about forensic testing.

MR. TAILLIEU: Got it. We'll identify that as Exhibit 4.

(Exhibit 4 was marked for identification is attached hereto.)

MR. SAROUKHANIOFF: Thank you.

MR. OKOROCHA: By the way, in Demaio it was pages 260 through 262.

MR. SAROUKHANIOFF: This doesn't apply to methamphetamines, does it?

MR. OKOROCHA: Well, it's --

MR. SAROUKHANIOFF: I just want to be clear that that is what this regulation discusses.

MR. OKOROCHA: Correct.

MR. SAROUKHANIOFF: Is that true, Doctor? Is that your understanding?

THE WITNESS: That is my understanding.

MR. SAROUKHANIOFF: Based upon your reading of this document?

THE WITNESS: That is my understanding.

MR. SAROUKHANIOFF: Okay. He can use mine so he can follow along with you, Counsel. 03:02

MR. OKOROCHA: Okay.

MR. SAROUKHANIOFF: So if you want to direct him to the page you're looking at.

MR. OKOROCHA: Sure. I'm on page 6.

Q. And for forensic purposes "a urine sample from a living individual shall be a sample collected no sooner than 20 minutes after first voiding the bladder."

In your -- in this test was there a voiding of the bladder in a 20 minute waiting period?

MR. SAROUKHANIOFF: Calls for speculation.

THE WITNESS: I do not know. I just do not know. 03:03

Q. Got it. And how long have you had this position?

A. I was assigned and moved over in February of this year. 03:22

Q. Before that what was your position?

A. I was a lab director for one of the campus laboratories, and we did a lot of the outpatient testing in chemistry and hematology and microbiology and molecular pathology.

Q. Got it. Any of that related to forensic testing of blood samples, urine samples?

A. No.

Q. How about before that position? What was your job?

A. So I worked at the LAC-USC Medical Center as the lab director of the immunology section there doing things like hepatitis testing and other immunologic tests and a little bit of flow cytometry. I've been running the flow cytometry laboratory for our pathology department since 1998. 03:23

Q. Got it. What's flow cytometry? I'm sorry. I'm not -- I don't know as much as he knows about the medicine. 03:23

A. Flow cytometry is a technique that allows us to identify antigens on the surface of cells usually used in diagnosing leukemias and lymphomas in patients that are being seen by hematologists.

Q. Hold on. You lost me.
A. L-methamphetamine.
Q. What is L-methamphetamine?
A. It's the optical stereoisomer of methamphetamine. So it has different effects on the body.
Q. I don't know what that means.
A. So there are two different stereoisomers that optically rotate light either right or left, and it turns out that the receptors are specific for one or the other, and most of the effects in the body are related to the D type of stereoisomer of amphetamine or methamphetamine and the L types have different effects. 03:40
Q. Got it. But, nonetheless, at the levels indicated on the right column, you would get a positive on the assay for amphetamines; correct? 03:40
A. That is correct.
Q. And that doesn't include the false-positive results that were discussed earlier and that I think were at least partially discussed in Exhibit 2?
A. In Exhibit 2 I think they identify bupropion by my recollection, and that's the only one that I think that they comment on. There are a couple of other antidepressants, one other antidepressant that they have new information on, but that was not tested by the Roche company. 03:41

Q. So if Mr. Sarabia had consumed any of the positive compounds on page 8, including potentially some of the compounds that would lead -- that would result in a false-positive, he would have likely shown a positive screening test for amphetamines; correct? 03:41

A. Correct.

MR. SAROUKHANIOFF: Objection. Incomplete hypothetical. Calls for speculation.

Q. BY MR. TAILLIEU: If someone were to say based only on the screening test that Mr. Sarabia was under the influence of methamphetamine, could that be proved solely by the screening test?

A. Not in my opinion.

MR. SAROUKHANIOFF: Belated objection. Calls for expert testimony.

Sorry, Doctor.

THE WITNESS: It's all right. 03:42

Q. BY MR. TAILLIEU: So this was 7?

A. Yes. Or that one. Yes. That was 8. I'm sorry.

THE COURT REPORTER: I have 6.

MR. TAILLIEU: Exhibit 7. Sorry.

Q. And Exhibit 7 that we just looked at, that's put out by the manufacturer of the assay; right?

A. That is correct.

Q. Okay. All right. 03:42

with the possible identification of the amphetamine or methamphetamine in the system. 04:13

Q. Why does a hospital -- why do you even do these screens? Why are they done?

A. We do them because patients present with symptoms and signs that oftentimes need to be understood before they can proceed with the treatment, and so in the case of sympathoametic amines, they may potentially have a patient who comes in who is acting a little bit unusual, has signs 04:14 that they have hypertension, that they have increased heart rates, they have dilated pupils, and so they ask us to do testing to help us put into perspective those signs and symptoms and to help them identify whether they need to just support the patient or whether they need to do additional interventions that might be able to address the 04:14 issue.

Q. And also a physician who's treating a patient, a patient comes in with a serious injury, let's say, that physician would want to know whether or not the patient has some kind of drug in his or her system so that if they are going to be giving the patient drugs here at the hospital, there is not going to be a counter-reaction or adverse reaction between the drug that's being given here and a drug that may have been taken previously by the patient him or herself; correct? 04:15

Q. In this case based upon the information that you've reviewed in preparation for your deposition here today, can you state to a reasonable degree of medical probability that there was a drug that was either interfering or providing another source of error in the positive result for amphetamines? 04:18

A. I believe that the result that we have identifies that there was either evidence of amphetamine, methamphetamine, or MDMA which are specific targets of our assay or an interfering substance or something that is recognized because of their similar cross-reactivity in the assay. So that is something that needs to be confirmed in order to identify which of those possibilities were operant. 04:18

Q. Would any of the interfering drugs appear on their own in the assay that was done here? For example, could you -- would this test identify any of those drugs that are listed as being potential interferers? 04:19

A. Any of the individual drugs at the level that were identified by Roche would give you -- alone would give you a positive result in the assay that we do.

Q. There's been some discussion about D-methamphetamines and L-amphetamines. In layman's terms can you tell what us what is the difference between the two? 04:20

A. I think the difference is in the specificity of the receptor on the cells. So that only certain stereoisomers of the compounds are effective in causing the physiologic effect as opposed to the other stereoisomer. 04:20

MR. TAILLIEU: Is that clear now?

Q. BY MR. SAROUKHANIOFF: Can you give us now -- are there L-amphetamines that are sold over the counter to your knowledge?

A. I'm not -- I don't do therapeutics as a pathologist, so I don't know the possible L-amphetamines that might be out there. I just don't know.

Q. Fair enough. I was just throwing it out there. 04:20

Then there was some discussion where you mentioned preanalytical versus analytical. What did you mean by that?

A. Preanalytical means that it's everything that happens before the sample is tested on the instrument. So was the sample intact and kept at a temperature that would not destroy the analytes. Was there any other problem with 04:21 mix up of a sample with another. That sort of a thing that would affect the results.

Q. And analytical is everything that happens afterwards?

A. Everything that is tested.

Q. In this case based upon everything that you have