STATE OF WISCONSIN CIRCUIT COURT MILWAUKEE COUNTY

BRANCH 07

STATE OF WISCONSIN,

Plaintiff,

-vs-

ANASTASIA GUMMO,

Defendant.

JURY TRIAL

Case No. 13-CT-837

(Partial transcript)

Date of Proceedings: February 4, 2014

HONORABLE THOMAS McADAMS

Circuit Judge Presiding

T R A N S C R I P T O F P R O C E E D I N G S

APPEARANCES:

MR. NICHOLAS CERWIN, Assistant Distict Attorney, appeared on behalf of the plaintiff.

MS. EMILY BELL, Attorney at Law, appeared on behalf of the defendant.

DEFENDANT present in court.

(Excerpt of Proceedings)

(Cross examination of Ryan Pieters)

THE COURT: Cross.

CROSS EXAMINATION BY MS. BELL:

Q. Mr. Pieters, you told us you have a Bachelor's in Chemistry?

A. Yes, I do.

Q. And you discussed that you have taken these two classes at Indiana University. I think you called them Borkenstein class?

A. Yes.

Q. And just to be clear, that Borkenstein class is at Indiana University, not through Indiana University?

A. As far as I know, that's correct.

Q. And you have worked at the lab for ten years, correct?

A. It will be coming up on ten years within the state lab of hygiene.

Q. Okay. And the state lab of hygiene, that lab is accredited?

A. Each different section has different accreditations. Within the forensic toxicology program we're accredited by ABFT, the American Board of Forensic Toxicology.

Q. Okay. And that's different from the American Society of Crime Laboratory Directors?

A. That's right.

Q. And, in fact, the ASCLD is what accredits the Wisconsin Crime Lab?

A. As far as I know, yes.

Q. And the ASCLD requires labs to hold to a standard that's called ISO17025, correct?

A. I'm not very familiar with-- We actually call it ASCLD (phonetic) just because--

Q. Now I know.

A. --the acronyms don't really mean a whole lot to us. But I'm not familiar with what they use for their accreditation standards. Everybody kind of has their own.

Q. But the hygiene lab that you work for actually has to follow the standards for the crime lab?

A. I know that we do some testing for them for proficiency stuff, but I don't know how much we're involved with their actual accreditation.

Q. You're not aware of whether as a matter of law the hygiene lab has to approve the standards for other blood labs in the state?

MR. CERWIN: Your Honor, object to relevance. I don't see where this is going.

THE COURT: Sustained.

Q. You are familiar with the standard ISO17025?

A. I'm familiar with the ISO standards. Not intimately. I don't know what any of the particular statutes inside of them are, but I know about ISO accreditation.

THE COURT: Okay. Let me interrupt here. ISO means what?

MS. BELL: ISO stands for the-- I believe it's-- I apologize.

THE COURT: International Society of-- I'm guessing.

MS. BELL: It's International Standards something. It's an Swiss organization that sets standards for things like labs.

THE COURT: Okay. I'm trying to help the reporter out for the record here, of course. But do you agree or disagree with that?

THE WITNESS: I honestly don't know what the acronym stands for. It sounds right. ISO is an overseeiing accreditation that goes into a whole bunch of different fields including laboratories and stuff like that.

Q. For the sake of the reporter, would you agree with me that ISO is letter I, letter S, letter O?

A. Yes.

Q. Okay. And there are parts of the state lab of hygiene that follow ISO17025?

A. I know that there are parts of the hygiene lab that are ISO accredited, but I don't know which sub sections of their standards that they follow.

THE COURT: International Organization for Standardization?

MS. BELL: There we go.

THE COURT: Okay.

Q. But the section that you work for is accredited by the forensic--the American Board of Forensic Toxicology?

A. That's right.

Q. Which is smaller than ASCLD?

MR. CERWIN: Objection, relevance.

THE COURT: I'm sorry. Could you ask the question again, Attorney Bell?

MS. BELL: I said which is smaller than ASCLD.

THE COURT: I missed the part before that, though.

MS. BELL: The section of the lab that Mr. Pieters works for is accredited by the American Board of Forensic Toxicology.

THE COURT: Can you answer that?

THE WITNESS: I honestly don't know. I know that the American Board of Forensic Toxicology is I believe a subsection of the Society of Forensic Toxicology or maybe even a different entity. And the Society of Forensic Toxicology has a meeting yearly that's thousands of people. I have no intimate knowledge of the size of ASCLD or how many members they might have or even if they do have members.

Q. But you do know the ABFT has less rigid standards than ISO?

A. I know that they have completely different standards because it deals specifically with forensic toxicology mostly with testing of blood, urine, hair, sweat, and those sort of things whereas the ASCLD standards also go into plant materials and crushed pills and that kind of stuff where ABFT doesn't have to venture that far.

Q. But still your lab has to follow the ABFT standards?

MR. CERWIN: Once again, object to relevance. This has been asked and answered several times throughout the record. And the analyst has testified as to what he knows what they're accredited to and what even the state lab of hygiene or the state crime lab is

accredited to. That's not relevant to this case.

MS. BELL: This is specifically to the section of the lab that he works for.

THE COURT: Okay. I will allow you a little leeway here, Attorney Bell, but please let's keep moving.

Q. So could you answer the question; the section of the lab that you work for has to follow the ABFT standards?

A. Yes, we do.

Q. And you in the lab take that seriously?

A. Yes, we do.

Q. So, going back to chromatograms, you told us they show what's in a sample?

A. Yes.

Q. And I believe you discussed that you will take a blood sample and mix it with I think it was water and propanol?

A. The sample is mixed with an internal standard solution. In this case it was water with N-propanol.

Q. N-propanol? All right.

THE COURT: How do you spell N-propanol, please?

THE WITNESS: It's N- p-r-o-p-a-n-o-l.

THE COURT: Thank you.

Q. And that N-propanol is--I think you already told us--is really like a measuring stick that you measure other things against?

A. That's right.

Q. Okay. And, now, I know you talked about that the machine gets calibrated? That happens every day, right?

A. It happens within every run. So if we're going to do a set of samples we will calibrate for our own dilution technique and our own instrument for that run. If we weren't going to run a day, then we wouldn't calibrate the instrument for that day.

Q. Sure. Sure. So any day that samples are being run that day starts with the calibration?

A. That's right.

Q. And that's more or less in laymens' terms for those of us like me who are not chemists, that's more or less teaching the machine to read what ethanol is and how much is in there?

A. It's-- Yeah, basically. It's telling the instrument this is what each one of these different levels look like on this day for this run.

Q. And the only thing that should show up in a calibration chromatogram would be propanol and ethanol?

A. In an ideal world when we would run a sample on our instrument that only has those two things in it, those would be the only two things that we would see.

Q. And a calibration sample would only have those two things in it? I know that there's one that your--that has other things in it but, typically speaking, for most of the calibrations.

A. Those are the only two things that would work in it.

Q. And, in addition to the calibrations, you will do a whole bunch of blood samples in one run, correct?

A. Yes.

Q. Somewhere around 90?

A. It's 96 samples per half of a run.

Q. Okay. And half of a run would be the a.m. sequence or the p.m. sequence?

A. That's right.

Q. Roughly lining up with before and after noon?

A. Right.

Q. And do you have with you the chromatograms that were done on the day that you analyzed Anastasia's sample?

A. Yes.

Q. Great. So now--

MR. CERWIN: Your Honor, just for the record I have been handed a copy of a lab of hygiene document. It is multiple, multiple pages long. I have not read through the entire thing. I don't know.

Is this my copy?

MS. BELL: That's your copy.

MR. CERWIN: That's all.

MR. BELL: And I handed Mr. Cerwin more documents than I intend to necessarily mark, but he now has everything that I might intend to mark.

Your Honor, may I please approach the witness?

THE COURT: You may.

Q. So, Mr. Pieters, I'm going to show you two documents, one that's been marked as Exhibit 10, and one that's been marked as Exhibit 11. And do those appear to be two of the calibration chromatograms from the run that involved Anastasia's blood?

A. Yes.

Q. Okay. And they show what we were talking about in terms of they just have ethanol and just have propanol, correct?

A. Yes.

Q. Okay. And I'm going to hand you a red pen. Could you please circle on both of those the ethanol

peaks? Okay. So on Exhibit 10-- Well, let's back up. There's two--two chromatograms on Exhibit 10, correct?

A. Yes.

Q. And one is that A column that you're talking about and one is the B column?

A. Yes.

Q. And they're actually measuring the same sample?

A. Yes.

Q. They're just sort of two different ways of measuring them?

A. Right. This is where I was talking about before where one is quantitative, the other one is confirmative. So the A column on the top is actually giving us an amount of how much ethanol is in that blood. And then the second one we suppress the actual calculated concentration because we're only looking at a retention time marker to make sure that it looks like ethanol in both columns.

Q. Okay. And that's also the same on Exhibit 11, there's the two chromatograms, the A column and the B column?

A. That's right.

Q. And so you have made four red circles, total between 10 and 11, circling the ethanol peaks on each

one?

A. Yes.

Q. Okay. And I'm going to hand you a blue pen. Could you please circle the propanol columns on both exhibits? And, again, that's that internal measuring stick that we were discussing?

A. That's right.

Q. And just like with the red pen, you just made four blue circles in each of the--between the two exhibits?

A. Yes.

MS. BELL: Your Honor, permission to publish to the jury?

THE COURT: Any objection?

MR. CERWIN: No objection.

THE COURT: Granted.

Q. And while they're looking at those, those are pretty clean looking chromatograms?

A. Yes.

Q. And they really just show just the ethanol and propanol?

A. Yes.

MS. BELL: Your Honor, permission to re-approach the witness?

THE COURT: Sure. Granted.

Q. Mr. Pieters, I'm showing you what's been marked as Exhibit 12. Do you recognize this as a chromatogram from the date that Anastasia's blood was analyzed?

A. Yes.

Q. And this one looks a little different from those other ones, right?

A. Right.

Q. This one has, in addition to the ethanol and the propanol, it's also got methanol, isopropanol and acetone?

A. Yes.

Q. And this is another one I think--I know--This is another one that's a calibrator one?

A. That's right.

Q. Where, in laymens' terms, you're teaching the machine how to read where the substances come out on that graph pretty much?

A. This one, it's part of our calibration sequence, but we're actually not inputting it into our quantitation method, so it's not used in calculating any results beyond anything. It's not used in our calibration curve at all.

What we use it for is retention time markers for these other volatile compounds that we can possibly see

within the blood sample. There are also other volatiles that may possibly come out, but this is one that we use and we would quantitate if any of those are beyond the sizes of these different peaks of the extra volatiles in here.

Q. So, fair to say you don't care how much methanol is in there? You only care that methanol comes out at the spot where it's labeled methanol?

A. For this particular sample?

Q. Yes.

A. We want to make sure that we can see each one of these compounds so that there is a peak there. You can tell if you--if the jury gets to see this--that methanol peak is really small. The isopropanol peak is about the size of ethanol, and acetone is quite big. But they're all at .010 grams per 100 milliliters. They just react a little bit differently with the detector that we have on this instrument.

But what we're looking at in this particular sample is that we can actually see them. And then every sample beyond that, if we have an unknown sample where the retention time matches any one of these, we will then investigate further whether it's bigger or smaller than that peak, possibily note on the chromatogram if it's in there or not, and if it's larger than one of these peaks

we would would actually go on and quantitate how much is in there.

Q. All right. So what's also important about that is that you can see them. You can see methanol, isopropanol, acetone distinct from ethanol?

A. Yes.

Q. They'd show up at different places on the chart?

A. That's right.

Q. And if I could get you-- I think we did ethanol in red last time. If I could get you to circle ethanol. I think we did propanol in blue.

And then if you could just highlight the other three for me. Great.

And then there was one more thing on this that I wanted to discuss, and it was actually-- I will actually hand you back the other exhibits as well. There actually is one more thing on all three of these that shows up as just this little peak. That's called T-0, correct?

A. It's commonly called that in the scientific community. Basically what it's showing is how long it takes that very beginning of that sample that's being injected on the instrument to get through the instrument and to the detector.

Q. So in laymens' terms, that's sort of the beginning point of the sample?

A. Yes.

Q. Okay. And sorry. Could I get you to circle that in black for me?

MS. BELL: And for purposes of the record, Mr. Pieters just circled the T-0 in black on both Exhibits 10 and 11 as well as Exhibit 12. And I would ask for permission to publish Exhibit 12 to the jury.

THE COURT: Any objection, Attorney Cerwin?

MR. CERWIN: No.

THE COURT: Granted.

Q. And while they're looking at that I'll just ask you. The reason you look for things like-- The reason you put specifically methanol, isopropanol and acetone into this sample is because those are things that are sometimes found in people?

A. They're found pretty infrequently, especially that methanol. The isopropanol and acetone can be found in diabetics when they're drinking and then the body starts converting the sugars and stuff back into acetone and isopropanol.

Q. Sure. That's why you would show the machine those things as opposed to--I don't know--mercury or something unlikely to be in a human body?

A. Right.

Q. And T-0, that's the beginning of the sample as we discussed, that's in laymens' terms?

A. Yes.

Q. And so really nothing should be before T-0?

THE COURT: For the benefit of the reporter could you please tell us what T-0 is? Are you talking about the letters, T-0 or--

MS. BELL: Yes. I believe it's just--

Q. Perhaps Mr. Pieters can help me out with this. Is it just letter T Number 0?

A. Yeah. It's just the letter T and then the number 0. It denotes the time that we would actually want to start our timing from because anything before that is just instrument time that the instrument is waiting for the sample to get to the detector.

Q. It's sort of the starting of the stop watch, if you will?

A. Yes, right.

Q. So we know that it's important that nothing should be before T-0 and we want to see these distinctive peaks, correct?

A. I don't know that it's important that we see nothing before T-0. It's possible that because we're running so many of these different samples and we're

testing for anything that's volatile that's possibly in that blood at the time that we could have something that's coming off from a previous sample in that time before the next sample is actually being analyzed which would kind of count it back to the sample before it, but because we're not going to run ten-minute long detection windows for something that we usually see within three minutes, it would just then show us that we should be looking back and going back and re-testing those samples.

So in an ideal situation we would see nothing before T-0 and then only that ethanol peak and that one propanol peak and if anything else were in there we would try and match it up with those other retention times, but we do see other things within our chromatograms as well.

MS. BELL: Your Honor, permission to approach?

THE COURT: Granted.

MS. BELL: Thank you.

THE COURT: I think you're good for the rest of this exam.

MS. BELL: Thank you, your Honor.

Q. I'm showing you what's been marked as Exhibit 13. Do you recognize this as being a sample that was run on the same day as Anastasia's blood was

examined?

A. Yes.

Q. And this has something weird on it?

A. We do see a bunch of peaks before that, what we were calling that T-0 peak, along with some other peaks in between the ethanol and T-0 and between ethanol and N-Proponal.

Q. And the thing that's around T-0, what is that?

A. We don't know.

Q. And can I get you to mark that thing that I'm talking about?

MS. BELL: And, for the record, he's using a yellow highlighter to mark that.

Q. And you don't know what this is?

A. No.

Q. And has this been discussed in the lab?

A. Yes, it has.

Q. And has this been seen in samples other than this one that I'm holding?

A. Yes.

Q. And no one in the lab knows what that is?

A. No one within our lab knows what it is and we actually had the manufacturer of the instrument come out and asked them about it as well, and they don't know

what it is.

Q. And they actually came out and looked and they don't know what it is?

A. They not only came out and looked at our own work and looked at our chromatograms but actually re-created it within their own testing, I believe, and it's not something that concerned them so they didn't investigate it further than that.

MS. BELL: Your Honor, permission to publish to the jury?

THE COURT: Any objection?

MR. CERWIN: No.

THE COURT: Granted.

Q. Mr. Peiters, I'm showing you what has been marked as Exhibit 14 and 15.

MR. CERWIN: And, Your Honor, I'm going to object at this point. We have seen several of these documents so far without--and I kind of let it go a little bit--but we don't have any correlation how they affected Ms. Gummo's test, and I don't know of any information where we're going to get to that point. I'm going to object to it as irrelevant and we get to the point pretty soon.

THE COURT: Any response?

MS. BELL: Yes, your Honor. Mr. Peiters has

testified that every one that I have shown has been part of the run that was done on the machine that tested Anastasia's blood on the day that it tested her blood, that they don't know what is causing this, that the manufacturer doesn't know what is causing this.

The ones that I have shown so far have been before her sample. There are ones that I have that are after her sample that show that there's a problem throughout this run on this machine, and that's very relevant to whether the result of her blood is reliable.

THE COURT: The objection will be overruled.

MR. CERWIN: And just for the record, your Honor, defense counsel didn't mention that before and after, but I didn't say anything about Ms. Gummo's run of her tests. That's why I was making that objection noted.

THE COURT: Okay. Ask the question.

Q. Exhibit 14 and 15 are also chromatograms from the day that Anastasia's blood was tested?

A. Yes.

Q. Okay. And they both have this weird thing on them?

A. Yes.

Q. And could I get you to highlight that for me?

MR. CERWIN: I note the same objection as before, your Honor.

MS. BELL: Same argument as before.

THE COURT: Same ruling as before.

Q. I'm showing you what has been marked as Exhibit 16 and Exhibit 17. These are also chromatograms from that same day and in that same run?

A. Yes.

Q. And these both also have that weird thing?

A. Yes.

Q. And if I could get you to mark those.

THE COURT: For my benefit, sir, would you tell me what that weird thing means?

THE WITNESS: Basically it's the detector showing that there's something coming off of the instrument at that time. So we're seeing you can barely even call them peaks because it's more noise in the baseline. We expect when the instrument is analyzing a sample that we get a very smooth baseline until something comes off the instrument and we get a peak, and then we get some baseline again afterwards.

In this case when the sample is being injected at some point before the ethanol comes off, we're getting a bunch of small little fluctuations in the baseline that the softwear is actually integrating as peaks and

marking them as retention times.

THE COURT: Okay. Continue, Attorney Bell, please.

MS. BELL: Sure.

Q. Now, to be clear, just so I understand what you have said to the judge versus what you said to me earlier, you don't know what these are?

A. No, we don't.

Q. You don't know what's causing them?

A. No.

MS. BELL: Your Honor, permission to publish 14, 15, 16 and 17 to the jury?

THE COURT: Any objection?

MR. CERWIN: Just the same objection as before.

THE COURT: You may publish them.

MS. BELL: Thank you.

Q. (by Ms. Bell) Now, all of these chromatograms that I have shown you have numbers on them, correct?

A. Yes.

Q. That was vague. Let me rephrase that. There is, for instance, specifically, a sample name that's a combination of numbers and letters?

A. Yes.

Q. And there's a vial number that's just a

number?

A. Right.

Q. And the sample number will correlate to a person?

A. Yes.

Q. Okay. And the vial number will be the position in the run, correct?

A. Right.

Q. So, for example, I'm holding 10 and--vial number 10 and vial number 59. Ten would have been 49 before 59?

A. Actually, in this case the one that you have that's vial number 10 is part of the calibration system.

Q. You're right.

A. So it's a little bit separate from the other one but--

Q. Excellent point. My mistake. But the ones that the jury is looking at right now that were just blood samples, those--the numbers would be chronological?

A. Right.

Q. And the blood samples that have the weird things, those come in vials both before and after Anastasia's sample?

A. Yes.

Q. And you haven't taken these machines out of service?

A. I don't believe we have since that time. I believe they're still running on the same columns that we had at the time that this sample was analyzed.

Q. So you haven't taken the machines out of service?

A. No.

Q. And you've seen this weird thing in runs other than the one that Anastasia's blood was examined in?

A. Yes.

Q. And the ABFT for accreditation requires you to thoroughly investigate and determine the root cause of repeated Q.C. failures?

A. Yes.

THE COURT: Quality control perhaps?

MS. BELL: I would guess.

A. That's right.

Q. And that investigation and any corrective action has to be documented?

A. Yes, it does.

Q. And has the lab investigated and documented this?

A. This is not a quality control failure, but

we have investigated it. I'm not really sure of the documentation part of it, but we have I believe done our due diligence with it.

Q. And another part of the accreditation requires that there has to be a procedure for notifying clients of analytical and other deficiencies that have affected the forensic reliabiliy of recorded results, correct?

A. I don't know the bylaws of ABFT, but it sounds like something that would be in there.

Q. To the best of your knowledge the lab isn't affirmatively informing people whose blood samples have these things?

A. No.

MS. BELL: Your Honor, I would move Exhibits 13 through 17 into evidence.

THE COURT: Any objection from the State?

MR. CERWIN: Just the objection I have already noted.

THE COURT: The objection will be overruled, and the documents will be admitted.

MS. BELL: Thank you.

Q. Now, going back to some of the issues that you discussed with the State's attorney, you said that Ms. Gummo's blood sample, there's a 12-day window

between the time that it was taken and the time that it was analyzed, correct?

A. Yes.

Q. And you said that's not really an unusual amount of time?

A. No, it's not.

Q. And, in fact, sometimes samples are left in evidence lockers for God only knows how long?

A. Yes.

Q. And you're not the person who gets the samples and puts them in the cooler? You are the person who takes them out?

A. I have put them in a few times, but it's not a part of my regular job.

Q. Sure. And you wouldn't be able to say when Ms. Gummo's--when Anastasia's sample got to the cooler; you can only say when it was taken out?

A. Right.

Q. And you really can't say anything about where the sample was or how it was stored or whatever prior to the day it was taken out?

A. No.

Q. Now, you discussed a study that looked at blood and alcohol dissipation. Do you remember that?

A. I don't know that I actually talked about

one in particular with that. That's more of a many different studies over a long period of time.

Q. So you don't have a name for that study or studies that you were referencing?

A. For the one where we were talking about average elimination rates, I do not.

Q. Now, you talked about the fact that the anti-coagulant and the preservative in the tube wouldn't expire for hundreds and hundreds of years if they're kept sterile?

A. That's my understanding, yes.

Q. But we also discussed that the expiration date for the tube isn't really talking about the anti-coagulant and the preservative? It's talking about the seal on the tube?

A. That's right.

Q. And if the seal on the tube is expired, then that means air can be getting in?

A. Yes.

Q. And when you receive the blood kits, they have the expiration date for the tubes written or stamped on them?

A. Yes.

Q. And you don't write that date down?

A. No.

Q. And you don't retain the blood kit?

A. No.

Q. And by the time that a blood vial reaches you, if it's been properly sealed, that seal actually covers up the expiration date on the tube?

A. Yes.

Q. And you're not aware of anybody else writing the expiration date down when they look at the tubes?

A. I know that every once in a while we will see the blood drawer will write down the expiration date somewhere on that submittal form, but it's not our practice within our laboratory for any of our analysts to write down the expiration date, whether we notice it or not.

Q. And it's not written down anywhere in any of the paperwork that you've seen that relates to Anastasia's sample?

A. No.

Q. And you discussed the study that I believe you characterized as they put a whole bunch of yeast in the blood and it overwhelmed the preservative. That's the same preservative that's in your blood tubes?

A. That's right.

Q. Is that the Jenny Coleman study you're referring to?

A. I believe it is.

Q. Okay. And their conclusion isn't that the preservative was overwhelmed; their conclusion was that under this study the preservative didn't work?

A. Yes, it is.

Q. And this yeast that we're talking about, this is the candida albicans yeast?

A. Yes.

THE COURT: I'm sorry, Counsel. Can you spell that for the record, please?

MS. BELL: We will see.

THE DEFENDANT: C-a-n-d-i-d-a.

MS. BELL: And then it's Albicans, A-l-b-i-c-a-n-s.

THE COURT: Okay. Thank you both.

Q. And that's found in the air?

A. Yes.

Q. And it's actually found on the human body?

A. Yes.

Q. Found on the skin?

A. Yes.

Q. And are you aware of the Hillyer, Josephson, Blajchman, Vostal--are you aware of the study about bacterial contamination of blood components that discusses that skin can't be entirely decontaminated?

A. No, I'm not.

Q. That's not one of the studies that you keep up on as part of your job?

A. It's possible that I have read it somewhere along the line, but if it doesn't relate directly to blood, alcohol or some kind of drug-related study, it's usually not something that I concern myself with.

THE COURT REPORTER: And can you spell that, please?

MS. BELL: It's Hillyer, H-i-l-l-y-e-r, Josephson, J-o-s-e-p-h-s-o-n, Blajchman, B-l-a-j-c-h-m-a-n, Vostal, V-o-s-t-a-l, Epstein, E-p-s-t-e-i-n and Goodman, G-o-o-d-m-a-n.

Q. So you may have come across that study but it's not one that you could--that you're highly aware of, let's say?

A. No, I'm not.

Q. And, now, when you discussed the Jenny Coleman study and you say they put in so much yeast, truth of the matter is, yeast grows, correct?

A. It does.

Q. And it multiplies?

A. Yes.

Q. And so you could start out with a very small amount of yeast and at some point end up with a very

large amount?

A. If it's in the right environment for it to grow, then yes.

Q. And yeast likes wet conditions with sugar?

A. This particular yeast does.

Q. And blood is a liquid with sugar in it?

A. Yes.

Q. So if yeast were to get into blood, it would grow and create ethanol as a by-product?

A. It could, yes.

Q. And are you also familiar with the Blume and Lakatua study?

A I know that I have heard the names before, but I don't recall the study offhand.

MS. BELL: For spelling it's B-l-u-m-e and L-a-k-a-t-u-a.

Q. Are you familiar with a study that looked specifically at candida albicans and temperature?

A. It sounds familiar.

Q. And do you recall that the study found that the preservative wasn't effective, only refrigeration was?

A. I can't say that I remember the conclusions of the article, but that definitely sounds like a conclusion that could be drawn.

Q. Sounds reasonable?

A. Sounds reasonable.

MS. BELL: No further questions.

THE COURT: Any questions, Attorney Cerwin?

MR. CERWIN: Yes. Yes, I do. Thank you, your Honor.

REDIRECT EXAMINATION BY MR. CERWIN:

Q. Mr. Peiters, your Department and your lab of hygiene that you work for is accredited; is that correct?

A. Yes.

Q. So you follow all the same precautions, everything that you need to do, to stay accredited in your organization, and your specific area of hygiene follows that?

MS. BELL: Objection. Leading, and the witness already testified that he wasn't particularly familiar with everything that was necessary.

THE COURT: Overruled.

A. Yes, we do.

Q. Okay. So, when we're talking about that thing that was coming up a lot, you have done everything that has been deemed appropriate to figure out what that thing was and if it affected any of the tests, correct?

A. We investigated as far as we thought that we

needed to, and because it doesn't affect the actual ethanol or the internal standard in that chromatogram, it always comes off before and it's not something that we're concerned with in that particular test that we're doing. We just let it be there.

Q. So let me be clear. This doesn't affect the ethanol or your internal standards?

A. That's right.

Q. So that thing that we talked about for a long time actually has no effect on what we have been actually talking about in this case?

A. That's right.

Q. All right. So does each one of the tests that you do get a specific number assigned to it, an FX number?

A. Yes.

Q. Do you still have I believe Exhibit 3 up there, correct?

A. Yes.

Q. And what was the FX number for this test for Ms. Gummo?

A. It is 13FX3078. There are actually a couple extra zeros in between the FX and the first 3078, but when we talk about any of these samples we will skip the leading zeros before that final number. Once we get

into the, you know, hundred thousand samples we will have to put them in but beyond that we won't.

Q. Got you. So would that number show up on the actual chromatograms that were Ms. Gummo's?

A. Yes.

Q. Okay. So I'm going to mark-- Before I mark these I'm going to ask you to actually just identify that these are correct, the right ones for Ms. Gummo.

A. Yes.

Q. Okay.

MR. CERWIN: And we were up to what number? I will take those from you. I think they're already admitted into evidence.

THE CLERK: Correct.

MR. CERWIN: Thank you. So 18 you think? I will take your word for it on 18.

THE CLERK: I believe so.

Q. All right. I show you what's marked as Exhibit Number 18 and Exhibit Number 19. All right. Are these the documents you said were correlating to the tests that were actually done with Ms. Gummo's blood sample, correct?

A. Yes.

Q. Is there even a, quote, unquote, thing on there?

A. No, there's not.

Q. Okay. So everything we talked about with the thing didn't even come up in Ms. Gummo's tests?

A. No.

Q. All right.

THE COURT: One second. Is there another word for this other than thing?

Q. Anamoly?

A. That's probably the best I would use.

Q. I will call it anomaly.

THE COURT: I think that's a little more helpful.

Q. So the anomaly isn't in Ms. Gummo's test?

A. No, it's not.

MR. CERWIN: I move Exhibit 18 and 19 into evidence.

MS. BELL: No objection.

THE COURT: Received.

MR. CERWIN: Thank you. As well as Exhibit Number 3 which is the overall lab of hygiene tests.

MS. BELL: That's the double sided?

MR. CERWIN: Correct.

MS. BELL: No objection.

THE COURT: Received.

Q. So we also talked about-- You and me had

talked about whether or not these test tubes are kept in certain conditions and how that can affect it, and your testimony at that time was that you have never seen a test tube that you guys have at the state lab of hygiene or the Wisconsin Lab of Hygiene go up within reason; that is correct?

A That's right.

Q. Within the accepted range?

A. Other than that urine sample that I talked about but never a blood sample.

Q. Never a blood sample will go up. So all the questions about whether or not--how it was stored and the 12 days, you have never seen anything go up?

A. No.

Q. Why don't you write down the expiration date?

A. Usually they're covered up by the labels and the seal strips, but also because as long as we have enough blood in there to do our testing we don't really care how much got in there. We're just concerned with--that we can actually do the tests that we need to do.

Q. So the expiration is on that seal so that it wouldn't draw enough blood if the expiration was poor, right?

A. Right.

Q. And in fact, I believe you testified that you used for your lab some of the expired tubes that had come back that haven't been used yet just for your internal testing?

A. That's right.

Q. And have you ever had problems come back with those?

A. I think we have had a few of them where they wouldn't actually draw blood. But outside of that, we haven't had problems with results going up or anything out of that nature.

Q. And the yeast, the yeast that defense counsel has talked about and referred to several studies, the preservative in the tube that is in there is designed to make sure that the normal amount of yeast won't affect these tests, correct?

A. It's mostly designed to keep that blood sample in the state that it was drawn at so that nothing can happen in there while it's being transported and then before it's analyzed. It's not targeted to that yeast by any means. It's just a preservative to keep any biological process from happening.

MR. CERWIN: No further questions.

THE COURT: You don't have any more questions; do you, Attorney Bell?

MS. BELL: Sadly, yes, your Honor. I apologize.

THE COURT: Okay.

RECROSS EXAMINATION BY MS. BELL:

Q. Mr. Pieters, you discussed that you don't think the anomaly is a problem because it doesn't affect your standards and controls?

A. Not only that it doesn't affect our standards and controls, but it comes out at a completely separate retention time from the ethanol that we're actually quantitating on that test as well as any of those other unknown volatiles that we're looking for in our tests.

Q. You have actually seen the anomaly on one of your standards and controls, at least one?

A. I would believe that, yes.

MS. BELL: Your Honor, may I continue to approach the witness?

THE COURT: Yes, you may.

Q. Mr. Pieters, I'm showing you what has been marked as Exhibit 20. Do you recognize-- It's actually three pages. Could you take a quick look at all three? Do you recognize the first page of this exhibit as a document created by your lab?

A. Yes.

Q. And, in fact, this is a document that has your signature on it, correct?

A. Yes.

Q. And this is a document that shows the various standards and controls and what their values should be, correct?

A. This is our-- This is basically our cover sheet for our entire run. It tells us every one of our standards that we ran and their results. It tells us our squared value for the correlation of our curve for the quantitative portion of the run, and then it also documents all of our quality control samples, what their results were and then what the target values are for those quality control samples.

Q. And the quality control samples, they get run in amongst the unknown blood samples?

A. That's right.

Q. And they're labled differently. They don't have that 13 FX something number?

A. That's right.

Q. They have a number like--well, let's just look--like BLD263?

A. Yes.

Q. Which would stand for blood 263?

A. Yes.

Q. And I apologize for reaching in front of you here. In this particular run actually blood 263 was vial number 20, correct?

A. Yes.

Q. And this is the chromatogram for vial number 20?

A. Yes.

Q. And that says blood or BLD 263 in the sample name place?

A. Yes.

Q. And this has quite the pronounced anomaly?

MR. CERWIN: I will object to relevance. I don't think there's a foundation laid here that this was from anywhere near from when the test happened in Ms. Gummo's case.

MS. BELL: This is to show that it happens on their standards and controls which he said were not affected.

THE COURT: Overruled.

Q. So this has quite a pronounced anomaly?

A. Yes, it does.

Q. And, once again, I'm going to ask you to highlight that.

MS. BELL: And, your Honor, permission to publish to the jury? I think it's probably enough for

me to simply hold it up rather than pass it around.

THE COURT: Okay. Any objection other than--

MR. CERWIN: Just the standard at this point.

THE COURT: Okay.

Q. Now, I believe the State's attorney asked you something to the effect of if the amount of preservative in the vials would handle the amount of yeast you might expect might get in the vials. Is that more or less an accurate summary of the question you were asked?

A. I don't think so but--

Q. Well, then I will just ask my next question. There are no studies that say X amount of the type of preservative that the lab uses is effective against Y amount of yeast?

A. None that I am aware of.

Q. There are no studies that say any amount of preservative is effective against this yeast?

A. I can't cite any offhand, so I would again say not that I'm aware of.

MS. BELL: No further questions.

MR. CERWIN: No further questions.

THE COURT: Okay. Thank you, sir. You are excused.

THE WITNESS: Thank you.

(End of Excerpt)

STATE OF WISCONSIN)

COUNTY OF MILWAUKEE)

I, CHRISTINE M. ZAPF, a court reporter in and for the State of Wisconsin, do hereby certify that the foregoing pages, numbered 1 through 43 inclusive, have been carefully compared by me with my stenographic notes; that the same is a true and correct transcript of my shorthand notes taken on said date to the best of my ability.

Dated this 6th day of February, 2014.

Christine Zapf

Court Reporter