1 All right. Take a seat.

2 | Spell your first and last name, please.

THE WITNESS: Dr. L-U-I-S, Sanchez,

 $4 \mid S-A-N-C-H-E-Z$.

5 THE COURT: Go ahead.

6 DR. LUIS SANCHEZ,

7 having been first duly sworn, testified as follows,

8 DIRECT EXAMINATION

9 BY MR. RYTTING:

- 10 Q. Dr. Sanchez, would you please tell the Court what
- 11 | your current position is?
- 12 A. Yes. I am the Harris County Chief Medical
- 13 | Examiner.
- 14 | O. And --
- THE COURT: And you replaced?
- 16 THE WITNESS: Dr. Joye Carter.
- 17 Q. (BY MR. RYTTING) And when did you replace Dr. Joye
- 18 | Carter?
- 19 A. I became the Chief Medical Examiner in January of
- 20 | 2003; however, I acted as an Interim Chief Medical Examiner
- 21 | since October of 2002.
- 22 Q. And that means that you were in the office when
- 23 Dr. Carter was; is that correct?
- A. Yes. I was hired in 2001 as a Deputy Chief Medical
- 25 Examiner.

- Q. Okay. Now, you were asked to review, by us, material in this case pertaining to the autopsy of Melissa Trotter; is that correct?
 - A. Yes.

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- Q. And that included autopsy photos, as well as an autopsy report?
 - A. Yes, that's correct.
 - Q. And you also reviewed temperature data?
- A. Excuse me?
- 10 Q. Temperature data?
- 11 A. Yes.
- Q. I would like to -- and you brought with you today several photos from the autopsy; is that correct?
 - A. Yes. I brought copies of the autopsies (sic) taken during the post-mortem examination.
 - MR. RYTTING: Your Honor, we would like to have entered into evidence in this hearing, the photographs that were taken at the autopsy while our witness is testifying. And we have -- there's a number of them. It might expedite matters if we have them entered all at once?
- 21 THE COURT: All right. We can do that, but 22 make sure the State is aware of it.
- MR. BRUMBERGER: The State would have no

 objection to this, Your Honor. There are at least two photos in

 here that are of the victim's vagina after being removed at the

1 autopsy, and I don't believe that has any relevance to the 2 entomological evidence in this case, so the State would only 3 object to the photos of that. 4 MR. RYTTING: May I reply? It clearly does 5 have relevance to the entomological evidence. 6 THE COURT: I'll let the exhibits in. 7 Let's proceed. 8 MR. RYTTING: And the reason why is that it 9 shows that there was no insect infestation of the vaginal 10 region. 11 THE COURT: You have to stop talking so she can 12 hand them to me. Hand them to her. 13 THE COURT REPORTER: Are they marked? 14 MR. RYTTING: They are not marked. May we have 15 them marked as Group Exhibit 1? 16 THE COURT: Get me an envelope and put these in 17 the envelope and mark these as Group Exhibit 1. 18 MR. RYTTING: Your Honor, since he's going to 19 be referring to the individual photos, maybe we should have them 20 marked individually rather than a group exhibit. 21 THE COURT: It's your exhibits. I don't care. 22 0. (BY MR. RYTTING) Dr. Sanchez, I'd like to show you 23 Exhibit No. 1. And what is that? 24

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dissected out of the body.

This is a photo of the vaginal wall after it was

And is there anything -- does this photograph show 1 Q. 2 any sort of insect activity? 3 Α. No. I show you Defendant's Exhibit No. 2. And would 4 5 you identify that? This is a closeup photograph, also of the posterior 6 Α. 7 vaginal wall, including the cervical wall, which is the opening 8 into the cervix, which is into the uterus. And there's several incisions. What were those 9 Q. 10 for? 11 MR. BRUMBERGER: Objection, Your Honor. this is going into the pathology, not the entomological 12 13 evidence. 14 THE COURT: What's your connection? MR. RYTTING: Well, there was an allegation of 15 16 vaginal bruising in this case. THE COURT: We heard all about that at the time 17 18 of trial. MR. RYTTING: Yes, Your Honor. But we have --19 one of our claims is that this has been retracted from the 20 21 M.E.'S Office. THE COURT: What's been retracted? 22 MR. RYTTING: The diagnosis of vaginal bruising 23 Our position is that that was erroneous. That --24 occurring.

Ask him.

THE COURT:

1 Q. (MR. RYTTING) And what was the -- what were those incisions to do? 3 Α. This was the incision made with a blade, looking for evidence of bruising in the underlying tissues. 5 And you've reviewed that evidence, and what is 6 your -- what is your conclusion about what the evidence shows? 7 It is my impression that what we are looking at here is just discoloration, most likely the congestion of 8 9 vessels. Ο. 10 And --11 THE COURT: All right. Well, Counselor, first 12 of all, we do our examination from counsel table. Okay? 13 MR. RYTTING: Yes, Your Honor. I'll have to wait for the exhibits to be marked 14 15 and then I'll go back. 16 THE COURT: Do you have any other exhibits 17 besides these? 18 MR. RYTTING: Yes, Your Honor, we do. We have, 19 we have an autopsy report, which -- we have an autopsy report 20 which Dr. Sanchez has brought a copy of. 21 THE COURT: Get all your exhibits marked at the 22 same time so we don't have to waste time. We'll take a quick 2.3 break while you do that.

THE COURT: Let's continue.

(BRIEF RECESS)

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- Q. (BY MR. RYTTING) Dr. Sanchez, I'd like to ask you
 a couple of questions about the protocol of doing autopsies as a
 Harris County Medical Examiner. Are these -- where is the
 autopsy actually done, what type of room?
- 5 A. They're done in what we call an autopsy suite, it's 6 almost like a surgical suite.
 - Q. And do you have several bodies in there at once when the autopsy is performed?
 - A. We only have one body per work station.
- Q. Is there adequate ventilation, an air conditioning or air system to prevent contamination in the Harris County

 Medical Examiner's Office?
- 13 A. Yes.

- Q. You've reviewed the autopsy report of Dr. Carter, have you not?
- 16 A. Yes.
- Q. Do you have any reason to suspect the integrity of that autopsy report? Did she follow protocol?
- 19 A. She followed protocol.
- Q. And was any type of testing done, such as sectioning, in this case?
- A. There was no microscopic evaluation done in this case, but there was other analyses that were done, like a toxicology analysis on the fluids.
- Q. In particular, I can show you the autopsy report.

I'm handing him an exhibit, I believe it's 41, 1 the autopsy report of Melissa Trotter. Does it reflect that the 2 3 pancreas was sectioned in this case? Excuse me, counsel, does it reflect what? 4 Α. 5 Q. That the pancreas was removed and sectioned in this case? 6 7 Α. Yes. 8 MR. BRUMBERGER: I'm going to object to the 9 relevance to the entomological evidence in this case. 10 THE COURT: Again, I don't see the relevance. 11 MR. RYTTING: I was going to establish, Your 12 Honor, that the autopsy evidence is going to corroborate the 13 entomological, forensic entomological conclusion about when this 14 body was placed in the woods. It would also rebut the State's 15 repeated argument --16 THE COURT: I'm giving you a wide scope here, 17 so let's tie this up. 18 MR. RYTTING: Yes, Your Honor. 19 MR. BRUMBERGER: Your Honor, if they're going 20

MR. BRUMBERGER: Your Honor, if they're going to be getting into all the pathology that might corroborate the entomological evidence, which is not new evidence and was not raised in the Successor application, the State is unprepared to respond to any of this.

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THE COURT: I agree. This hearing was supposed to be about the evidence involving entomology and not about the

1	quality of the pathology report or about any kind of
2	inaccuracies of that report. Now, if it leads to something, I
3	mean, simply, for instance, the deterioration of the body, I
4	mean, if this witness has an opinion about how long that body
5	was exposed to the elements, that might be relevant.
6	Do you have such an opinion?
7	THE WITNESS: Yes.
8	THE COURT: What is your opinion?
9	THE WITNESS: My opinion is it shows that the
10	body was not in that environment for more than two weeks, in
11	that environment.
12	THE COURT: That environment being the outside?
13	THE WITNESS: Outside in the forest, yes.
14	THE COURT: What is the date of the pathology
15	report?
16	THE WITNESS: Well, the autopsy was done on
17	January the 3rd, 1999. And the autopsy report was signed on
18	January 11th of 1999.
19	THE COURT: So the body was found when?
20	THE WITNESS: On the 2nd.
21	THE COURT: On January the 2nd?
22	THE WITNESS: Right.
23	THE COURT: So, you're saying the body was
24	definitely exposed for two to three weeks?
25	THE WITNESS: Well, my opinion is based on the

changes, on the post-mortem changes that we see on the body.

That body most likely was not in that forest for more than two weeks. It probably was some place else before that, but not in that forest.

THE COURT: Why do you say that?

THE WITNESS: Well, I would have expected the changes of decomposition and break down of the body being a lot more advanced than what was observed and documented during autopsy. And again, by decomposition and breaking, again breaking down of the tissue, we look at color changes in the body, the production of gas, gases by bacteria, bloating, skin slippage. Those are the types of changes that we look physically on the body to help us determine the time of death.

THE COURT: So, do you have an opinion about the time of death?

THE WITNESS: No. I mean, when the death happened, I really don't know. You know, my opinion was -- my opinion is that, based on the evidence that I have reviewed, it is unlikely that the body was there in that field for over 10 to 15 days.

THE COURT: Okay. Go on.

- Q. (BY MR. RYTTING) Particularly, the basis of that opinion, if you look at the pancreas, what does it describe?
- A. You know, the pathologist described the pancreas.

 It gave the weight of the pancreas and also the description of

the morphological features of the pancreas.

- Q. And was she able to remove this pancreas for observation and sectioning?
 - A. Yes.

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- Q. And in your experience, does the pancreas autolyze virtually completely within a matter of days?
- A. Well, it really depends on the circumstances. But it's one of those, again, organs of the body that tends to autolyze quite rapidly.
- Q. In fact, it may, under hostile conditions, autolyze completely within, say, 48 hours?
- A. Well, I wouldn't say within 48 hours, but sometimes quite quickly, yeah, within days.
 - Q. What does it mean for it to be autolyzed?
 - A. That means it's, it's the breakdown of the tissue due to their own, again, enzymes and chemicals. It's not due to bacteria. It's due to the breakdown of those cells that are releasing enzymes that basically break down the tissue.
- Q. And once the organ is completely autolyzed, can the pancreas be sectioned and examined for destruction?
 - A. No. If it's autolyzed, it's become like liquid, liquefied.
- Q. Similarly, the autopsy report refers to the liver.

 And what does it reflect Dr. Carter did in order to examine the

25 liver?

- A. Well, the liver was still there. She was able to identify the liver. She was able to take the liver out of the body and section the liver. And she was able to do an evaluation of the architecture of that organ.
- Q. And in your experience, does the liver also autolyze relatively quickly?
- A. Yes. I mean, all the organs eventually would break down and will autolyze. The liver usually does not autolyze as quickly as the pancreas or the adrenal glands.
- Q. Additionally, Dr. Carter examined the gastrointestinal tract, did she not?
- 12 A. Yes, she did.
 - Q. And was she able to identify the mucosa lining? Was it still present, according to the autopsy?
 - A. Yes.

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- Q. What type of tissues is the mucosa?
- A. It's the inside lining of those, of the intestine, of the guts.
- 19 Q. Is it a fragile tissue?
- 20 A. Yes.
- Q. And does it also, like the pancreas, autolyze completely within a fairly short period of time when it's exposed, as this body was, in the forest?
- A. Yes. Like any other organs, it will break down and autolyze.

Q. If that body had been out in the woods for 25 days in the temperature and conditions that are reflected in the autopsy -- in the entomological report, would you expect that mucosa to be present?

MR. BRUMBERGER: Judge, the State's going to object one last time on relevance, the entomology. All this pathological information has been available for the applicant to

object one last time on relevance, the entomology. All this pathological information has been available for the applicant to contest at trial, in his initial application. None of this was raised in the Successor Application.

THE COURT: I agree. This is covering ground that we've already used. And you're not making any connection.

Make your point.

- $$\operatorname{MR.}$$ RYTTING: I'll make the connection with the gastrointestinal tract right now.
- Q. (BY MR. RYTTING) The gastrointestinal tract was intact, was it not?
- 17 A. Yes.

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- 18 Q. There was little to no insect infestation of the 19 gastrointestinal tract either, was there?
 - A. There was no -- small evidence of the compositional changes.
 - Q. So, there was no insect activity at all, is that correct, that is reflected by the autopsy?
 - A. I would have to refer to the autopsy report.
 - No. There was no evidence of post-mortem

animal activity in the gastrointestinal tract.

- Q. And by animal activity, you also would include insects; is that correct?
 - A. Yes.
 - Q. And other parasites; is that correct?
- A. Yes.

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- Q. I'll have to show you what's been marked as Defendant's Exhibit 3. What does that reflect?
- 9 A. This is a photograph taken of the autopsy of the
 10 back of the body, the lower extremity of the legs after the body
 11 was undressed.
 - Q. And is there evidence of insect activity around the -- well, first of all, does it reflect the genital organs of the victim?
 - A. It shows the back of the buttocks and the, the perianal region.
- Q. And does it reflect any insect activity or infestation, particularly by maggots of these areas?
 - A. No. This, even though this is not a closeup, I can only see just skin slippage and discoloration, but not fly activity or maggot activity.
 - Q. I'd like to show you Defendant's Exhibit No. 14.

 And what does that depict?
- A. This is a photo of the body before the body was undressed and shows the trunk with the chest and abdomen and the

front of the legs.

- Q. And in what state does it show the clothing, particularly the pants the lower torso is in?
- A. Well, the torso is exposed and then the blue jeans are actually, appears to be clean, at least the front of the jeans.
- MR. RYTTING: Your Honor, I have no more questions of the Doctor.

CROSS-EXAMINATION

BY MR. BRUMBERGER:

- Q. Dr. Sanchez, when a body has been outside or inside, regardless, for an extended period, two weeks or longer, does forensic entomology, if it can be applied, tend to give more accurate results than pathological findings as to the actual time of death?
- A. Not really. I mean, it really depends. In some cases, yes; in other cases, no. Sometimes you have cases where the animals, they do not have access to the body. So, in that particular case, then the changes that we see on the body are more relevant and more important to the case when we talk about post-mortem interval, so it really depends.
- Q. Okay. In a case such as this where the body was outside for some period of time, can entomology provide more accurate results than what you can observe pathologically?
 - A. It could provide -- again, this is another source

- of information. I don't think it's more accurate, but it's another piece of information that we should evaluate when determining the post-mortem interval.
- Q. And you're not saying, based on your observations, that it's impossible for Melissa Trotter to have been murdered on December 8th of 1998, are you?
 - A. Yes. I'm not saying that.

8 That is possible.

- Q. And with regard to the pancreas autolyzing quickly and the liver autolyzing not as quickly, but autolyzing as well, your opinion, as you've expressed, is that this body was certainly out there more than just the 48 hours that counsel was alluding to, correct?
- A. Yes. I think it was probably there more than 48 hours, yes.
 - Q. And there were clothes on the body when it was recovered, correct?
- 18 A. Yes.

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- Q. There were pants on, as well as a sweater and underlying clothing that were pulled up on the chest?
- 21 A. That's correct.
- Q. And that clothing would serve as a preventative barrier to some degree to insects colonizing everywhere on the body, correct?
 - A. Yes. But not to the head or hands that were

- exposed. And also, the abdominal area looks like it was exposed also.
 - Q. And on the exposed areas, there was some maggot activity on some of the exposed areas of the body, was there not?
- A. Only on the head, but not on the hands and not on the abdominal region, just on the head area.
- MR. BRUMBERGER: No further questions, Your Honor.
- MR. RYTTING: I have no other questions either

 11 for this witness, Your Honor.
- THE COURT: Does the degree of the temperature preserve bodies longer if it's colder?
- THE WITNESS: Yes. Yes.
- THE COURT: So this body being discarded in the middle of the winter --
- 17 THE WITNESS: Right.
- THE COURT: -- December of the year would mean
- 19 | what to you?

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- 20 THE WITNESS: Well, that depends on the
 21 temperature, Your Honor. I mean, if the temperature is low,
 22 ves. Low temperatures can delay the process of decomposition
- 22 | yes. Low temperatures can delay the process of decomposition.
- 24 delay the activity of insects or maggots, so forth?
- THE WITNESS: Yes. Of some animals, yes.

THE COURT: Well, low temperatures would also

1 THE COURT: But, so, what you're telling me is 2 that -- you still have the undigested food that was in the 3 stomach --4 THE WITNESS: Yes. 5 THE COURT: -- purchased on the day of the 6 disappearance. We still have the body having bruising to the 7 right side of the head. Isn't that correct? None of those things are changing in your report? 8 9 Is there anything changing in your report? 10 THE WITNESS: No. I mean, I just -- again, 11 some of the -- I would expect for a body that was outside in the 12 elements --13 THE COURT: To have deteriorated a little bit 14 more rapidly? 15 THE WITNESS: Right. 16 THE COURT: Except for the fact that it might 17 have been very cold, and therefore, that would explain that. 18 THE WITNESS: Right. Except that if there were 19 changes in temperature. We see sometimes even that that tends 20 to actually accelerate sometimes the decomposition. 21 THE COURT: Are you saying anything different 2.2 in your testimony today that differs from Dr. Carter's testimony 2.3 of several years ago? 24 THE WITNESS: Well, the fact that, again, I 25 don't think that the body was in that type of environment for

1 more than 10 to 15 days or out, two weeks. And that the pattern of the decomposition in this case is a little bit unusual. It's 2 3 not what we tend to see in most of our cases, especially with 4 the mold that she saw all over her body. 5

THE COURT: Okay.

6 THE WITNESS: Yes.

7 THE COURT: All right. Thank you, Doctor, for

8 appearing.

9 MR. BRUMBERGER: Your Honor, just a few final

10 questions from the State now?

11 THE COURT: If I have opened up a door, yes, go

right ahead. 12

13 RECROSS-EXAMINATION

- 14 BY MR. BRUMBERGER:
- 15 I just want to clarify that the autopsy photos you 16 reviewed, those are photos from the M.E.'S file in this case?
- 17 Α. Yes.
- 18 And there was at least one photo in that file that 19 you were unable to review -- excuse me, one photo admitted in 20 evidence that you did not believe was in that file?
- 21 That's right, from the posterior vaginal wall, Α. 22 yeah.
- 23 MR. BRUMBERGER: No further questions, Your
- 24 Honor.
- 25 MR. RYTTING: Your Honor, I have two other