

1 SUPERIOR COURT OF CALIFORNIA

2 COUNTY OF ALAMEDA

3 BEFORE THE HONORABLE WINIFRED Y. SMITH, JUDGE PRESIDING

4 DEPARTMENT NUMBER 21

5 ---oOo---

6 COORDINATION PROCEEDING)
SPECIAL TITLE (RULE 3.550))

7)
8 ROUNDUP PRODUCTS CASE)

JCCP No. 4953

9 _____)
THIS TRANSCRIPT RELATES TO:)

10 Pilliod, et al.)

Case No. RG17862702

11 vs.)

12 Monsanto Company, et al.)

Pages 4604 - 4798

Volume 28

13
14
15 **Reporter's Transcript of Proceedings**

16 Tuesday, April 30, 2019

17
18 Reported by: Kelly L. Shainline, CSR No. 13476, RPR, CRR
19 Lori Stokes, CSR No. 12732, RPR
20 Stenographic Court Reporters



23 **BAY AREA REPORTING**
24 SOLUTIONS

25 888.526.8243
www.BayAreaReportingSolutions.com

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

APPEARANCES OF COUNSEL:

For Plaintiffs:

THE MILLER FIRM, LLC
108 Railroad Avenue
Orange, Virginia 22960
(540) 672-4224
BY: MICHAEL J. MILLER, ATTORNEY AT LAW
mmiller@millerfirmllc.com

BAUM HEDLUND ARISTEI & GOLDMAN PC
10940 Wilshire Boulevard, 17th Floor
Los Angeles, California 90024
(310) 207-3233
BY: R. BRENT WISNER, ATTORNEY AT LAW
rbwisner@baumhedlundlaw.com
PEDRAM ESFANDIARY, ATTORNEY AT LAW
pesfandiary@baumhedlundlaw.com

(APPEARANCES CONTINUED ON FOLLOWING PAGE)

1 **APPEARANCES:** (CONTINUED)

2 For Defendants:

3 EVANS FEARS & SCHUTTERT LLP
4 2300 W. Sahara Ave, Suite 950
5 Las Vegas, Nevada 89102
6 (702) 805-0290

7 **BY: KELLY A. EVANS, ATTORNEY AT LAW**
8 kevans@efstrialallaw.com

9 HINSHAW
10 One California Street, 18th Floor
11 San Francisco, California 94111
12 (415) 362-6000

13 **BY: EUGENE BROWN JR., ATTORNEY AT LAW**
14 ebrown@hinshawlaw.com

15 GOLDMAN ISMAIL TOMASELLI BRENNAN & BAUM LLP
16 564 West Randolph Street, Suite 400
17 Chicago, Illinois 60661
18 (312) 681-6000

19 **BY: TAREK ISMAIL, ATTORNEY AT LAW**
20 tismail@goldmanismail.com

21 (Multiple other counsel present as reflected in the
22 minutes.)

23

24

25

26

27

28

29

30

31

32

33

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I N D E X

Tuesday, April 30, 2019

DEFENDANT'S WITNESSES

PAGE VOL.

PHALEN, ROBERT

Direct Examination by Mr. Evans	4609	28
Voir Dire Examination by Mr. Wisner	4619	28
Direct Examination resumed by Mr. Evans	4620	28
Cross-Examination by Mr. Wisner	4663	28
Redirect Examination by Mr. Evans	4726	28
Recross-Examination by Mr. Wisner	4733	28

1 Tuesday, April 30, 2019

9:08 a.m.

2 **P R O C E E D I N G S**

3 **---oOo---**

4 (Proceedings commenced in open court in the
5 presence of the jury:)

6 **THE COURT:** Good morning, everybody. Good
7 morning, ladies and gentlemen.

8 We're going to continue with the next witness
9 presented by Mr. Evans for the defense.

10 You may proceed.

11 **MR. EVANS:** Good morning. Thank you,
12 Your Honor.

13 Good morning, ladies and gentlemen of the
14 jury.

15 The defense calls Dr. Robert Phalen.

16 **THE CLERK:** Sir, would you remain standing for
17 one second and raise your right hand.

18 **ROBERT PHALEN,**
19 called as a witness for the defendant, having been duly
20 sworn, testified as follows:

21 **THE WITNESS:** I do.

22 **THE CLERK:** Thank you. Please be seated.

23 And would you please state and spell your name
24 for the record.

25 **THE WITNESS:** Robert Phalen. Spell the last

1 name?

2 **THE CLERK:** Yes, sir.

3 **THE WITNESS:** P, as in Peter, H-A-L-E-N.

4 **THE COURT:** All right. You may proceed,
5 Mr. Evans.

6 **MR. EVANS:** Thank you, Your Honor.

7 **DIRECT EXAMINATION**

8 **BY MR. EVANS:**

9 **Q.** Good morning, Dr. Phalen. How are you?

10 **A.** Good.

11 **Q.** First time in court today?

12 **A.** Yes, first time ever.

13 **Q.** Well, I think I may have been here a day or
14 two more than you, so let's see if we can struggle
15 through today; okay?

16 **A.** Sounds good.

17 **Q.** All right. So could you introduce yourself to
18 the ladies and gentlemen of the jury, please.

19 **A.** My name is Robert Phalen. I'm an associate
20 professor in industrial hygiene and safety at the
21 University of Houston Clear Lake.

22 **Q.** All right. And when you say you're an
23 associate professor, what are you associate professor
24 of?

25 **A.** Well, my primary area of expertise is

1 industrial hygiene.

2 Q. Okay. And what does industrial hygiene mean?

3 A. We're the ones that go out into the workplace,
4 into the homes, into the communities, and we assess
5 exposures. And we determine whether or not they're
6 acceptable. And if they're not acceptable, then we work
7 to control them.

8 Q. All right. And the term "industrial hygiene,"
9 we talked about this before, is that a -- is it limited
10 to what you do, to actually what goes in industry or in
11 a factory?

12 A. No, it's not. We have been trying to change
13 the name for about 20 years now. So generally when we
14 try to explain what we do, it's occupational safety,
15 it's like occupational and environmental safety and
16 health. So we're -- it's not limited. What we do in
17 the workplace also applies to the community and people's
18 homes.

19 A lot of what we do is things like indoor air
20 quality in people's homes.

21 Q. All right.

22 MR. EVANS: Permission to publish his CV?

23 MR. WISNER: No objection, Your Honor.

24 THE COURT: Granted.

25 (Document published.)

1 **BY MR. EVANS:**

2 **Q.** And I'd like to just talk about -- starting
3 out by talking a little bit about your educational
4 background. Tell us where you got your education.

5 **A.** I have a bachelor's degree in biology from
6 Cal State Fullerton. And then also a doctorate in
7 environmental health science from UCLA.

8 **Q.** And it says there on the top that you're a
9 Ph.D. in environmental health science industrial
10 hygiene. And then your dissertation, why don't you tell
11 the ladies and gentlemen of the jury about your
12 dissertation?

13 **A.** My dissertation was focused on pesticides,
14 looking at methods to evaluate pesticide exposures, and
15 also chemical permeation of pesticides, primarily
16 focused on protective clothing, but with the main
17 emphasis that you're protecting the skin.

18 **Q.** And what is -- it says here surface analysis
19 for the permeation of captan. What is captan?

20 **A.** Captan is a fungicide. So it's a common
21 fungicide used with strawberries and apples.

22 **Q.** Okay. Now, if you could turn to the next page
23 and let's look a little bit about your employment.
24 Where -- you said -- where are you currently employed?

25 **A.** I'm at the University of Houston in

1 Clear Lake. It's a bay area right adjacent to the
2 Johnson Space Center, NASA.

3 Q. And it says here --

4 THE COURT: I think there may be a problem
5 with the screen.

6 MR. ISMAIL: Does yours work, Your Honor?

7 THE COURT: Mine is fine.

8 (Pause in the proceedings.)

9 MR. WISNER: For some reason, the output here
10 isn't working. It's not communicating.

11 Mr. Evans, do you prefer to just keep going
12 and use the big screens?

13 MR. EVANS: Does it work for looking this way
14 or that way? Or do we need to take a break and fix
15 that?

16 (Discussion off the record.)

17 THE COURT: All in favor of going forward
18 without the screen, raise your hand?

19 All right. Sounds good.

20 (Laughter.)

21 MR. EVANS: Shall I proceed, Your Honor?

22 THE COURT: I think we should go ahead and
23 proceed. If you don't mind just looking left or right
24 until we can figure it out.

25 MR. EVANS: Thank you, Your Honor.

1 **Q.** So it says here you're teaching industrial
2 hygiene courses.

3 **A.** Correct.

4 **Q.** Who do you teach and what do you teach?

5 **A.** Well, I teach undergraduate and graduate
6 level. We have a ABET-accredited bachelor's program in
7 both industrial hygiene and safety, and that's one of
8 the reasons why I came to University of Houston, for the
9 ABET accreditation.

10 And then also graduate level. And I'm also
11 there for the opportunity to work with grad students to
12 do meaningful research and to advance the field.

13 **Q.** If you look at page 12 of the CV, does it have
14 your teaching experience there?

15 **A.** Yes.

16 **Q.** And do any of those courses relate to topics
17 that you're going to be talking to us about today?

18 **A.** Yes. I mean, the first course there,
19 industrial health and hygiene, we cover exposure
20 assessment in there. Noise, not so much.

21 Moving down, number 6, industrial hygiene
22 sampling analysis, that's directly related to exposure
23 assessment. Statistical analysis, that's a part of
24 exposure assessment. The recognition occupational
25 diseases, it's more of a path of physiology, but that's

1 important to understand the body and how things interact
2 with the body. So that's related.

3 The air pollution class has some exposure
4 assessment, more related to air pollution, so in this
5 case not much relationship because inhalation is not of
6 concern here.

7 And then the last one, that graduate level
8 analytical methods class, that is related to exposure
9 assessment.

10 Q. All right. And let's go back, if we could, to
11 page 2. And prior to working at the University of
12 Houston, where did you work?

13 A. I was at Cal State San Bernardino, Inland
14 Empire, just in from Los Angeles, for about nine years.
15 I was also the director of the Palm Springs Institute
16 for Environmental Sustainability for several of those
17 years. And we had a satellite campus in Palm Springs.

18 Q. All right. And what types of courses did you
19 teach during those years?

20 A. Similar. A little more public health, more
21 environmental health science, some industrial hygiene
22 courses, some of the air pollution, some of the exposure
23 assessment, but definitely more public health-based.

24 Q. And then if you move down, it looks like you
25 were an assistant professor before you became associate

1 professor?

2 A. Yeah, just general progression. Start out as
3 assistant and then if you prove yourself, you go to
4 associate, and then onto full.

5 Q. Now, before working in academia, did you
6 actually work as an industrial hygienist?

7 A. I did, yeah.

8 Q. All right. Let's turn the page. And 1997 to
9 2001, four or five years you worked as an industrial
10 hygienist?

11 A. Yes. I was at the Stockman Group for about --
12 for five years. And that's where I did a lot of
13 exposure assessment in these industries that you see
14 there.

15 So a number of clients, hundreds actually, of
16 different work sites, and also residential work that was
17 done there. And so -- and each one of these listed,
18 those are areas where I've done exposure assessment.

19 Q. All right. And I think the jury is probably a
20 little tired of hearing about one study after another.
21 So let's do a little CSI.

22 Have you had some cases where you were out
23 investigating, you know, what's going on and why someone
24 was getting sick or not sick?

25 A. Yeah, that's kind of what we do. That's the

1 enjoyable part of the field is the CSI aspect. We are
2 doing investigations so...

3 Q. Do you have some examples of those that you
4 found interesting?

5 A. Yeah. I had one where the person was --
6 Wilshire district, high-rise.

7 Q. Was that Los Angeles?

8 A. Los Angeles, yeah. So a broker. He -- the
9 only way he could explain it was he felt like he was
10 being possessed. So after an hour or two sitting there
11 at his desk doing his job, there was nothing else
12 around, he felt this feeling coming over him, tingling
13 and numbness, and he was concerned that there was
14 something in his workplace.

15 He went to an occupational physician to try to
16 figure out what was the problem. They couldn't figure
17 it out. The physician called us. I went out there and
18 did an evaluation.

19 That one I couldn't find anything. It was a
20 pretty clean environment. The only thing that coincided
21 with this feeling was he was drinking some water. So he
22 had some water, and soon after he was drinking that
23 water he had this rush come over him.

24 Turns out that the water was coming from his
25 house. His wife was preparing it for him. And sent him

1 back to the doctor to do some testing, some biological
2 monitoring testing for heavy metals because that's what
3 I suspected. Came back positive for arsenic.

4 So that would be one example of when --

5 Q. And did your investigation stop at that point?

6 A. Pretty much. He wouldn't talk to me after
7 that point. You know, tried to do some follow-up
8 testing. But I did tell him that he really needed to
9 look at this water carefully and what he was drinking.

10 Q. And did you have other examples in your
11 working as an industrial hygienist where there were
12 situations where people were just trying to understand
13 what's going on with respect to their work situation,
14 for example?

15 A. Yeah. There's a lot of them. I've had cases
16 where people were opening shipping containers and they
17 were throwing up, they were going to the hospital,
18 didn't know what to suspect.

19 Physicians, the company -- they thought that
20 it was possibly some kind of fumigant, some kind of
21 pesticide on the pallets that were coming over in these
22 shipments from China.

23 And I just followed normal investigation
24 principles. And one of those is to find out as much
25 information as I can ahead of time. I simply asked one

1 of the main persons there that received that shipment
2 what was different. They said that the main thing was
3 different was that they were on pallets, they had never
4 received these shipments on pallets. And the other was
5 that they're wet.

6 So I still investigated that fumigant, that
7 pesticide exposure, but I was pretty confident it was
8 mold. And sure enough, it was mold. And it was the
9 highest mold spore counts I've ever seen in my
10 experience.

11 Q. All right. Let's shift gears for a minute and
12 look at your publications.

13 And have you published peer-reviewed articles?

14 A. Yes.

15 Q. And what are some of the topics that you've
16 addressed in those peer-reviewed articles?

17 A. Chemical permeation of pesticides. A lot with
18 protective clothing and as it relates to dermal
19 exposures. And I've also done some exposure
20 assessment-type monitoring for air pollutants.

21 MR. EVANS: All right. At this point,
22 Your Honor, we tender Dr. Phalen as an expert with
23 respect to dermal absorption and exposures.

24 MR. WISNER: Very brief voir dire, Your Honor.

25 ///

VOIR DIRE EXAMINATION

BY MR. WISNER:

Q. You got your Ph.D. from UCLA?

A. Correct.

Q. Do you agree UCLA is one of the greatest schools in the world?

A. I'd agree it's pretty good. Yeah, I enjoyed my time there.

Q. It's my college.

Second point, Doctor. You don't intend to offer any opinions about whether or not Roundup caused Mr. or Mrs. Pilliod's cancer?

A. That's not something I evaluated.

Q. Great.

MR. WISNER: No objection, Your Honor.

THE COURT: Proceed.

MR. EVANS: All right. And, Your Honor, I shared with counsel the PowerPoint slides --

MR. WISNER: No objection.

MR. EVANS: -- that the witness helped us prepare and he didn't have any objection.

So go ahead and publish the first PowerPoint slide.

THE COURT: Do I have a copy?

MR. EVANS: May I approach, Your Honor?

1 **THE COURT:** Yeah. Thanks.

2 (Demonstrative published.)

3 **DIRECT EXAMINATION** **(resumed)**

4 **BY MR. EVANS:**

5 **Q.** Could you just describe for the ladies and
6 gentlemen of the jury what you did in this case, at a
7 very general level?

8 **A.** Very generally it's standard industrial
9 hygiene practice to do an investigation, collect as much
10 information that I can on the exposure scenario.

11 What I'm looking at is essentially what would
12 be the route of exposure, how is it going to get on the
13 body, and if any, how is it going to get in the body.
14 And because that's the key thing is the dose, what get's
15 in the body if we're talking about health effects.

16 And so that's what I did here was did a
17 thorough review of the literature to see what's out
18 there. There's actually quite a bit. I ended up
19 reviewing over 100 articles and documents, and I'm sure
20 you've heard about many of them.

21 And then the next part of that is to see how
22 they were using it, how would that influence their
23 exposure, how would it get on their skin.

24 So I reviewed the depositions of Mr. and
25 Mrs. Pilliod. And I also did a site visit at their

1 primary residence to gather information on how they
2 would be using it and how those exposures would occur.

3 Used all that information to do my assessment
4 and determine what their doses were, what would get into
5 the body.

6 Q. Okay. And I guess I'm the one with the
7 clicker here.

8 Could you describe to the ladies and gentlemen
9 of the jury what this slide demonstrates.

10 A. I mean, this is showing you how exposure would
11 occur. It could start with purchasing of the product
12 and having the product. But the key thing here is not
13 necessarily how much product you purchase or how much
14 you spray on the weed, it's what gets on the skin.

15 And so that's the critical thing in doing an
16 exposure assessment is, in this case, with the Roundup,
17 it's not inhalation exposure concern, it's primarily
18 skin contact. And that's what I evaluated is how much
19 would be getting on the skin. And then of that, what
20 would get into the body.

21 Because that's really the critical thing we
22 need to know. We need to know what is in the body
23 because if it's not in the body, then we can't -- it's
24 not even worth talking about the effects that could
25 potentially be there.

1 And another critical thing, the last thing, is
2 how quickly it's eliminated from the body. So, you
3 know, it's critical to understand that once it gets in
4 the body, is it going to stay there or -- and
5 accumulate, or is it going to be rapidly eliminated and
6 not accumulate.

7 **Q.** Okay. And with respect to the first point
8 here with regard to analyzing exposure and absorption
9 literature on glyphosate and Roundup, let's first start
10 by talking a little bit about just what is in Roundup.
11 I know the jury has heard this so we'll not spend a lot
12 of time on this, but what's in -- for example, this is a
13 jug of Roundup; correct?

14 **A.** Yes.

15 **Q.** And is this the same, maybe a little bit
16 different looking, but is this the same type of Roundup
17 that you saw when you actually went out to the Pilliods'
18 house?

19 **A.** Yes. And this is what Mr. and Mrs. Pilliod
20 reported applying most of the time. I think 85 percent
21 of the time they reported using this 2 point -- I'm
22 sorry -- 2 percent glyphosate in Roundup.

23 **Q.** All right. And so in that type of a bottle of
24 Roundup, what is the vast majority of what's in the
25 bottle?

1 A. It's mostly water.

2 Q. All right. And there's -- it says on here
3 2 percent surfactant and then trace impurities; right?

4 A. Correct.

5 Q. And the jury heard some from Dr. Sawyer about
6 some of the trace impurities that may be in a bottle of
7 Roundup. Have you looked at what's in there?

8 A. I've looked at, you know, the main components,
9 but it's difficult when you're talking about trace
10 impurities.

11 Q. Why is that?

12 A. Because they're trace. They're not measurable
13 amounts. And if they are, they're so small, it's been
14 determined that they're not a hazard or concern.

15 And so we get into this trace realm, we'll
16 find these types of impurities and everything in our
17 bodies, in the food we eat. And same type of things
18 that Dr. Sawyer is talking about. Formaldehyde, our
19 body produces it.

20 Q. All right. So let's talk about formaldehyde.

21 A. Yeah.

22 Q. That was one of the examples that he used. Is
23 formaldehyde something that if I had an apple here that
24 I bought from Whole Foods or Trader Joe's, it's
25 completely organic, never exposed to any sort of an

1 herbicide or pesticide or anything, would that actually
2 have formaldehyde in the apple?

3 A. It would have trace amounts of formaldehyde.
4 It's a natural by-product of degradation of alcohol.

5 Q. And are trace impurities in Roundup, like
6 other products, regulated, the amounts that can be in
7 any of those -- any products, those regulated by the
8 EPA?

9 A. Those are regulated and controlled and so,
10 yes.

11 Q. Okay. Now, this is a chart that the jury saw
12 when Dr. Sawyer was here. And this contains some
13 overview of the results from some of the studies.

14 Do you recognize this chart?

15 A. Yes.

16 Q. And is this a chart that you reviewed from his
17 report?

18 A. I did.

19 Q. Okay.

20 MR. EVANS: And if it's okay, Your Honor,
21 could the witness just point to the exhibit?

22 Q. Can you just point to the jury which of the
23 results there are actually not from human skin when
24 you're talking about absorption rates.

25 A. The Maibach and the TNO. So this is a rodent

1 and this one's a monkey.

2 **Q.** Okay. And if you're looking at absorption
3 rates in human skin, is it important to look at human
4 data?

5 **A.** Yes.

6 **Q.** Why?

7 **A.** Why is it important?

8 **Q.** Yes.

9 **A.** Because we know that especially rodent data is
10 going to be higher. And we also see some differences in
11 monkeys. A little bit closer to humans. But definitely
12 this would be expected, you would see higher values with
13 rodent data.

14 **Q.** And the Wester 1991 exposure data, is all of
15 that human data, or is some of that not human?

16 **A.** No. Some of this is data in monkeys as well.

17 **Q.** Okay. And in the Franz 1983 study, there's an
18 asterisk there and there was a footnote on the original
19 that I accidentally cut off in making this. But the --
20 Dr. Sawyer talked about that 4 percent. That's not
21 actually a number that was in the reported outcome, but
22 it is something that was found where?

23 **A.** That 4 percent was what was found in the
24 epidermis, the outer layer of the skin. And the authors
25 did not report that as being going in through the skin.

1 It was on that outer later. The actual amount of dermal
2 absorption was .15 percent, but Dr. Sawyer thought that
3 he should add this 4 percent in there.

4 Q. Okay. Now, have you reviewed the -- all of
5 the data with respect to human absorption -- well,
6 absorption of glyphosate in human skin?

7 A. Yes. I've reviewed quite a few. This is
8 about 12 studies that I reviewed that would most closely
9 relate to Mr. and Mrs. Pilliod's use. These are for
10 formulations of Roundup with glyphosate in them,
11 different concentrations, and this is spanning 30 years.

12 There's actually quite a bit of information on
13 normal absorption. This is for human skin. This is how
14 much gets through skin.

15 Q. All right.

16 A. And so it doesn't include all of it. I just
17 want to say that there are some with gels that I didn't
18 include here.

19 Q. All right. Because why not?

20 A. They're not using the gels. And it seemed
21 like a weird product.

22 Q. Okay. So these are the 12 studies that you
23 think are most relevant to the Pilliods' exposure and
24 usage; is that fair?

25 A. Yes.

1 **Q.** Okay. And with respect to the study names are
2 in green versus black, what's the difference between
3 those two?

4 **A.** The ones that are in green represent those
5 where we have data on the formulation. And in many
6 cases we have it non-formulated versus formulated, which
7 means these studies do it without the surfactants and
8 with the surfactants.

9 **Q.** So you have data on both glyphosate by itself
10 and glyphosate in combination with surfactants and how
11 quickly it moves through the skin?

12 **A.** Correct.

13 **Q.** And as a general matter, does glyphosate
14 readily absorb through skin?

15 **A.** No. It's a very low rate. It's kind of a
16 little misleading looking at percentages here. The rate
17 is very low, I can tell you.

18 The skin repels water. It repels glyphosate.
19 And these rates with many of these studies are -- we
20 call 10 to the minus 6 type amounts, a millionth of a
21 milligram per centimeter squared per hour. Just very
22 low amounts are going to get through the skin. The skin
23 actually repels glyphosate.

24 **Q.** All right. Now, you said percentage absorbed,
25 which is what this is representing, is different than

1 rate of absorption. What does that mean? Can you
2 explain that?

3 A. Percentage is just the measure of how much was
4 on the outside of the skin versus how much gets inside.
5 And so these can be represented how much was actually --
6 how much did they actually put on the outside of the
7 skin. They could put a large volume. And so that
8 percentage, you know, it's going to be related to how
9 much is outside the skin versus how much is in.

10 The rate is actually how much and how fast
11 goes through the skin. That's more important when doing
12 an exposure assessment and a dose assessment.

13 Q. So just so I make sure I understand, if
14 you're -- I think the example that when Dr. Sawyer was
15 here, he talked about if you put a piece of paper
16 between two glasses of water and you turn it upside
17 down, the question is how much goes through that skin if
18 the piece of paper is water. Are you with me so far?

19 A. Yes.

20 Q. Okay. And when you're talking about
21 percentage absorbed, if you put a very little amount on
22 top of the paper and then you look at what's underneath
23 the paper, it could result in a higher percentage; is
24 that fair?

25 A. That would be fair to say.

1 Q. And if you put a lot on top of it, but you
2 only got a small amount through, what would result --
3 what would the result be?

4 A. The percentage would show smaller, but the
5 rate would still be the same.

6 Q. All right.

7 A. And I would just like to point out. So like
8 something here, like the Wester study where it shows it
9 looks higher, they actually only put in this one measure
10 here 2.6 micrograms. 2.6 millionths of a gram. It was
11 such a small amount. And that's why it shows a higher
12 percentage.

13 Q. And so let's talk a little bit about just
14 glyphosate. And you talked about it a little bit, but
15 let's talk about --

16 A. Do you want me to keep standing?

17 Q. No, you can sit down. Thank you.

18 I mean, unless you want to.

19 A. I don't mind either way. I stand for my job
20 typically.

21 Q. So let's talk about what explains the low
22 absorption rate of glyphosate. Why -- why is that the
23 case? What is it about glyphosate?

24 A. Yeah. It's strongly what we call hydrophilic.
25 It loves water. We measure this as log K_{ow} . It's a

1 octanol water proficient. It's -- if you had two
2 layers, you got a layer of octanol which is represented
3 like oil, more like kerosene, and a layer of water, it's
4 going to go in the water a thousand times more than it's
5 going to go in the oil. It's not soluble in oil.

6 And that's really critical when we're talking
7 about the human skin. The human skin is waxy and oily.
8 It repels water. It's the reason why if we're taking a
9 bath, we don't just swell up like a sponge.

10 It's the same thing if glyphosate gets -- or
11 Roundup, a water-based product gets on the outer skin,
12 it's not just going to swell in there. It's not just
13 going to -- you know, the skin is not going to absorb
14 like a sponge. It's actually repelling it.

15 And so in that repelling it, the outer skin is
16 kind of waxy, oily, and it's like bricks and mortar.
17 And so the bricks are made of cells filled with keratin.
18 And in between them is oils and waxes. And it has to go
19 try to go around those cracks. And that's really what
20 limits glyphosate from getting in through the skin.

21 **Q.** Now, compare that to something that's
22 called -- that's lipophilic, or soluble in fat or oil,
23 what is -- how does that work?

24 **A.** If it was lipophilic, then it can go right
25 into those cells. And the cells, they're made of

1 lipids. And the membranes of our cells have lipids in
2 them. And so that's where we really are concerned when
3 we're talking about chemical exposures, is something
4 that's highly lipophilic and oil soluble and it will
5 readily go through the cells. And it can even absorb in
6 them and be what we call sometimes a reservoir, it can
7 absorb into the fat tissues and in the cells and it's
8 going to go through much faster.

9 Q. Now, does the presence of a surfactant in
10 effect cut through the wax and oil and allow the
11 glyphosate to just go streaming in?

12 A. It would depend. There's a lot of different
13 types of surfactants so it would depend on the
14 surfactant.

15 Q. Well, if you looked at the surfactants that
16 are actually in the Roundup, did you see that in the
17 results from the surfactant studies?

18 A. I did not. I did not see evidence with the
19 surfactants that they'd have in there that, you know,
20 that it was having an effect on the rate it was going
21 through the skin. And you could see these are all
22 studies with and without surfactants.

23 Q. Now, one of the things that Dr. Sawyer talked
24 about was that some of the later studies involved, I
25 think he said -- and I'm not going to try to quote here,

1 right -- but basically it involved freezing and then
2 heating up the skin and that somehow changed the
3 complexion of the skin such that you wouldn't get
4 absorption through skin like you would live skin.

5 Have you -- do you have any views about
6 whether that's the reality?

7 A. I would disagree.

8 Q. Why?

9 A. Well, specifically with glyphosate, the main
10 barrier to glyphosate getting in the skin is the outer
11 part of the skin. It doesn't have any vascular tissues.
12 It's largely nonliving. And so if you damaged it, if
13 you damage that, you will see higher rates.

14 And Nielson actually did that in one of the
15 studies where damaged the skin more like a chemical burn
16 rather than an actual burning. But the rates were
17 higher.

18 So if you damage that outer layer, it's going
19 to be higher. I haven't seen anything in the literature
20 that would point elsewhere with that.

21 Q. And are those studies, the 2010 going forward
22 studies, are those all done pursuant to standards?

23 A. Yes. There's -- you see a little more
24 consistency after the Nielson because those studies are
25 following some specific guidelines for consistency. We

1 have OECD guidelines to make sure we get more consistent
2 results.

3 Q. All right. Let's go forward and talk about
4 glyphosate and its absorption into the body and the
5 excretion out of the body. And let's talk -- you talked
6 already about the hydrophilic nature of glyphosate and
7 that it's highly hydrophilic. But with respect to that
8 actually resulting in it coming out of the body, does
9 that have an effect on that?

10 A. Yes. It's important for it getting out of the
11 body rapidly too. It's water soluble so you will find
12 it in the blood. And its size and its structure
13 molecularly make it -- just looking at it, I can tell
14 you that it's going to go in the urine pretty rapidly,
15 that it's going to be excreted through the kidneys into
16 the urine. And that's the case. I reviewed the
17 literature, and literature shows that once it goes into
18 the blood, it's going to be excreted rapidly. And
19 majority of that predominantly is going to be in urine
20 from dermal absorption.

21 Q. And could some of that end up in feces?

22 A. Yes. I mean, it's -- it's in the -- it's
23 going to be in the bloodstream and some of that blood
24 flow goes to the liver and you might see some small
25 percentage in the feces.

1 **Q.** And the question whether it comes out through
2 the urine or the feces, how quickly is it out of the
3 body totally?

4 **A.** It's out of the body fairly rapidly.
5 Especially human studies I've reviewed. Connolly 2018
6 is one that I reviewed where they looked at excretion in
7 the urine, and it peaked at three hours. So with
8 exposures and so -- and the half-life was somewhere
9 between five and ten hours. So that means every five or
10 ten hours, it's being -- half of it's left in the body,
11 it's going into the urine that quickly.

12 And then looking at some of the primate
13 studies like Wester, they evaluated was it accumulated
14 in the body, how fast was it excreted. At the end of
15 seven days, they sacrificed a couple of the monkeys and
16 didn't find it in any of the tissues.

17 **Q.** All right. And I actually want to -- want to
18 spend a minute to talk -- and we're not going to get
19 into very many studies today, but the Wester study is
20 one that I did want to talk a minute about.

21 **MR. EVANS:** So Exhibit 6177, do you have any
22 objection to that?

23 **MR. WISNER:** No. I have a copy as well.

24 **MR. EVANS:** May I approach, Your Honor?

25 **THE COURT:** Yes.

1 **MR. WISNER:** No objection.

2 (Exhibit published.)

3 **BY MR. EVANS:**

4 **Q.** And so let's talk a little bit. Can you just
5 tell the ladies and gentlemen of the jury what the
6 Wester study involved.

7 **A.** There was several components to the study.
8 And -- and so they did some testing with human skin,
9 some dermal absorption studies. They looked at binding
10 in the stratum corneum, that outer layer of the skin
11 that I was telling you about that's a primary barrier to
12 glyphosate. And then they also did some studies with
13 primates, looking at dermal absorption through monkeys.

14 **Q.** So they looked at both absorption through
15 human skin; right?

16 **A.** Yes.

17 **Q.** And they also had absorption that they were
18 monitoring with respect to monkeys?

19 **A.** Correct.

20 **Q.** Live monkeys?

21 **A.** Yes.

22 **Q.** The skin was removed from a cadaver; correct?

23 **A.** Yes. The skin they had was cadaver skin for
24 humans.

25 **Q.** Right, of course.

1 And so let's just look at the abstract. And
2 about halfway down there's a sentence that starts
3 "In vitro percutaneous absorption."

4 What does that tell me, sir, with respect to
5 the results of the human skin absorption?

6 **A.** Sorry. I'm not following here. Oh,
7 in vitro --

8 **Q.** It's on the screen in front of you too,
9 Doctor. You can look the other way if you want.

10 **A.** Thank you.

11 This was just saying that dermal absorption
12 with the human skin, the cadaver skin, that it wasn't
13 over 2 percent. That means the amount on the outside of
14 the skin versus the amount inside, there not more than
15 2 percent went through the skin.

16 **Q.** All right. And I want to shift down to
17 page 729. And I want to talk specifically about the
18 part of this that analyzed the monkeys that they
19 sacrificed at the end of the study.

20 So can you just tell the ladies and gentlemen
21 of the jury what they did with respect to they exposed
22 monkeys to Roundup.

23 **A.** Yes. The Roundup was radiolabeled, and so
24 they use a carbon 14 radiolabel, very sensitive, so they
25 can use that to detect very, very minute amounts of the

1 glyphosate.

2 And so they were evaluating that radiolabel in
3 the tissues of these monkeys after seven days. So they
4 can see if there was any even very, very small amounts
5 in the bone, in any of the organ systems, and the
6 tissues and the skin.

7 Q. And the monkeys were exposed to glyphosate
8 both through IV injection and also dermal; is that
9 right?

10 A. Correct.

11 Q. And so they were -- had two different sets,
12 one they were administering directly into the blood and
13 one was going through the skin?

14 A. Yes. And I think you can see for what was
15 going into the blood in Table 3 there, that in urine you
16 can see once it gets into the blood, which we expect to
17 see after it gets through the skin, that 95 to about
18 99 percent is going into the urine. And you do see a
19 small fraction that would be in the feces there.

20 Q. All right. And the Table 4 is the topical or
21 dermal absorption number; right?

22 A. Correct.

23 Q. And what is this showing?

24 A. It's showing that upon that dermal absorption,
25 how much was -- that we found in the urine, a very small

1 amount; right? So that was in one dose group about
2 2.2 percent in urine. And then the other dose group
3 .8 percent in the urine.

4 Q. And in this study, was there, again, in both
5 the IV administered and the dermal administered, some
6 was coming out in the feces?

7 A. Yes.

8 Q. All right. And then at the end of the study,
9 and if you can just go down below that to that two
10 monkeys from each, at the end of the study they
11 sacrificed monkeys; right?

12 A. Correct.

13 Q. And I just want to walk through this next
14 paragraph. Could you go ahead and read that for us,
15 please?

16 A. Yes.

17 Two monkeys from each topical dose
18 level (a total of four monkeys) were
19 euthanized after the seven-day excretion
20 period and tissues were assayed for carbon
21 14 content. No radioactive was detected
22 in spleen, ovaries, kidney, brain, liver,
23 abdominal fat, bone marrow, upper spinal
24 column, or central nervous system fluid.
25 Skin that contained the applied dose for

1 12 hour ending with washed with soap and
2 water contained .006 plus or minus .0007
3 percent of the applied dose.

4 Q. Let's go on the next page, please.

5 A. (Reading from document:)

6 Untreated skin contained levels of
7 .0012 plus or minus .0002 percent.
8 Therefore there was no residual tissue --
9 no residual dose in tissues or the skin.

10 Q. And why don't we go ahead and finish out that
11 paragraph.

12 A. (Reading from document:)

13 Thus, the 75 to 80 percent
14 accountability for topical application
15 (Table 4) and no residual compound in
16 tissues or skin suggests that the missing
17 20 to 25 percent dose was lost during
18 procedure. Such a loss of 20 to
19 25 percent of the topically applied dose
20 is not unusual. Similar losses occurred
21 in previous studies. And it cites some
22 studies there.

23 In vivo skin undergoes exfoliation, a
24 continual shedding of the top layer of the
25 stratum corneum. This process will

1 scatter microscopic tissues and bound
2 chemical to the atmosphere making total
3 accountability impossible to achieve.

4 **Q.** All right. And so what does it -- what does
5 it mean that the top -- the continual shedding of the
6 top layer of the stratum corneum; what does that mean?

7 **A.** It means we're continually shedding skin cells
8 so we're -- we're losing that in those skin cells that
9 are being shed from the outer layer of the skin.

10 **Q.** And does that happen in humans as well as
11 monkeys?

12 **A.** It does, but I've -- I've seen this issue more
13 with the monkey studies.

14 **Q.** All right. Now, let's shift topics and talk a
15 minute about the actual Mr. and Mrs. Pilliod's use.

16 And did you actually analyze that?

17 **A.** Well, I evaluated how they were using the
18 products and -- and evaluated, you know, dermally -- how
19 it would be dermally absorbed and used all that
20 information to calculate their dose. But part of that
21 was to evaluate their -- what they report in their
22 deposition and also do a site visit.

23 **Q.** All right. So you looked at what they said
24 about how they used the product, and you also did a site
25 visit to the Agate Court, their residence?

1 A. Yeah, standard practice is to -- to try to do
2 a site visit, you know, collect as much information as
3 possible. It's investigation that they were doing
4 trying to gather facts.

5 Q. And if you look on -- and these are
6 photographs that have already been admitted into
7 evidence. But if you look on the left photograph, do
8 you see the Pilliods' residence?

9 A. Yes, the one on the left there.

10 Q. Okay. And then is the overhead, is that --
11 have you seen that before?

12 A. Yes.

13 Q. And do you know how big that lot is in total?

14 A. I think it's approximately about a quarter of
15 an acre.

16 Q. Okay. And is this representative of when you
17 actually went out and looked at the property? Is this
18 what it looked like when you were there?

19 A. Pretty close. I mean, there were some weeds
20 growing around the cracks and in the area. But, yeah.

21 Q. Okay. And this is again an admitted photo.
22 It's a little dark in the front, but does this look like
23 the backyard?

24 A. Yes.

25 Q. And the part that's kind of dark, do you see

1 in this photograph, is that lawn there?

2 A. Yes, the darkened part is lawn. There's quite
3 a bit of lawn back there.

4 Q. And in reading their deposition, do you have
5 an understanding of how they were using Roundup at their
6 Agate property, both in their front yard -- let's talk
7 about the front yard first.

8 A. That they would be applying it on weeds around
9 the walkways, around the fence line, and it would be
10 consistent with what we call like spot-type treatments.

11 Q. And when you talk about spot treatment, is
12 that as compared to just some other type of treatment?

13 A. Yeah. In agriculture, might see where they're
14 continuous spraying. So they're just continually
15 spraying. And so spot spraying is kind of more like see
16 a weed, spray a weed.

17 Q. And what's this a photograph of?

18 A. This is one of the products that was there on
19 site. And that's one of the reasons why I like to do
20 the site visits is to see the products. Just make sure
21 if I'm going to do an assessment that I've got the
22 concentration right and that the type of application
23 that they're applying is correct.

24 Q. And what's this a photograph of?

25 A. This was on the day of my visit. This was

1 just a picture of -- I think that's me holding the wand
2 out so you could see what type of an applicator they're
3 using.

4 Q. And how about this photograph?

5 A. These are some of the other products that were
6 out there. This one on the left is a Super Concentrate
7 that the Pilliods reported using. And it was at
8 50.2 percent. And then the one in the middle is one
9 they did report using kind of occasionally, it's a hand
10 sprayer but not much at all.

11 And one of the things that, you know, I'm
12 looking at is information on the dates and label claims
13 for use so that I can gather that information on how
14 they'd be using it and then matching it up to
15 concentrations. But all the concentrations I found on
16 the bottle. So the year wasn't as critical here.

17 Q. All right. And with respect to the Roundup
18 Concentrate, was that -- how big a Roundup Concentrate
19 was that?

20 A. You can see my hand there. It was just a free
21 sample that -- it didn't -- I don't think it had a date
22 on it or anything like that. It just was like a free
23 sample, is what it said.

24 Q. And was it full or was it empty?

25 A. It had product in it. It seemed like it was

1 pretty full.

2 **Q.** All right. And in these photographs where you
3 are actually handling the Roundup containers, I don't
4 see you wearing a glove. Did you wear a glove?

5 **A.** No. It doesn't appear to be that I was
6 wearing a glove there.

7 **Q.** And you're a trained industrial hygienist and
8 trained in protective gear; correct?

9 **A.** Correct.

10 **Q.** And why did you not think it necessary to wear
11 a glove when you were handling the Roundup bottle?

12 **A.** It's -- it has a low hazard, low toxicity
13 profile. I know it's safe. And I'm handling it in
14 accordance to the label.

15 And that's what I'd recommend to anyone that
16 would be using these products. There's been a full
17 evaluation that's been done. The EPA has evaluated. A
18 lot goes into these labels. And so I'm confident that
19 there's no hazard there.

20 **Q.** All right. And with respect to the Stabulis
21 Road property -- and you -- as I understand it, you did
22 not go out and look at the additional properties that
23 they owned for a shorter period of time; is that fair?

24 **A.** No. Yeah, that's fair. One of the main goals
25 was to see what products they're using just -- you know,

1 that's important and to get an idea how they might be
2 using it at their primary residence. But there's plenty
3 of pictures of the other investment properties.

4 Q. And so this is the Stabulis Road property that
5 the jury has seen before. And the Gabor Street; right?

6 A. Correct.

7 Q. And the Hartvickson?

8 A. Correct.

9 Q. Now, in your assessment, did you actually look
10 at the deposition of Mr. and Mrs. Pilliod to see what
11 they wore when they were applying Roundup?

12 A. Yes, and that's an important part of the
13 assessment.

14 Q. Why?

15 A. Clothing, that skin contact, that's going to
16 be important in determining how much gets in the body.

17 Q. And what's here on the screen?

18 A. For -- well, Mr. Pilliod, he reported wearing
19 tennis shoes, jeans, long-sleeved shirts, and some type
20 of a sun hat. He was very protective of his skin, it
21 appeared from the deposition.

22 Q. All right. And what about Mrs. Pilliod?

23 A. Mrs. Pilliod reported most often wearing
24 shorts, flip-flops, tank top or a T-shirt, and maybe on
25 occasion probably some longer clothes.

1 **Q.** All right. And with respect to the factors
2 other than the clothing they wore, did you also consider
3 additional factors in their use of Roundup?

4 **A.** Yes. I pulled as much information as I could
5 out from their depositions and from the site visit. And
6 in my assessment I'm doing with what we call
7 retrospective assessment, trying to determine what those
8 exposures would be going back in time, and when we do
9 that, standard practice is to do a highest possible
10 exposure scenario.

11 So I'm going to determine what that highest
12 exposure is so I can confidently say that on any given
13 day of their spraying, it's going to be below that.
14 And -- and that's kind of important in doing these types
15 of assessments. And that's what I did. So --

16 **Q.** And so let's break this down a little bit. So
17 Mr. Pilliod reported that he had some exposure both
18 while mixing Roundup; correct?

19 **A.** Right.

20 **Q.** And did he also report exposure with respect
21 to spraying?

22 **A.** Yes.

23 **Q.** Okay. And let's just walk through those
24 different issues then. With respect to when he spilled
25 it while he was mixing, what factors or what assumptions

1 are you using for your calculations?

2 A. I mean, one of the main assumptions here is
3 that he spilled it on his hand, that he wasn't wearing
4 gloves, it sounded like. So that would be no protective
5 gloves. So that would be a spill of a small amount. He
6 mentioned half a cup.

7 You know, the little mixing thing is about a
8 two-and-a-half-inch little cap. So I figured if it was
9 about half of that, about an ounce that he spilled some
10 of that concentrate directly on his hand. And that
11 would have been to one side of his hand, and cover at
12 least -- at least half of that skin area, about 4 inches
13 by 4 inches.

14 Q. All right. And he also reported, I think in
15 his deposition, that he may have spilled it on his arm
16 or his pants or his shoe. When you're trying to do
17 this, you know, sort of conservative estimate so you can
18 get to the highest dose, why are you focusing on
19 exposure to the hand versus if he spills it on his
20 sleeve or pants or his shoes?

21 A. Because in this case, it's going to be higher
22 if it's directly on the skin. Cotton, there's been
23 studies out there show that cotton can absorb Roundup,
24 can absorb those products pretty effectively. Nielson
25 did a study on that and found it was ninefold. So I

1 know that on bare skin, it's going to be higher.

2 Q. All right. And with respect to when he was
3 actually spraying the product, what did you put into
4 your calculation with respect to him?

5 A. Once again, this is a very conservative
6 approach, highest possible day. I assumed that based on
7 other studies where they've done similar spraying, that
8 the exposures are to the lower legs and that there would
9 be some residual exposure, but I assumed that the full
10 front of his legs was exposed to the Roundup.

11 Now, he had clothing. So I did apply clothing
12 protection factor of 50 percent to account for the
13 clothing. So that would reduce it a little bit.

14 Q. All right. So just let me make sure I
15 understand. So when he's spraying and he's got long
16 pants on with shoes and he's getting some on his -- your
17 calculation is based from knee to his shoe?

18 A. Correct.

19 Q. And you're assuming that it got on his skin,
20 but then you're reducing it by 50 percent because of the
21 presence of pants; is that right?

22 A. Yeah. We know that even just normal cotton
23 and other types of fabrics will reduce that exposure. I
24 would expect that it would be more than that. But in
25 the Nielson study, they looked at the effects of sweat,

1 and so if you included a lot of sweat and those jeans
2 were soaked, then that would only provide about
3 50 percent protection.

4 Q. Okay. And then with respect to how long the
5 glyphosate stayed on the skin, what were you using for
6 that?

7 A. I'm assuming that they sprayed it early
8 morning. The highest possible scenario would be they
9 sprayed it early morning and that it sat on their skin
10 until the end of the day.

11 And actually that was one -- well, that was
12 the main assumption there.

13 Q. All right. And with respect to -- and we
14 didn't look at the study specifically, but with respect
15 to if you spray something on right now on your skin, is
16 the absorption going to just continue forever until you
17 wash it off? Or is it going to be, you know, sort of a
18 peak absorption and then a period of diminishing
19 absorption?

20 A. There is a peak absorption and a point of
21 diminishing, just as you stated it. And in fact, this
22 is one of my areas of expertise is Fickian diffusion,
23 chemical permeation. A lot of my research is in that
24 area.

25 Glyphosate follows -- it's kind of a little

1 boring of a topic here, I know, but for me it's
2 exciting. But it follows Fickian diffusion. So all of
3 those dermal absorption studies they've -- we've put up
4 there, those what you can see is even though it's
5 sitting on the surface of the skin for 24 or some of
6 them even longer, 48 hours, it's gone through the skin
7 and we see no more after about 12 hours.

8 So it's following fixed laws of diffusion
9 based on concentration gradients. But -- I know it
10 sounds technical, but essentially it's a law. And it's
11 predictable. And everything I've seen shows that it's
12 predictable and consistent.

13 Q. All right. And now with respect to
14 Mrs. Pilliod, what factors did you apply in making your
15 calculations with her?

16 A. So she was not -- she was not mixing it.
17 And -- and so she was just spraying the diluted
18 ready-to-mix most of the time I think 85 percent of the
19 time, so that was a higher percentage. I just accounted
20 for the higher percentage. And since she wasn't wearing
21 long pants and shoes, I accounted for the full front of
22 both of her legs exposed skin, as well as the top of her
23 feet. So the larger surface area.

24 Q. Okay. So from, again, below the knee all the
25 way down to the end of the toes?

1 A. Correct.

2 Q. Okay. So and the same 12-hour assumption with
3 respect to the absorption?

4 A. Correct.

5 Q. All right. Now, when you take that
6 information, those factors in, then what did you -- what
7 formula, what calculations did you do?

8 A. Well, and it's one that's important here to
9 follow with something that's highly hydrophilic. EPA,
10 they have guidelines to -- and also in my profession,
11 the American Industrial Hygiene Association, we have
12 guidelines and there's some specific guidelines there,
13 if it's hydrophilic, if it's strongly water-loving, we
14 call it. And so I used those guidelines.

15 I also made sure that I used dermal absorption
16 data for formulations that were similar to what Mr. and
17 Mrs. Pilliod used. That means the Super Concentrate
18 when mixing for Mr. Pilliod, and then also the
19 ready-to-use when they were spraying.

20 Q. All right. And you just talked about the skin
21 exposure. Do you actually calculate that in square
22 centimeters?

23 A. Yeah. For here I'm talking about the Fickian
24 diffusion, how important it is. And skin surface is
25 important when we're talking about diffusion. And the

1 time is important. But the flux. And that's the rate.

2 So that outer skin is limiting how much is
3 getting through. It's this waxy layer that's repelling
4 it, some will get through, but we call that the flux.

5 Q. All right. And these calculations don't mean
6 anything to me, but can you explain what they mean to
7 you.

8 A. Well, the top one there, the dose, it's just a
9 function of the rate, the flux. The flux is how much
10 and how fast it goes through the skin. And that's also
11 going to be a function of how long that event is going
12 to occur, how long is that exposure. And then also the
13 surface area is important.

14 And you put those all together and that will
15 tell us and tell me how many milligrams would be in
16 their body after a certain exposure to their skin over a
17 certain amount of time.

18 Q. All right. And did you actually do those
19 calculations with respect to Mr. and Mrs. Pilliod?

20 A. I did.

21 Q. And why don't you walk the ladies and
22 gentlemen of the jury through your calculations. It's a
23 little algebraic for me, but go ahead.

24 A. Okay. So for Mr. Pilliod, you look there at
25 the top, for mixing, that is the flux over -- I carried

1 everything out over a 12-hour period. That ensures that
2 I'm going to account for everything that would get into
3 their body. Like I was telling you before, Fickian
4 diffusion, 12 hours is important. And in the case of
5 glyphosate.

6 So that's the movement. So 2.94 times 10 to
7 the minus 4 milligrams per square centimeter of skin is,
8 over that 12-hour period, is how much we'd see come
9 through the skin. And then the 105 square centimeters,
10 that would be the surface area of a quarter of the hand.

11 Q. All right. So is that square centimeters, is
12 that -- if you convert that to inches, is that roughly
13 4 inches by 4-inch area of skin?

14 A. Yes.

15 Q. Okay. And so you're taking -- just see if I
16 can restate this in terms that I understand. You're
17 taking the rate of absorption, which is the 2.94 times
18 10 to the minus 4.

19 A. Correct.

20 Q. And then that -- and then you have to have the
21 time, that's the 12 hours?

22 A. It's included in there, yes.

23 Q. Okay. And then you're looking at the surface
24 area of exposure?

25 A. Correct.

1 Q. And when you do that on an event where
2 Mr. Pilliod spilled it on his hand, what would the total
3 amount that would get into his bloodstream be?

4 A. For that event, that would be .031 milligrams.
5 It's a very small amount.

6 Q. Okay. And with respect to spraying, walk
7 through that when Mr. Pilliod was spraying Roundup.

8 A. First thing I'd like to point out is if you
9 look at between Mr. and Mrs. Pilliod, you'll notice that
10 that flux for Ms. Pilliod is twice. That's because she
11 wasn't wearing clothing.

12 So the 1.25 times 10 to the minus 5, that is
13 the rate, the flux rate, for a 2 percent type
14 concentration, taking into account a 50 percent clothing
15 factor.

16 And the 100 -- or sorry. The 1,035 square
17 centimeters, that's roughly the surface area of the
18 front of Mr. Pilliod's legs based on some EPA tables
19 that we used.

20 Q. All right. So, again, from a math
21 perspective, is that roughly how many inches? Can you
22 convert to centimeters to inches for us?

23 A. Could be about 4 inches by 25, sounds about
24 right.

25 Q. Okay. Now let's -- sorry. And then you

1 combine those together. So on a day where Mr. Pilliod
2 spilled it on his hand plus sprayed his legs and left it
3 for 12 hours, is that what you're calculating?

4 A. Yes. That would be the highest possible dose
5 I would -- could imagine would occur on a given day of
6 spraying. And I can confidently say that it would be
7 lower than that on any regular day. There's not many
8 occasions where I would see full coverage of lower legs
9 with this type of application.

10 Q. And that's a good point. You're -- the jury's
11 heard testimony about the number of days that the
12 Pilliods sprayed. You're not offering any opinion about
13 that one way or the other; right?

14 A. No.

15 Q. Okay. This is just on a day when he's
16 spilling and spraying and covering his legs so his pants
17 are wet, that's the calculation with respect to how much
18 would actually be absorbed into his body?

19 A. Correct.

20 Q. Okay. Now what about Mrs. Pilliod?

21 A. So she wasn't mixing. So just you have the
22 flux there. And this is coming from dermal absorption
23 data, using a formulation of 2.5 times 10 to the minus
24 5 milligrams per centimeter squared over 12 hours. And
25 then you can notice that the surface area is higher here

1 because I'm accounting for the top of her feet as well
2 because she wasn't necessarily wearing shoes, she was
3 wearing flip-flops. And so that times 1,458 square
4 centimeters, that area gives a dose of .036 milligrams
5 in the body.

6 **Q.** Okay. Now, this is, I think, just a summary
7 of what we just looked at, but then what's the
8 additional calculation here you've got?

9 **A.** Well, the additional calculation is
10 normalizing it for body weight. You know, everyone
11 pretty much has their own body weight and so it's
12 normalized.

13 When they do rodent bioassay studies, they
14 normalize it in milligrams per kilogram. So this is
15 just normalizing it in a systemic dose of amount would
16 be in the body per kilogram body weight.

17 **Q.** All right. Now, you talked about that the
18 flux rates, the actual rate where glyphosate, when
19 sprayed in formulated product, is going through human
20 skin, when we go back to those tables, we have the
21 Wester which was -- you know, had the 2.2 percent
22 sometimes looked like the highest percentage, but when
23 you look at the actual rate, the flux that you're
24 talking about, did it actually result in it being higher
25 than the calculation they used?

1 **A.** No. And that was one of the key points I was
2 talking about earlier, is how much they put on the
3 outside, that percentage is going to be dependent on
4 pretty much how much they put on the outside.

5 The difference in flux between the Wester
6 study, which shows this higher percentage, versus the
7 Franz study is about three times. And so if I was to
8 use the Wester flux that was related 2 percent, my
9 estimate is going to be three times higher.

10 However, I would say the only reason why I
11 didn't use Wester is I couldn't necessarily be sure of
12 the concentration in the formulation. It was a little
13 ambiguous. It was hard to tell. I suspected it was
14 three times higher which would explain why the flux is
15 three times higher.

16 **Q.** All right. And let me just make sure I
17 understand. Whether you use the calculations that you
18 did based upon the studies that you relied upon that you
19 thought were most equivalent to the Pilliods' product or
20 the Wester study, are both of those very low absorption?

21 **A.** Yes. You can see here. I mean, the systemic
22 doses are very low. And, you know, if you compare those
23 to, like, rodent bioassays, you'll see that they're
24 extremely low. And that's just a function of the fact
25 that the skin is an exceptional barrier for glyphosate

1 and water. It's not going to let much through.

2 **Q.** Now, I want to talk just a minute more about
3 this. There are other models of looking at potential
4 absorptions, and I think the jury has heard something
5 about a model called the POEM, the POEM out of UK.

6 Have you heard of that before?

7 **A.** Yes.

8 **Q.** And can you explain the difference between
9 what you're doing here versus what is going on with
10 respect to a POEM modeling?

11 **A.** What I'm doing here is I'm doing a precise
12 estimate based on skin contact and the actual rate going
13 in through the skin that would get into the body. This
14 is the most precise method. And this would be my
15 choice.

16 The POEM model, as far as from what I've seen,
17 it's one that's designed for more like farming where
18 they're spraying massive amounts of acres. It's based
19 on how many acres you apply and, you know, how long
20 you're spraying these acreages.

21 And so it's not based on these factors of the
22 amount of skin surface that's exposed, the rate. And so
23 I would say that the model I used is more precise, going
24 to give a better estimate.

25 **Q.** And so just so I understand, when you're doing

1 spot spraying like the Pilliods are doing over the
2 course of 30 years, is that the same as when you're
3 going out as a farmer and spraying acres at a time?

4 A. No, it's not the same. And in fact when I
5 went to the website for the POEM model, they have one
6 for residential. And so it's more for residential use
7 for spot spraying. And I don't remember, but it was
8 giving much lower estimates than the POEM model.

9 Q. All right. And what the POEM model was not
10 actually looking, like you did in this case, which is
11 looking at the actual Pilliods' use, how much got on
12 their skin, what the actual rate of absorption; is that
13 right?

14 A. Correct.

15 Q. Now, just finishing up here. Again just
16 looking at your assessment here, did you look at the
17 amount that Mr. Pilliod mixed and sprayed of Roundup?

18 A. I did. I remember seeing in their deposition
19 they were talking about how much they were mixing and
20 spraying.

21 Q. Right, and we went through that earlier.
22 And then you analyzed based upon their
23 testimony how much got on their clothes and skin;
24 correct?

25 A. Correct.

1 Q. And then from that, based upon the formulas
2 and calculations, you determined the amount was actually
3 absorbed; is that right?

4 A. Yes. And that was -- once again just that's
5 the highest possible amount that would be in the body on
6 a given day.

7 Q. Now, .044 milligrams, how does that convert
8 into something that, you know, maybe the ladies and
9 gentlemen of the jury are familiar with? Can you talk
10 about that in the context of teaspoons? What percentage
11 of a teaspoon that would be?

12 A. Yeah. Sugar is probably similar density.
13 Well, probably. It's -- sugar is near the density of
14 glyphosate. So you could look at it like a teaspoon of
15 sugar.

16 Q. Okay. And -- but from just from a weight
17 perspective; right?

18 A. From a weight perspective.

19 Q. Okay. And so what does that calculate to with
20 respect to what percentage or a fraction of a teaspoon
21 is actually being absorbed on this highest day?

22 A. For Mr. Pilliod, that's about
23 1 ninety-fifth -- 1 over 95 thousandths of a teaspoon.
24 It's a very small amount.

25 Q. And with respect to Mrs. Pilliod, same thing,

1 you went through all the process that you talked about.
2 And what was the result with respect to her with respect
3 to the highest dose?

4 **A.** Well, .036, a little bit lower because she
5 wasn't mixing the concentrate with that direct skin
6 contact. So her exposure is a little more dilute. But
7 still pretty close.

8 **Q.** What is that converted to with respect to
9 teaspoons?

10 **A.** So 1 in 115 thousandths of a teaspoon. So
11 these are -- these are very small amounts.

12 **Q.** Now, again, are you testifying that this is
13 what they were exposed to every day they sprayed?

14 **A.** No. This is a retrospective assessment. And,
15 you know, the best we can do in these types of scenarios
16 is establish what the highest possible systemic dose
17 would be on a day and knowing so I can confidently say
18 that it's going to be below this on any given day.

19 **Q.** All right. And did you compare these -- the
20 dosage that the Pilliods would have received on the
21 highest day, did you compare that to what the dosing is
22 of rodents in cancer studies, for example?

23 **A.** Yes.

24 **Q.** And what does that comparison look like?

25 **A.** So normalizing it to milligrams per kilogram,

1 this Pilliod dose that you see there, that represents
2 the higher dose for Mr. Pilliod, .00048 milligrams per
3 kilogram in a day. We compare that to one of the rodent
4 study doses that would be related to -- this one is
5 related to thymus effects, you can see in that rodent
6 dosing study of 1,000 milligrams per kilogram per day
7 that the Pilliod dose is about 2 million times lower.
8 It just -- these amounts that get in the body from
9 dermal exposures are just -- typically they're small.

10 **Q.** All right. Thank you very much, Dr. Phalen.

11 I would just like to ask, have the opinions
12 you offered today been to a reasonable degree of
13 scientific certainty?

14 **A.** Yes.

15 **Q.** And are they to the same degree of scientific
16 certainty that you teach in your classroom?

17 **A.** Yes.

18 **Q.** And that you've done when you go out and do
19 absorption or exposure studies outside of court?

20 **A.** Definitely.

21 **MR. EVANS:** All right. Thank you very much.

22 **THE COURT:** All right. This is a good time
23 for our morning break.

24 Ladies and gentlemen, we'll start up at 10:30.
25 Thank you.

1 (Recess taken at 10:18 a.m.)

2 (Proceedings resumed in open court in the
3 presence of the jury at 10:32 a.m.)

4 **THE COURT:** Mr. Wisner, cross-examination.

5 **MR. WISNER:** Thank you, Your Honor.

6 **CROSS-EXAMINATION**

7 **BY MR. WISNER:**

8 **Q.** Good morning, Dr. Phalen. How are you?

9 **A.** Good.

10 **Q.** My name is Brent Wisner. I spoke to you
11 casually a second ago. I'm an attorney who represents
12 the Pilliods in this lawsuit.

13 **A.** Okay.

14 **Q.** Before today we've actually never met; right?

15 **A.** No.

16 **Q.** But I understand that you are a paid expert
17 for Monsanto; right?

18 **A.** I'm being compensated, yes.

19 **Q.** And it's on an hourly rate; is that right?

20 **A.** Correct.

21 **Q.** What is your hourly rate for testifying in
22 court?

23 **A.** 345 an hour.

24 **Q.** Okay. And do you have an hourly rate for
25 preparing reports and stuff?

1 A. 245 an hour.

2 Q. Okay. And about how many hours have you
3 worked on preparing your -- for this testimony today?

4 A. I've submitted some billing. I'd have to --
5 I'm still a little behind on some of that. But I know
6 I've worked on it many days. I've reviewed hundreds of
7 articles and documents. And so I know it's -- it's
8 quite a number of days.

9 Q. My colleague took your deposition in February;
10 right?

11 A. Yes.

12 Q. And at that time, you'd worked approximately
13 40 hours on the Pilliod case?

14 A. Yeah. Probably about right.

15 Q. How many more hours since then?

16 A. I would say -- I'd have to give you a rough
17 estimate, but I would say more than double that.

18 Q. Okay. So 80?

19 A. Yeah, probably more than 80. Probably more
20 like over a hundred.

21 Q. Okay. So we have over 100 since February.
22 And at February when your deposition was taken it's
23 about 40?

24 A. Yeah.

25 Q. So conservatively 120 hours?

1 A. Conservatively.

2 Q. And my understanding is correct, this case
3 isn't the only case you're an expert; is that right?

4 A. Correct.

5 Q. In fact, you've consulted with Monsanto on
6 other Roundup NHL cases?

7 A. There was one other case.

8 Q. Just one?

9 A. Just one case, yes.

10 Q. Okay. How many hours have you worked on that
11 case?

12 A. Not as many. I'd have to go back and look to
13 recall. But not as many as here.

14 Q. Well, as of February when your deposition was
15 taken, you said it was around 40 hours for that case;
16 right?

17 A. Yeah.

18 Q. Have you worked on that case at all since
19 then?

20 A. No.

21 Q. Okay. So 120, we're up to about 160 now
22 conservatively; is that right, total time spent?

23 A. Okay, yeah.

24 Q. Okay. And is it your expectation to continue
25 working for Monsanto in the future?

1 **MR. EVANS:** Objection, Your Honor.

2 **THE WITNESS:** I couldn't say.

3 **THE COURT:** Sustained.

4 **THE WITNESS:** I couldn't say.

5 **THE COURT:** Strike the answer.

6 **BY MR. WISNER:**

7 **Q.** Well, let me ask you a separate question.
8 Would you like to continue working for Monsanto in the
9 future?

10 **A.** I enjoy doing exposure assessments, and if
11 there was an opportunity where my expertise could be
12 used. If it was an area that wasn't my area of
13 expertise, I wouldn't be offering my services.

14 **Q.** Okay. And is there ever a scenario, based on
15 your review of the literature, where you would think
16 that dermal exposure from spraying Roundup would ever be
17 high?

18 **A.** I guess you'd have to define "high," but in my
19 review of the literature, if we're looking at comparing
20 it to like the rodent bioassay studies, all very, very
21 low, all consistently near where I have Mr. and
22 Mrs. Pilliod's highest possible dose.

23 **Q.** You mentioned the rodent bioassays. You
24 understand how a rodent bioassay is done; right?

25 **A.** I'm familiar with it, yeah.

1 **Q.** You have about 50 animals per sex per group?

2 **A.** Sometimes, yeah.

3 **Q.** That's what they were in these cases; right?

4 In fact, the Atkinson study that you referenced was
5 that?

6 **A.** Correct.

7 **Q.** All right. And because you have such a
8 limited number of animals, you have to use very high
9 doses to see if there's actually an oncogenic effect of
10 a compound; right?

11 **A.** Yes.

12 **Q.** And that's actually the standard model for
13 rodent studies; right?

14 **A.** Pretty standard. We see pretty high doses
15 with the rodent studies.

16 **Q.** And in fact, you have to do a rodent study
17 before you can even sell a product in the United States;
18 right?

19 **MR. EVANS:** Objection, Your Honor. Beyond the
20 scope.

21 **THE COURT:** If he knows. Overruled if he
22 knows.

23 **THE WITNESS:** I'm familiar with some of the
24 legal requirements that the EPA has requiring some
25 testing, level of testing, but I don't know exactly all

1 the intricacies of that testing.

2 **BY MR. WISNER:**

3 Q. Okay. Well, you understand at least for
4 glyphosate there were rodent studies done before it came
5 on the market; right?

6 **MR. EVANS:** Objection, Your Honor. Beyond the
7 scope.

8 **THE COURT:** Overruled. If he knows.

9 **THE WITNESS:** Can you restate the question?

10 **BY MR. WISNER:**

11 Q. Sure. You understand that before Roundup came
12 on the market, there were rodent studies done; right?

13 A. I would have to go back and look. I don't
14 know exactly what the dates were.

15 Q. Okay. But you would agree, then, using rodent
16 studies as a way of comparing a human in the real world
17 exposure, it's not really a fair comparison; right?

18 A. I don't know if -- I don't think I would agree
19 with that statement.

20 Q. Let me walk you through it. Okay. For
21 example, in some of these mouse studies, these mice were
22 exposed and 20 percent of the mice got lymphoma. All
23 right. For us to see 20 percent of human beings getting
24 lymphoma from Roundup, we'd have to use those high
25 doses; right?

1 **MR. EVANS:** Objection, Your Honor. Beyond the
2 scope. Speculation.

3 **THE COURT:** Sustained.

4 Why don't you approach, counsel.

5 (Sidebar held but not reported.)

6 **BY MR. WISNER:**

7 **Q.** So because of rodent studies, they have
8 limited animals, they're trying to induce tumors by
9 using various high doses; right?

10 **A.** I think that's one objective, yeah. They're
11 looking for the effects and -- but other than that, I
12 can't really comment much on their methodologies.

13 **Q.** Fair enough. But for example, in
14 epidemiological studies, right, they're looking at
15 potentially millions or hundreds of thousands of people;
16 right?

17 **MR. EVANS:** Your Honor, beyond the scope. We
18 didn't talk about epidemiology at all.

19 **THE COURT:** Sustained.

20 **MR. WISNER:** It's in his report, Your Honor.

21 **MR. EVANS:** He didn't talk about it.

22 **THE COURT:** I don't have his report in front
23 of me.

24 **MR. WISNER:** I can show Your Honor, if you'd
25 like. It's in the binder, Your Honor.

1 Your Honor, I could just lay the foundation
2 right now quickly with a question.

3 **THE COURT:** Well, to the extent if it's beyond
4 the scope of direct examination. So I think that you
5 need to have a sidebar conversation to the extent you're
6 going to go into that.

7 **MR. WISNER:** We'll lay some foundation.

8 **Q.** You reviewed the epi in this case?

9 **A.** I reviewed some epi studies as they relate to
10 exposure assessment.

11 **Q.** Specifically Roundup epi studies?

12 **A.** Yeah.

13 **Q.** And you relied on those epi studies in forming
14 your opinions in this case; right?

15 **MR. EVANS:** Objection, Your Honor. Beyond the
16 scope of what he testified to today.

17 **THE COURT:** All right. Let's have one more
18 sidebar.

19 (Sidebar held but not reported.)

20 **MR. WISNER:** Please reask my question.

21 Thanks.

22 (The record was read back by the court
23 reporter as follows:

24 "Q. And you relied on those epi studies in
25 forming your opinions in this case; right?")

1 **THE WITNESS:** In my report, I think I
2 referenced an epi study in rebuttal to Dr. Sawyer's
3 statement in his report that I thought was incorrect.

4 **BY MR. WISNER:**

5 **Q.** Okay. And this is all leading up to a very
6 simple question which is in your report, I don't think
7 this is controversial, but in the epi studies that you
8 have reviewed, Mr. and Mrs. Pilliod fall in the highest
9 dosing categories; correct?

10 **A.** Based on what they provided in their
11 deposition, if I was to put them in the similar category
12 in that Agricultural Health Study, as Mr. -- or
13 Dr. Sawyer did, yes, I would agree.

14 **Q.** Okay. Now I want to go to some of the slides
15 that you presented to the jury here. I want to talk
16 about first this slide. It was this Pilliod dose
17 calculation slide. Do you recall that?

18 **A.** Yes.

19 **Q.** I want to talk about Mr. Pilliod first. Your
20 calculation is based solely upon -- well, let me break
21 it down. In the mixing, that's based upon this idea
22 that he got some on his hands while he was mixing; is
23 that right?

24 **A.** Correct.

25 **Q.** So if, for example, when he was mixing he got

1 some on his leg, that wouldn't account for that; right?

2 **A.** Well, it would account if it was on the leg
3 versus the hand as the hand is going to be higher. So
4 I'm taking conservative approach.

5 **Q.** Sorry, that didn't answer my question.

6 My question was: If it got on his leg, this
7 wouldn't account for it; right?

8 **A.** It would because it would be lower if there
9 was that small ounce that was spilled on the leg, of a
10 concentrate, I would say that that would be lower.

11 **Q.** Sir, again not my question.

12 So you're assuming here, this is the mixing
13 analysis, is looking at exposure to the hand; right?

14 **A.** It's looking at exposure to the skin. I
15 picked the hand because that would be one that from a
16 highest possible exposure scenario would be not covered
17 by clothing.

18 **Q.** Okay. And then of the hand, you said, what,
19 25 percent of the hand would be covered by it; is that
20 right?

21 **A.** Yes.

22 **Q.** Where did you get that from?

23 **A.** Had to come up with some assumptions there.
24 Spilling it on the hand, it's going to be one side. It
25 wouldn't fully -- he's not dipping his hand so it's --

1 you know, it's a conservative approach.

2 Q. So you just kind of made it up?

3 A. Well, we have to make some assumptions. And I
4 have to figure out, you know, some type of surface area.
5 I wasn't there. So we're going back and recreating it
6 and using conservative assumptions. But not too
7 conservative as to where it wouldn't be realistic.

8 Q. So these assumptions then that we're using to
9 construct this model has a 25 percent exposure to the
10 hand; is that right?

11 A. Yes.

12 Q. So by definition then, it wouldn't include any
13 potential exposure to his leg; right?

14 A. For the -- for the concentrate?

15 Q. Yeah, for the mixing.

16 A. Well, it potentially could because if it
17 spilled on his leg, it's going to be absorbed into his
18 jeans. And so I can tell you that on the hand without
19 any gloves or clothing covering, it's going to be
20 higher.

21 Q. Well, I understand it would be higher on the
22 hand. I'm not disputing you with that, sir. But what
23 I'm talking about is because you're focusing on
24 25 percent exposure on the hand, you're by definition
25 excluding any other exposures to other parts of the

1 body; right?

2 A. No.

3 Q. What am I missing here? I mean, you said just
4 a second ago that 25 percent of the hand is what you're
5 using for the mixing. And I'm saying if that's the
6 case, then if it got on his hand and it got on his leg
7 and it got on his foot and it got on -- and it splashed
8 on his face a little bit, let's say, none of that other
9 exposure would be captured by that mixing calculation?

10 A. For the mixing, I'm taking an approach of the
11 highest possible daily exposure. Yeah, I'm not assuming
12 that he spilled it on his hand, and then I don't know
13 how he would necessarily reabsorb it into a container
14 and then spill it on his leg. I'm assuming that he's
15 spilling it once, not spilling it three times. He's
16 only applying an amount of product that -- he's not
17 doing multiple mixings and loadings on these days, from
18 what I saw. It was always --

19 So I would say that my calculation takes into
20 account the highest possible where he spilled some
21 concentrate on his skin and he was spraying and it
22 covered the full front of his legs. And in my opinion,
23 that represents a highest possible daily exposure and
24 potential dose.

25 Q. All right. Sir, I really didn't ask you any

1 of that. So let's go back to my question.

2 A. Okay.

3 Q. I'm sorry if my questions are not clear. I
4 apologize if I'm not being clear here. But let's stick
5 to the mixing, which is what we're talking about here,
6 okay?

7 A. Okay.

8 Q. So the scenario where he's mixing and he
9 spills on his hand, but at the same time, you know,
10 spilling is spilling, he gets it on his leg, maybe on
11 his foot, the exposures on the leg and the foot wouldn't
12 be captured in your assumptions for the mixing; right?

13 A. They would be accounted for -- for some part
14 of it, yeah. I mean, I would say I'm still accounting
15 for complete coverage of his legs with the Roundup so...

16 Q. That's for spraying; right?

17 A. Right.

18 Q. We're not talking about spraying here. We're
19 talking about mixing. Let's focus in on my question
20 here. Okay?

21 A. Okay.

22 Q. So we're talking about the mixing calculation.
23 He puts in the Roundup and he gets some on his hand --

24 A. Okay.

25 Q. -- and he gets some on his leg. Your

1 assumption is that he didn't get any on his leg, it's
2 just 25 percent of his hand. That's what forms the
3 basis of that calculation.

4 **A.** The hand is going to be higher, the exposed
5 skin is going to be higher. If it gets on his leg with
6 his pants, it's going to be much, much lower.

7 So all I can say is there's a lot of scenarios
8 where I could assume that maybe he spilled it some
9 multiple times on different areas, but the hand is going
10 to be the highest and that amount that spilt on his
11 pants that might be residual after he spilled on his
12 hand, I can say that that's going to be much lower than
13 the skin absorption.

14 **Q.** All right. Let's move on to spraying then.
15 For spraying, you were calculating just the exposure
16 that would have occurred on his legs assuming he's
17 wearing pants; right?

18 **A.** Yes.

19 **Q.** Okay. So, for example, if Mr. Pilliod, when
20 he was spraying it, the thing leaked a lot and got all
21 over his hands and dripped into his skin, that wouldn't
22 be captured in this calculation?

23 **MR. EVANS:** Objection. Foundation,
24 Your Honor.

25 **THE COURT:** Overruled. He can answer.

1 **THE WITNESS:** I didn't see any indication in
2 the deposition where they said it was leaking on their
3 hands.

4 **BY MR. WISNER:**

5 **Q.** Okay.

6 **A.** But I can just say that that surface area
7 is -- isn't critical. And so if there was a little bit
8 on the surface area of the skin, I'm taking account for
9 it in that large surface area of the whole bottom part
10 of their front legs.

11 **Q.** I'm sorry. The spraying is based on leg
12 exposure wearing pants; right?

13 **A.** Yes.

14 **Q.** So it doesn't contemplate exposure to the
15 hand; right?

16 **A.** If it was leaking. I'm just saying I didn't
17 see any indication that they said it was leaking on
18 their hands.

19 **Q.** Sir, I didn't ask you if you saw any
20 indication. I'm asking you if your calculation
21 considers that?

22 **A.** It does consider these other types of
23 exposures that might occur from some incidental exposure
24 to parts of the skin. And the reason is, is I'm
25 overcompensating on full coverage of the bottom part of

1 the legs, which is like a thousand square centimeters,
2 it's a large area. I wouldn't expect to see that. And
3 that's accounting for these other small exposures that
4 might occur on the hand, on the arm, as you're saying.

5 Q. You know he didn't wear gloves; right?

6 A. From what I recall in the deposition saying
7 that he didn't wear gloves.

8 Q. He sometimes wore gloves and sometimes didn't?

9 A. Right.

10 Q. You also -- this doesn't contemplate drift,
11 right, that comes off and gets on your face; this
12 doesn't contemplate that, does it?

13 MR. EVANS: Objection. Speculation.

14 THE COURT: Overruled. He can answer.

15 THE WITNESS: They reported not using it under
16 windy conditions. And they reported using in the early
17 morning and evening to avoid some of those windy
18 conditions.

19 And I visited their site. And so it's a
20 fenced-in area, their primary site, and so I would say
21 that wind and drift is -- is a minimal effect.

22 BY MR. WISNER:

23 Q. Sir, I'm asking you a question, and you're
24 answering something else. I didn't ask you about what
25 they reported or even what you did when you went to look

1 at the Livermore house. I asked you a question about an
2 assumption.

3 My question about the assumption is
4 straightforward. Your calculation doesn't consider
5 drift; correct?

6 **MR. EVANS:** Objection. Argumentative.

7 **THE WITNESS:** It does.

8 **THE COURT:** Overruled.

9 Go ahead. He can answer.

10 **THE WITNESS:** It does.

11 **BY MR. WISNER:**

12 **Q.** It does? So you calculated the surface area
13 of the face, the arms that might have been exposed, the
14 hands, the rest of the torso, you considered all of that
15 potential exposure in coming to this calculation?

16 **A.** No. I based my assessment on the paths of
17 dissymmetry studies that exist that show that a majority
18 of it is going to go onto the lower legs and the drift
19 is going onto the lower legs. The drift is not going
20 all over the torso and the body.

21 And it's pretty clear in the studies where
22 pesticide applicators using similar types of equipment,
23 that it's going on the lower legs. They're spraying the
24 ground, it's going on the lower legs. And I mean,
25 that's what I based my assumptions on and my

1 calculations.

2 **Q.** Sure. And that's because you said that they
3 did something called spot spraying; right?

4 **A.** Yeah. I did mention that it appeared that
5 they would be doing more spot spraying than continuous
6 spraying.

7 **Q.** Okay. And that's based -- let's back up a
8 couple steps. Just quickly for Mrs. Pilliod, that's the
9 same sort of calculation, you just looked at exposure to
10 the legs and with her you also contemplated feet; right?

11 **A.** Yes.

12 **Q.** Okay. Now you said you went and visited the
13 sites. You actually only visited one site; right?

14 **A.** Yes, their primary residence where they
15 reported spraying it the most.

16 **Q.** Well, you didn't look at those sort of rural
17 properties where they were spraying large acres of land;
18 right?

19 **A.** I looked at pictures of the properties and the
20 layout of the properties.

21 **Q.** Well, a second ago you said you went there and
22 you saw that it wasn't windy.

23 **MR. EVANS:** Objection, Your Honor.

24 **THE COURT:** Sustained.

25 ///

1 **BY MR. WISNER:**

2 **Q.** Okay. So you have no idea what the wind
3 conditions were of those other places, those three other
4 sites that you didn't visit; right?

5 **A.** What I know is from their deposition that they
6 reported not applying it under windy conditions.

7 **Q.** Well, I mean, sometimes the wind picks up;
8 right?

9 **MR. EVANS:** Objection. Speculation,
10 Your Honor.

11 **THE COURT:** Sustained.

12 **BY MR. WISNER:**

13 **Q.** Okay. Now, in this dose calculation that you
14 came up with here for the Pilliods, you've actually
15 reviewed Dr. Sawyer's report; right?

16 **A.** Yes.

17 **Q.** And he did a dose calculation using the POEM
18 model; right?

19 **A.** Correct.

20 **Q.** And he actually got that POEM model from
21 Monsanto; right?

22 **A.** I don't know.

23 **Q.** Well, he says it in his report.

24 **A.** I know he mentioned something about Monsanto
25 and POEM model.

1 **Q.** Okay. And when he did the calculation, for
2 just one of the properties he had a systemic dose for
3 Mr. Pilliod of 12 milligrams, didn't he?

4 **MR. EVANS:** Objection. Your Honor,
5 speculation. It's not evidence of record.

6 **THE COURT:** Sustained.

7 **BY MR. WISNER:**

8 **Q.** I'm sorry. Did you review his report?

9 **A.** I did, but I'd have to probably go back and
10 review it to see a specific number.

11 **MR. WISNER:** Permission to approach?

12 **THE COURT:** Yes.

13 **BY MR. WISNER:**

14 **Q.** I'm handing you Exhibit 1243. That is a copy
15 of Dr. Sawyer's report; right?

16 **A.** It appears to be, yeah.

17 **Q.** And this is one you carefully reviewed as part
18 of your expert report; right?

19 **A.** I did. I think last time I reviewed it was
20 several months ago.

21 **Q.** Okay. And if we turn to page 22 -- if you use
22 the bottom right number, that's what I'm using for
23 simplicity -- that's Dr. Sawyer's POEM modeling for
24 Mr. Pilliod at the Stabulis Road property; right?

25 **MR. EVANS:** Your Honor, I'm just going to

1 object. Dr. Sawyer was here and did not offer this
2 testimony and did not allow me an opportunity to
3 cross-examine him on it. And so this is an
4 inappropriate way to try to use Dr. Sawyer's
5 calculations that you asked that we not tell the jury
6 about.

7 **THE COURT:** So approach because I don't want
8 any speaking objections.

9 **MR. WISNER:** Yeah.

10 (Sidebar held but not reported.)

11 **BY MR. WISNER:**

12 **Q.** So, Doctor, isn't it true under the POEM
13 model, if you applied it to Mr. Pilliod at Stabulis
14 Road, that his exposure would be about 12 milligrams?

15 **A.** I --

16 **MR. EVANS:** Same objection, Your Honor.

17 **THE COURT:** Overruled. He can answer.

18 **THE WITNESS:** I wouldn't agree that it's --
19 that it's an accurate assessment.

20 **BY MR. WISNER:**

21 **Q.** Sir, I didn't ask you if you thought it was
22 accurate. I asked if that was the number,
23 12.9 milligrams?

24 **A.** Well, you're asking me what the number that
25 Dr. Sawyer --

1 **Q.** No. I'm asking you what the POEM model would
2 do. If it just so happens to be what Dr. Sawyer did,
3 fine. But I'm asking you, sir.

4 **A.** I would have to go in and probably use --
5 spend some time with this POEM model and see what type
6 of calculation it would give. I'd have to check all the
7 numbers.

8 **Q.** And you didn't do that when you criticized
9 Dr. Sawyer's report?

10 **A.** I reviewed --

11 **MR. EVANS:** Same objection, Your Honor.

12 **THE WITNESS:** I reviewed --

13 **THE COURT:** Wait.

14 Overruled. He can answer that question.

15 **THE WITNESS:** I reviewed the use of this, and
16 so I did look at the POEM model. I mean, I did notice
17 that they had one for residential. It seemed a little
18 bit more appropriate.

19 But I'm still using the guidelines that are in
20 my profession that we use. So I would still say that if
21 you're going to ask me to give you a number and to
22 confidently say what that number is, I'd probably have
23 to spend some time researching what goes into this
24 model, what goes in, what goes out. And all I can say
25 is this number you're giving me is -- I think it's tens

1 and hundreds of times higher than we've seen reported
2 with any, like, pesticide applicators. So I don't trust
3 it.

4 **BY MR. WISNER:**

5 **Q.** That number or that model that you're
6 referring to, that's Monsanto's model?

7 **MR. EVANS:** Objection, Your Honor.

8 **THE COURT:** Sustained.

9 **THE WITNESS:** I don't know if that's --

10 **THE COURT:** Sustained.

11 **BY MR. WISNER:**

12 **Q.** That's all right. Don't answer.

13 All right. Well, let's go back to your
14 calculations here. And one of the things that I noticed
15 was that you talked about -- you actually brought in
16 Dr. Sawyer's report during your direct; do you recall
17 that?

18 **A.** I don't recall bringing --

19 **Q.** You remember this slide? You actually showed
20 the jury --

21 **A.** Oh.

22 **Q.** -- a figure from Dr. Sawyer's report; right?

23 **A.** Yes.

24 **Q.** So just to be clear, you carefully analyzed
25 this figure but not the other ones; is that right?

1 **A.** I did look at the POEM model. And so -- and I
2 looked at this. This POEM model isn't relevant to my
3 exposure assessment. So I did my exposure assessment
4 done on using methods that I've been trained on and that
5 I know. I -- that's about all I can say.

6 **Q.** Okay. So these DTL studies that were here at
7 the very end, right, from Dr. Sawyer, you understand in
8 those studies they used -- it was all the same
9 laboratory; right?

10 **A.** I assume so. There's some different authors
11 there, but I would assume -- I'd have to check.

12 **Q.** The "L" in "DTL" is "laboratory"; right?

13 **A.** Right.

14 **Q.** Okay. So all of these studies at DTL between
15 2010 and 2017, they used human skin; right?

16 **A.** Yes.

17 **Q.** And the human skin was -- the way it was
18 treated is it was frozen -- sorry, it was heated to
19 about 140 degrees Fahrenheit and then it was frozen
20 before it was used; right?

21 **A.** I think I recall reading 60 degrees Celsius --
22 I'd have to do the conversion -- for 45 seconds in one
23 of them, and I reviewed that in comparison with the OECD
24 guidelines and they said for that type of -- if they're
25 preparing the skin, that it shouldn't be more than one

1 to two minutes. And so 45 seconds appeared to be within
2 that criteria.

3 Q. I didn't ask you about OECD or any guidelines.
4 I asked if they'd cook it and freeze it, and they did;
5 right?

6 A. I -- I would disagree with the cooking.
7 45 seconds would not be considered cooking.

8 Q. 60 degrees Celsius, do you have any sense how
9 that is in Fahrenheit?

10 A. I'd have to do the conversion.

11 Q. Okay. In any event, did these other studies
12 that are earlier and even in the human -- like the Franz
13 one, that was a human skin study?

14 A. Yes.

15 Q. In fact, that's what you used to form the
16 basis of your calculations in this case; right?

17 A. I did. It gave a little bit higher flux than
18 one of the DTL studies. So I'm taking a conservative
19 approach so I did use the one with the higher flux.

20 Q. Okay. And in the Franz study, they didn't
21 heat and cool the skin; right?

22 A. My understanding is fresh human skin.

23 Q. Right. Fresh human skin. Didn't have any of
24 that getting hot and then cold stuff that we had at the
25 DTL laboratories; right?

1 **A.** Correct.

2 **Q.** Okay. Then if we go to your chart where you
3 showed -- these are just human skin studies; is that
4 right?

5 **A.** Well, I would like to go back at least a
6 statement. They were --

7 **MR. WISNER:** Your Honor.

8 **THE COURT:** Why don't you just answer the
9 question that's pending.

10 **THE WITNESS:** Okay.

11 **BY MR. WISNER:**

12 **Q.** So this is your other chart that you used;
13 right?

14 **A.** Yes.

15 **Q.** Okay. And here, these are the human skin
16 studies, you said; right?

17 **A.** Yes.

18 **Q.** And all these ones that are green, all these
19 ones right here, those are all DTL studies; right?

20 **A.** I believe so, yes.

21 **Q.** Okay. And we know that -- and you said that
22 there was multiple authors. So what you've done here is
23 you actually broke it out in multiple results by author
24 and date; right?

25 **A.** Yes.

1 Q. So Ward 2010a; right?

2 A. Yeah.

3 Q. Is it your opinion that -- let me back up
4 here.

5 You agree it's a bit interesting that the
6 exposures that were observed prior to the DTL
7 laboratories were much higher than later on?

8 A. I'm a little confused on the question of
9 exposures.

10 Q. That's fine. All right.

11 So I want to go through some of these studies.
12 I know, you know, everyone hates the studies, but I
13 personally love them for some reason.

14 All right. I want to talk to you about the
15 biomonitoring studies that you reference in your report
16 and actually are part of those studies that we just
17 looked at; right?

18 A. Okay.

19 Q. In the biomonitoring studies, they primarily
20 examine exposure in urine; right?

21 A. That is -- yes.

22 Q. And the way that works is we have some form of
23 exposure and then we measure the specimen's urine to see
24 how much was actually absorbed into the family or
25 creature; right?

1 A. Yeah, we call that a biomarker. We can -- we
2 can -- urine is a common biomarker.

3 Q. Sure. So for example, there was a
4 biomonitoring study done by Monsanto in 2004; are you
5 familiar with that one?

6 A. The authors?

7 Q. It was by John Acquavella.

8 A. Okay, yeah.

9 Q. And what they did there is they looked at a
10 couple families who were spraying glyphosate and they
11 measured how much glyphosate was in their urine; right?

12 A. I would like to at least see a copy of the --

13 Q. The Farm Family Health Study; do you recall
14 the general specifics of that study?

15 A. Yeah, I do recall it, yes.

16 Q. Okay. And they measured the content of
17 absorption by looking at the urine; right?

18 A. I believe so.

19 Q. Okay. You'd agree with me, though, when it
20 comes to dermal absorption, the vast majority of
21 glyphosate actually isn't excreted in the urine, it's
22 excreted in the feces; right?

23 A. I would not agree.

24 Q. Okay.

25 A. For dermal absorption.

1 Q. Yeah, for dermal absorption. You disagree?

2 A. I would disagree that with dermal absorption,
3 that predominantly we would see it excreted in the
4 urine.

5 Q. Okay. Let's look at some studies. Go back to
6 the first study that you mentioned. You actually
7 covered it on direct. It's the Wester study,
8 Exhibit 1445 in your binder, if you want to take a look
9 at it.

10 And this is that Wester study that you showed
11 the jury on direct; right?

12 A. Yes.

13 Q. Okay. If we go through the study, there's a
14 chart here. And what we have here is a photograph of a
15 sort of silhouette of a rhesus monkey; is that right?

16 A. Yes.

17 Q. And what they're showing here is how they
18 dermally applied the glyphosate, or in this case
19 Roundup, to their bellies; right?

20 A. Yes.

21 Q. And they put them on, what, 1-inch or
22 1-centimeter square, sort of patches on their abdomen;
23 is that right?

24 A. Yeah.

25 Q. Okay. And then they actually looked at how

1 much was excreted from their body over the next seven
2 days; right?

3 A. Yes.

4 Q. Okay. And we have dose C and dose D. These
5 are two different doses for which they did that dermal
6 absorption test; right?

7 A. Correct.

8 Q. And we have here that, for example, the lower
9 dose, so dose D, it says right here it's dose 100 UG.
10 And look at the comparison between urine and feces.
11 Nearly four to five times as much of it is coming out in
12 the feces than the urine; right?

13 A. Okay.

14 Q. So this is a clear example of dermal
15 absorption coming out in the feces, not necessarily the
16 urine?

17 A. I would say it's contradictory to the dose C
18 group. So there's some evidence that there's some
19 issues there between those two dosings. You have two
20 groups. You have some conflicting evidence. And if you
21 go to the Figure 3, you know, you can see these error
22 bars --

23 Q. You mean Table 3?

24 A. No, I think it's Figure 3. It's down at the
25 bottom.

1 Q. Oh, okay.

2 A. So as a scientist, one of the things we look
3 at is variation. And I'm seeing huge variation here in
4 the results. It means that likely with this small group
5 of monkeys, that one of them has higher fecal amount
6 than the other. So -- and that's these large error bars
7 showing lots of variation.

8 So I look at this and so I -- I don't know,
9 there's some contradiction there. And I wouldn't
10 base -- I wouldn't base my opinion saying that it's all
11 going -- or it's not all, but that the majority of it is
12 going in the feces.

13 Q. Okay.

14 A. I mean, we see it -- we see it go to the
15 urine. I mean, we look at the biomonitoring studies.
16 We see it go into the urine with humans. We see it in
17 the Table 3 going to the urine once it's in the blood.

18 So there's that one anomaly, and that wouldn't
19 leave me to believe that it's predominantly going into
20 the feces.

21 Q. All right. Let's unwind some of the things
22 you just said.

23 A. Okay.

24 Q. First of all, these two bars aren't reflecting
25 two monkeys, they're reflecting dosing groups; right?

1 A. Correct.

2 Q. So this is -- dose C had a much higher dose;
3 right?

4 A. Yes.

5 Q. A hundred times higher dose?

6 A. Yeah.

7 Q. So you'd expect to see a higher amount of dose
8 coming out on the early portions than you would in
9 dose D; right?

10 A. Yeah, I agree.

11 Q. And that's what this bar graph is actually
12 showing?

13 A. Well, I'm actually pointing to the little bars
14 on top of those bars showing the variation. And so if
15 we're looking at dose D, there's a lot of variation.
16 That means that bar is representing an average between
17 probably a couple monkeys. And so that means one of
18 them was really low and the other one was really high.
19 So that tells me that there is even some conflicting
20 evidence in dose D.

21 I don't know exactly what that explanation is.
22 All I can say is it doesn't give me compelling evidence
23 that what you're saying it going predominantly in the
24 feces is true. Everything that I've -- everything else
25 that I've seen other than that anomaly points that it

1 will go into the urine.

2 Q. All right. So this also shows that even after
3 seven days of dermal exposure, there's still excreting
4 at the end of the study, of glyphosate; correct?

5 A. At the end of seven days, they -- we'd end
6 up -- prior testimony, they evaluated what was remaining
7 in several monkeys, four monkeys, and didn't find it
8 remaining in any of the tissues.

9 Q. I'm sorry?

10 A. It was being excreted -- yes, you can see
11 predominantly from this figure that most of it was
12 excreted within the first 24 hours and it's being
13 excreted. And at the end of seven days, in this study,
14 they sacrificed those four monkeys, and they didn't see
15 any remaining glyphosate in the tissues.

16 Q. So, again, sir, I'm not trying to argue with
17 you. I really would like to get you out of here before
18 lunch, and really if you could just answer my questions
19 yes or no, that would be great.

20 A. Okay.

21 Q. And I didn't ask you about any of that.

22 A. I'll do my best.

23 Q. I asked you a very simple question. This
24 shows that at the seventh day, they're still excreting
25 glyphosate; correct?

1 A. There's some small amount being excreted
2 there, according to that figure. I don't -- I don't
3 know. That could be zero on one of them and slightly
4 above zero in the other.

5 Q. And I want to talk to you about in your
6 report, you actually have an explanation as to why you
7 think that there's dosing in the feces; right?

8 A. Yes. I mean, there's some possibilities
9 there.

10 Q. In your report you talk about how you think
11 that there was cross-contamination where the animals
12 were picking at their stomachs and then eating it;
13 right?

14 A. Yes.

15 Q. And one of the concerns you raise in your
16 report is that there wasn't any belly plates?

17 A. Well, an upper plate, yes.

18 Q. Well, I find that interesting because it says
19 right here, it's talking about the dose and it
20 specifically mentions a belly plate. Do you see that?

21 A. Right.

22 Q. So in fact, they weren't able to do that,
23 that's just not true.

24 A. Well, there's a covering over the actual area.
25 So there's a top plate, there's a belly plate. I didn't

1 see in the report where that full area of the belly was
2 covered.

3 Q. It says belly plate right here; right?

4 A. Right. But that's not necessarily covering
5 the full belly into where they have access to their
6 skin.

7 Q. Well, that's where they applied glyphosate, to
8 their belly; right?

9 A. Okay.

10 Q. That's what the picture shows; right?

11 A. Show that they're applying it to the belly,
12 yes.

13 Q. So when you say that they were able to access
14 it, there's actually no basis of that in the study.

15 A. Oh, I believe I was looking at some pictures
16 in Dr. Sawyer's report that showed that, and it looked
17 like there was some access to the skin in those pictures
18 regarding this type of study.

19 Q. So your opinion about whether or not they had
20 access to it is based on what you saw in Dr. Sawyer's
21 report?

22 A. All I can say regarding this is this isn't
23 something that I considered in my assessment of dose.
24 So everything I've seen with humans is once it's in the
25 bloodstream, it's going to be excreted in the urine,

1 that, from a chemical standpoint, it makes sense. From
2 a physiological point, it makes sense.

3 If it's getting into the bloodstream, it's
4 going to be excreted in the urine. We see that with IV
5 dosing in the blood.

6 Dermally, once it goes to the skin, it's going
7 to go into the bloodstream. We see this consistently
8 with exposures to pesticide applicators. And, yes, some
9 will go into the feces. And if they ingested it, then I
10 would expect to see more of it go into the feces.

11 **MR. WISNER:** Your Honor, I would ask you to
12 instruct the witness to answer my questions. He's going
13 literally on diatribes.

14 **THE COURT:** Okay. So --

15 **MR. EVANS:** Object to that.

16 **THE COURT:** Yeah, that's argumentative.

17 Just listen to the question and answer
18 directly what he's asking.

19 **THE WITNESS:** Okay.

20 **BY MR. WISNER:**

21 **Q.** So it says right here the animals were placed
22 in metabolic chairs for the first 12 hours of the study
23 dosing period and then housed individually in metabolic
24 cages. Do you see that?

25 **A.** Yes.

1 **Q.** And then it says right underneath that a belly
2 plate and apron were positioned on the metabolism chair
3 under the skin dosing site. Do you see that?

4 Do you see that?

5 **A.** Okay.

6 **Q.** Okay. So to be clear, this study, at least
7 when it was done on the dermal absorption for rhesus
8 monkeys, shows that for the lower dose there was in fact
9 more excreted in the feces than in the urine; correct?

10 **A.** As a percentage, yes.

11 **Q.** All right. Now, you think this is an
12 anomalous result; is that right?

13 **A.** Yeah, I do see that as anomalous result.

14 **Q.** I'm going to show you Exhibit 34. This is an
15 evidence. And this is an e-mail written from a Monsanto
16 scientist dated 2008.

17 I want to draw your attention to the bullet
18 point down to these bullet points right here. It says:

19 The movement of glyphosate in the
20 blood flow from dermal contact is
21 different to that through oral or
22 intravenous exposure. The little data we
23 have suggests that the excretion is
24 significantly more through the feces than
25 the urine.

1 Do you see that?

2 A. I see it.

3 Q. So a Monsanto scientist, in 2008, says you're
4 wrong, that in fact when you have dermal absorption,
5 it's mostly excreted through the feces; right?

6 MR. EVANS: Objection, Your Honor.

7 THE COURT: Sustained.

8 MR. WISNER: Let me rephrase.

9 Q. A Monsanto scientist in 2008 is saying that
10 when you have dermal absorption, because of the way
11 blood flow works you have more excretion through the
12 feces than the urine; right?

13 A. I don't know if I can really -- I mean, this
14 is an e-mail. I don't know the context. I don't know
15 what the reply was. I don't think I could really
16 comment on what they were thinking. I don't know what
17 the reply was to this.

18 Q. Okay. If you read the next bullet point, it
19 says:

20 Dermal exposure is the greatest risk
21 of exposure for operators.

22 Do you see that?

23 MR. EVANS: Beyond the scope, Your Honor.

24 THE COURT: Overruled as to this question.

25 THE WITNESS: I see it.

1 **BY MR. WISNER:**

2 **Q.** You agree with that, don't you?

3 **A.** I agree that dermal exposure is a primary
4 route of exposure. So I would disagree with the
5 statement about greatest risk.

6 **Q.** All right. I want to turn to Exhibit 1433.
7 This is the Brewster study.

8 You're familiar with that study; right?

9 **A.** Yes.

10 **MR. WISNER:** Your Honor, this has been
11 previously published a couple times.

12 (Exhibit published.)

13 **BY MR. WISNER:**

14 **Q.** This is a publish -- from 1991; do you see
15 that?

16 **A.** What tab is this again?

17 **Q.** It's Exhibit 1433.

18 **A.** Okay.

19 **Q.** My question pending is: Do you see that's
20 from 1991, sir?

21 **A.** Yes.

22 **Q.** Okay. And then it says here that it was done
23 by Monsanto Company. Do you see that?

24 **A.** Yes.

25 **Q.** All right.

1 **A.** Or people at Monsanto.

2 **Q.** And it says down here this was an oral study;
3 right?

4 **MR. EVANS:** What is the exhibit number again?
5 I'm sorry, counsel.

6 **MR. WISNER:** 1433.

7 **MR. EVANS:** Thank you.

8 **THE WITNESS:** Yes, this is oral dosing of rats
9 in this case.

10 **BY MR. WISNER:**

11 **Q.** Okay. And this is one of the studies you
12 relied upon; correct?

13 **A.** It's one of them.

14 **Q.** And they actually talk about whether or not
15 they're finding excretion through the feces, don't they?

16 **A.** Yes.

17 **Q.** And they actually specify that they are in
18 fact finding excretion through the feces; correct?

19 **A.** Yeah, that makes perfect sense.

20 **Q.** But it doesn't say one is better than the
21 other. It says right here: Urine and feces were
22 equally important routs of elimination. Do you see
23 that?

24 **A.** I see that and it's relative to oral
25 administration --

1 Q. Okay.

2 A. -- not dermal.

3 Q. And then if we go to one of the tables in
4 here, and this is I think the jury saw this previously.
5 This is -- it's showing where they're finding the
6 glyphosate seven days after exposure; right?

7 A. Okay.

8 Q. And we have right here, when they eat it, it
9 originally was two hours out, the vast majority of the
10 dose is in the small intestines; right?

11 A. Yes, this is tissue blood ratios. Doesn't
12 Table 1 show it a little bit better of the amounts in
13 the tissues?

14 Q. I want to talk about Table 4.

15 A. I know, but you're asking me how much is in
16 the tissues. And in Table 1, I can see it a lot clearer
17 what you're asking.

18 Q. Sir, I don't know what's in Table 1, I don't
19 really care. I asked you about Table 4. And my
20 question was: The vast majority of the dose is in the
21 small intestines; correct?

22 A. It says here tissue to blood ratios of
23 glyphosate-derived radioactivity in selected times after
24 oral administration. So I would assume that that's a
25 measure of glyphosate in that tissue. So it shows small

1 intestine two hours is the highest value.

2 Q. Thank you.

3 And then if you move on, as we go through
4 longer time periods, six hours, 28 hours, 96 hours,
5 168 hours, you see that the dose in the small intestine
6 goes down pretty dramatically after six hours?

7 A. Yes.

8 Q. Okay. But we see a sort of different effect
9 in the bone; right?

10 A. Okay.

11 Q. In fact we see the inverse. There's very
12 little exposure two hours in. But as we get to the
13 seven-day mark, the vast majority of the glyphosate dose
14 goes to the bone; right?

15 A. I'd say the problem with this is this is the
16 tissue to blood ratio, and as I stated before, Table 1
17 shows what's actually in the tissue more appropriately.

18 So I don't think I can answer your question
19 looking at this table.

20 MR. WISNER: Please reask my question.

21 THE COURT: Go ahead and read it back.

22 And answer the question that's being asked.

23 (The record was read back by the court
24 reporter as follows:

25 "Q. In fact we see the inverse. There's very

1 little exposure two hours in. But as we get
2 to the seven-day mark, the vast majority of
3 the glyphosate dose goes to the bone; right?")

4 **MR. EVANS:** Objection, Your Honor. Asked and
5 answered.

6 **THE COURT:** Overruled. He hasn't answered
7 that question.

8 **THE WITNESS:** I can't answer that looking at
9 this table, knowing what I know in Table 1.

10 **BY MR. WISNER:**

11 **Q.** Okay. Let's take a look at Table 1.

12 Sir, Table 1 doesn't even mention bone, does
13 it?

14 **A.** Oh, sorry. Table 3.

15 **Q.** Table 3, okay. Let's look at Table 3.

16 Look at the bone concentration. I don't see
17 how this talks about the distribution at all of the
18 dose.

19 **A.** Table 3 says tissue distribution, percent of
20 administered dose of glyphosate-derived radioactivity at
21 selected time intervals after oral administration.

22 **Q.** Exactly. So this doesn't answer the question
23 that I asked. Because I'm asking you, sir: Where does
24 the glyphosate go after seven days? And this tells us
25 that of the glyphosate that's remaining, the vast

1 majority of it goes to the bones; correct?

2 **MR. EVANS:** Objection. Asked and answered,
3 Your Honor.

4 **THE COURT:** Well, actually not. Overruled.

5 **THE WITNESS:** As I said before, going back to
6 Table 3, I can answer that question appropriately.
7 So...

8 **BY MR. WISNER:**

9 **Q.** So you refuse to answer my question, sir?

10 **A.** I'm just saying based on this, I can't answer
11 your question based on this Table 4. This is a tissue
12 to blood ratio, and it's not a measure of the percent of
13 absorbed dose in the tissue.

14 **Q.** So my question was actually slightly
15 different, and that may be why you're confused, sir.

16 Of the remaining dose at seven days, of the
17 remaining dose most of it is in the bones; correct?

18 **A.** Of the remaining dose, yes, after seven days
19 in this study, we do see that the highest amount is in
20 the bones. And that's about 1 percent in Table 3.

21 **Q.** Fair enough. I wasn't fighting you about the
22 percentage.

23 So of the absorbed dose, 1 percent after seven
24 days gets in the bones; right?

25 **A.** They measured 1 percent in the bones after

1 seven days.

2 Q. And you talked about this concern about
3 accumulation; right?

4 A. Yes.

5 Q. You talked about that on direct, remember?

6 A. Yes.

7 Q. And we don't know how much of that stays in
8 the bones after seven days, do we?

9 A. I can say from my review of this paper and
10 review of Table 3, I see it -- I see it clearly not
11 accumulating in the bones.

12 Q. Okay. The study ends at seven days; right?

13 A. Correct.

14 Q. So we don't know what happens on day eight;
15 right?

16 A. I can predict it, looking at Table 3.

17 Q. Okay. Because the study ended at seven days,
18 we actually don't know day eight; right?

19 A. As I said, by looking at Table 3, I can see
20 the pattern. It goes -- it goes up and peaks at about
21 six hours, I think, somewhere around there. And then it
22 starts going down and down and down.

23 And so, yes, at seven days, it's at 1 percent.
24 But that is decreasing over time. And so if we're
25 looking at that pattern, it's decreasing. It's not

1 accumulating. It's actually decreasing. That's why I
2 said that this Table 4 is a little misleading.

3 Q. Well, I didn't write Table 4, did I?

4 A. No.

5 Q. Okay. So when you were calculating the
6 exposures for Mr. and Mrs. Pilliod, you contemplated
7 weekly exposure; right?

8 A. Yeah. I mean that -- and I contemplated, I
9 looked at this study and I looked at Wester to look at
10 this effect of accumulation.

11 Q. Okay. And so week after week, they're being
12 exposed dermally to glyphosate. Is it fair to say then
13 that during the time period when they were spraying,
14 they had at least a 1 percent, whatever the dose was, in
15 their bones?

16 A. This is a rat study, an oral feeding, very
17 high dose. The Wester study, dermal absorption, after
18 seven days nothing in any of the tissues, nothing in the
19 bone.

20 And based on glyphosate and its properties,
21 I'm telling you it's going to be going into the urine.
22 It's going to be excreted very rapidly.

23 If you look at the evidence in the
24 biomonitoring data, Connolly is a big one. Three hours
25 is the peak, it's excreted in the urine, and it's

1 dropping off fairly rapidly.

2 So I would say that I didn't see any evidence
3 that it's accumulating in the body or the bones.

4 Q. I'll show you another exhibit that's in
5 evidence. This is the Maibach study from 1983.

6 Do you see that?

7 A. Yes.

8 Q. And this is Exhibit, if you want to look at
9 the hard copy, sir, Exhibit 27.

10 Do you agree, sir, this is from 1983; right?

11 A. Yes.

12 Q. And as we go down here, we see there's a
13 discussion of purpose and methods; do you see that?

14 A. Okay.

15 Q. Do you see that, sir?

16 A. In the methods? I see that there's methods.

17 Q. Okay. So that's a "yes"?

18 A. Yes.

19 Q. Great.

20 And it goes on here talking about how they're
21 collecting the dose amounts and they're using urine;
22 correct?

23 It's just a yes-or-no question.

24 A. Okay, yes, I see that.

25 Q. All right. They did not look at feces;

1 correct?

2 Another yes-or-no question.

3 A. I don't re -- I don't think they were, no.

4 Q. Okay. And if we look down here, we have the
5 results. And there's a conclusion written. And you can
6 see down here, it's actually authored by Richard C.

7 Dirks, Ph.D. toxicologist; right?

8 A. That's what it says.

9 Q. Monsanto Company employee; right?

10 A. It says Monsanto.

11 Q. All right. And in here they talk about the
12 total recovery was very low. Do you remember reading
13 this?

14 A. Yes.

15 Q. It says: The total percent recovery (percent
16 label removed by washing plus total percent label
17 contained in urine) was low, i.e., 16 percent.

18 Do you see that?

19 A. Yes.

20 Q. And what kind of study was this? Was this a
21 dermal? Was this an injection? What kind of study was
22 this?

23 A. I believe the main part of the study was they
24 were injecting it and then they had a topical dose.

25 Q. Okay. And in all of the living species

1 studies that you relied upon for calculating Mr. and
2 Mrs. Pilliod's exposure, you were looking at IV studies;
3 right, not dermal application studies?

4 A. Can you restate that again?

5 Q. What about my question was confusing, sir?

6 A. I'm just processing it.

7 Q. Okay. Let me know when you're ready to answer
8 and go ahead and answer.

9 MR. EVANS: Your Honor, he asked that he
10 restate the question.

11 THE WITNESS: I was just asking you to restate
12 the question.

13 BY MR. WISNER:

14 Q. Oh, I thought you were asking me to restate it
15 in a different way. I'm sorry.

16 THE COURT: No, he didn't.

17 Read the question, please.

18 MR. WISNER: Yeah, absolutely.

19 (The record was read back by the court
20 reporter as follows:

21 "Q. And in all of the living species studies
22 that you relied upon for calculating Mr. and
23 Mrs. Pilliod's exposure, you were looking at
24 IV studies; right, not dermal application
25 studies?"

1 **THE WITNESS:** I mean, I reviewed a lot of
2 studies on dermal absorption, that would be with human
3 skin. I reviewed a lot of the biomonitoring data in
4 humans, looking at -- so it seems to be a complicated
5 question. You might have to break it down a little bit.

6 **BY MR. WISNER:**

7 **Q.** You know what, we'll just move on. I don't
8 want to get lost in this contemplated question.

9 So it says here:

10 A definitive explanation for the low
11 recovery is not provided in the report,
12 but the author does state that previous
13 experience would suggest that much of the
14 test material may in some way bind to or
15 in the skin and cannot be removed by
16 washing.

17 Do you see that?

18 **A.** Yeah.

19 **Q.** And what they're saying here is that when they
20 did this dosing study, they only recovered 16 percent;
21 right?

22 **A.** Correct.

23 **Q.** And actually if we go back to the methods of
24 this one, I actually think this was a dermal absorption
25 study. It says right here "For this dermal penetration

1 phase of the study." Do you see that?

2 A. Okay.

3 Q. So they actually were applying Roundup
4 specific -- or glyphosate, sorry, specifically to rhesus
5 monkeys here; right?

6 A. Yes.

7 Q. And they only recovered 16 percent of it. But
8 again here, Doctor, they actually weren't measuring the
9 feces, were they?

10 A. Nope.

11 Q. So it's possible, consistent with the Wester
12 study, that the vast majority of the excretion was
13 actually happening in the feces, they just didn't catch
14 it?

15 A. I would disagree there.

16 Q. Okay.

17 It says down here that -- the author state
18 that previous experience would suggest that much of the
19 test material may in some way may bind to the skin.

20 Is it your understanding that a large
21 percentage, 20 percent or so, of glyphosate actually
22 stays in the skin?

23 A. No.

24 Q. That's not your understanding?

25 A. That 20 percent of it stays in the skin?

1 Q. Up to 20 percent, yeah.

2 A. My understanding in review of the literature
3 is that it's readily washed from the outer surface of
4 the skin and so the amount that's actually retained in
5 the skin is very small.

6 Q. So where it says right here, "Previous
7 experience would suggest that much of the test material
8 may in some way bind to or in the skin and cannot be
9 removed by washing," you don't agree with that?

10 A. No. That was later evaluated by Wester. And
11 it looked at the skin binding and determined that it's
12 not binding to the skin.

13 Q. And when was that study by Wester?

14 A. It was like '91 or something like that.

15 Q. Okay. Well, I'm going to take a look at an
16 e-mail. It's in evidence. Exhibit 25. It's up here on
17 your screen, sir. And as you see here, this is dated
18 February 2003; right?

19 A. Okay.

20 Q. So this would be after that study that you
21 said confirmed it didn't absorb in the skin; right?

22 A. Well, that was just one. I can give you other
23 examples.

24 Q. Well, here's what this person Fabrice says.
25 He says: And we know now five to 20 percent of the dose

1 of glyphosate could be stored in the skin.

2 Do you see that?

3 A. That's what it says.

4 Q. Okay. Are these Monsanto scientists wrong?

5 A. This is an e-mail. I don't know -- I just --
6 I don't if I can really answer. I don't know the
7 context. I don't know what the replies were. I don't
8 know, you know, did the next e-mail say you're crazy. I
9 don't know.

10 Q. Okay.

11 A. I'm just telling you that in my review of the
12 literature and studies, even in the peer-reviewed
13 literature, I don't see this 20 percent binding and
14 retained in the skin.

15 Q. Well, let's look at the response since you
16 wanted to look at it.

17 A. I don't want to look at it.

18 Q. You brought it up, sir. It says right here:
19 20 to 50 percent of the dose was found in the dermis.

20 Dermis, that's skin; right?

21 A. Okay. So they're referring to a Franz study,
22 and I --

23 Q. My question was: Is dermis skin?

24 A. Dermis is the lower layer of the skin.

25 Q. Right. That's the part that things absorbed

1 into the body; right?

2 A. Yes.

3 Q. Okay. All right. Now, part of your
4 calculations assumed about a 1 percent dermal
5 absorption; right?

6 A. My calculations are based on the flux. So
7 it's the rate.

8 Q. 1 percent?

9 A. It depend on the concentration. Like I said,
10 in a percent, it's going to vary on concentration and on
11 the study. So --

12 Q. You used the Franz study; right?

13 A. I've used -- I used Franz and I think I used
14 data from the Davies as well.

15 Q. Okay. And in the Franz study, I actually
16 think the diluted absorption rate was around .5 percent;
17 right?

18 A. For the dilution, I think it was .15 percent,
19 was --

20 Q. .15 percent.

21 A. .15 percent.

22 Q. Okay. You would agree 10 percent is much,
23 much higher than .15 percent; right?

24 A. I would not agree.

25 Q. You wouldn't agree?

1 **A.** No. You have to specify what that is percent
2 of. 10 percent of a very small amount could be very
3 different than 1.5 percent of a very large amount. So
4 I'm just -- this is the problem with percents.

5 **Q.** I think this is probably the least
6 controversial question I've asked you.

7 10 is bigger than .15; right?

8 **A.** I would agree.

9 **Q.** All right. We agree on something.

10 So let's look at the TNO study. That's one of
11 the studies you actually did look at; correct?

12 **A.** It's -- it's one I looked at, yes.

13 **Q.** And this is actually a document.

14 **MR. WISNER:** Actually is this in evidence?

15 Your Honor, permission to publish Exhibit 800.

16 **Q.** Sir, take a look at Exhibit 800 in your
17 binder. And that's a copy of the TNO study; right?

18 **A.** It appears to be, yes.

19 **Q.** Okay. And this is what you reviewed?

20 **A.** I did review it.

21 **Q.** Okay.

22 **MR. WISNER:** Permission to publish,
23 Your Honor?

24 **MR. EVANS:** No objection.

25 (Exhibit published.)

1 **BY MR. WISNER:**

2 **Q.** So if we go to this TNO study, you look at the
3 very bottom of this. And was this a rodent study, sir?

4 **A.** Yes, rodent study.

5 **Q.** All right. We look at the discussion and
6 conclusions. And in the conclusion it says right here:
7 An eight hour exposure to MON35012.

8 I'll stop right there. You understand that
9 that number refers to a formulated glyphosate product?

10 **A.** Yes.

11 **Q.** It says: Resulted in a penetration of CA.

12 I'll stop right there. What is CA?

13 **A.** It's like approximate concentration.

14 **Q.** All right. Penetration of approximately
15 10 percent concentrate or 2.6 percent field dilution
16 over a period of 48 hours in viable rat skin membranes.

17 Do you see that?

18 **A.** Okay.

19 **Q.** Do you see that?

20 **A.** Yes.

21 **Q.** Okay. And I just want to be clear, sir, when
22 you did your dose calculations for the Pilliods, you
23 used a .15 percent absorption rate, not 10 or 2.6;
24 right?

25 **A.** I used a -- I used a flux. I used the actual

1 rate through human skin. I did not -- you know, there
2 are percentages based on these. But this is a rat
3 study. I didn't base my calculations on a rat study
4 knowing that there's 12-plus studies on human skin. So
5 I used flux.

6 Q. You understand what happened around this study
7 and Monsanto, or no?

8 A. I reviewed the study from a scientific
9 standpoint, and I saw some methodological issues that
10 the authors did report. And so they obviously had some
11 issues with their study. And I would agree that there
12 was issues with the study.

13 Q. Do you know if Monsanto ever gave this study
14 to regulators?

15 A. I don't know.

16 MR. EVANS: Objection, Your Honor, outside the
17 scope.

18 THE COURT: Sustained.

19 BY MR. WISNER:

20 Q. All right. One of the studies that you cite
21 to pretty regularly in your report is the Solomon
22 review, do you recall that?

23 A. Yes.

24 Q. That was from 2016; right?

25 A. Sounds about right.

1 **Q.** And that was part of a 2016 Intertek expert
2 panel; right?

3 **A.** I don't know. I was just reviewing it for the
4 science. I wasn't -- I just -- it was a review paper on
5 passive dissymmetry and biomonitoring data, and I also
6 reviewed the papers it reviewed.

7 **Q.** Sorry. That doesn't answer my question.

8 **A.** Okay. So I don't know.

9 **Q.** You don't know. Okay. Thank you.
10 You didn't read the -- who wrote it when you
11 looked at the study?

12 **A.** I do recall reading it. I just -- do you have
13 a copy of it here?

14 **Q.** Sure. Let's take a look at it. It's
15 Exhibit 2144 in your binder.

16 **MR. WISNER:** Permission to publish,
17 Your Honor?

18 **THE COURT:** Any objection?

19 **MR. EVANS:** No, Your Honor.

20 (Exhibit published.)

21 **BY MR. WISNER:**

22 **Q.** You see this is the article by Dr. Solomon,
23 sir? It's on the screen in front of you.

24 **A.** Yes.

25 **Q.** Actually if we just go to the last part of it,

1 there's a discussion, disclosure of interests. Right
2 here it talks about -- oh, sorry. Acknowledgment,
3 sorry. Here we go.

4 Acknowledgments. It talks about how it's part
5 of the Intertek panel. Do you see that?

6 **A.** Okay.

7 **Q.** All right. In any event, did you follow the
8 subsequent developments related to this article after
9 you relied on it?

10 **A.** I don't know. I used this article because it
11 provided a review of biomonitoring and passive
12 dissymmetry data. And I also reviewed the relevant
13 articles that this used.

14 So beyond that scope, I don't -- I'm not sure
15 I understand what you're asking.

16 **Q.** Are you aware one way or the other if the
17 journal subsequently issued an expression of concern
18 about this publication?

19 **MR. EVANS:** Objection, Your Honor. Beyond the
20 scope.

21 **THE COURT:** Overruled. He can answer.

22 **THE WITNESS:** I don't know.

23 **BY MR. WISNER:**

24 **Q.** You don't know?

25 I just need an oral answer.

1 A. I don't know.

2 Q. When did you first read this study, do you
3 recall?

4 A. Probably in the past three or four months.

5 Q. Okay. So it would have been after
6 November 2017?

7 A. No. I probably -- I'd have to look at it.
8 When I first reviewed it, it probably was somewhere
9 around November.

10 Q. Yeah, 2017?

11 A. Oh, not 2017.

12 Q. So it was definitely after that; right?

13 A. Yes.

14 Q. And when you pulled up the article online and
15 you looked at it, did you see that there was an
16 expression of concern that had been issued?

17 A. I may have. I just don't recall.

18 Q. Did you read it?

19 A. I don't recall.

20 Q. Okay. All right. Well, let's just go to --
21 basically I'm coming to the end here, sir.

22 During your deposition that you had, you
23 talked about something called the safety data sheet;
24 right?

25 A. Yes.

1 **Q.** Okay.

2 **A.** I imagine.

3 **Q.** And you actually said that you recommend as
4 part of your work as an industrial hygienist, you
5 recommend that people read the safety data sheet; right?

6 **A.** In the workplace?

7 **Q.** Sure.

8 **A.** In the workplace, it's something that is
9 required under OSHA requirements. You know, you have to
10 provide safety data sheets. And if I'm working in a
11 workplace with large amounts of chemicals, it's good to
12 know about what -- you know, about the potential
13 hazards. And so I would agree.

14 **Q.** And you actually said that you recommended --
15 you recommend people follow the safety data sheet even
16 in the residential context; right?

17 **MR. EVANS:** Your Honor, it's beyond the scope.

18 **THE COURT:** Sustained.

19 **BY MR. WISNER:**

20 **Q.** You relied upon both the label and the safety
21 data sheet in forming your opinions in this case, didn't
22 you?

23 **MR. EVANS:** Beyond the scope, Your Honor.

24 **THE COURT:** Overruled. You can answer.

25 **THE WITNESS:** If I relied on the -- for my

1 calculations?

2 **BY MR. WISNER:**

3 Q. For coming to your opinions.

4 A. Oh, for coming to my opinions.

5 The label was primary in determining the
6 concentration. If the label didn't provide the
7 concentration, I would have gone to a technical sheet or
8 safety data sheet only for concentration. So that's
9 necessary for my assessment.

10 Q. And on direct examination, Mr. Evans asked you
11 about you physically handling a Roundup bottle,
12 remember?

13 A. Yes.

14 Q. Remember that?

15 A. Yes.

16 Q. And you said, "Well, I read the label and I
17 followed it"; right?

18 A. Correct.

19 Q. But the label on the safety data sheet is
20 different than the label that consumers get; right?

21 **MR. EVANS:** Beyond the scope, Your Honor.

22 **THE COURT:** Sustained.

23 **BY MR. WISNER:**

24 Q. You are an expert in protective gear; right?

25 A. Yes.

1 **Q.** And you would agree that wearing protective
2 gear generally reduces one's exposure?

3 **A.** Generally, yes.

4 **Q.** So if in fact Mr. and Mrs. Pilliod had worn
5 chemical-resistant gloves, they would have had reduced
6 exposure; right?

7 **A.** That would make sense.

8 **Q.** If they had a chemical-resistant apron when
9 they were spraying, they would have had less exposure;
10 right?

11 **A.** That makes sense.

12 **Q.** None of the Roundup labels that you
13 specifically relied on ever recommended wearing any of
14 that; right?

15 **A.** Right. And that's why we do risk assessments
16 and we do hazard assessments. We determine if there's
17 no hazard, why would we put somebody in a chemical suit.
18 It's actually quite dangerous.

19 **Q.** You actually have the opinion that both of the
20 Pilliods' exposures were essentially equivalent to what
21 you would expect an operator's exposure to be; right?

22 **MR. EVANS:** Objection, Your Honor. Same issue
23 we talked about earlier.

24 **THE COURT:** I'm sorry, I can't hear your
25 objection.

1 **MR. EVANS:** I'll just withdraw the objection.

2 **THE WITNESS:** I would agree, yes. They
3 weren't wearing as much chemical protective clothing so
4 they weren't applying it as much as you would see in
5 those studies where they're applying it for
6 seven-hours-plus at a time. So I do put their exposures
7 in that range.

8 **BY MR. WISNER:**

9 **Q.** And you agree because they were in that high
10 range of exposure, it would have been a good idea for
11 them to have been told to wear protective gear; correct?

12 **MR. EVANS:** Objection, Your Honor.

13 **THE COURT:** Sustained.

14 **MR. WISNER:** No further questions.

15 **THE COURT:** Redirect?

16 **MR. EVANS:** Briefly, Your Honor.

17 Can you pull up slide number 6, please.

18 (Counsel confer off the record.)

19 (Demonstrative published.)

20 **REDIRECT EXAMINATION**

21 **BY MR. EVANS:**

22 **Q.** And counsel asked you some questions about
23 some of the later studies and whether again this whole
24 concept of, you know, freezing and I think he said
25 cooking or whatever. The rate calculation, the flux

1 calculation that you looked at, did it actually come
2 from one of those studies or did it come from the Franz
3 study?

4 **A.** I was using flux with the Franz study for the
5 ready spray dilution mix.

6 And for the concentrate, I did use the -- one
7 of the Davies because I was being a little conservative
8 there and taking the higher measurement than one that
9 was closest to the percentage they were using. That's
10 important. If we're going to be applying flux, the
11 concentration that they're using and the concentration
12 associated with that flux is critical.

13 **Q.** Now in the Pilliods' case --

14 **MR. EVANS:** If we can go to slide 3.

15 (Demonstrative published.)

16 **BY MR. EVANS:**

17 **Q.** In the Pilliods' case, you were asked some
18 questions about this issue of if Mr. Pilliod in
19 particular --

20 **MR. EVANS:** This is Mrs. Pilliod. I want you
21 to go back to Mr. Pilliod one or two slides before.

22 (Demonstrative published.)

23 **BY MR. EVANS:**

24 **Q.** If Mr. Pilliod actually spilled it on his hand
25 and his pants and his shoe, wouldn't it actually be more

1 than if he just spilled it on his hand? I'm trying to
2 understand that.

3 What is your assumption based upon with
4 respect to trying to get the highest amount of exposure?

5 **A.** The assumption there is that a spill to the --
6 directly to the skin would give the highest possible
7 dose. And so in that case, a spill to the hand would
8 represent a highest -- to a concentrate would represent
9 a highest possible exposure. And having it absorbed
10 into the pants is going to be much lower.

11 **Q.** Okay. When you reviewed the deposition
12 testimony, are you trying to analyze again what the
13 highest exposure is as opposed to some theoretical
14 exposure? Is it based on what they testified to?

15 **A.** It's based on what they testified to.

16 **Q.** Okay. And but when you spill an amount, you
17 don't keep -- well, I'm just -- in your calculation did
18 you consider what if he just kept pouring over his hand
19 onto his leg and then onto his foot, would that be
20 something that you saw in his deposition?

21 **A.** No.

22 **Q.** And you're trying again --

23 **MR. EVANS:** Let's go to slide 25, please.

24 (Demonstrative published.)

25 ///

1 **BY MR. EVANS:**

2 **Q.** When you're using the surface area, this is
3 the 105 centimeters squared, the thousand centimeters
4 squared, and the 1,500 centimeters squared, does it
5 matter where that centimeter squared is, if it's on the
6 hand or it's on the shoe or on the pants or the sleeve?

7 **A.** Not in those areas of the body, no.

8 **Q.** Well, if in reality one of -- part of the
9 centimeter that you applied to the hand had actually
10 been on his pants, there would have been a protective
11 factor against that; right?

12 **A.** Correct.

13 **Q.** So less than you calculated?

14 **A.** It would be less.

15 **Q.** But let's just assume for the sake of argument
16 that, again, there was let's say twice as much square
17 surface centimeters. Okay?

18 **A.** Okay.

19 **Q.** So he spilled it on his hand and then he also
20 spilled an additional amount on his leg. Or let's
21 assume for the sake of argument it wasn't just the front
22 of the pants or legs, but let's assume it was, you know,
23 the whole leg front and back. Okay?

24 **A.** Okay.

25 **Q.** Does -- would that result in the Pilliods

1 receiving a high dose of glyphosate being absorbed into
2 their body?

3 A. No. Even if you doubled these doses, it's
4 still going to be very small. You're going to go from
5 .044 to .088 milligrams for Mr. Pilliod. And from .036
6 to .072. It's a very small amount.

7 Q. And so you quantified that into teaspoons.
8 For Mr. Pilliod it would be 1/95 thousandths of a
9 teaspoon. Is that less than like one speck of sugar?

10 MR. WISNER: Objection. Beyond the scope.

11 THE COURT: Sustained.

12 BY MR. EVANS:

13 Q. Okay. Well, if you -- if you double it, do
14 you just end up with 2/95 thousandths; is that how the
15 calculation works?

16 A. Yes.

17 Q. Now you were shown some -- a study, the
18 Brewster study, that was talking about exposure in
19 rodents who were actually fed the product.

20 A. Yeah. They were fed 10 milligrams per
21 kilogram body weight.

22 Q. Okay. But -- and I don't want to be
23 graphic -- when you talk about your basis for concluding
24 that after seven days there's nothing in the body from a
25 dermal absorption, that was based upon the Wester study;

1 right?

2 A. Correct. In primates.

3 Q. Right. And --

4 A. With dermal absorption.

5 Q. What did they do to the primates to make sure
6 that in fact there was no glyphosate? That by the way
7 had been marked, as you said earlier, with the
8 radioactive labels; right?

9 A. Correct.

10 Q. And do they actually literally -- I mean,
11 they're taking the monkeys apart and looking at every
12 part of them; right?

13 A. Yes.

14 Q. Including the bones?

15 A. Yes.

16 Q. Including the skin?

17 A. Yes.

18 Q. Including the bone marrow?

19 A. Yes.

20 Q. Every part of it?

21 A. Yes.

22 Q. And the Wester study that we read earlier
23 shows they didn't find any anywhere; is that true?

24 A. That's true.

25 Q. Now your calculations, as I understood them,

1 were based upon, as we talked about here, the surface
2 area, the actual rate of absorption, and how much gets
3 into the blood. And then talked about it's eliminated
4 after seven days at the outside. You think it's
5 actually quicker than seven days?

6 **A.** Yes. I mean, in humans when we look at it,
7 definitely the evidence shows that it's excreted in the
8 urine very rapidly. And the half-life is somewhere
9 probably around seven hours.

10 That means if you took a half-life, if you
11 went out 10 half-lives you wouldn't expect to see much.
12 So within 70 hours, I wouldn't expect to see much. And
13 that's substantiated in the biomonitoring studies where
14 in cases, some cases they do the biomonitoring the next
15 day, they don't see anything in the urine.

16 **Q.** But back to the Wester study. Whether it's
17 being removed from the monkeys in their feces or through
18 their urine, after seven days, when they actually went,
19 you know, sacrificed the monkeys, there wasn't anything
20 there. So it's out of the body one way or the other?

21 **A.** Correct. And it doesn't actually affect my
22 calculations at all. I'm just determining how much got
23 in the body, not -- not how much was in the feces.

24 **Q.** And that was really my question, which is this
25 whole line of questions regarding how it actually gets

1 out of the body. You're here talking about how much
2 gets into the body?

3 A. Correct.

4 MR. EVANS: That's all the questions I have.
5 Thank you.

6 RECROSS-EXAMINATION

7 BY MR. WISNER:

8 Q. Doctor, you calculated how much comes into the
9 body by seeing how much comes out?

10 A. They do evaluate in the biomonitoring studies
11 how much comes out, you know. I've looked at this, does
12 it -- is it excreted from the body effectively.

13 Q. That's how we figure out how much is absorbed;
14 right? We see how much was put on and we look at how
15 much comes out. So if you're not looking at all the
16 stuff that comes out, you're going to misunderstand the
17 actual amount coming in; right?

18 A. I looked at how much was coming out.

19 Q. You mentioned these two studies right here,
20 talking about the Franz study, and you said this is the
21 one that you kind of relied on for your flux
22 calculation?

23 A. I used one of the flux measurements from that
24 study.

25 Q. And Dr. Sawyer, however, had a much, much,

1 much higher percentage of absorption than you did;
2 right?

3 A. Yeah. We're coming back to the percent issue.

4 Q. Yeah, and what happened here was when they did
5 the Franz, there was a certain amount of dose that was
6 actually in the skin; right?

7 A. I'm willing. I'm looking at the Franz data if
8 you want to look at it.

9 Q. Sir, could you just answer my question.

10 A. Okay.

11 Q. You haven't answered it. So is that a "yes"?

12 A. Oh, I didn't hear -- I didn't -- I didn't
13 think you'd completely finished the question.

14 MR. WISNER: Okay. I'll have her read it
15 back.

16 (The record was read back by the court
17 reporter as follows:

18 "Q. Yeah, and what happened here was when
19 they did the Franz, there was a certain amount
20 of dose that was actually in the skin;
21 right?")

22 THE WITNESS: Yes.

23 BY MR. WISNER:

24 Q. And according to OECD guidelines, you have to
25 calculate that as a part of the absorbed dose; right?

1 **A.** I reviewed the OECD guidelines, and they say
2 and they state in there if you have a reason not to,
3 that you have to provide that reason.

4 **Q.** So here, if we used Dr. Sawyer's flux number,
5 it would blow up your evaluation; right?

6 **MR. EVANS:** Objection, Your Honor. That was
7 not a flux number.

8 **MR. WISNER:** That's not a legal objection.

9 **THE COURT:** Okay.

10 **MR. WISNER:** Sorry, Your Honor. What's the
11 objection?

12 **THE COURT:** I'm the judge.

13 **MR. WISNER:** Sorry, Your Honor. I apologize.

14 **THE COURT:** Would you like to restate your
15 objection?

16 **MR. EVANS:** The objection, Your Honor, it's
17 misleading. It's not what Dr. Sawyer did in this chart.

18 **MR. WISNER:** Again, I don't believe that's a
19 legal objection.

20 **THE COURT:** He says it's misleading. So I
21 don't know whether you want to restate it or reask it.

22 **BY MR. WISNER:**

23 **Q.** If we use this number from Franz, it blows up
24 your calculation; right?

25 **A.** Get me straight. If I use a 4 percent dermal

1 absorption rate that Dr. Sawyer said it was, if I was
2 using the flux in my calculation, it wouldn't change it.
3 It's the same flux. It's the same rate.

4 **Q.** In the Wester study that you talked about when
5 he looked at all the tissues and stuff, remember on
6 recross -- redirect, he brought that up?

7 **A.** Yes.

8 **Q.** They lost 20 percent of the dose, didn't they?

9 **A.** In the Wester study?

10 **Q.** Yeah.

11 **A.** Yeah, they -- then they did some explanation
12 on that lost dose.

13 **Q.** Yeah. They speculated that 20 percent of the
14 dose exfoliated off their skin; right?

15 **A.** Yes.

16 **Q.** That's pretty outrageous; right?

17 **MR. EVANS:** Objection, Your Honor.

18 **MR. WISNER:** Let me rephrase.

19 **Q.** That's a pretty bad recovery rate for one of
20 these types of studies; right?

21 **A.** And I would just say that that's why we're
22 doing more of the human dermal absorption data and
23 that's what I relied my calculations on.

24 **Q.** But just a second ago, that was the study you
25 kept citing to say that it doesn't stay in the body.

1 **A.** Yeah, that is an important study that states
2 that purpose.

3 **MR. WISNER:** No further questions, Your Honor.

4 **THE COURT:** All right. Thank you. Thank you,
5 Doctor.

6 So, ladies and gentlemen, we're done for the
7 day. So if you could just wait one second.

8 Step down, Doctor. Go ahead and step down.

9 So we're done for the day. And just to remind
10 you that tomorrow we will have a short day, we'll be
11 finished by 3:00 o'clock. So and then after tomorrow,
12 you won't be back until probably Monday. So just you
13 have in mind the schedule remaining part of the week.

14 So I will see you tomorrow morning at
15 9:00 o'clock. And I trust that you will not talk about
16 anything that's happened in this case so far. We are
17 actually nearing the end, and the lawyers have assured
18 me that by the date we originally promised the case will
19 go to you for deliberation.

20 So thank you for your time. Thank you for
21 your attention. Have a good lunch and then go home.
22 Thank you.

23 (Jury excused for the remainder of the day.)

24 (Proceedings continued out of the presence of
25 the jury:)

1 **THE COURT:** So those people in the gallery,
2 you can probably leave because they're going to have
3 lunch before they leave. So there's no reason to wait
4 if you want to leave.

5 **MR. WISNER:** Your Honor, I just want to
6 apologize for saying -- getting angry there. My
7 frustration stems from those kind of objections are not
8 even close to proper. Yelling out "argument" as an
9 objection is highly improper. We have not been doing
10 that, never did it during their directs or their
11 crosses. I stand up on my objection, "hearsay,"
12 "speculation." I stick to the legal grounds. They
13 have been routinely doing that throughout trial, and
14 that's why I've gotten angry and I apologize. I
15 shouldn't have gotten so angry.

16 **THE COURT:** Okay. So let's move on.

17 I have a conference call at 12:30. I have to
18 do it in the courtroom regarding another case. So we're
19 not going to resume until at least 1:30. The doors are
20 still locked. I'll open them when I'm not busy. But
21 probably between 1:30 and 1:45 we can come back. And
22 remember I need to leave by 3:30.

23 Have a good lunch.

24 (Luncheon recess was taken at 12:06 p.m.)

25 AFTERNOON SESSION

1:54 p.m.

1 (The following proceedings were heard out of
2 the presence of the jury:)

3 **THE COURT:** Good afternoon.

4 **MR. MILLER:** Your Honor, if I could, I would
5 like to introduce my law partner, Dave Dickens.
6 Mr. Dickens argued your instructions in the Johnson
7 trial, and he's been working on this one behind the
8 scenes.

9 **MR. DICKENS:** Good afternoon, Your Honor.

10 **THE COURT:** Good afternoon. Sorry to keep you
11 waiting, but I had other fires to put out before we
12 could go forward.

13 So first of all, with respect to the motion
14 that was filed last Friday and that was argued for
15 nonsuit, that's denied. And I think I indicated that I
16 would probably deny it last Friday.

17 I just think, in looking at the evidence in
18 the light most favorable to the plaintiff, these issues
19 can and should go to the jury. I'm not going to go into
20 any great detail on that.

21 I did have a chance to look at the briefs.
22 And with respect to the jury instructions that you had
23 filed up to last Friday, I think that I got an
24 opposition to one from the plaintiffs today, this
25 morning or last night. And I didn't have a chance to

1 look at that one. So we won't be able to discuss that
2 today. But I think we can make some real progress.

3 And I have something on the Mucci letter, and
4 I don't know that that's for tomorrow. When is that
5 happening, and is that something I need to pay attention
6 to immediately or not?

7 **MR. MILLER:** She is testifying tomorrow, and
8 we do intend to use it in cross-examination, so it's an
9 issue I think the defendants wanted to raise.

10 **THE COURT:** Okay. We'll mark that for a
11 moment.

12 I took a look at the defense bench brief
13 yesterday. I just got the opposition this morning, I
14 think, from Plaintiffs. I haven't had a chance to
15 really look at it.

16 The first thing that came to my mind is that
17 we talk about a trial, and work through what all that
18 meant and how time consuming that was going to be. That
19 was the first thing that came to mind.

20 So as we have this conversation, I'm going to
21 need to know how much time we're going to spend on
22 unraveling this letter and what it means or if it meant
23 anything in particular.

24 So it's not just a question of asking her
25 about it, but how much time do we need to explain what

1 it means to the jury and whether it represents bias or
2 not. Think about it while we talk about other stuff.
3 But I wanted to give you a preview of what first came to
4 my mind.

5 **MR. MILLER:** Sure.

6 **THE COURT:** With respect to causation, I did
7 take a look at those briefs. And my tentative is that I
8 would read 430 with the bracket, I would not read 431,
9 and I would not read 435.

10 We had some discussion of that last week. You
11 can make your record if you like, but I've read the
12 briefs, and that's pretty much where I'm landing.

13 **MR. DICKENS:** Good afternoon, Your Honor.
14 David Dickens, once again, on behalf of the plaintiffs,
15 Your Honor.

16 I think the issue essentially comes down to
17 the evidence and what the evidence has been in this
18 case. And both plaintiffs --

19 **THE COURT:** I apologize. I did not bring my
20 jury instructions out with me. I left them on my desk.
21 Give me one second and allow me to grab the
22 instructions.

23 All right. Counsel, you can proceed.

24 **MR. DICKENS:** Yes, Your Honor.

25 Plaintiffs -- both of the plaintiffs'

1 case-specific experts, Dr. Weisenburger and Dr. Nabhan,
2 testified that it was not only Roundup that caused
3 cancer. Even though it was, in fact, a substantial
4 factor, it combined with other factors such as --

5 **THE COURT:** Let me just talk about that a
6 second.

7 The whole argument all along has been that
8 there are various sundry risk factors -- not causes, but
9 risk factors that may be present -- but they're really
10 not important. Because the key thing was that the cause
11 was the glyphosate.

12 That's been pretty much the testimony of all
13 the witnesses so far, and the argument of Counsel as
14 we've gone along.

15 **MR. DICKENS:** I think it's a matter of,
16 certainly, semantics to the extent it's risk factors
17 versus causes.

18 But what the experts have said is that things
19 such as obesity or age, even if we take the fact that
20 it's not a cause, something is. So something causes
21 that, even if we can't say it's one of these. But
22 there's some kind of genetic disposition that occurred.

23 So there is a cause, even if we can't put our
24 finger on it. And so it's not necessarily Roundup. And
25 there was testimony with respect to --

1 **THE COURT:** Well, it is necessarily Roundup
2 according to the Plaintiffs' theory, which is that you
3 get older. It's not age. And with Dr. Nabhan, if he
4 said it once, he said it -- age doesn't cause it,
5 obesity doesn't cause it. It's when your body begins to
6 break down -- was it the doctor that was here yesterday?

7 **MR. DICKENS:** Dr. Bello.

8 **THE COURT:** Dr. Bello essentially argued the
9 same thing, which is that these are risk factors.
10 Because when your body is older, then you've had more of
11 an opportunity to have all kinds of things happen to it,
12 which makes it easier.

13 But the running theme has been that the
14 glyphosate was a cause, notwithstanding the risk
15 factors.

16 And, in fact, I would agree with the defense
17 argument that, you know, you spent a lot of time
18 eliminating the things that you call risk factors, and
19 bringing over to the cause column the cause, which is
20 Roundup.

21 **MR. DICKENS:** And, you know, once again, I
22 think if we look at 431 specifically with respect to
23 multiple causes, it's Roundup combining with other
24 factors.

25 So the testimony has been that it was --

1 clearly we agree that it was a substantial contributing
2 factor to both of the Pilliods' cancer.

3 And because of the fact that it combined with,
4 you know, the risk factors of age and obesity, whatever
5 those are -- and we've introduced testimony with respect
6 to how cancer actually occurs, and the hit-and-run
7 theory. There's a hit, and that Roundup is -- and
8 Dr. Sawyer testified to that -- it is a promoter. So it
9 combines with other factors leading to cancer.

10 Even if we took away Plaintiffs' testimony, if
11 we look at Defendants, Logacz -- I'm sure I didn't
12 pronounce that correctly, but I can give you the
13 citation -- that case stands for the principle that if
14 Defendants come in and argue a separate cause, that a
15 multiple cause instruction is appropriate.

16 **THE COURT:** But Defendants aren't -- there is
17 no cause. You can't tell the cause because there are
18 all these other things floating around.

19 But ultimately, what they land on, we don't
20 know. Nobody knows, and the plaintiff doesn't know
21 either.

22 **MR. DICKENS:** So with respect to Dr. Bello,
23 she talked with respect to risk factors. But once
24 again, she's saying that Roundup did not cause the
25 cancer. It does not cause any cancer, was her

1 testimony. Something did. There is another cause
2 there.

3 So she said, I call it idiopathic because I
4 couldn't pinpoint it. But that doesn't mean there was
5 no cause, it just means there's a separate cause that is
6 not Roundup. But what she also said was, even if I'm
7 talking risk factors, there's two causes: HIV and a
8 compromised immune system.

9 Now, Dr. Levine, who has not testified yet,
10 her report specifically says that compromised immune
11 system caused Mr. Pilliod's cancer. And she says that
12 in her report. Dr. Bello has already presented
13 testimony that compromised immune system is a cause of
14 cancer.

15 And Dr. Levine is pointing to that compromised
16 immune system in saying that Mr. Pilliod's cancer -- and
17 once again, her testimony hasn't been presented, but
18 based on her reports and deposition testimony, we know
19 that's going to be her testimony.

20 What they did also point to, and what
21 Dr. Weisenburger said, is with respect to Hashimoto's.
22 We've heard some testimony with respect to that. And
23 Hashimoto's, Dr. Weisenburger said, is a cause; but I
24 was able to rule that out, and here is why. Doctor --

25 **THE COURT:** That's my point, which is that

1 there's been so much discussion about all the things
2 that -- thyroiditis, unless you have a thyroid-type
3 cancer, not a cause. Hashimoto's, not a cause. Nothing
4 to do with it.

5 That's the argument. There are these things
6 out there, but they were not factors. Because the
7 factor that we can point to, which 10 to 12 different
8 experts say, step-by-step, we get to glyphosate and the
9 formulated Roundup -- which, I guess the theory is that
10 it's more toxic than glyphosate alone -- is the cause of
11 the cancer. So --

12 **MR. DICKENS:** And they did that.

13 **THE COURT:** So backing up and saying, there
14 are all these things out there, so I need to give this
15 instruction that accounts for all the potential causes
16 is really saying two different things. Which is why I'm
17 not going to do it, unless I hear Dr. Levine say that it
18 is the cause as opposed to it can be, but it's -- I
19 don't know.

20 **MR. DICKENS:** I think the issue comes down to,
21 if the jury is back in the room, and they're
22 deliberating, and they decide, we think Roundup did
23 cause cancer, but we also think something else did as
24 well. What are they supposed to do with that?

25 If we don't give the but-for record -- that

1 is, if we don't give multiple causation --

2 **THE COURT:** I think the but-for is the last
3 record, isn't it?

4 **MR. DICKENS:** What I'm saying is, if we do
5 give that -- and I probably said it wrong.

6 If we do give but-for, and then they say, we
7 think something else also played a role here, but
8 because all we have is the but-for language and nothing
9 else with respect to the multiple causation, what do we
10 do with that fact?

11 There's nothing for them to say that these
12 other factors that Defendant brought in -- I don't
13 know -- age, obesity, those risk factors. But we were
14 presented with studies that showed there was a
15 significantly increased risk of these factors.

16 **THE COURT:** One of the jurors has asked that
17 question. And it was emphasized over and over again
18 just yesterday, because that question was asked: Are
19 risk factors not cause? It's a risk factor.

20 So I'm not sure -- I can't hypothetically tell
21 you what they're going to say, and I don't think it's
22 appropriate to respond to that particular question. I
23 don't know -- they may go through a lot of things.

24 But I think that understanding that it needs
25 to be a substantial factor explains what they need to

1 consider in deciding whether or not, ultimately, Roundup
2 was a substantial factor in causing the non-Hodgkin's
3 lymphoma.

4 **MR. MILLER:** Your Honor, I would just add, if
5 I could, why don't we punt on 431 until we hear
6 Dr. Levine's testimony.

7 Because clearly, as to Al Pilliod, she points
8 to a separate, independent cause of his non-Hodgkin's
9 lymphoma.

10 **THE COURT:** I'll punt until then.

11 But I'm just saying that at this moment, and
12 depending on what I hear tomorrow, I am not likely to
13 read it. And I am likely to read 431 as --

14 **MR. MILLER:** It's actually Monday for her.

15 **THE COURT:** I want to hear from Mr. Ismail
16 before --

17 **MR. WISNER:** I think what Mr. Dickens is
18 getting at is, there was a very long cross-examination
19 of Dr. Weisenburger, going over smoking and that
20 gene t(14;18) mutation and all -- obesity, all of these
21 different -- age. All these different numbers were
22 thrown in front of the jury. And they've also seen
23 numbers related to glyphosate. It would be a reasonable
24 thing to conclude, based on the evidence in this case.

25 And that's the standard for a jury

1 instruction. Based on the evidence that's been
2 presented, a jury can go, yeah, I think both Roundup and
3 Hashimoto's, I think both of those were substantial
4 factors in causing Mrs. Pilliod's disease. They could
5 come to that conclusion. That would be a reasonable
6 inference from the evidence.

7 If that is a possibility, then we have to give
8 them an instruction on how to deal with that situation,
9 because that is the evidence in this case.

10 Fair enough, our experts don't think that's
11 true. And their expert had a distinction between risk
12 factor and causation. And frankly, I don't think that's
13 a proper distinction; I think they are the same things.

14 I believe we can get into arguing the merits,
15 but regardless, the jury can hear this evidence.
16 There's a lot of it. They went there on cross and spent
17 hours and hours showing different studies and risks.
18 And a jury can see that and say, yeah, I think both
19 caused it.

20 If they have that reasonable conclusion, which
21 is not something that could be argued from the evidence,
22 then they have to be instructed on how to deal with that
23 situation. I think that's our biggest concern.

24 And when you throw in the but-for causation,
25 and don't give the multiple causation instruction, you

1 really create a situation where the answer to that
2 question -- because, for example, we all agree that if
3 they concluded that both Hashimoto's and Roundup were a
4 substantial factor in causing her cancer, we win that
5 fight.

6 But without that instruction, we don't. And
7 if you give that instruction with the but-for causation
8 instruction, we definitely don't. And that's the
9 problem.

10 So we either get rid of the but-for causation
11 issue in the 430, or we keep it and add the multiple
12 causation one so the jury knows what to do if they come
13 up with that issue.

14 They're both statements of the law, and
15 they're both factual inferences that can be derived from
16 the evidence of the case.

17 **THE COURT:** Okay.

18 Let me hear from Mr. Ismail.

19 **MR. ISMAIL:** Thank you, Your Honor.

20 First of all, 430, by its terms, states that
21 it does not have to be the only cause of the harm. So
22 to the extent Plaintiffs are concerned that the jury is
23 otherwise under the impression that Roundup has to be --
24 to be a substantial factor, has to be the only cause of
25 the harm, 430 expressly states to the contrary.

1 So a substantial factor need not be the only
2 factor. So that is, indeed, the law.

3 The law very clearly states that but-for
4 causation is the standard in California. So if the harm
5 would have occurred anyway, without the alleged tortious
6 conduct, then it cannot be a substantial factor. And
7 that's, indeed, how the California cases describe it and
8 how the use notes describe it.

9 There's a very limited exception to but-for
10 causation, and the Major case calls it an exceptional
11 circumstance. And that's where there are concurrent
12 sufficient causes to bring about the harm. So a
13 situation where the plaintiff can't prove but-for
14 causation because the other action or conduct or
15 exposure was sufficient to bring about the harm, as was
16 the alleged tortious conduct.

17 It's a rare circumstance for it to occur. The
18 Major case talks about multiple defendants, the
19 plaintiff smoking different cigarettes; and the
20 plaintiff, if forced to prove but-for causation, can't
21 unpack that.

22 Here, none of the experts, none of them, have
23 posed that there are independent sufficient causes in
24 bringing about either of these cancers. The plaintiffs'
25 experts were, to a question, denying that the risk

1 factors played any role, let alone a sufficient role, in
2 bringing about the cancer.

3 So the whole construct of their risk factor
4 board -- and Mr. Wisner says this idea of risk factor
5 versus cause is somehow artificial. It was
6 Dr. Weisenburger and Dr. Nabhan's explanation for why
7 certain risk factors wouldn't be considered causal risk
8 factors.

9 So age, obesity, gender, ethnicity, Your Honor
10 might recall, I tried to put an X on the board, and he
11 said to take it off. You can't even call it a risk
12 factor that he has, let alone put it in the far right
13 column where he would say it was even a substantial
14 factor, let alone an independent sufficient factor in
15 bringing out the harm, which is what's required under
16 431.

17 And Dr. Bello's distinction is consistent with
18 that proposition, as well, as is Dr. Levine's opinion.
19 Dr. Levine will not say that there are independent
20 causes of bringing about this cancer; Roundup on the one
21 hand, and something else on the other.

22 So this whole idea that if a plaintiff has
23 risk factors -- regardless of what kind of case we're
24 talking about -- that that drives this jury instruction
25 to 431 is belied by the way the cases talk about it as

1 being an exception, the rare circumstance.

2 Here, their theory of the case certainly isn't
3 that there are two things that independently caused
4 their cancer; they think only one thing caused their
5 cancer. And there hasn't been any evidence from which
6 this jury, on their own, can decide: I think they would
7 have gotten it without the Roundup, or I think they got
8 it because of the Roundup.

9 That's not any evidence that has been put
10 before this jury. So, obviously, we agree with the
11 Court's tentative. Happy to answer any questions.

12 **MR. DICKENS:** If I may, Your Honor, a point
13 directly -- and we actually cited it in our trial brief
14 on causation -- what Dr. Weisenburger's testimony was
15 with respect to obesity itself.

16 He said that we don't really understand for
17 sure what happens, but with obesity, the risk is about
18 30 percent.

19 And then he says:

20 "It may have contributed to her lymphoma, but
21 it wasn't a substantial contributing cause.
22 On the other hand, Roundup causes an odds
23 ratio greater than 2 in people who are highly
24 exposed."

25 **THE COURT:** So if he says it himself -- which

1 is that it's not a substantial factor, and it doesn't
2 have to be the only factor -- then Mr. Ismail is right.
3 It doesn't have to be the only thing, but just a
4 substantial factor.

5 **MR. DICKENS:** And Roundup has to be a
6 substantial factor. But the other causes don't have to
7 be substantial contributing factors in order for --

8 **THE COURT:** But they have to be an independent
9 cause. And I think the entire focus of the trial has
10 been that none of these things -- including the obesity,
11 by the way -- is a major factor.

12 It's just a -- it's a reason they might be
13 more likely to have gotten NHL. But by themselves, were
14 not identified as anything that would have actually
15 caused them to have NHL.

16 **MR. DICKENS:** And I think that what we're
17 confusing is the two standards for independent.

18 Independent applies to the but-for clause. It
19 does not apply to 431. Specifically, 431 can deal with
20 contributing causes that are not independent concurrent.
21 Independent concurrent, that applies to whether or not
22 you give the but-for clause in that section.

23 So with respect to other contributing causes,
24 like Dr. Weisenburger said with respect to obesity, that
25 would fall into giving 431, which is contributing cause.

1 **THE COURT:** Not so far. I'm sorry. The way
2 I've heard the evidence, not so far.

3 I'm not going to make a final decision until
4 after I hear Dr. Levine. But at this moment, it's 430
5 with the last phrase. That's where we are right now.

6 We'll come back to it after Dr. Levine
7 testifies. But that's -- that is how I see it -- how I
8 see the record.

9 **MR. WISNER:** Just a quick question. When do
10 you read the jury instructions? Before closing or
11 after?

12 **THE COURT:** Before.

13 **MR. WISNER:** Okay. My concern is --

14 **THE COURT:** I don't want the jury -- I give
15 them a copy to follow along, so that they have a copy.
16 They tend to pay better attention if they have something
17 in their hands.

18 **MR. WISNER:** My concern is argument. You read
19 the instructions to the jury, and defense counsel says,
20 ladies and gentlemen, Roundup didn't cause it. If
21 anything caused it, it's Hashimoto's. Right? Or, if
22 anything caused it, it was obesity or their advanced
23 age. They both were old; that's clearly the cause here,
24 ladies and gentlemen.

25 If they go and argue that -- and you can argue

1 that based off the evidence. There's plenty of data to
2 support that argument. I don't think it's correct, but
3 there's evidence to support it.

4 If they do that -- can we get an agreement
5 that they're not going to make these arguments? If they
6 are, we're clearly entitled to these instructions. If
7 they're going to argue other causes of their cancer, we
8 have to be able to instruct the jury how to deal with
9 these other causes.

10 **MR. ISMAIL:** So the evidence that we put
11 forward yesterday is that Hashimoto's didn't cause her
12 cancer. We're not going to stand up in closing and say
13 that Hashimoto's caused her cancer, even though our own
14 expert said it's a risk factor, not a cause.

15 I'm not sure what Mr. Wisner is concerned
16 about here with respect to the argument. We're equally
17 concerned with how we would argue it in the context of
18 430, but we can deal with it in closing. If they think
19 there's something objectionable, they can object. But
20 our argument will conform to our theory of the case,
21 Your Honor. You heard it yesterday.

22 That there's risk factors that these
23 plaintiffs have, but that there are only a couple of
24 known causes of NHL. She didn't have HIV, and she was
25 immunocompetent. That's the way the testimony has come

1 in.

2 Rather than crafting how the closing argument
3 is going to go right now, we're going to conform to the
4 law and to the evidence.

5 **MR. WISNER:** Your Honor, in their opening
6 statement, they make alternative cause arguments
7 throughout the opening statement.

8 **THE COURT:** I don't want to hear that right
9 now. I don't want to go back to opening statements.

10 **MR. WISNER:** I know. But that's what we're
11 worried about.

12 **THE COURT:** I want to fast-forward to where we
13 are right now, and focus on what will or will not be
14 said to the jury in closing arguments.

15 **MR. WISNER:** The reason I say that is because
16 past is prologue, right? So they've already made this
17 argument to the jury, and now they're saying, we're not
18 going to make that argument. Then I don't know what --
19 okay.

20 **THE COURT:** Did he say causes or risk factors?

21 **MR. WISNER:** I'll go back and find it.

22 **THE COURT:** No, don't. I would expect the
23 lawyers -- you lawyers, and I'm sure you've now argued
24 this a couple times -- to conform to the evidence.
25 Because if you don't, then there's a real problem that

1 if either one of you steps outside the line, then we
2 have a real problem with the case. And I'm sure you're
3 aware of that.

4 We've invested a lot of time and energy, so I
5 can't imagine that anybody wants to do that. No one,
6 certainly, wants to deal with me if you do do it.

7 What can I say, other than my expectation is
8 that your arguments will conform to the evidence.
9 Nobody wants to hear an objection during their closing
10 argument, and a bunch of sidebars and that kind of
11 thing. So let's just take this a step at a time.

12 Right now it's 430. We'll go forward. We'll
13 finalize them after all the evidence has been heard.

14 So with respect to consumer expectation versus
15 risk benefit, I'm going to read the consumer
16 expectation. And I've read these -- by the way, I spent
17 a good deal of the weekend reading cases and reading
18 your briefs, so I've actually given this a fair amount
19 of thought coming into this argument today. I wasn't
20 prepared last Thursday to talk too much about it then.
21 But I really have, I have looked at these cases.

22 So with respect to this, I feel very strongly
23 that the consumer expectation is the appropriate
24 standard here. Roundup is sold in Home Depot pretty
25 much everywhere. It's very straightforward. There's

1 nothing so complex about it that could trigger the
2 reading for the risk benefit.

3 **MR. ISMAIL:** Understood. Your Honor, noting
4 our objection, I can articulate it on the record, but
5 we've heard the Court's tentative.

6 We believe there's not a proper design defect
7 claim here, both from a legal perspective and from the
8 way the evidence has been presented. That this is
9 fundamentally a warnings case, under concepts such as
10 unavoidably unsafe.

11 And so the comment came from the
12 restatement -- how you're dealing with a chemical, a
13 pesticide -- and you have to consider warnings concepts
14 along with the design of the product, that they are part
15 and parcel. It's fundamentally a warnings claim.

16 Here, the consumer expectation test, we
17 believe, under the law, that what we have is -- we've
18 heard a lot of complex scientific proof through eight or
19 nine experts debating the science. And it's well beyond
20 the ken of the consumer to have an expectation about
21 that level of complexity.

22 And therefore, I believe the consumer
23 expectation case not to be an appropriate standard for
24 this jury. We understand the Court's ruling, and we're
25 just preserving that for the record.

1 **THE COURT:** Sure. You have to have a lot of
2 complex testimony about what glyphosate is, how it
3 works. But Roundup itself is a pretty straightforward
4 consumer item. Which, yes, it contains glyphosate, and
5 unpacking glyphosate may be a little complex.

6 But it doesn't necessarily make the product
7 itself so complex that the jury can't figure out whether
8 or not the warnings were sufficient, or any of the other
9 issues that follow the use of Roundup in the ordinary
10 course of weed-fighting or however else they use it on
11 their property.

12 All right. So failure to warn. Failure to
13 warn, that would be the 1205 and 1222. And I actually
14 really only want to talk about Bates. Because potential
15 stays in as written. And 1205, paragraphs 2 and 4 --
16 actually, I don't think there's any reason for me to
17 read actual. I don't think that that's either
18 required -- I think that the language in 1205 and 1222,
19 using the term "potential" is adequate.

20 I think the whole speculation issue does come
21 in with respect to the second paragraph that's addressed
22 in the Carlin case, but I think that the jury can
23 understand and deal with that.

24 I'm thinking about adding paragraph 3, the
25 requested language under Bates, as a substitute for use

1 or misuse in an unforeseeable way. The fit for a
2 phrase -- that's proposed by the defendants at that
3 point. So I would hear argument on that.

4 I think that the language in Bates that's
5 driving that decision, potential decision, is the
6 last -- the paragraph where it says:

7 "If the case proceeds to trial, the Court's
8 jury instructions must ensure that
9 nominally-equivalent label requirements are
10 genuinely equivalent. And if a defendant so
11 requests, the Court should instruct the jury
12 on the relevant FIFRA misbranding standards."
13 So that's what's driving this decision.

14 **MR. DICKENS:** Certainly, we understand,
15 Your Honor. I think the first sentence that the Court
16 just read is what should drive the day here. It says:

17 "The Court's jury instructions must ensure
18 that nominally-equivalent labeling
19 requirements are generally equivalent,"
20 italicized.

21 What is included in the failure to warn
22 instruction with respect to just the standard CACI
23 instruction, used or misused in an intended or
24 reasonably foreseeable way, is genuinely equivalent to
25 the language widespread and commonly-recognized

1 practice.

2 What Bates says is that the wording does not
3 need to be identical. You don't need to change the jury
4 instructions to make sure that it reads exactly what
5 FIFRA or what Bates says. All that it requires is that
6 it's generally equivalent. It does not make or require
7 warnings in addition to what FIFRA requires.

8 So what is included, that language, is not
9 specifically a recitation of what FIFRA is misbranding,
10 provisions actually go on to say.

11 Because once we go there, then the Court would
12 also need to instruct them -- I think what Bates stands
13 for is, you need to tell them that, in addition to what
14 the failure to warn standard here is in California, here
15 is what the misbranding is as well. To ensure that the
16 jury does not find Monsanto liable for anything in
17 addition to or different than what FIFRA requires.

18 So FIFRA is specific that, if a pesticide is
19 misbranded, if it fails to warn of the risks -- and I
20 don't have the exact language if front of me. But it's
21 specifically and exactly what the failure to warn
22 instruction was here in California.

23 So when you look at these two, they're
24 completely and genuinely equivalent. And to start
25 changing up the language because they use different

1 language in a federal regulation, then once we do that,
2 we have to start instructing with respect to the other
3 and put that into context, what does FIFRA misbranding
4 mean? How is that looked at from a federal perspective?

5 As long as they're equivalent, which we
6 certainly submit is the case, there's no reason to go
7 ahead and start changing the CACI instruction.

8 So I'll also point out, Your Honor, that
9 Judge Chhabria, in the federal case, specifically held
10 that those two standards are equivalent. Judge Bolanos,
11 in the Johnson case, used the standard CACI instructions
12 once again.

13 All the courts that have considered this have
14 held that as generally equivalent, and there's no need
15 to start messing with the CACI instructions that were
16 drafted in a way that are understandable to a jury.

17 **THE COURT:** Okay. Well, I just want to hear
18 argument once I've reviewed Bates. I had some question
19 about that.

20 But go ahead, Mr. Ismail.

21 **MR. ISMAIL:** Thank you, Your Honor.

22 I will start with two propositions. One, I
23 think everyone agrees that the instruction needs to
24 conform to the federal requirements so as not to impose
25 additional burdens from a preemption perspective.

1 The next point I would make is that the
2 language we submitted, Plaintiffs are not arguing that
3 we have mischaracterized the federal regulation. They
4 haven't contested that instruction should conform. They
5 haven't contested that our language -- asserted that our
6 language is erroneous. Their point is that it's close
7 enough to what the CACI is.

8 If we agree with the first two principles, why
9 should we not just give the language that is inarguably
10 the correct articulation of the federal burden, rather
11 than trying to decide whether different words are
12 communicating the same thing.

13 And I think, Your Honor, just based on the way
14 the wording is phrased, "misused in an intended or
15 reasonably foreseeable way," versus "in accordance with
16 widespread and commonly recognized practice," they are
17 communicating different concepts. There's a
18 foreseeability concept in the CACI that's not included
19 in the federal.

20 And they are different articulations. Whether
21 they're, in some sense, in the same zip code, I don't
22 think is an issue. They have to be consistent and
23 harmonized in a way that we don't have this collision
24 between the state-toward obligation and the federal
25 regulatory obligation.

1 So if our language is correct, and we agree
2 that it needs to be harmonized, why not just use the
3 language we proposed?

4 **THE COURT:** So Mr. Dickens argues that --
5 well, if we go down that path -- I would not be inclined
6 to add additional instructions to further explain them.

7 **MR. ISMAIL:** Well, with the hypothetical he
8 proposes or suggests, we're going to have to add other
9 language to what? Yes, there's a whole regulatory
10 scheme you could instruct on. We're not asking for you
11 to do so; they're not asking for you to do so.

12 So there's a concept of failure to warn that's
13 articulated here, that needs to be put in the context
14 such that it's not imposing additional obligations than
15 is required in the federal regulatory scheme.

16 I agree with you that there's a lot of
17 concepts in the federal regulations, and neither side is
18 asking you to instruct on it. So it seems to be
19 somewhat of an irrelevant hypothetical that he's
20 proposing.

21 **MR. DICKENS:** Yes, Your Honor. We're trying
22 to hold Monsanto liable under the state law here. And
23 what Bates says is that the state law need not
24 explicitly incorporate FIFRA's standards as an element
25 of the cause of action.

1 The cause of action here is failure to warn.
2 The instructions have been approved. They're used in
3 court after court after court. It's approved language.
4 It doesn't need to be exact to FIFRA. There's no reason
5 to change that.

6 **THE COURT:** So let's park that. I've heard
7 enough on that.

8 What I would say is that, potentially, let's
9 just hold in abeyance, my final decision on that
10 language in paragraph 2 of 1222 and paragraph 3 of 1205.

11 But that I will maintain the word "potential"
12 in paragraphs 2 and 4 in 1205. And in 1222, I will not
13 insert "on the label" in either 4 or 7. So we'll come
14 back and make a final decision on that, but the other
15 two points I just made are final.

16 Where are we?

17 **MR. WISNER:** What time is it?

18 **THE COURT:** What day is it? Is it over yet?
19 No, I'm sorry. Did I say that?

20 Let me go back, because those were the
21 briefs -- I know that there will be a discussion about
22 punitive damages.

23 Are there briefs I missed? I know we sort of
24 had a rolling conversation last Thursday, and I wasn't
25 clear on -- there's one other thing I know, and I'll

1 come back to it.

2 But I know that there was some discussion
3 about wanting to know what I had to say about causation
4 and failure to warn before getting into a discussion
5 about punitive damages.

6 So I wanted to recalibrate, figure out where
7 we are and what's left -- major issues we need to hammer
8 out.

9 **MR. DICKENS:** I believe the opposition to the
10 trial brief that was filed by Plaintiffs last night or
11 this morning does address Special Instruction 3, which
12 is the punitive damages instruction.

13 **THE COURT:** That, I haven't really reviewed
14 yet. Because I just got the opposition this morning, so
15 I'll have to take a look at it.

16 **MR. DICKENS:** And that's only specific to
17 Monsanto's Instruction Number 3 with regard to
18 punitives.

19 **THE COURT:** Let me take a quick break. I left
20 some other stuff on my desk.

21 (Recess taken at 2:32 p.m.)

22 (Proceedings resumed at 2:35 p.m.)

23 (The following proceedings were heard out of
24 the presence of the jury:)

25 **THE COURT:** So the other brief -- which I left

1 on my desk, I'm sorry -- was the special EPA
2 instruction, and I read the briefs on that.

3 And my tentative is that that's an argument to
4 the jury, but I don't think a special instruction is
5 warranted. That would be Number 9 on Defendant's.

6 **MR. ISMAIL:** Your Honor, both parties proposed
7 some version of an EPA instruction as a special. It is
8 sort of a unique situation. The jury has heard a lot of
9 regulatory evidence from both sides.

10 And we had proposed giving them some guidance
11 on how to deal with that evidence. I understand the
12 Court's tentative. Perhaps I shouldn't assume, but
13 would your tentative apply to both sides?

14 **THE COURT:** I don't think a special EPA
15 instruction is warranted.

16 **MR. DICKENS:** As long as the defendant doesn't
17 get theirs, ours was more peremptory to the extent of
18 some type of EPA registration. We're fine if the
19 Court's decision is that there's no EPA instruction at
20 all.

21 **THE COURT:** I think it's argument. Both would
22 be out. Neither special instruction would be included,
23 I guess, is what I should say.

24 **MR. ISMAIL:** If I may, Your Honor?

25 **THE COURT:** Yes.

1 **MR. ISMAIL:** So at the lunch break, we --
2 Your Honor requested that the parties submit a merge
3 set, so to speak.

4 **THE COURT:** I got that.

5 **MR. ISMAIL:** Just by way of how this is
6 forming, I think the first --

7 **THE COURT:** Let me grab it. I didn't bring
8 that out. I brought everything but that.

9 **MR. ISMAIL:** There's nothing left in there.

10 **THE COURT:** Oh, there's plenty left.

11 I was going to ask somebody to sort of, in
12 view of everything we've discussed, give me a set of
13 proposed instructions that combines my rulings so far,
14 with modifications that you all may have agreed to, plus
15 the agreed to instructions. And I think we'll have a
16 good outline of what they're going to start looking
17 like.

18 **MR. ISMAIL:** So this, obviously, is prior to
19 this afternoon's discussion?

20 **THE COURT:** Right.

21 **MR. ISMAIL:** So the first three instructions,
22 which are the first 33 pages, are all agreed.

23 **THE COURT:** Okay.

24 **MR. ISMAIL:** And then what the parties have
25 done is, there are some instructions submitted by one

1 side or the other that are objected to. And where both
2 sides are submitting an instruction on a topic, we've
3 put them back-to-back so you can see what the competing
4 instructions are.

5 **THE COURT:** Okay.

6 **MR. ISMAIL:** So, for example, on page 34,
7 Plaintiffs are proposing an instruction. We discussed
8 this a little bit last week. Your Honor was disinclined
9 to give it, in light of how the evidence has been
10 presented, similar to the next instruction.

11 So these are not agreed to. We object to
12 giving any instructions. We don't think anything is
13 appropriate.

14 And as you go forward, there's the causation
15 one, obviously, as we've discussed. But, for example,
16 there was the warning issuing that Your Honor has given
17 some guidance on.

18 **THE COURT:** Right.

19 **MR. ISMAIL:** And then the specials are at the
20 end. So the playing field is getting narrower.

21 **THE COURT:** Yes. I'm so happy about that.

22 So pages 68 and 69 would actually both be out,
23 because I'm not going to give either EPA instruction.

24 We're going to talk about the punitive damages
25 after I've had a chance to look at the briefs and --

1 **MR. DICKENS:** Your Honor, when I referenced
2 the objection or the trial brief, we do object to all
3 their special instructions, punitive damages or
4 otherwise.

5 I just want to make clear that when I said
6 there was a trial brief on Special Instruction 3, that
7 wasn't the only one we object to.

8 **THE COURT:** We haven't talked about special
9 instructions. Before today, we have not.

10 I know that Special Instruction Numbers 3 and
11 5 are in your brief.

12 **MR. DICKENS:** That's right.

13 **THE COURT:** We haven't gone through all of
14 these yet, so don't be concerned that I've ruled on
15 things we haven't actually discussed and finalized.

16 **MR. ISMAIL:** And, Your Honor, the last thing
17 to give the Court a heads up about is, at the end of the
18 day yesterday, you commented about how we are going to
19 deal with the different --

20 **THE COURT:** I'm sorry, I do want to talk about
21 that, yes.

22 **MR. ISMAIL:** We're proposing an instruction,
23 it's the very last one in the packet. I don't think the
24 plaintiffs have a competing instruction.

25 So that's not agreed to, but that was our

1 proposed language to deal with the issue the Court
2 raised yesterday.

3 **THE COURT:** Okay. So why don't you either
4 develop your own or meet and confer with defense counsel
5 about that. Because we need something like this.

6 I haven't read it, but we need an instruction
7 that deals with the fact that Mr. and Mrs. Pilliod have
8 two separate cases.

9 **MR. DICKENS:** We certainly will, Your Honor.
10 We just received this. We will take a look and work
11 with Defendant. I imagine we will likely be back, but
12 to the extent we can work something out, we will.

13 **THE COURT:** I know we had a conversation about
14 Plaintiffs' proposed Instruction Number 11, which is the
15 basic negligence instruction.

16 Is there an objection to that? I know
17 Mr. Brady was arguing that we need this to explain the
18 basic concept of negligence before going into
19 negligent -- duty to warn, failure to warn.

20 **MR. DICKENS:** Your Honor, I just want to point
21 out that we obviously took a look and worked through it.
22 We had both 400, 401, and then we had the
23 1221 instruction.

24 So what we think made sense was to combine the
25 first two sentences, lay out what negligence is, and put

1 them with 1221. And that's how we ended up with this
2 instruction.

3 **THE COURT:** Oh, okay. Got it. Okay. That
4 makes sense.

5 Does that make sense to you?

6 **MR. ISMAIL:** I understand what --

7 **THE COURT:** Mr. Brady did say that, sort of
8 taking some part of it and adding it. And I said, oh,
9 gee, that sounds like a great idea. But we never
10 followed through to find out what the idea was.

11 **MR. ISMAIL:** I understand what the plaintiffs
12 have done. I guess our point is that they have specific
13 negligence claims, not a general negligence claim.

14 And the specific does delineate the elements,
15 either from a design or a warnings perspective. And the
16 instruction -- proposed Instruction Number 11 from the
17 plaintiff is superfluous in light of -- the specifics
18 should govern the general, I guess, is our position.

19 And I'm not sure what we're getting, besides
20 potential confusion by giving them a stand-alone
21 negligence instruction, independent from the actual
22 claim being made.

23 **THE COURT:** Okay. I see what you're saying,
24 Mr. Ismail. And perhaps that can be resolved. Because
25 I do think that just defining negligence isn't a bad

1 idea.

2 So the first sentence, which is that
3 negligence is the failure to reasonably prevent harm to
4 others. Just as before, Mr. and Mrs. Pilliod claimed
5 that Monsanto was negligent. Because that's the kind of
6 thing where you might have a request from a juror like,
7 what is negligence?

8 So if it defines it, and goes on to further
9 define what it means in the context of duty to warn, I
10 think that might solve it. Because when Mr. Brady
11 mentioned, I thought, just giving them the concept of,
12 what is negligence? We know what it is; they may not
13 know what it is.

14 So what about the first sentence defining
15 negligence?

16 **MR. ISMAIL:** So taking the first sentence from
17 proposed Number 11 and have that as the lead-in to --

18 **THE COURT:** 12 --

19 **MR. ISMAIL:** -- the 1222 instruction.

20 **THE COURT:** Yeah.

21 **MR. ISMAIL:** I believe that's okay.

22 **MR. DICKENS:** Your Honor, so I'm clear, taking
23 that first sentence, I think we also need that second
24 sentence, which is taken directly from 401.

25 Once again, it provides clarification as to

1 what negligence is. It's taken directly from 401,
2 before it gets into the standard of care, which is in
3 401.

4 Our proposed Instruction Number 11 for 1221 is
5 the standard of care for a negligent design claim. So
6 it takes the basic, here's what negligence is, the two
7 sentences, and then provides the standard of care for a
8 negligent design claim. That is the plaintiffs'
9 proposed Number 10, CACI 1220.

10 **THE COURT:** Let me go back here. Hold on.

11 Did you propose --

12 **MR. DICKENS:** Plaintiffs have proposed both
13 1220 and 1221. We've pulled down our 400 and the
14 entirety of 401.

15 So Plaintiffs had proposed the negligence of
16 1220, which lays out the factual elements.

17 1221 provides the standard of care for that
18 negligence claim in a product liability action.

19 And then, once again, those first two
20 sentences are taken, just to define what negligence is,
21 from 401. The second sentence, once again, we think is
22 necessary because it makes clear that negligence is not
23 only affirmative action, but can also be a failure to
24 account.

25 **THE COURT:** I see. I'll have to go back and

1 look at your original.

2 So in your original set of instructions -- I
3 see what you did. You proposed 1200, 1203 --

4 **MR. DICKENS:** I think in our original -- and
5 what might be making confusion, if I recall correctly.
6 I think what should be 1220, in our initial one, was
7 incorrectly labeled as CACI 1205.

8 But it's "Negligence Essential Factual
9 Elements." But I'll try to pull up our original.

10 **THE COURT:** Okay.

11 **MR. DICKENS:** So in our original, our 1220 was
12 Instruction Number 16, Your Honor.

13 **THE COURT:** Yeah, I'm looking at that. I see
14 what he did. It was labeled 1225, but it's 1220?

15 **MR. DICKENS:** That's correct.

16 **THE COURT:** So what you did was take --

17 **MR. DICKENS:** And then Instruction Number 17
18 corresponds now to what is proposed Instruction
19 Number 11.

20 So in our initial, Instruction Number 17 was
21 "Basic Standard of Care."

22 **THE COURT:** So when we were having a
23 conversation about this, we weren't talking about
24 Instruction Number 17. We were actually way back at
25 401.

1 **MR. DICKENS:** That's right.

2 **THE COURT:** When --

3 **MR. DICKENS:** Yes, Your Honor.

4 So what Plaintiffs had initially requested was
5 400, 401, "General Negligence."

6 But we also had 1220 and 1221, which is
7 negligence under the "Product Liability" section of the
8 jury instructions.

9 **THE COURT:** Right.

10 **MR. DICKENS:** So after reviewing the Court's
11 comments and instructions, what we thought made the most
12 sense was to move forward with the negligence of 1220
13 and 1221.

14 However, since that standard of care does not
15 define what negligence is, to use the language from 401
16 and bring that over to the 1221 standard of care for
17 negligence in product liability actions, just the first
18 two sentences.

19 **THE COURT:** Right. I see what you did.

20 **MR. DICKENS:** We're fine --

21 **THE COURT:** I'm not sure that we really solved
22 anything by doing that.

23 **MR. DICKENS:** To the extent we just want to
24 read the first two sentences in as a separate
25 instruction to define what negligence is, I think that's

1 certainly an alternative, as well, Your Honor, rather
2 than including it into 1221. Just including it
3 beforehand to lay out what negligence is.

4 But our position is that 1220 and 1221 would
5 still be necessary at that point.

6 **THE COURT:** Okay.

7 **MR. WISNER:** And just to clarify, 1221,
8 Your Honor, just doesn't define what negligence is.

9 **THE COURT:** I'm looking at it. I understand
10 what you're saying.

11 **MR. WISNER:** That's why we took just the first
12 two sentences from 401 as an instruction. We withdrew
13 400 and most of 401.

14 **THE COURT:** 1221 does actually -- it doesn't
15 define the term negligence that an ordinary person might
16 understand when you're sort of describing something, as
17 opposed to the adjective that is -- I mean, a noun is
18 negligent, as opposed to -- when something is negligent,
19 as opposed to, exactly what does that mean?

20 But I think, in terms of looking at whether or
21 not the two sentences as a separate instruction -- let
22 me just hold that thought. It may make sense. Let me
23 just hold that thought.

24 **MR. WISNER:** Sure.

25 **THE COURT:** So let me just go back and make a

1 note.

2 So that takes us to -- just, as we're going
3 through this list, I've already ruled on 1222. So now
4 we're at 3905. Is that essentially where we are, once
5 we get through the 1200s?

6 Is there an opposition -- is there any
7 opposition to that? Oh, I see, there are two different
8 versions.

9 So the plaintiffs combined 3905 and -- no,
10 both of you did, let's see.

11 So I'm wondering if we shouldn't state
12 Mr. Pilliod and Mrs. Pilliod's damages in separate
13 instructions. You were saying that Mr. and Mrs. Pilliod
14 are each seeking -- I'm really wanting to instruct the
15 jury so that they get that these are two different
16 cases.

17 So you can state Mr. Pilliod's and then
18 Mrs. Pilliod's. So you can say they both want this, but
19 only one wants that. What Defendants have been arguing
20 is that there's some potential for them not viewing
21 these cases as separate.

22 I'm fine with 3928; you're sort of describing
23 what applies to both of them. But it might not be a bad
24 idea to just state them separately. Maybe you can break
25 it down.

1 **MR. DICKENS:** Your Honor, on the items of
2 noneconomic damages, I think part of the issue is that
3 we're claiming that the damages for noneconomic damages
4 are the same for Mrs. Pilliod and Mr. Pilliod.

5 It's our understanding that Monsanto is
6 claiming there's no evidence of any future noneconomic
7 damages for Mr. Pilliod himself. And that's the
8 distinction.

9 **THE COURT:** Noneconomic or economic?

10 **MR. DICKENS:** Noneconomic. So they're simply
11 pulling out any future noneconomic damages for
12 Mr. Pilliod himself. Which, based on his testimony, his
13 wife and his son, we think it's clear there was evidence
14 of future noneconomic damage.

15 They've also specifically pulled out the
16 language of, you know, physical impairment,
17 inconvenience, grief, anxiety, humiliation, all those
18 type of damages, which is straight from the CACI
19 instruction; it's available for noneconomic damages.

20 We certainly understand the Court's
21 instruction to break that down. But there's more
22 substantive documents.

23 **THE COURT:** Why do you argue that Mr. Pilliod
24 doesn't have any noneconomic damages?

25 **MR. ISMAIL:** Mr. Pilliod has been in remission

1 for eight years. Plaintiffs opened their case saying he
2 has experienced cognitive dysfunction as a result of his
3 three-month treatment in 2011.

4 They have abandoned that from an evidentiary
5 perspective. They had an expert, they never called him.
6 They never solicited that testimony from Dr. Nabhan.
7 They have not solicited that testimony, even from any of
8 their percipient witnesses.

9 At most, what we heard from the plaintiffs'
10 son and from the plaintiffs themselves is that
11 Mr. Pilliod is not the same since his cancer in 2011.

12 **THE COURT:** Right.

13 **MR. ISMAIL:** That's neither -- that's not 2019
14 going forward.

15 But in any event, there should be some
16 competent medical evidence submitted from which this
17 jury could conclude that he has future noneconomic
18 damages.

19 He has a past -- he articulated what he went
20 through in the past. But as we sit here in 2019, they
21 haven't presented evidence that he has any future pain
22 and suffering, that he has any future disease, that he's
23 dealing with anything from his cancer in 2011.

24 They functionally abandoned that argument when
25 they didn't present their expert, they didn't present

1 the treating physicians on this issue. They didn't even
2 solicit from -- Mr. Wisner went through opening
3 statement that he can't go sailing because he forgets
4 where he is and he gets lost. They never asked any of
5 those questions from their witnesses.

6 The general statement that he wasn't the same
7 after his cancer in 2011 isn't a basis upon which this
8 jury, in April of 2019, can start speculating as to what
9 that damage is going forward.

10 And we distinguish Mrs. Pilliod from
11 Mr. Pilliod in this regard. They did present some
12 evidence as to her going forward. But as to him, they
13 did not. They've abandoned it from where they started
14 this trial.

15 **MR. WISNER:** Your Honor, Mr. Pilliod testified
16 very clearly that his life has fundamentally changed
17 since he's been diagnosed with cancer.

18 He talked in detail about how it's affected
19 sense of well-being, and all sorts of issues that came
20 out, that a reasonable jury can infer that he did suffer
21 serious noneconomic damages following his diagnosis and
22 severe treatment -- R-CHOP, for his chemotherapy. So
23 there's clearly evidence that he did, in fact, suffer
24 damages following his cancer.

25 There's a sort of inherent contradiction in

1 Counsel's argument. If they agree that there has, in
2 fact, been damages since 2011, there's no reason the
3 jury couldn't assume that those damages can continue
4 into the future.

5 Now, the specific arguments, for example, that
6 his cognitive dysfunction was directly caused by
7 Roundup -- sorry, by the chemo treatment, two things:
8 One, I actually never said that in opening. He then
9 proceeded to claim to the jury that I did say that in
10 opening, and that's not the truth. I actually didn't
11 say that. I said it got worse.

12 And we heard testimony, very clearly, from
13 Mr. Pilliod and Mrs. Pilliod that he got much worse,
14 that his seizures got worse, his ability to walk got
15 worse, and he has bone pain moving forward. And all of
16 that is related to his cancer and treatment of that
17 cancer.

18 Sure, we didn't call Dr. O'Shanick to have him
19 give his cognitive opinion about specific details of
20 neural impairment. But we don't have to do that to
21 argue future noneconomic damages to the jury.

22 So I think that the evidence here is clear
23 that he is able to obtain noneconomic damages in the
24 future. Obviously, it has to be constrained by the
25 evidence that they heard.

1 But they have heard evidence that leads to a
2 reasonable conclusion that he suffered some of the
3 things they're trying to get out of here, including
4 grief, anxiety, emotional distress. I mean, there's no
5 question that he's experiencing that for the rest of his
6 life. He clearly testified to that, and so did his son.

7 So there's evidence here for him getting
8 noneconomic damages moving forward.

9 **THE COURT:** Okay. I actually agree that there
10 is evidence, based on his testimony, regarding what he
11 can't do anymore, what he used to do, what he liked to
12 do. I think you are constrained somewhat by that
13 evidence, however. It's only going to get you so far.

14 But it is -- I think that that does -- his
15 discussion about how difficult the whole process was and
16 the impact on his life, coupled with some of the
17 limitations that he said he has had to experience and
18 currently doesn't do any longer, which has more to do
19 with the outdoor sports and sailing and things he used
20 to do, I think that gets you into future noneconomic
21 damages.

22 As I said, you can only argue so much. But I
23 do think that you can argue that he has some future loss
24 in that regard.

25 So I think that we can include that

1 instruction, and I would not break both of them out. I
2 don't know if there's anything else in the difference
3 between -- with respect to the difference between
4 Plaintiffs' and Monsanto's proposed instruction.

5 Otherwise, I would agree that he can argue --
6 that can be included in the instruction and can be
7 argued.

8 **MR. WISNER:** And I think we just throw in a
9 sentence that says something to the effect of -- we can
10 meet and confer on this -- but something to the effect
11 of, in assessing noneconomic damages, you should assess
12 Mr. and Mrs. Pilliod's damages separately.

13 **THE COURT:** There does need to be some
14 reference to that.

15 The next one, I think I already said no to
16 3928, the unusually-susceptible plaintiff.

17 **MR. DICKENS:** Your Honor --

18 **THE COURT:** Go ahead and make your record.

19 **MR. DICKENS:** Your Honor, for the record, with
20 respect to 3928 -- and the source of authority, you
21 know, lay it out. What this instruction is for, that a
22 plaintiff without such a pre-existing would probably
23 have suffered a less injury or no injury, does not
24 exonerate Defendant from liability.

25 Your Honor, if we cannot get the causation

1 instructions, if risk factors are not causes, then
2 certainly those risk factors are something. And those
3 risk factors are making it more likely than not that the
4 Pilliods were unusually susceptible for developing
5 cancer, whether that be obesity, age, all of those risk
6 factors that the Court has determined may or may not be
7 causes.

8 Those risk factors would make them unusually
9 susceptible. And because of that, this instruction is
10 necessary to take into consideration what those risk
11 factors are, and how to weigh those in making
12 determinations as to the Pilliods.

13 **MR. MILLER:** If I could, Your Honor, not just
14 for the record, but in an attempt to persuade the Court.

15 As to Mrs. Pilliod, I agree with the Court
16 100 percent.

17 As to Mr. Pilliod, I think the Court wants to
18 reserve until you hear Dr. Levine. This is precisely
19 what Dr. Levine says. She's going to tell this jury
20 that Mr. Pilliod was more susceptible to getting
21 non-Hodgkin's lymphoma because he has this constellation
22 of immune compromises, and she's going to rattle off a
23 laundry list of them that fit together. Because she's
24 the non-Hodgkin's lymphoma expert in the world, and she
25 has got some impressive credentials. And she says that

1 he's more susceptible, and we're entitled to have it
2 because that squarely fits the evidence.

3 So I'm asking as to Mr. Pilliod -- and the
4 Court is trying two different cases here at once. This
5 applies to Mr. Pilliod, and I think the Court should
6 reserve until you hear her because it's square-on with
7 the evidence.

8 Thank you, Your Honor.

9 **THE COURT:** Well, we haven't finalized them.
10 But as of this moment, no.

11 **MR. MILLER:** I understand, Your Honor.

12 **THE COURT:** You can always renew it one last
13 time after Dr. Levine.

14 **MR. MILLER:** Thank you, Your Honor.

15 **THE COURT:** But as of this moment, no.

16 And then we're actually at punitive damages.
17 So we're going to hold that thought on punitive damages
18 until I've had a chance to read the briefs.

19 So on the special instructions.

20 **MR. WISNER:** Your Honor, there's Number 15,
21 the life expectancy.

22 **THE COURT:** I kind of assumed --

23 **MR. WISNER:** No, they're objecting.

24 **THE COURT:** All right. So there's an
25 objection to Number 15, Counsel?

1 **MR. ISMAIL:** So, in part, Your Honor, it's
2 preserving our issue on the Revlimid issue and future
3 medical expenses, which I assume is well-preserved at
4 this point, given how much we've talked about it.

5 But we think this instruction invokes that
6 very issue, so we're objecting, in part, on that basis.

7 In addition, Your Honor, the proposed
8 instruction here is not consistent with 3905, which both
9 parties have presented as being -- as should be charged
10 in this case. The no fixed standard for deciding
11 noneconomic damages, in light -- there isn't some
12 formulaic approach to determining noneconomic damages in
13 the future, given that Mr. Pilliod has no future
14 economic damages.

15 So as to him, understanding the Court is
16 allowing future noneconomic, the life expectancy
17 issue -- there's a lack of consistency with 3905, which
18 is being given.

19 And even as to Mrs. Pilliod, same argument
20 with the noneconomic for her, as well, understanding
21 that we have objected and have been overruled on the
22 future economic damages of Mrs. Pilliod.

23 **THE COURT:** But 3905, there's no fixed
24 standard for deciding that you're going to give -- how
25 much you're going to give. But you have to have some

1 general idea how long they might live.

2 **MR. ISMAIL:** I understand, Your Honor.

3 **THE COURT:** So that essentially sort of
4 bookends the whole idea that, yes, you have to kind of
5 use your judgment. But at the same time, you have to
6 have some context within which to exercise that
7 judgment.

8 So unless there's a problem with the wording
9 that's inconsistent with the actual instruction, I'm
10 going to include that.

11 Tomorrow, Dr. Mucci is coming, and how long of
12 a day is that looking like?

13 **MR. ISMAIL:** We're going to consult after
14 court today. Dr. Mucci would ordinarily be a full-day
15 witness. Maybe with the Court's indulgence on a shorter
16 lunch, we can pick a little time up there, but I'll talk
17 with Mr. Miller.

18 **MR. WISNER:** There is a possibility, although
19 we're hoping to work around it, that she comes back on
20 Monday. But we understand the Court's schedule.

21 **THE COURT:** And there's a witness on Monday,
22 as well, right?

23 **MR. ISMAIL:** Dr. Levine.

24 **THE COURT:** That's your last witness?

25 **MR. ISMAIL:** Yes, Your Honor.

1 **THE COURT:** Is she an all-day witness?

2 **MR. ISMAIL:** She likely would be an all-day
3 witness.

4 **THE COURT:** So then we're really talking about
5 Tuesday, winding up instructions. And closing and
6 instructions on Wednesday.

7 Is that what we're thinking?

8 **MR. ISMAIL:** If the evidence spills over to
9 Tuesday, that seems almost assured to be the case.

10 Absent that, I think the parties don't object
11 to closing on Tuesday if the Court is in a position on
12 the jury instructions.

13 **THE COURT:** Which means we would have to
14 finish the jury instructions on Monday.

15 **MR. WISNER:** That's right.

16 **THE COURT:** And we're talking about the rest
17 of Dr. Mucci and all of Dr. Levine on Monday? That
18 sounds a little ambitious.

19 The problem is, I don't mind working late.
20 But if this is open to the public, I can't have
21 everybody in the courtroom. And that's fine. I'm just
22 explaining that I have to get everybody out of here by
23 around 4:30.

24 **MR. WISNER:** I think Mucci will get done
25 tomorrow. I think it probably will happen. And I'm

1 pretty sure Levine will get done on Monday, as well.
2 She is a case-specific expert for Mr. Pilliod, and
3 Dr. Bello was off early on Monday.

4 **MR. ISMAIL:** No, she wasn't.

5 **MR. WISNER:** She was not.

6 **MR. ISMAIL:** 4:29.

7 **MR. WISNER:** I apologize. She was not.

8 But in any event, I think Mr. Miller is not as
9 long of a cross-examiner as I am.

10 **MR. MILLER:** I think she's an all-day witness.

11 **MR. WISNER:** I think she's all-day, but I
12 think both sides expect Dr. Levine to be done on Monday.

13 And so the question is, on Tuesday morning,
14 are our jury instructions ready to go? And if they are,
15 I know I prefer to close on Tuesday, if we could. We
16 have obviously the 10th off because of the wedding. But
17 I would like to get them in deliberations as soon as
18 possible and see if we can get a verdict before Friday
19 and go home.

20 **THE COURT:** Okay. That's ambitious. That
21 takes as long as it takes.

22 **MR. WISNER:** Sure.

23 **THE COURT:** You never have any idea.

24 I don't feel like we have tons left to do with
25 the jury instructions; I feel like we're getting close.

1 Really focusing on the punitive damages, which I'll try
2 to look at a little bit this evening, now that I have
3 the briefs.

4 As far as Dr. Mucci, are we sort of there,
5 except for some of the specials?

6 **MR. ISMAIL:** Your Honor, pages 34, 35, and 36
7 were proposed instructions from Plaintiffs that
8 Your Honor tentatively was inclined not to give last
9 week.

10 **THE COURT:** Okay. Hold on one second.

11 **MR. DICKENS:** Your Honor, our position would
12 be that those instructions would better be dealt with
13 after the evidence. It involves things such as failure
14 to explain or deny evidence, party having power to
15 produce better evidence. And so --

16 **THE COURT:** 203, I'm almost certain not to
17 read that.

18 On terms of failure to explain or deny
19 evidence and statement of a party opponent, I am likely
20 to give that, but I'm not sure about Number 2.

21 But I know I'm not going to give -- I'm not
22 inclined to give Number 1, which would be CACI 203.

23 I doubt I will give 205. I just don't see
24 that.

25 But 212, probably.

1 That would be my tentatives going forward.

2 **MR. DICKENS:** Understood, Your Honor.

3 So to the extent we, at the close of evidence,
4 believe for 203 or 205, we may just submit. I don't
5 think there needs to be much argument. But what we
6 believe meets those elements and submit it to the Court,
7 and we can have an argument at that point.

8 **THE COURT:** Whoever the scribe is, it looks
9 like it's Plaintiffs. No, actually everybody is on
10 here. Whoever is doing it.

11 **MR. WISNER:** It's joint.

12 **MR. DICKENS:** It's joint.

13 We'll take care of it, Your Honor.

14 **THE COURT:** If you can refine it and give it
15 to me tomorrow, that would be helpful. If there's
16 something I can address tomorrow before I leave, I will.

17 **MR. ISMAIL:** Your Honor, if I may on one
18 issue. I apologize. I've been reminded that I failed
19 to point one thing out on the consumer expectation test.

20 In the directions for use -- and this is
21 1203 -- there's an option for the Court in charging and
22 submitting to the jury the factual question of whether
23 there is a consumer expectation for the product. And
24 you'll see it's cited to the Saller case.

25 And so it gives the Court the option to modify

1 the instruction to advise the jury that it first must
2 determine whether the product is one about which an
3 ordinary consumer can form reasonable minimum safety
4 expectations.

5 And I believe that was part of the charge in
6 Johnson for consumer expectation. And if this
7 instruction is given over objection, we would request
8 that the optional language be included in it.

9 **THE COURT:** All right. Let me get that.

10 In terms of the use notes, where are you,
11 Counsel?

12 **MR. ISMAIL:** In the second paragraph: "The
13 Court must make an initial determination."

14 Maybe I have an out-of-date book.

15 **THE COURT:** No, it is.

16 I'm not inclined to read that, actually. But
17 I'll take it under advisement.

18 **MR. ISMAIL:** Thank you, Your Honor.

19 **THE COURT:** But I don't think it applies,
20 based on my analysis of this whole question. I don't
21 think it applies.

22 So this Mucci letter, what exactly are we
23 looking at here? There was a letter written by two
24 Congresspersons regarding her testimony, or at least
25 some of her work with respect to the --

1 **MR. MILLER:** Yes, Your Honor. Judge Chhabria
2 let it in. It took less than three minutes. It's clear
3 impeachment. We don't have to do a trial within a
4 trial. That's just silly. It takes about three
5 minutes.

6 She can deny it and claim she's still right,
7 but it goes to her credibility. And it's not a ham
8 sandwich, it's a lot more relevant. That's why
9 Judge Chhabria allowed it and why it took so little
10 time.

11 **THE COURT:** I haven't looked at the -- I guess
12 there's an excerpt from the transcript, where it says he
13 initially let it in and then cut it off and -- cut off
14 the line of questioning and struck Plaintiffs' counsel's
15 question because it developed into --

16 **MR. MILLER:** I read it last night. That's not
17 what happened at all. It was not a side draw.

18 What Judge Chhabria did not like was that
19 Ms. Wagstaff referred to it as a congressional thing.
20 And Judge Chhabria said, no, it's two congresspeople,
21 refer to it that way. And she referred to it that way
22 and she completed her line of questioning, and then they
23 moved on.

24 He said, that's enough, let's move on, after
25 they had queried it. He did not cut it off, he did not

1 strike it. It takes less than five minutes. It's very
2 legitimate cross-examination.

3 **THE COURT:** I'll tell you what, since I didn't
4 look carefully at the transcript, and I haven't looked
5 at your brief yet, let me look at that. We'll talk
6 about it first thing in the morning.

7 **MR. ISMAIL:** You indicated last week that you
8 had a tentative on the second RJN, when we were --

9 **THE COURT:** I think I issued an --

10 **THE CLERK:** I'll give you a copy.

11 **THE COURT:** I drafted an order, just to make
12 sure -- I just wanted to make sure that it was in the
13 record. I did, and I drafted and filed the order.

14 **MR. ISMAIL:** Very good.

15 **THE COURT:** The only one I didn't file was --
16 well, it's sort of moot now, which was your motion for
17 reconsideration, which I denied.

18 **MR. MILLER:** Oh, on Rubenstein?

19 **THE COURT:** No, the neighbor.

20 **MR. MILLER:** It's moot now.

21 **THE COURT:** It's moot now. I just didn't file
22 an order on that.

23 So I think we're done, if that's okay with
24 you. And I will see you mañana at 9:00.

25 **MR. DICKENS:** Thank you, Your Honor.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

MR. ISMAIL: Thank you, Your Honor.
(Proceedings adjourned at 3:18 p.m.)

1 State of California)
2 County of Alameda)

3

4 We, Kelly L. Shainline and Lori Stokes, Court
5 Reporters at the Superior Court of California, County of
6 Alameda, do hereby certify:

7 That we were present at the time of the above
8 proceedings;

9 That we took down in machine shorthand notes all
10 proceedings had and testimony given;

11 That we thereafter transcribed said shorthand notes
12 with the aid of a computer;

13 That the above and foregoing is a full, true, and
14 correct transcription of said shorthand notes, and a
15 full, true and correct transcript of all proceedings had
16 and testimony taken;

17 That we are not a party to the action or related to
18 a party or counsel;

19 That we have no financial or other interest in the
20 outcome of the action.

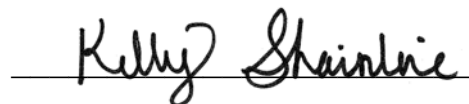
21 Dated: April 30, 2019

22

23

24

25



Kelly L. Shainline
CSR No. 13476, CRR



Lori Stokes
CSR No. 12732, RPR