

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

SUPERIOR COURT OF CALIFORNIA

COUNTY OF ALAMEDA

BEFORE THE HONORABLE WINIFRED Y. SMITH, JUDGE PRESIDING

DEPARTMENT NUMBER 21

---oOo---

COORDINATION PROCEEDING)	
SPECIAL TITLE (RULE 3.550))	
)	
ROUNDUP PRODUCTS CASE)	JCCP No. 4953
)	
_____)	
THIS TRANSCRIPT RELATES TO:)	
)	
Pillioid, et al.)	Case No. RG17862702
vs.)	
Monsanto Company, et al.)	Pages 2941 - 3074
_____)	Volume 18

Reporter's Transcript of Proceedings

Wednesday, April 10, 2019

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



BAY AREA REPORTING
SOLUTIONS

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 kevens@efstriallaw.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

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

Wednesday, April 10, 2019

PLAINTIFFS' WITNESSES

PAGE VOL.

WEISENBURGER, DENNIS (Resumed)

Cross-Examination (Resumed) by Mr. Ismail	2945	18
Redirect Examination by Mr. Miller	2982	18
Recross-Examination by Mr. Ismail	3043	18
Further Redirect Examination by Mr. Miller	3058	18
Further Recross-Examination by Mr. Ismail	3060	18

MARTENS, MARK

By Video Deposition resumed(not reported)	3061	18
---	------	----

REEVES, WILLIAM

By Video Deposition (not reported)	3064	18
------------------------------------	------	----

1 Wednesday, April 10, 2019

9:06 a.m.

2 (Proceedings commenced in open court in the
3 presence of the jury.)

4 **THE COURT:** Good morning, ladies and
5 gentlemen.

6 All right. So Mr. Ismail will complete --
7 good morning.

8 **THE WITNESS:** Good morning.

9 **THE COURT:** Mr. Ismail will conclude his
10 cross-examination and then we'll have redirect and move
11 on from there.

12 Mr. Ismail.

13 **MR. ISMAIL:** Your Honor, good morning.

14 Good morning, everyone.

15 **DENNIS WEISENBURGER,**

16 called as a witness for the Plaintiffs, having been
17 previously duly sworn, testified further as follows:

18 **CROSS-EXAMINATION (Resumed)**

19 **BY MR. ISMAIL:**

20 **Q.** Good morning, Doctor.

21 **A.** Good morning.

22 **Q.** Are you ready to proceed?

23 **A.** I'm ready.

24 **Q.** Very good. Doctor, I want to clear up one
25 thing that you said yesterday. You were talking about

1 how when you were a young researcher coming to Nebraska
2 you were interested in the issue of NHL because of
3 trends in the incidence rate of NHL in the country. Do
4 you recall words to that effect yesterday?

5 **A.** Yes.

6 **Q.** Now, the truth of the matter is that the rate
7 of non-Hodgkin's lymphoma began increasing in this
8 country back in beginning in the 1940s, 1950s; correct?

9 **A.** Yes.

10 **Q.** So that's several decades before Roundup came
11 on the market or any glyphosate-based formula; true?

12 **A.** Yes.

13 **Q.** And as you know and have said before, the rate
14 of NHL nationally has plateaued over the last couple
15 decades; correct?

16 **A.** Yes.

17 **Q.** Now, I want to turn now to a discussion of the
18 NAPP, the North American Pooled Project. And you talked
19 about how yesterday that you were one of the
20 investigators in that research effort; correct?

21 **A.** Yes.

22 **Q.** Now, just to remind everyone what the NAPP is,
23 it is a pooling of a couple of different studies,
24 case-control studies that have looked at the question of
25 non-Hodgkin's lymphoma in different exposures and

1 whether there's an increased risk; correct?

2 A. Yes.

3 Q. There's four states that are part of the NAPP
4 that have been studied in various peer-review journals
5 and also some provinces in Canada; correct?

6 A. Yes.

7 Q. Now, the -- you were involved in the Nebraska
8 study, as we heard; true?

9 A. Yes.

10 Q. And the idea of pooling the various data sets
11 is to get more events and get more participants in the
12 studies and hopefully improve the reliability of the
13 data that you're seeing; correct?

14 A. Right. It improves the power of the study to
15 detect differences.

16 Q. And when you get smaller and smaller studies
17 with fewer and fewer events, both the power of the study
18 and also the reliability of the results become less
19 certain; is that fair to say?

20 A. They can, yes.

21 Q. And so if done correctly, the pooling
22 hopefully is better than the sum of the parts?

23 A. Yes.

24 Q. Now, the -- just so we're clear, on the
25 various studies that sort of fold into NAPP, I wanted to

1 perhaps just show it graphically so maybe it will be
2 easier for folks to see.

3 **MR. ISMAIL:** Mr. Miller, I'm going to show
4 this.

5 **MR. MILLER:** No objection.

6 **MR. ISMAIL:** Thank you.

7 (Demonstrative published.)

8 **BY MR. ISMAIL:**

9 **Q.** Okay. So, Dr. Weisenburger, we have up on the
10 screen -- and if you don't recall the exact number of
11 cases, you probably can confirm at least -- we confirmed
12 them in the studies, the publications, but this looks
13 about what -- it's consistent with your recollection of
14 what the various data sets show; correct?

15 **A.** I think so, yes.

16 **Q.** So it's about 113. And we call them cases
17 when we're talking about case-control studies, but I
18 know we're in a courtroom here talking about a case. In
19 epidemiology a case is an event, a person who has an
20 event.

21 **A.** Has a disease, yes.

22 **Q.** Has a disease. So when we say "cases" in
23 these studies, we're not talking lawsuits, we're talking
24 people who have a disease in a study.

25 **A.** Yes.

1 **Q.** Okay. And so the McDuffie study is that
2 case-control study in Canada that you took a look at
3 yesterday; true?

4 **A.** Yes.

5 **Q.** And the jury hasn't seen these three names
6 over here. These were the original publications of the
7 various states that looked at this issue; correct?

8 **A.** Yes.

9 **Q.** And you were involved here in the Nebraska
10 one; correct?

11 **A.** Yes.

12 **Q.** Now, just -- there's a name that the jury has
13 seen, and that is De Roos 2003. You were involved in
14 that study; correct, as an author?

15 **A.** Yes.

16 **Q.** And the De Roos study is actually a subset of
17 the United States case-control studies; correct?

18 **A.** Yes.

19 **Q.** And the reason why it's a subset is because
20 for various reasons we don't have to take the time to
21 discuss this morning, there were a certain number of
22 events that were excluded from the De Roos study that
23 were part of the other United States case-control
24 studies; correct?

25 **A.** Yes.

1 **Q.** Women, for example, were not part of the
2 De Roos study, and there were some other exclusions;
3 correct?

4 **A.** Yes.

5 **Q.** So when we think about the De Roos study, this
6 is really a subset of the United States case-control
7 data; correct?

8 **A.** Yes.

9 **Q.** And which in total is a subset of the North
10 American data that's part of the NAPP?

11 **A.** Yes.

12 **Q.** Okay. So let's go forward and take a look at
13 what the results of the NAPP have been.

14 Now you told us yesterday that there have been
15 three presentations of the data from NAPP at various
16 scientific conferences in 2015 and 2016; correct?

17 **A.** Yes.

18 **Q.** And those are the three presentations that
19 you're aware of as an investigator; true?

20 **A.** Yes.

21 **Q.** And Mr. Miller gave you a -- asked you which
22 of the three you wanted to discuss with the jury;
23 correct?

24 **A.** Yes.

25 **Q.** And you picked the June 2015 presentation;

1 correct?

2 A. Yes.

3 Q. Now, just so we can get the sequence right --

4 MR. ISMAIL: Any objection?

5 MR. MILLER: No objection.

6 (Demonstrative published.)

7 BY MR. ISMAIL:

8 Q. Okay. So we have the three presentations that
9 were given June 2015, August 2015, and then there was
10 one in June 2016; correct?

11 A. Yes.

12 Q. And you picked the presentation from June 2015
13 to discuss with the jury; correct?

14 A. Yes.

15 Q. In fact, that was the only data you showed
16 yesterday; true?

17 A. Yes.

18 Q. Now, you can confirm, sir, that all the data
19 in the June 2015 presentation has been superseded by the
20 subsequent presentations; true?

21 A. Well, they're different iterations of the same
22 data, yes.

23 Q. The 2015 data is old and superseded data;
24 true?

25 A. I don't know what that means by "superseded."

1 **Q.** Well --

2 **A.** The data is all valid data. It was analyzed
3 slightly differently.

4 **Q.** Do you still have a copy of your deposition in
5 Mr. Pilliod's and Mrs. Pilliod's case, sir?

6 **THE COURT:** I may have moved it. So hold on
7 one second.

8 (Pause in the proceedings.)

9 **BY MR. ISMAIL:**

10 **Q.** If you could turn to page 240, please, of your
11 deposition, beginning at line 10.

12 **MR. ISMAIL:** Do you have it, Mr. Miller?

13 **THE WITNESS:** Page 240, line 10?

14 **MR. MILLER:** I don't have it, but that's all
15 right.

16 **MR. ISMAIL:** Your Honor, may I display the
17 impeachment?

18 **THE COURT:** Well, ask him --

19 **MR. MILLER:** I don't think it's impeachment,
20 but he can read the deposition, I have no objection.

21 **THE COURT:** Hold on one second.

22 Let me see if he agrees or disagrees.

23 **THE WITNESS:** I guess I agree with myself.
24 It's more recent data. That's how I would phrase it.

25 **MR. ISMAIL:** Okay. I can show the deposition.

1 **THE COURT:** Yes.

2 **MR. ISMAIL:** Thank you.

3 **MR. MILLER:** I object to that, Your Honor.

4 It's not what --

5 **THE COURT:** Pardon me?

6 **MR. MILLER:** It's not what the rules of
7 evidence require. He can read it and the witness can
8 say did I say that or not and then explain what he said.
9 I believe that is the proper protocol. So I object to
10 publishing on the easel. But if we're going to publish
11 them, that's okay, we'll --

12 **THE COURT:** Well, we'll go with one rule. If
13 you want to publish, go ahead, but publishing -- I'm
14 just going to go with one rule is what I'm indicating.
15 Yes, you may, and that's the rule, that's going to be
16 the rule -- publishing --

17 (Simultaneous colloquy.)

18 **BY MR. ISMAIL:**

19 **Q.** Well, just so we don't have any problems,
20 counsel wants me to read it. I won't show it up on the
21 screen, Dr. Weisenburger, but you can follow along.
22 Okay?

23 **A.** Okay.

24 **Q.** At line 10. Were you asked the following
25 question:

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

And if we go ahead, one side in the frequency data from the lifetime days in this June 2015 PowerPoint presentation that data is old and has been superseded; correct?

What was your answer?

A. Yes.

Q. Next question:

In fact, it is true that all of the data, every single analysis in Exhibit 19 --

Which was the June 2015 --

A. Where are you reading now?

Q. Line 15, sir.

Are you there?

A. Line 15 on page 240?

Q. 240. Very next question.

A. Okay.

Q. (Reading from document:)

And in fact it is true that all of the data, every single analysis in Exhibit 19 --
Which is the June 2015 presentation.
-- is old and has been superseded; correct?
What was your answer under oath?

1 A. Yes. Because the later analyses were done
2 with some slight differences and the numbers changed
3 slightly so --

4 Q. Actually your answer was yes.

5 A. Yeah, it is yes.

6 Q. Okay. So this June 2015 data set, as you
7 testified under oath in your deposition, is old and
8 superseded; right? Correct?

9 A. There is other data available, yes.

10 Q. And this is the data that you presented
11 yesterday?

12 A. Yes.

13 Q. And so if anyone, any member of the jury wrote
14 down the numbers from the June 2015 presentation
15 yesterday, it would be correct to write next to them
16 "old and superseded"; right?

17 A. Right. Well, the numbers didn't really change
18 much between the different analyses. And the reason I
19 showed the 2015 June data is --

20 **THE COURT:** That's not in response to a direct
21 question. So let Mr. Ismail ask a question.

22 **BY MR. ISMAIL:**

23 Q. Doctor, let's look to see how the numbers
24 changed.

25 Now, I think you have in your binder all three

1 versions, but if it's easier, sir, I can just hand up a
2 new copy. And I was going to start with August 2015.
3 Would it be easier if I just handed you a copy?

4 **A.** I don't know where my binder is.

5 **THE COURT:** Did you put it here?

6 **THE WITNESS:** I probably did, yeah.

7 **BY MR. ISMAIL:**

8 **Q.** Look down below, Doctor.

9 **A.** Oh, there's one here.

10 **Q.** I'll give you a clean copy just to keep things
11 moving.

12 **MR. ISMAIL:** Your Honor, would you like a
13 clean copy?

14 **THE COURT:** Yes.

15 **BY MR. ISMAIL:**

16 **Q.** So, Dr. Weisenburger, is Exhibit 5671 a copy
17 of the August 2015 presentation? So we're now going to
18 be looking at the next presentation in the sequence.

19 **A.** Yes.

20 **MR. ISMAIL:** Your Honor, permission to
21 publish.

22 **MR. MILLER:** No objection.

23 **THE COURT:** Yes.

24 (Exhibit published.)

25 ///

1 **BY MR. ISMAIL:**

2 **Q.** So August 2015 we have -- oops.

3 Okay. So you're familiar with this
4 presentation; correct?

5 **A.** Yes, I am.

6 **Q.** This is -- you're noted here as an
7 investigator; true?

8 **A.** Yes.

9 **Q.** So these data in this presentation are updated
10 from the prior presentation that you shared with the
11 jury; correct?

12 **A.** Yes.

13 **Q.** Now, if you would, please, sir, turn to page
14 number 9 -- no, I'm sorry -- page number 10 of this
15 analysis.

16 **A.** Okay.

17 **Q.** Glyphosate use and NHL risks.

18 So this is the updated set of the North
19 American case-control pool data; correct?

20 **A.** Yes.

21 **Q.** And you have reported here whether there --
22 what the relative risks are for developing non-Hodgkin's
23 lymphoma following glyphosate exposure; correct?

24 **A.** Yes. It's an ever/never analysis.

25 **Q.** Yes. We'll get to the others in a minute,

1 sir.

2 And then you have two columns. And I want to
3 focus here on OR. That's odds ratio; correct?

4 **A.** Yes.

5 **Q.** And it's got a little footnote there B, and if
6 we go down below this presentation tells us that it's
7 column B that adjusts for use of three particular
8 pesticides; correct?

9 **A.** Correct.

10 **Q.** And there's been some talk thus far in the
11 trial about adjusting for other pesticides. You and I
12 chatted about that yesterday.

13 But at this point, you and your colleagues on
14 the NAPP identified -- sorry -- 2,4-D dicamba and
15 malathion as potential confounders; correct?

16 **A.** Yes.

17 **Q.** And you've gotten more sophisticated in
18 identifying the confounders that you wanted to control
19 for in your analysis as you progressed, for example,
20 De Roos 15 years ago to your presentations from a couple
21 years ago; correct?

22 **A.** Yes.

23 **Q.** And in fact you, I think, told us yesterday
24 that these three pesticides here you believe are a cause
25 of NHL; true?

1 **A.** Yes.

2 **Q.** So if we wanted to look at the adjusted
3 numbers that the NAPP investigators presented, we would
4 look over here in column B; correct? Adjusted for
5 pesticide use.

6 **A.** Yes.

7 **Q.** So the overall relative risk reported is 1.13.
8 That's not statistically significant; correct?

9 **A.** Yes.

10 **Q.** And this is the largest pooled case-control
11 data set that you're aware of?

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

13 **Q.** And it shows no increased risk for NHL
14 following glyphosate exposure; correct?

15 **A.** For ever/never, yes.

16 **Q.** And you told the jury yesterday about the Leon
17 paper; right?

18 **A.** Yes.

19 **Q.** Just came out a couple weeks ago, which is a
20 large cohort study?

21 **A.** It's a pooled cohort study.

22 **Q.** Pooled cohort study?

23 **A.** Yes.

24 **Q.** The largest that you're aware of?

25 **A.** It's the only one I'm aware of.

1 **Q.** And you told us yesterday that overall there
2 was no increased risk of non-Hodgkin's lymphoma
3 following glyphosate use in that Leon paper; correct?

4 **A.** I believe that's true, yes.

5 **Q.** And the other recent data that has come out in
6 the last couple years is the updated Agricultural Health
7 Study; correct?

8 **A.** Yes.

9 **Q.** And you shared with the jury yesterday your
10 criticisms of that study, but you would acknowledge,
11 sir, that you respect the researchers who conducted the
12 Agricultural Health Study; right?

13 **A.** Yes.

14 **Q.** And you respect the National Cancer Institute
15 who funded and sponsored that study; correct?

16 **A.** Yes.

17 **Q.** And even some of the folks that you have
18 worked with in various other research efforts have
19 participated in the Agricultural Health Study either in
20 the first publication or the updated publication; true?

21 **A.** Yes.

22 **Q.** And we don't have to go over it again, the
23 jury has seen it, but in summary form, you would
24 acknowledge that the Agricultural Health Study shows no
25 increased risk for non-Hodgkin's lymphoma following

1 glyphosate exposure; correct?

2 A. Yes.

3 Q. And we say glyphosate exposure, you and I in
4 the last several questions, but this is really the
5 formulated product because these are epidemiology
6 studies; true?

7 A. Yes.

8 Q. And if we continue down, we look at DLBCL.
9 You talked with the jury yesterday about some -- that as
10 the data gets bigger, you can look at particular
11 subtypes of NHL; correct?

12 A. Yes.

13 Q. And you -- and your colleagues did so here.
14 And you can confirm that there's no significant risk of
15 DLBCL in particular following glyphosate exposure in
16 this analysis; true?

17 A. That's correct.

18 Q. Now, there are additional analyses that you
19 did in this updated data set that wasn't shared
20 yesterday. I'm going to ask you to turn to page 26. It
21 should be entitled "Proxy Versus Self-Respondents."

22 A. Yes.

23 Q. And you touched on this yesterday, but just to
24 get our terminology correct, "self-respondents," I
25 think, means what it says which is that the study

1 participant was the person who answered the researcher's
2 questions about their pesticide exposure and other
3 questions that were posed; correct?

4 A. Yes.

5 Q. And then "proxy" means, in the context of a
6 study like this, that the actual pesticide user wasn't
7 the one answering the questions; correct?

8 A. Yes.

9 Q. It was either a spouse or other family member
10 who was providing the information; correct?

11 A. Yes.

12 Q. And either because -- well, for whatever
13 reason you had to use proxy information for some of the
14 data; right?

15 A. Yes.

16 Q. And you told us yesterday that one of the
17 concerns is that proxy data may not be as reliable as
18 self-respondent data.

19 A. Some people believe that, yes.

20 Q. And you certainly want to take it into account
21 when you are conducting research like this; true?

22 A. Yes.

23 Q. And so this presentation reports both proxy
24 and self-respondents together and what does the data
25 look at if we only look at the data provided by people

1 who are actually using the pesticides at issue; correct?

2 A. Right.

3 Q. Now, you talked yesterday about dose response.
4 Do you recall that?

5 A. Yes.

6 Q. And what you're showing on this page here are
7 various ways to get at the question of dose response;
8 true?

9 A. Yes.

10 Q. And one way dose response can be measured is
11 duration of pesticide use; correct?

12 A. Yes.

13 Q. Another way to get at it is a question of how
14 many days per year does the person use the pesticide;
15 correct?

16 A. Yes.

17 Q. And then the last one here is lifetime days,
18 and that is sort of a combination of the prior two
19 metrics for dose response; correct?

20 A. Yes.

21 Q. And what you show here -- and then, of course,
22 the never/ever is the data we looked at a moment ago;
23 correct? That's the top analysis?

24 A. Yes.

25 Q. So we can look here at the various data

1 points. And so for "ever" use, that would be Mr. and
2 Mrs. Pilliod; correct?

3 A. Right.

4 Q. And you can confirm that either in the
5 combined group or just looking at self-respondents,
6 there's no increased risk; correct?

7 A. Yes. For ever/never.

8 Q. Ever/never.

9 Then there's another way to look at it, and
10 that's duration of years; right?

11 A. Yes.

12 Q. And you told us yesterday that you analyzed
13 the exposure, how long Mr. and Mrs. Pilliod used the
14 product; right?

15 A. Yes.

16 Q. And they would be in the more-than-three-
17 and-a-half-year group; right?

18 A. Yes.

19 Q. And what you found is whether you looked at
20 all of them together or you looked at just
21 self-respondents, there was no increased risk for
22 non-Hodgkin's lymphoma in participants in your study who
23 used the product for more than three and a half years;
24 correct?

25 A. Yes.

1 Q. And in fact you would characterize what I'm
2 showing here as a inverse dose response; correct?

3 A. I wouldn't do that, no.

4 Q. Well --

5 A. The odds ratios is lower than 1 but --

6 Q. I'm sorry. Please finish.

7 A. -- I wouldn't use that terminology. I would
8 just say that it's close to 1 but it's lower than 1.

9 Q. And actually I'm trying to get at a different
10 question, which is: If you look at less than
11 three-and-a-half years and more than three-and-a-half
12 years, what your data showed was that as the number of
13 years went up, the relative risk went down; right?

14 A. Yes. And so that's one reason why I don't
15 think duration -- the number of years is a good
16 surrogate for dose.

17 Q. And the other data set -- I'm sorry -- another
18 way to look at it is frequency, and this is what you
19 talked about with the jury yesterday; right?

20 A. Yes.

21 Q. And these were the two data points you used;
22 right?

23 A. Yes.

24 Q. Now, in the self-respondents only, the
25 increased relative risk here is not statistically

1 significant; true?

2 A. It's borderline.

3 Q. The answer is "yes"?

4 A. It's not statistically significant, but it's
5 borderline.

6 Q. And so what we have here is you have a
7 borderline not significant in this column, and you have
8 a borderline significant in the other column; right?

9 A. Yes. But they're essentially the same number
10 so it's a statistical quirk.

11 Q. And then you have the next dose-response
12 metric is this lifetime days number; right?

13 A. Yes.

14 Q. And you can confirm that Mr. and Mrs. Pilliod
15 would be in the more-than-seven-lifetime-days by your
16 calculation; true?

17 A. Yes.

18 Q. And if you do that, regardless of which column
19 you look at, there's no increased risk for non-Hodgkin's
20 lymphoma; true?

21 A. Yes.

22 Q. The lifetime days, was that the same way to
23 look at the data as the Eriksson study you talked about
24 yesterday?

25 A. Yes.

1 **Q.** Okay. So you talked about lifetime days as
2 being something you're relying upon in the Eriksson
3 study. If we look at that exact same metric in your
4 study, no increased risk; true?

5 **A.** Yes.

6 **Q.** Now, one of the things you talked about was
7 this concept of a trend analysis in your dose-response
8 inquiry; correct?

9 **A.** Correct.

10 **Q.** And what a trend analysis is, is applying
11 statistics to the question of whether, as the relative
12 risk changes with exposure, are those differences real
13 or not. Is that a fair way to put it?

14 **A.** Are they statistically significant.

15 **Q.** Are they statistically significant, which is
16 an important part of any investigator's research effort;
17 right?

18 **A.** Yes.

19 **Q.** And what you do is you can actually report a
20 p for trend; correct?

21 **A.** Yes.

22 **Q.** And if the p for trend is .05 and below, you
23 would say that's positive trend analysis; correct?

24 **A.** Yes.

25 **Q.** And that would allow you to say maybe there's

1 a dose response here in this study; correct?

2 A. Yes.

3 Q. If the p for trend is above .05, you would be
4 negative for that analysis and you would not be able to
5 say there's a dose response using that statistical test;
6 true?

7 A. No, I don't think that's true. One would have
8 to look at the numbers and see whether they really
9 change or not. And, you know, there's nothing magic
10 about .05, okay, it's a convention that people use.

11 But epidemiologists look at the data and make
12 their decisions based on the data, not always on the
13 p-values. Just because something is not statistically
14 significant doesn't mean it's not relevant or important.

15 Q. Can you please turn to your deposition at
16 page 161 -- I'm sorry -- page 160, sir, at line 14.

17 Tell me when you're there.

18 A. Yes.

19 Q. Were you asked the following question:

20 And when the p-value is .05 or
21 higher, there's no evidence of a
22 significant trend of the exposure data,
23 that is, there's no evidence that there's
24 a dose-response relationship; right?

25 What was your answer?

1 **A.** My answer was "right," but one never just
2 looks at the p-value and makes the decision. You look
3 at the data and make the decision. So I was assuming
4 that in this question.

5 **Q.** Let's go on then, sir, and look at the p-trend
6 data in the NAPP.

7 So yesterday you looked at the older data set,
8 the June 2015 data set, which I believe -- I'll just
9 give you a copy.

10 **MR. ISMAIL:** May I approach, Your Honor?

11 **THE COURT:** Yes, you may.

12 **BY MR. ISMAIL:**

13 **Q.** Okay. So this is the older and superseded
14 data set that you talked about yesterday; right?

15 **A.** Yes.

16 **Q.** And if you turn to page 14, I believe the
17 particular numbers you chose was just this page; right?

18 **A.** I think we showed data for all three of the
19 tables, duration, frequency, and lifetime days. But we
20 did show this table, yes.

21 **Q.** All right. So, and in this data what you
22 showed was broken out by subtype and you looked at the
23 data for number of days per year; right?

24 **A.** Yes.

25 **Q.** And what you told the jury was this data shows

1 that there's a positive p for trend because the p-value
2 is below .05; correct?

3 A. Yes.

4 Q. Now you know that's no longer good data;
5 correct?

6 A. Well, when they reanalyzed the data for the
7 last presentation, the numbers changed and the p-trend
8 then became nonsignificant. But the data itself didn't
9 change very much.

10 Q. Well, let's look at how the numbers changed.

11 MR. ISMAIL: May I, Your Honor?

12 THE COURT: Yes.

13 BY MR. ISMAIL:

14 Q. Is this Exhibit 5669, Doctor, the June 2016
15 version of the NAPP data?

16 A. I believe so, yes.

17 MR. ISMAIL: Permission to publish?

18 MR. MILLER: No objection, Your Honor.

19 THE COURT: I'm sorry. What page are we on?

20 MR. ISMAIL: Currently just on the title page.

21 THE COURT: All right.

22 MR. ISMAIL: No objection?

23 MR. MILLER: No.

24 (Exhibit published.)

25 ///

1 **BY MR. ISMAIL:**

2 **Q.** So, again, this is you're listed as an
3 investigator as you've been the whole time, and this is
4 yet a further update of this data set; correct?

5 **A.** Yes.

6 **Q.** Now, if you turn to page 9, this is a little
7 different way of looking at the data.

8 **A.** It is.

9 **Q.** And just to orient everyone here, the greenish
10 bars, those are unadjusted for pesticide use; correct?

11 **A.** Yes.

12 **Q.** And the orange brownish bars are the ones that
13 are adjusted for the same three pesticides that you and
14 your colleagues think should be adjusted for when
15 looking at glyphosate; correct?

16 **A.** Yes.

17 **Q.** So we're going to be focusing on the orange
18 bars. And what you've done here, and we'll look in the
19 subsequent data -- I say you. This was actually -- you
20 didn't present this data; right?

21 **A.** No, I didn't.

22 **Q.** It was one of your other investigators on the
23 NAPP?

24 **A.** Yes.

25 **Q.** But you're familiar with it; correct, sir?

1 A. Yes.

2 Q. And you have various ways of looking at this
3 question of whether there's a trend with increasing dose
4 of glyphosate; correct?

5 A. Yes.

6 Q. And what you have, first of all, is the
7 question of ever/never. Have you ever used glyphosate?
8 And there's not a trend here because it's not a dose
9 question, but you can confirm there's no increased risk
10 reported here; right?

11 A. Well, it's a slight increased risk, but it's
12 probably not significant.

13 Q. Well, it's clearly not significant. Those are
14 confidence intervals around the point estimate; right?

15 A. Right.

16 Q. And the point estimate itself is very close
17 to 1; correct?

18 A. Yes.

19 Q. Okay. So then we actually have these things
20 up above that say "p-trend." This is what you and I
21 were talking about a moment ago, which is, as you
22 increase the dose and you're looking at the relative
23 risks as you increase the dose, are those differences
24 statistically meaningful or not; true?

25 A. Yes. Are the changes -- are the changes

1 significant?

2 Q. So the first question was duration, number of
3 years, which is one of the ways you can look at dose
4 response; right?

5 A. Yes.

6 Q. And you can confirm actually the relative risk
7 went down. We saw that a moment ago; correct?

8 A. Yes.

9 Q. And as you report here, there's not a
10 meaningful statistical difference as you increase the
11 number of years of exposure; correct?

12 A. Yes.

13 Q. And then there's this question of frequency.
14 This is the metric that you talked about yesterday;
15 right?

16 A. Yes.

17 Q. And if you're looking at the question of
18 ever/never, as you increase -- I'm sorry, this isn't
19 ever/never. This is NHL overall; right?

20 A. Yes.

21 Q. As you increase the number of days per year,
22 there is no statistically significant p for trend;
23 correct?

24 A. Right. You can see it increases, but it's not
25 statistically significant.

1 **Q.** Right. And the whole point of doing
2 statistics is so researchers don't just eyeball their
3 data and say: Well, it looks different to me. It
4 means: I'm going to do a rigorous scientific equation
5 to see if these are statistically meaningful
6 differences. True?

7 **A.** Yes.

8 **Q.** And when you did that, this is negative for
9 dose response; correct?

10 **A.** Yes.

11 **Q.** And similarly, this last metric here, lifetime
12 days, this is clearly not a dose-response relationship;
13 correct?

14 **A.** Yes.

15 **Q.** So that's several of the analyses.

16 And then you actually did it by -- you broke
17 it down by different subtypes; correct?

18 **A.** Yes.

19 **Q.** And so frequency is, again, the number of days
20 per year; true?

21 **A.** Yes.

22 **Q.** And that was the data that you showed the jury
23 yesterday?

24 **A.** Correct.

25 **Q.** And when we looked at the old and superseded

1 data for diffuse large B-cell lymphoma, you reported a
2 positive p-value below .05; right?

3 A. For trend?

4 Q. For trend.

5 A. Yes.

6 Q. But when you look at the updated data, there
7 is no positive p-value anymore; right?

8 A. Well, it's borderline. It's .16. So it's
9 borderline.

10 Q. .16 you think is borderline to .05?

11 A. Yes.

12 Q. It's negative; right, Doctor?

13 A. It's borderline.

14 Q. Is it negative or positive?

15 A. It's borderline.

16 Q. So going forward, then, Doctor, you looked
17 at -- the p-value changed, right, from the data you
18 showed the jury to the updated data; right?

19 A. Yes. Yes.

20 Q. And it went from below .05 to above .05;
21 correct?

22 A. Yes.

23 Q. And then you have other ways of looking at the
24 data. Duration, this is again the number of years;
25 right?

1 **A.** Yes.

2 **Q.** And in looking at each of the subtypes,
3 looking at the adjusted data set, there's no dose
4 response shown here; correct?

5 **A.** There isn't.

6 **Q.** And if you look at lifetime days, similarly if
7 you look at adjusted data, there is no dose response
8 shown in your data; true?

9 **A.** That's correct.

10 **Q.** Okay. Doctor, I just have two quick things to
11 do with you.

12 **THE COURT:** Counsel, can I see you at sidebar
13 for just a quick second.

14 **MR. MILLER:** Sure.

15 (Sidebar held but not reported.)

16 **BY MR. ISMAIL:**

17 **Q.** Doctor, I would just like to quickly show you
18 this board.

19 **MR. ISMAIL:** You're probably not going to be
20 able to see it way back there, but I'll tell you what's
21 on here.

22 Can everyone see that okay? More or less?

23 **THE WITNESS:** Yeah, barely.

24 **BY MR. ISMAIL:**

25 **Q.** I'll keep moving it around like it's on a

1 swivel.

2 **THE COURT:** Hold on one second. I don't know
3 if he can -- I think there's a question about whether
4 Dr. Weisenburger can see.

5 **MR. ISMAIL:** Sure. And I'm going to tell him
6 what's here.

7 **Q.** And so, Doctor, if you do want to see it --

8 **MR. MILLER:** Your Honor, may I stand in the
9 corner?

10 **THE COURT:** Sure.

11 **BY MR. ISMAIL:**

12 **Q.** If at any time you want me to get closer,
13 Doctor, just holler and I'll do so.

14 And just a couple questions for you about this
15 table.

16 So this was presented earlier in the trial,
17 and I just want to confirm a couple things here.

18 So this is the Hardell 1999 study. You're
19 familiar with that; right?

20 **A.** Yes.

21 **Q.** And this is the Hardell 2002 study; right?

22 **A.** Yes.

23 **Q.** So all this data is included in here; right?

24 **A.** Yes.

25 **Q.** And so this is essentially showing the same

1 data twice?

2 A. Well, there's other data added into the second
3 Hardell.

4 Q. Right.

5 A. But it shows all the data from the first
6 paper, yes.

7 Q. Yeah, so everything in here is in here; right?

8 A. Yes.

9 Q. And then we have De Roos, McDuffie, and NAPP
10 here; right?

11 A. Okay.

12 Q. So McDuffie and De Roos are all in here;
13 right?

14 A. Yes.

15 Q. And I think you've testified previously, if
16 you're showing NAPP, you would be double counting if you
17 also show De Roos and McDuffie; right?

18 A. Yes. That's why I didn't do it in my general
19 causation report.

20 Q. That's why you didn't do it because you knew
21 that if you showed this and this and NAPP, you're really
22 showing -- if you're showing this, you're double
23 counting these two up here; right?

24 A. You're showing the same data. But the NAPP
25 data, I think, is probably the best data because it's

1 larger and is able to look at subtypes as well. So...

2 Q. Okay. Thank you.

3 Now, one last -- couple of questions for you,
4 Doctor. I appreciate your patience.

5 MR. ISMAIL: Any objection?

6 MR. MILLER: No objection, Your Honor.

7 (Demonstrative published.)

8 BY MR. ISMAIL:

9 Q. Okay. So I have up on the screen,
10 Dr. Weisenburger, you talked with the jury yesterday
11 about particular subtypes of NHL and you focused on
12 DLBCL; right?

13 A. Yes.

14 MR. ISMAIL: Okay. May I approach,
15 Your Honor?

16 THE COURT: Yes.

17 BY MR. ISMAIL:

18 Q. Now, Doctor, I didn't expect you to have all
19 these numbers memorized so I provided you, and I can
20 provide the Court as well, it's a compilation of each of
21 those studies and I tabbed at the tables that show the
22 DLBCL numbers.

23 But certainly what I'm showing here comports
24 with your recollection of what these data show; right?

25 And please feel free to confirm with the

1 actual papers that I gave you tabbed to the tables of
2 interest if you would like.

3 (Witness reviewing documents.)

4 **THE WITNESS:** Okay. I think it is correct,
5 yes.

6 **BY MR. ISMAIL:**

7 **Q.** Okay. And just to remind folks what's here.
8 Eriksson is a study that you talked about yesterday;
9 right?

10 **A.** Yes.

11 **Q.** And it reported DLBCL subtype relative risks;
12 correct?

13 **A.** Yes.

14 **Q.** And this actually is not even adjusted for
15 other pesticide use in this analysis; correct?

16 **A.** Yes.

17 **Q.** And you can confirm there's no significant
18 risk reported here; correct?

19 **A.** Correct.

20 **Q.** Orsi is another study that looked at the
21 particular subtype at issue and reported no increased
22 risk; correct?

23 **A.** Correct.

24 **Q.** The NAPP study we just went over with the jury
25 looking at the updated data, there was no increased risk

1 for DLBCL; correct?

2 A. It was for ever/never.

3 Q. Ever/never; correct?

4 A. Yes.

5 Q. And Chang was one of the papers you mentioned
6 yesterday. That's a meta-analysis; correct?

7 A. Yes.

8 Q. And it too looked at this question of DLBCL;
9 correct?

10 A. Yes. I don't remember that part, but I think
11 you're right.

12 Q. And reported no significant risk; correct?

13 A. Yes.

14 Q. And then Andreotti, that's the Agricultural
15 Health Study; correct?

16 A. Yes.

17 Q. And the way it's reported here is they
18 actually broke it down by their exposure metric;
19 correct?

20 A. Yes.

21 Q. And they actually looked at this question of
22 intensity which includes how often you're spraying;
23 right?

24 A. Yes.

25 Q. And they broke it down from lowest to highest

1 and looked at the question of DLBCL in their study as
2 well; correct?

3 A. Yes.

4 Q. And no increased risk reported; true?

5 A. Yes.

6 Q. And Leon was the one DLBCL data point you gave
7 the jury yesterday; right?

8 A. Yes.

9 Q. And that is borderline statistically
10 significant with an overall risk of 1.36; true?

11 A. Yes.

12 MR. ISMAIL: Thank you very much, Doctor.

13 THE COURT: Okay. Redirect, Mr. Miller.

14 MR. MILLER: Thank you very much, Your Honor.

15 Good morning, folks. How are you all doing
16 today? All right. Great.

17 REDIRECT EXAMINATION

18 BY MR. MILLER:

19 Q. Doctor, I'm going to start right where
20 Monsanto's lawyer ended up.

21 MR. MILLER: Just one second, Your Honor.

22 THE COURT: That's fine. Just transition.

23 BY MR. MILLER:

24 Q. All right. Monsanto's attorney talked to you
25 about the importance of statistical significance; right,

1 just five minutes ago?

2 A. Yes.

3 Q. And he told you that that's why we use
4 statistical significance because that's the most
5 reliable data, that's what scientists do; right?

6 A. Well, we use statistical significance to make
7 sure that the increases are not due to chance.

8 Q. Sure. And the reason that the Leon study is
9 able to get statistical significance for diffuse large
10 B-cell is because it's so big; right?

11 A. Yes. The larger the size, the more power and
12 the more likelihood that you can detect true --
13 statistically significant true increases.

14 Q. All right. So let's look at this last chart
15 that counsel put up. Following his rules then, is
16 Eriksson and its look at diffuse large B-cells
17 statistically significant?

18 A. No.

19 Q. Is Orsi statistically significant?

20 A. No.

21 Q. Even NAPP didn't have enough data to be
22 statistically significant on this point, did it?

23 **MR. ISMAIL:** Objection. Leading, Your Honor.

24 **THE COURT:** Overruled, but --

25 **THE WITNESS:** The data --

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

(Simultaneous colloquy.)

THE COURT: Hold on one second.

Mr. Miller, I'm going to overrule the objection, but this is redirect.

BY MR. MILLER:

Q. Was the Chang study statistically significant on this point of the subtype of diffuse large B-cell?

A. No.

Q. There's only one study, and that came out the first day of trial, right, that's statistically significant on the increased risk of diffuse large B-cell from exposure to Roundup; right?

MR. ISMAIL: Objection, Your Honor, leading.

THE WITNESS: Which study?

MR. MILLER: Let me rephrase and make it easy.

Q. The Leon study, was that the largest of all these studies?

A. Yeah, it's a cohort study so it had lots of cases.

Q. Sure. And did it show a statistically significant increased risk of diffuse large B-cell with exposure to Roundup?

A. Well, it's borderline. As he said, it was borderline.

Q. And what is that percentage risk?

1 **A.** Well, it's about a 36 percent increased risk,
2 but the confidence interval includes 1 so it's
3 borderline.

4 **Q.** Right. Borderline statistically significant;
5 right?

6 **A.** Yes.

7 **Q.** Okay. Great.

8 Now, counsel criticized us for using the June
9 NAPP data and wanted instead to use the August NAPP
10 data, more current; right?

11 **A.** Right.

12 **Q.** Okay. Let's take a look at them and see what
13 we did so everybody can know. All right.

14 We asked the jury to consider the June data
15 where the -- let me get it all on here so we can read
16 it.

17 This is the June data. And it shows for
18 diffuse large B-cell at frequency -- remember the last
19 trial we looked at was ever/never?

20 **A.** Yes.

21 **Q.** Here at NAPP you looked at frequency use;
22 right?

23 **A.** Yeah, we looked at both, yeah.

24 **Q.** And under frequency of use, we used 2.49 for
25 people that had used it greater than two days; right?

1 **A.** Yes.

2 **Q.** Counsel said he wants us to use instead the
3 August data.

4 **A.** I want to point out before you go, that this
5 shows a statistically significant increase with the
6 confidence intervals and the trend analysis. Okay.

7 **Q.** Yes, I understand. It's -- and is that an
8 important finding, Dr. Weisenburger?

9 **A.** Yes.

10 **Q.** But we used 2.42 from the June data.
11 Monsanto's lawyer wants us to use the August data.

12 **MR. MILLER:** Sorry?

13 **THE COURT:** Mr. Miller, Mr. Ismail has a
14 running objection to leading questions. I'm trying to
15 let you do it, but you need to ask questions and have
16 the witness respond.

17 **MR. MILLER:** Thank you, Your Honor.

18 **Q.** Let's look at the August data. On the same
19 point, did the August data go up or down, sir, for
20 diffuse large B-cell more than two days' usage?

21 **A.** The data -- well, the odds ratio went up, but
22 this is the unadjusted data. That's the reason I didn't
23 show this data.

24 **Q.** Okay. And we have adjusted data; right?

25 **A.** Yes.

1 **Q.** And with adjusted data in the most recent data
2 sets, do we have an increased -- statistically
3 significant increased risk for proxy and
4 self-responders? Explain to us what that data means.

5 **A.** Well, this is data using ever/never, I
6 believe -- no, it isn't. It's data using these
7 different parameters. So we focus on frequency and the
8 number of days. And this is for NHL overall.

9 For greater than two days per year, if you use
10 the combined data, proxy plus the self-respondents, the
11 odds ratio is 1.73 and it is statistically significant.

12 If you use the self-respondents alone, it goes
13 up slightly and becomes nonsignificant. But the numbers
14 are basically the same numbers. So I wouldn't put a lot
15 of weight into the fact that it suddenly became
16 nonsignificant. Because the numbers are the same.

17 **Q.** Right. Right. So for proxy and
18 self-responders using more than two days per year, the
19 number is what, sir?

20 **A.** I'm sorry?

21 **Q.** What is the odds ratio?

22 **A.** 1.73.

23 **Q.** And is this statistically significant?

24 **A.** Yes.

25 **Q.** And that's the most recent data.

1 The most recent data would be -- well, let's
2 ask you.

3 Did you and the fellow scientists in NAPP,
4 have you prepared a manuscript for publication?

5 **A.** Yes, we have.

6 (Pause in the proceedings.)

7 **MR. MILLER:** 2085, permission to publish?

8 **THE COURT:** Is it in our books from yesterday?

9 **MR. WISNER:** I think so, Your Honor.

10 **THE COURT:** I'm not seeing it. That's okay.
11 I'll just wait until you publish it.

12 **MR. MILLER:** I'm going to move on to something
13 else, and at the break I'll show it to counsel so we
14 don't waste the jury's time.

15 **Q.** Let's go to some easy things that we're going
16 to talk about here. You know Dr. Levine. You talked
17 with Monsanto's attorney about Dr. Levine, their expert
18 in this case; right?

19 **A.** Yes.

20 **Q.** You two work together at the City of Hope?

21 **A.** Yes.

22 **Q.** And you have the same website, you and
23 Dr. Levine share that same website; right?

24 **A.** Well, it's the City of Hope website.

25 **Q.** And you're both City of Hope employees?

1 **A.** Yes.

2 **Q.** And does that website list pesticides as a
3 cause of non-Hodgkin's lymphoma?

4 **A.** Yes, it does.

5 **Q.** Okay. Now, Dr. Levine tells us that age did
6 not cause Mr. Pilliod's non-Hodgkin's lymphoma; do you
7 agree?

8 **A.** Yes.

9 **Q.** Age is not a cause of non-Hodgkin's lymphoma,
10 or is it, Doctor?

11 **A.** It's not a causative risk factor.

12 **Q.** In fact, I learned this morning that there are
13 over 40 million people over the age of 65 in America;
14 does that sound about right to you?

15 **A.** Sounds about right.

16 **Q.** And only, at best, 75,000 cases of
17 non-Hodgkin's lymphoma a year?

18 **A.** Yes.

19 **Q.** I assume some of them are over 65. We don't
20 know how many.

21 **A.** Yes.

22 **Q.** Counsel mentioned to you that older people are
23 seven times more likely to get non-Hodgkin's lymphoma.
24 Do you remember that line of questioning?

25 **A.** Yes.

1 **Q.** If older people are seven times more likely,
2 older people who are exposed to high doses of Roundup,
3 how do we factor that in?

4 **MR. ISMAIL:** Object. Speculation.

5 **THE COURT:** He can answer.

6 **THE WITNESS:** Well, we don't know how to
7 factor it in, but it probably would increase their risk
8 even more.

9 **BY MR. MILLER:**

10 **Q.** Counsel talked to you about possible other
11 causes for Mr. Pilliod's cancer and for Mrs. Pilliod.
12 Do you generally remember that line of questioning?

13 **A.** Yes.

14 **Q.** So what is the concept of multiple causality
15 in cancer, to be more specific?

16 **A.** Well, a cancer can have more than one cause
17 because different agents or different etiologies can act
18 at different stages in the pathway of the cell to
19 cancer. So you have things that may occur early in
20 the -- and initiate the disease. And then you have
21 events that occur later that cause the cell to become a
22 true cancer cell and then progress to a very malignant
23 cell.

24 **Q.** You've heard Dr. Levine describe it as sort of
25 a hit-and-run, something has to hit that cell to make it

1 start down the road to cancer. And then as we get
2 older, immune systems can weaken; is that --

3 **MR. ISMAIL:** Objection, Your Honor.

4 **THE COURT:** Leading.

5 **MR. MILLER:** I'll rephrase. I'll withdraw.

6 **Q.** Can toxins, a toxin in the environment, be
7 that hit that causes the cancer progress?

8 **A.** Yes.

9 **Q.** And can a chemical be that hit that causes
10 cancer to begin?

11 **A.** Yes.

12 **Q.** We've shown this to the jury previously but
13 Exhibit 1068.

14 **MR. MILLER:** Any objection?

15 **MR. ISMAIL:** Yeah, it's beyond the scope of
16 cross, this document at all.

17 **THE COURT:** Was that discussed in
18 cross-examination at all? This is redirect.

19 **MR. MILLER:** This document was not, but the
20 issue of glyphosate causing cancer was.

21 **THE COURT:** So just to the extent that that
22 was raised, you may redirect on what was discussed in
23 cross.

24 **MR. ISMAIL:** Sorry, Your Honor. I believe you
25 previously indicated the document shouldn't be

1 published.

2 **THE COURT:** Well, at this point we're not
3 going to publish it because it wasn't discussed on
4 cross. So we're only going to have redirect to the
5 extent that issues were covered specifically, and
6 documents, on cross-examination.

7 **MR. MILLER:** All right. Understand,
8 Your Honor. Thank you.

9 **Q.** So the State of California has determined --
10 or are you aware that they've determined that Roundup is
11 a known cause of non-Hodgkin's lymphoma?

12 **A.** Yes, they have.

13 **Q.** And what is your understanding about what IARC
14 found on the issue of whether or not Roundup causes
15 non-Hodgkin's lymphoma?

16 **A.** Well, they thought -- they classified it as a
17 class 2A in terms of its carcinogenicity which means it
18 is probably a carcinogen.

19 And I agree with what the IARC found. I think
20 that it does cause cancer in animals. We know that.
21 And we do know that it's genotoxic and that it causes
22 oxidative stress and we can see that it causes lymphomas
23 in humans.

24 So putting all that data together, I did an
25 analysis much like the IARC did and came to the same

1 conclusion.

2 Q. And before IARC unanimously, 17 scientists
3 from around the world, came to that conclusion, you're
4 aware that Monsanto had representatives at that meeting?

5 A. Yes.

6 Q. Raised every argument we've heard over the
7 last few days at that meeting?

8 MR. ISMAIL: Objection, Your Honor.

9 THE WITNESS: Well, I don't know what occurred
10 at that meeting.

11 THE COURT: Hold on. Let me hear the
12 objection and resolve it first.

13 THE WITNESS: I'm sorry, yes.

14 MR. ISMAIL: Both leading and lack of
15 foundation. Dr. Weisenburger was not there.

16 MR. MILLER: I can rephrase.

17 THE COURT: Why don't you rephrase the
18 question.

19 BY MR. MILLER:

20 Q. Have you had the opportunity to read the
21 91-page report on the issue of Roundup and non-Hodgkin's
22 lymphoma prepared by the scientists from IARC?

23 A. Yes.

24 Q. And the arguments that you heard today and
25 heard yesterday from Monsanto's lawyer, were they raised

1 and rejected in that 91-page report?

2 **MR. ISMAIL:** Objection, Your Honor.

3 **THE COURT:** So we're going to stick with the
4 scope of cross-examination. And so on redirect, just
5 stay within the scope of what was raised on cross.

6 **MR. MILLER:** All right.

7 **Q.** Now, you're aware, and I think we all are,
8 that Dr. Blair was the chairman of the IARC?

9 **A.** Yes.

10 **Q.** And you have coauthored, or have you not, sir,
11 articles with Dr. Blair?

12 **A.** Yes, I have.

13 **Q.** And I want to look at one of them. You
14 coauthored with Dr. Blair and others Exhibit 3062.

15 Do we have a copy for counsel?

16 **THE WITNESS:** Do I have it?

17 **MR. MILLER:** I'm going to approach.

18 Your Honor, may I?

19 **THE COURT:** Yes.

20 **BY MR. MILLER:**

21 **Q.** All right. So I want to put this in context.
22 We'll talk about some of the issues that were raised by
23 counsel yesterday.

24 **MR. ISMAIL:** No objection, Your Honor.

25 **MR. MILLER:** I'm sorry. Permission to

1 publish? I apologize.

2 **THE COURT:** Was this published yesterday?

3 **MR. ISMAIL:** No.

4 **THE COURT:** Was this covered yesterday?

5 **MR. ISMAIL:** Not this paper.

6 **THE COURT:** The topic?

7 **MR. MILLER:** Yes. Yes.

8 **THE COURT:** Okay.

9 (Document published.)

10 **BY MR. MILLER:**

11 **Q.** All right. So here we have a paper written in
12 2014 by you, Dr. Weisenburger, as one of the authors;
13 right, sir?

14 **A.** Yes.

15 **Q.** Okay. And Dr. Levine, Monsanto's expert, one
16 of the authors; right?

17 **A.** Yes.

18 **Q.** Okay. And Dr. Blair, one of the authors;
19 right?

20 **A.** Yes.

21 **Q.** Dr. De Roos, Anneclaire De Roos, one of the
22 authors; right?

23 **A.** Yes.

24 **Q.** And Dr. Chang, who we've heard, you've told
25 us -- where is Dr. Chang? Here it is, all right -- who

1 Monsanto hired and did shortly after this a
2 meta-analysis on Roundup and non-Hodgkin's lymphoma;
3 right?

4 A. I don't know if that's the same here. Ellen
5 Chang. Is it? It may be. I don't know.

6 Q. Well, I want to look at some of the issues
7 that -- in the first instance. This is the InterLymph
8 non-Hodgkin's lymphoma project that you started; right?

9 A. Yes.

10 Q. One thing I wanted to ask you about. It looks
11 like you studied, all of you together, all of the
12 non-Hodgkin's lymphomas as one entity; is that fair, on
13 this project?

14 A. So what we took is all the case-control
15 studies and we pooled them together into one large
16 analysis, which this comes from.

17 Q. Okay. And like we heard from counsel that
18 cigarette smoking increased the risk of non-Hodgkin's
19 lymphoma; do you remember that line of questions?

20 A. Yes.

21 Q. And look at page 133 of this report by you and
22 Dr. Levine. It says cigarette smoking, duration of
23 smoking, overall risk of non-Hodgkin's lymphoma 1.06.
24 Do you see that?

25 A. Yes.

1 **Q.** All right. So maybe a 6/100 of an increased
2 risk is what you, Dr. Levine, Dr. Blair, and others
3 found in this study; right?

4 **A.** Correct. Generally smoking is not considered
5 a risk factor for non-Hodgkin's lymphoma.

6 **Q.** Sure.

7 **A.** I mean, this shows that.

8 **Q.** And I think -- let's drive it into this case.
9 We said Alberta started smoking at 17 for about
10 20 years. She quit smoking at 37. All right. So that
11 would have been 34 -- 34, 35 years between the time she
12 quit smoking and got non-Hodgkin's lymphoma?

13 **A.** Yes.

14 **Q.** Now, if I came to you and told you that
15 Alberta had used Roundup 35, 36 years earlier but hadn't
16 used it at all in 35 years, would that fit for Roundup
17 causing non-Hodgkin's lymphoma?

18 **A.** Not really, no.

19 **Q.** Sure. So are you comfortable in your opinion
20 that smoking had absolutely no cause in this, or has
21 this in any way affected your opinion on that issue?

22 **A.** It hasn't affected my opinion. I don't
23 believe smoking is a risk factor for, in general,
24 non-Hodgkin's lymphoma or for diffuse large B-cell
25 lymphoma.

1 **Q.** Counsel seemed to suggest yesterday that
2 somehow Al and Alberta were more susceptible of injury
3 because they're old and their immune systems; do you
4 remember that general line of questioning?

5 **A.** Yes.

6 **MR. ISMAIL:** Objection. Your Honor.
7 Characterization of the questions is inaccurate. If he
8 could just ask his questions without attempting to
9 characterize it.

10 **THE COURT:** Sustained.

11 You know what, it's time to take a break.
12 It's 10:15 almost. We're going to start up again at
13 10:30.

14 **THE WITNESS:** Thank you.

15 (Jury excused for recess.)

16 (Proceedings continued in open court out of
17 the presence of the jury:)

18 **THE COURT:** You can step down,
19 Dr. Weisenburger.

20 **THE WITNESS:** Thank you.

21 **THE COURT:** So talking about the scope of
22 redirect, we need to stay in terms of both topic and
23 what was covered within cross-examination. So do be
24 careful.

25 **MR. MILLER:** Your Honor, I will.

1 **THE COURT:** I'll let you do your redirect, but
2 at the same time, the wider your redirect, the wider the
3 recross, and we could be here all day with this. So I
4 think you need to be cognizant of what you want to
5 cover, what was covered, and stay within the lines
6 because otherwise we -- I mean, I have to give
7 Mr. Ismail an opportunity, and then deal with things
8 that weren't dealt with on his cross but may not have
9 been dealt with on direct. So we can be here all day
10 but I don't think we want to.

11 **MR. MILLER:** Your Honor, I don't think I had
12 at this point, I haven't gone outside of the issue.

13 I mean, first off, counsel says Roundup
14 doesn't cause cancer and so I have to go into that
15 issue. And then --

16 **THE COURT:** Well, this whole case is about
17 whether Roundup causes cancer. We're talking about the
18 specific topics and focus of each witness.

19 I'm just suggesting to you as you begin to
20 broaden it, and it is a little bit broader than what was
21 covered on cross and now we're looking at more studies
22 which weren't covered, and granted, Mr. Ismail
23 introduced on cross a number of studies that weren't
24 discussed. Understand that I'm just simply saying that
25 on redirect then we need to stay within the topics that

1 were discussed, and I'm fine with that.

2 **MR. MILLER:** Absolutely, Your Honor.

3 **THE COURT:** Just keep that in mind with
4 respect to our time and 352.

5 **MR. MILLER:** Yes, Your Honor.

6 **THE COURT:** I think we want to just make sure
7 that we're covering exactly what was covered. And then
8 you can cover what you really need to cover with
9 Dr. Weisenburger, but, you know, that can get out of
10 control pretty quickly. I'm trying to allow you to do
11 that but also manage your time and the jury's. So just
12 keep that in mind.

13 **MR. MILLER:** Thank you, Your Honor.

14 **MR. WISNER:** Your Honor, just one
15 consideration. Mr. Ismail raised a whole bunch of
16 issues that were never covered on direct, like for
17 example smoking. That really wasn't covered on direct
18 because he doesn't think it's a risk factor.

19 **THE COURT:** Right, but he can certainly --
20 well, it was fair for him to ask whether or not he felt
21 it was and why he should or shouldn't. I'm not saying
22 he can't talk about smoking. I'm not suggesting that.
23 I'm just simply saying to you that as we go forward,
24 just keep in mind the parameters of cross and the things
25 that were focused on, on redirect. Otherwise this could

1 get out of control.

2 **MR. EVANS:** Your Honor, we have a separate
3 stipulation that is on the record outside the presence.
4 It should just take 10 seconds.

5 **THE COURT:** Sure. That's fine.

6 **MR. EVANS:** All right. The parties stipulate
7 that neither party will reference, argue, or offer
8 testimony about reference doses derived from or used by
9 domestic or foreign regulatory agencies.

10 And neither party will reference, argue, or
11 offer testimony that Mr. Pilliod's or Mrs. Pilliod's
12 dose or exposure is below or above any threshold
13 reference dose as determined by any domestic or foreign
14 regulatory agencies.

15 This stipulation includes but is not limited
16 to the California NSRL.

17 Thank you.

18 **THE COURT:** Okay. All right. Take a break.

19 **MR. WISNER:** And, Your Honor, I apologize, the
20 comment at sidebar, there's a hearing issue which might
21 be why it's louder than it should be. I apologize.

22 **THE COURT:** I just want you to be cognizant
23 that you're facing the jury when you do that.

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

25 (Proceedings resumed in open court in the

1 presence of the jury at 10:35 a.m.)

2 **THE COURT:** Mr. Miller, you may resume.

3 **MR. MILLER:** Thank you, Your Honor.

4 **Q.** Before our break, we were talking about an
5 article that you had written within the umbrella of your
6 InterLymph organization. Do you remember that line of
7 questioning?

8 **A.** Yes.

9 **Q.** And you were coauthors with Dr. Levine,
10 Monsanto's expert in this case, and Dr. Blair and
11 others?

12 **A.** Yes.

13 **Q.** And if we look at smoking and prior smoking,
14 was there an increased risk of that in the study that
15 you did in 2014 with these other scientists?

16 **A.** No.

17 **Q.** Let's look at some other issues.

18 **MR. MILLER:** And turn the ELMO back on,
19 please.

20 All right. Thank you.

21 **Q.** So family history of other cancers. Do you
22 see that at the top of the chart there?

23 **A.** Yes.

24 **Q.** In 2014, you and Dr. Levine looked at family
25 history only of hematologic malignancy not solid tumors.

1 Why is that?

2 A. Well, it's because this is the parameter that
3 most epidemiologists look at when they're studying
4 hematologic malignancies. There isn't any agreement or
5 consensus that exposure -- that developing any cancer or
6 having a family history of any cancer predisposes you to
7 another type of cancer. So we don't usually use that
8 measure.

9 Q. Sure. What is important is whether there's
10 been a family history of hematologic malignancies; is
11 that why you looked at that?

12 A. Yes.

13 Q. And let's bring it back to Al and Alberta.
14 Did Al have any family history of blood or hematologic
15 malignancies in his family?

16 A. No.

17 Q. Did Alberta have any family history of
18 hematologic malignancies in her family?

19 A. No.

20 Q. So were you able to confidently rule out
21 family history of cancer as a cause or even a small
22 cause of either of the Pilliods' cancer?

23 A. Yes, I was able to rule it out as a risk
24 factor, yes.

25 Q. Okay. Thank you.

1 All right. Let's talk about autoimmune
2 disease. Counsel talked to you about that general issue
3 yesterday. Do you remember?

4 A. Yes.

5 Q. Autoimmune disease, which you and Dr. Levine
6 and Dr. Blair looked at here, are which, sir?

7 A. Well, what we did is we categorized the
8 autoimmune disease based on whether it was primarily a
9 disease mediated by B-cells or whether it was primarily
10 a disease mediated by T-cells.

11 Q. Go ahead. I'm sorry.

12 A. No, that's all I was going to say.

13 Q. Okay. And so the B-cell-activating diseases
14 that were important to you as scientists to see if in
15 fact they raised the risk was Sjogren's syndrome? Did I
16 pronounce that right?

17 A. Uh-huh, Sjogren's syndrome.

18 Q. And systemic lupus erythematosus.

19 A. Erythematosus.

20 Q. Can we just say "lupus"?

21 A. Lupus, you can just say "lupus." Yes.

22 So what this table shows is that any
23 B-cell-activating disease increases the risk for
24 non-Hodgkin's lymphoma by twofold. And I think what
25 they're trying to show here is that the two that were

1 very high and statistically significant, there are other
2 ones that also increased the risk.

3 Q. What are they?

4 A. Oh, things like rheumatoid arthritis. I'd
5 have to go to the list, but there's an --

6 Q. There's a well recognized list?

7 A. Yeah, so they didn't show everything. In
8 fact --

9 Q. Sure.

10 A. -- the data is shown in some of the individual
11 papers that were accompanying this paper.

12 Q. Sure. Let's cut to the chase.

13 Did either Al or Alberta have any autoimmune
14 disease that you scientists regularly look at as causing
15 B-cell lymphoma?

16 A. Well, I don't believe Al did. Alberta did
17 have Hashimoto's thyroiditis which is a risk factor for
18 B-cell non-Hodgkin's lymphoma involving the thyroid
19 gland but not other organs.

20 Q. Okay. And let's -- while we're there, let's
21 talk about that. The thyroid gland, so we all know, is
22 here in the throat area?

23 A. Yes.

24 Q. I don't want to draw on myself. My wife will
25 get mad.

1 Okay, so the thyroid is here. And Hashimoto's
2 disease, which were reported that Mrs. Pilliod has,
3 causes non-Hodgkin's lymphoma where again?

4 **A.** I'm sorry? In the thyroid gland.

5 **Q.** In the thyroid.

6 Did Alberta get non-Hodgkin's lymphoma in the
7 thyroid?

8 **A.** No.

9 **Q.** Where was her non-Hodgkin's lymphoma?

10 **A.** So she had lymphoma in her brain.

11 **Q.** Does Hashimoto's disease increase
12 non-Hodgkin's lymphoma in the brain?

13 **A.** I don't believe so.

14 **Q.** How many years have you been doing this?

15 **A.** Forty.

16 **Q.** And you talked to us about weight and its risk
17 factor. I think you told us about 30 percent increased
18 risk?

19 **A.** Yeah, something like that. Around 30 percent.

20 **Q.** And you're the expert. But in your chart you
21 had it at weight as a factor. Do you see that, sir,
22 down here?

23 **MR. ISMAIL:** What are you showing, counsel?

24 **MR. MILLER:** I'm sorry. Same study.

25 **MR. ISMAIL:** Thank you.

1 **MR. MILLER:** And it's a supplemental table.

2 **THE COURT:** Which study is that, Mr. Miller?
3 Which study is that?

4 **MR. MILLER:** It's the same study we've been
5 looking at, Your Honor.

6 **THE COURT:** Okay. This is further along on
7 this study.

8 **BY MR. MILLER:**

9 **Q.** The point I'm trying to make is this is
10 consistent with what you scientists said, it's about
11 26 percent, you told us 30, about the same number;
12 right?

13 **A.** That's for diffuse large B-cell lymphoma?

14 **Q.** Yes.

15 **A.** Yeah, that's about the same number. Exactly.

16 **Q.** And then you went on. This is in 2014 before
17 IARC. You looked at farm crop vegetable farmers. Do I
18 have that right? Do you see that?

19 **A.** Yes.

20 **Q.** And you show for diffuse large B-cell 1.48.
21 What does that mean for farm workers? Explain to us
22 what the significance of that is.

23 **A.** Well, they have an increased risk of about
24 50 percent. That's statistically significant.

25 **Q.** All right. Move one back to supplemental

1 Table 3. We've got recreational sun exposure; do you
2 see that?

3 A. Yes.

4 Q. You and Dr. Levine agreed that for diffuse
5 large B-cell it was .07. Am I reading that right?

6 A. I'd like to see where you're at in the paper.

7 Q. Yes, of course. It should be two pages from
8 the end.

9 A. Okay.

10 Q. All right. Thanks, Doctor.

11 If you could just explain, I'll put it back on
12 the ELMO. You tell us what is the significance of that
13 in this issue about the skin cancer, is all I'm trying
14 to get at.

15 A. Yeah. So there have been many studies that
16 have looked at the effect of ultraviolet light on risk
17 for non-Hodgkin's lymphoma. And by and large, they've
18 all showed people who have a lot of sun exposure have a
19 decreased risk for non-Hodgkin's lymphoma rather than
20 increased risk.

21 Q. Is there any biological plausibility -- we've
22 talked about with Roundup and non-Hodgkin's lymphoma
23 before. Here's my question: What's the biological
24 plausibility of how we get skin cancer -- how do we
25 normally get it, skin cancer?

1 **A.** Yeah. So the main cause of skin cancer,
2 whether it's basal cell carcinoma or squamous cell
3 carcinoma or melanoma, all the skin cancers that
4 Mr. Pilliod got are due to sun exposure.

5 And as I said yesterday, he -- because of his
6 light complexion, his red hair, he's very vulnerable --
7 he has less -- basically has less pigment in his skin
8 and he's more vulnerable to damage from the sun than the
9 average person.

10 **Q.** Is there any biological plausibility for how
11 one goes from a removed skin cancer to causing
12 non-Hodgkin's lymphoma?

13 **A.** No.

14 **Q.** Why not?

15 **A.** Well, I mean, there's no -- we don't
16 understand why some of the studies show that people who
17 have history of skin cancer have an increased risk for
18 non-Hodgkin's lymphoma.

19 When I looked at those studies carefully, many
20 of the studies show that the risk for non-Hodgkin's
21 lymphoma occurs in the first year or within the first
22 four or five years, and then it decreases to being un--
23 nonsignificant.

24 And I think what's happening in these studies
25 is you have what's called the surveillance bias where,

1 because somebody has a skin cancer, they're going back
2 to the doctor more often just to watch for other skin
3 cancer, first to get worked up for that skin cancer, get
4 it excised, and then they go back to be examined to see
5 whether they have other skin cancers or they develop new
6 skin cancers. And in the process of that increased
7 surveillance, being seen by the physician more
8 frequently than the average person, they actually -- the
9 physician actually detects other cancers like
10 non-Hodgkin's lymphoma that may be present but not
11 causing symptoms.

12 So, you know, if having multiple skin cancers
13 actually was an important risk factor for non-Hodgkin's
14 lymphoma, you should not just see it in the first few
15 years, but you should see it out many more years.

16 And so I think there's a surveillance bias
17 that really influences those studies making this
18 association.

19 Q. If I was a medical student or a resident and
20 you were teaching me -- do you teach residents?

21 A. Yes.

22 Q. And I asked you, "Dr. Weisenburger, does skin
23 cancer cause non-Hodgkin's lymphoma?" what would you
24 tell them?

25 A. I would say no.

1 Q. And so Alberta never had skin cancer; right?

2 A. She never had skin cancer, that's correct.

3 Q. She did not have skin cancer. And Al had skin
4 cancer; right?

5 A. Yes.

6 Q. Yet they both got non-Hodgkin's lymphoma?

7 A. Yes.

8 Q. Now, I was asked at the break to clear up
9 something about the NAPP, and we won't be that long on
10 it and then we'll move on.

11 The early data from the June 2015
12 presentation --

13 A. Okay.

14 Q. I'll put it on the ELMO, but you've got copies
15 there. I just want to make sure I was clear. Page 14.

16 And it showed the 2.49 for diffuse large
17 B-cell, greater than two days use; right? And then a
18 later data showed an increase of 2.3.

19 But here's my question: The later -- or did
20 the later data adjust for malathion?

21 A. In this analysis, they didn't do that
22 adjustment, no. So this is unadjusted.

23 Q. But in the earlier data where they showed the
24 2.49, was that adjusted for --

25 A. Yes. And that's why I used that information.

1 **Q.** So adjusted for use of 2,4-D, for the use of
2 dicamba, and for the use of malathion; is that right?

3 **A.** Yes.

4 **Q.** And showed a statistically significant
5 increased risk of what?

6 **A.** Of diffuse large B-cell lymphoma.

7 **Q.** And is that significant in your opinion in
8 this case?

9 **A.** Yes, because it's the disease that both of --
10 both Al and Alberta had.

11 **MR. MILLER:** Here, Your Honor, Exhibit 3071,
12 permission to approach, Your Honor, and permission to
13 publish?

14 **THE COURT:** I'm sorry. Is that in the --
15 okay.

16 **BY MR. MILLER:**

17 **Q.** Doctor, what is this?

18 **A.** It looks like it's an abstract from a draft of
19 the paper.

20 **Q.** Of the NAPP paper?

21 **A.** Of the NAPP paper, an early draft, yes.

22 **MR. MILLER:** Permission to publish,
23 Your Honor.

24 **MR. ISMAIL:** Objection, Your Honor. May we
25 approach?

1 (Sidebar held but not reported.)

2 **BY MR. MILLER:**

3 Q. Doctor, you're holding a piece of paper in
4 your hand marked Exhibit 3071. Are you one of the
5 authors of this?

6 A. Yes, I am.

7 **MR. MILLER:** Permission to publish,
8 Your Honor?

9 **THE COURT:** Well, I think we might want to go
10 a little further than that.

11 **BY MR. MILLER:**

12 Q. And how did this come to be authored? What is
13 this?

14 A. Well, I'm not sure what it is. It's either an
15 early abstract of -- from one of the draft manuscripts,
16 or it may be an abstract that was submitted at one of
17 the meetings. I'm not sure what it is.

18 Q. It says "IARC Conference 2016" on the top
19 left?

20 A. Ah, yes. Okay.

21 Q. And it lists the one, two, three, four, five,
22 six, seven, eight, nine, ten, eleven authors of the NAPP
23 study?

24 A. Yes.

25 Q. And you're one of them?

1 **A.** Yes.

2 **Q.** And you helped write this over the years?

3 **A.** I'm sorry?

4 **Q.** Have you -- did you help draft this, write
5 this?

6 **A.** I was involved, yes.

7 **MR. MILLER:** Your Honor, permission to
8 publish?

9 **THE COURT:** Denied. We didn't establish that
10 in fact that's what it was. And that's it.

11 **MR. MILLER:** I'll just ask him about it, I
12 won't publish. I understand.

13 **Q.** So this was in 2016. That's -- that's as late
14 as your data got before you submitted your manuscript
15 publication?

16 **A.** Well, there -- I think this is the abstract
17 for the meeting in France at IARC. And since that time,
18 there have been some additional analyses. So the
19 numbers have changed in the final manuscript from this,
20 I believe.

21 **Q.** All right. And in the -- let's look at this,
22 and then ask you about this and ask you about the final
23 manuscript.

24 So the results by June of 2016 showed that
25 subjects who ever used glyphosate had a significantly

1 higher non-Hodgkin's lymphoma risk. Is that the finding
2 of these 11 scientists, including you?

3 A. For what? For non-Hodgkin's lymphoma as a
4 group overall?

5 Q. Yes.

6 A. Yes.

7 Q. And it says here handling glyphosate for
8 greater than two days a year was associated with a
9 significantly higher odds rate for non-Hodgkin's
10 lymphoma and for diffuse large B-cell.

11 A. Yes.

12 Q. Is that the finding of you and the
13 11 scientists that worked on this paper?

14 A. Yes. But I believe this is unadjusted data.
15 So that's what it shows, but it's unadjusted.

16 Q. Right. So your conclusion was this analysis
17 suggested that glyphosate use was associated with an
18 increased risk of non-Hodgkin's lymphoma. Has that
19 conclusion changed by the 11 scientists who did the
20 NAPP -- let's cut to the chase -- is that still your
21 conclusion?

22 A. Yes.

23 Q. When your paper comes out, is that going to be
24 your conclusion?

25 MR. ISMAIL: Objection, Your Honor.

1 **THE WITNESS:** Yes.

2 **MR. ISMAIL:** We've never been provided a final
3 paper.

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

5 **THE WITNESS:** The findings have not changed
6 dramatically.

7 **BY MR. MILLER:**

8 **Q.** Are the findings still going to be that it's a
9 significant risk for non-Hodgkin's lymphoma?

10 **A.** Yes, for diffuse large B-cell lymphoma, yes.

11 **Q.** Okay.

12 All right. You were asked about something
13 called t(14). Do you remember that line of questions?

14 **A.** Yes.

15 **Q.** Okay. So just to sort of get our basic
16 science fact down, t(14) represents what?

17 **A.** So the t(14;18) is a translocation between the
18 number 14 and the number 18 translocation. So some
19 genetic material moves from 14 to 18. And so there's a
20 gene there called BCL2 which then becomes upregulated,
21 and it's a translocation that's very common in certain
22 subtypes of non-Hodgkin's lymphoma, particularly
23 follicular lymphoma and the subset of diffuse large
24 B-cell lymphoma.

25 **Q.** t(14) is mostly described in follicular

1 lymphoma, you said?

2 A. Yes.

3 Q. Now, Al did not have follicular lymphoma?

4 A. No.

5 Q. Did Alberta have follicular lymphoma?

6 A. No.

7 Q. Follicular lymphoma, where is that? Where
8 does it start?

9 A. Follicular lymphoma, do you mean what organs
10 does it start in?

11 Q. Yeah.

12 A. Well, it's generally thought to start in the
13 bone marrow where the translocation occurs as a mistake
14 of gene rearrangement, okay.

15 Q. There are other forms of DNA damage that can
16 be caused by a toxin other than t(14); right?

17 A. Yes.

18 Q. What is a double strand break?

19 A. So double strand breaks are when two -- where
20 the strands break in the same place in both chromosomes.

21 Q. And what is -- I'm sorry. Go ahead.

22 A. And so it's the kind of genetic abnormality
23 that leads to these translocations.

24 Q. And you've told us what a double strand break.
25 What is a sister chromatid exchange?

1 **A.** Well, it's something slightly different where
2 the chromosomes exchange small amounts of genetic
3 material.

4 **Q.** Is that also a form of DNA damage?

5 **A.** Yes.

6 **Q.** There are 23 chromosomes --

7 **A.** Yes.

8 **Q.** -- in the DNA?

9 And the t(14) is measured by the FISH test?

10 **A.** That's one way to do it, yes.

11 **Q.** And the FISH test only looks at three
12 potential chromosomal abnormalities?

13 **A.** Well, you can do FISH tests for many
14 abnormalities.

15 **Q.** But in Alberta's case, they only looked at
16 three?

17 **A.** Yeah, they looked at three that were very
18 relevant to her cancer, diffuse large B-cell lymphoma.

19 **Q.** Right. And she was t(14) negative. Counsel
20 made a big deal of that. Do you remember that line of
21 questions?

22 **A.** Yes.

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

24 **THE COURT:** Sustained.

25 **MR. MILLER:** I'll rephrase. I'm sorry.

1 **Q.** Well, let's find out. You wanted to talk
2 about correlation and not association, but you were cut
3 off. I want you to explain that article. What did you
4 mean by that?

5 **A.** The article that we wrote on the t(14;18)
6 translocation?

7 **Q.** Yes.

8 **A.** Yeah. So we were trying to understand a
9 better way to analyze risk factors for non-Hodgkin's
10 lymphoma. And we thought maybe instead of dividing them
11 by histologic subtype, we would use the (14;18) to
12 divide them into two groups based on whether the
13 lymphomas had that translocation or not. So that's what
14 we did. And we looked at risk.

15 And what we found, which was kind of
16 surprising, was that the increased risk was mainly for
17 the pesticides, was mainly for the -- I'm forgetting
18 now -- I think it was mainly for the non-(14;18) cases.

19 And so -- no, it was with the (14;18) cases.
20 So it seemed like the use of pesticides induced the
21 lymphoma more likely that had a (14;18) translocation.

22 **Q.** And -- I'm sorry. I interrupted you. Go
23 ahead.

24 **A.** So that's what we found. And it was sort of a
25 novel finding, a preliminary finding. And we found it

1 for insecticides and herbicides and also fumigants. So
2 it seemed sort of consistent that maybe pesticides
3 somehow worked through this pathway involving the
4 (14;18) translocation.

5 There was another paper that came out about
6 the same time from the National Cancer Institute where
7 they also looked at the (14;18) translocation. And they
8 found it only correlating with organic chlorine
9 insecticides. They didn't find it correlating with
10 other herbicides in general.

11 So all we did with this paper is we suggested
12 that this may be a different way to look at risk factors
13 for non-Hodgkin's lymphoma. So it's kind of a
14 preliminary research. It's hypothesis-generating
15 research. And, you know, unfortunately, no one has,
16 since those two papers were published, has gone on and
17 tried to confirm it.

18 So, you know, it's based on small numbers.
19 So, you know, I would say that -- you know, I would -- I
20 would not make big decisions based on this data because
21 it's what I would consider preliminary data based on
22 small numbers.

23 And we sort of say that in our discussion. If
24 you go to the discussion, we say under the discussion:

25 However, our findings should be

1 interpreted cautiously because the sample
2 size is small and the estimates are
3 imprecise.

4 So it was a novel finding that hasn't been
5 confirmed.

6 **Q.** And this is in 2006; right?

7 **A.** Yes.

8 **Q.** And it was not involving Roundup specifically
9 but looking broadly at environmental toxins and
10 herbicides, fungicides and pesticides?

11 **A.** Yes. So we looked at just the very broad
12 categories of pesticides. And so herbicides, of course,
13 there are many herbicides. So it's sort of a crude way
14 to look at risk.

15 **MR. MILLER:** And I want to point out, if I
16 can, this has been previously published, Your Honor.

17 **Q.** You wrote the paper in 2006 with Aaron Blair;
18 right?

19 **A.** Yes.

20 **Q.** And it was Aaron Blair that went on to lead
21 IARC; right?

22 **A.** Yes.

23 **MR. ISMAIL:** Objection. Repetitious,
24 Your Honor.

25 **THE COURT:** Sustained.

1 **BY MR. MILLER:**

2 Q. Well, specifically IARC did not exclude TH14
3 positive or negative from their conclusion that Roundup
4 causes non-Hodgkin's lymphoma, did they?

5 A. I don't know. I wasn't there. I'm sorry.

6 Q. Well, you've seen the conclusions that Roundup
7 is a probable human carcinogen; right?

8 A. Yeah.

9 Q. Did they say Roundup is a probable human
10 carcinogen only for t(14) positive?

11 A. No, they didn't because it's preliminary data.

12 Q. Has anyone relied on this preliminary data to
13 reach conclusions about whether Roundup causes
14 non-Hodgkin's lymphoma?

15 **MR. ISMAIL:** Objection. Lack of foundation.
16 Speculation.

17 **THE COURT:** Sustained. Unless he knows
18 specifically whether that's true or not.

19 **BY MR. MILLER:**

20 Q. In your --

21 A. I don't believe -- I don't think anyone has,
22 no.

23 Q. Counsel criticized and showed a paper about
24 malathion. Do you remember that general line of
25 questioning?

1 **A.** Yes.

2 **Q.** But in the NAPP study, you adjusted for
3 malathion; right?

4 **A.** We did, yes.

5 **Q.** We've talked about Hashimoto's. And I wanted
6 to show you a paper that --

7 **MR. MILLER:** Do we have copies of this?
8 With the Court's permission, may I approach?

9 **THE COURT:** Yes.

10 **MR. MILLER:** Thank you, Your Honor.
11 So permission to publish, Your Honor?

12 **MR. ISMAIL:** No objection.

13 **THE COURT:** Granted.

14 (Document published.)

15 **BY MR. MILLER:**

16 **Q.** So here we have an article about primary
17 thyroid lymphoma. And what is primary thyroid lymphoma?

18 **A.** So that's a lymphoma that arises in the
19 thyroid gland and, at least early in the disease, just
20 involves the thyroid gland.

21 **Q.** And if you have -- I want to ask you about
22 this. Patients with Hashimoto's thyroiditis are at
23 greater risk for developing PTL -- that's primary
24 thyroid lymphoma -- with a relative risk of 67 compared
25 to those without thyroiditis. Oh, I'm sorry. Have I

1 read that correctly?

2 A. Yeah, so it's a very high risk. Hashimoto's
3 provides a very high risk in this ballpark for lymphoma
4 in the thyroid gland. And that's why when you look at
5 these larger comprehensive studies of all kinds of
6 autoimmune diseases, you need to know where the
7 lymphomas occurred to really understand that.

8 This would also increase the risk for
9 non-Hodgkin's lymphoma overall. But it would be wrong
10 to conclude that Hashimoto's increases the risk for all
11 non-Hodgkin's lymphomas because whatever analysis is
12 being done is being driven by this very high risk of
13 thyroid lymphoma.

14 Q. And counsel for Monsanto complained that with
15 the pesticide studies, you didn't control for
16 confounders; you remember that general line of
17 questions, right?

18 A. Yes.

19 Q. Well, in here if someone were to take
20 Hashimoto's and the PTL data and mix it with general
21 non-Hodgkin's lymphoma data, what would be the effect?

22 A. Well, in the two other papers that I
23 referenced, it increased the effect. It caused a two-
24 to threefold increased risk for general -- for
25 non-Hodgkin's lymphomas in general. But that was

1 because the studies were not large studies, and most of
2 the lymphomas were actually thyroid lymphomas.

3 Q. So if I was a young graduate student and asked
4 you, "Dr. Weisenburger, does Hashimoto's increase the
5 risk of non-Hodgkin's lymphoma generally?" what would
6 you tell me?

7 A. I would say no.

8 Q. Is there a kind -- I would say,
9 "Dr. Weisenburger, is there a kind of lymphoma that it
10 does increase"?

11 A. Yes, it increases the risk for primary thyroid
12 lymphoma, yes.

13 Q. And to be clear, neither Al or Alberta have
14 primary thyroid lymphoma; right?

15 A. That's correct.

16 Q. So -- and Alberta had Hashimoto's disease, Al
17 didn't have Hashimoto's disease, but they both got
18 non-Hodgkin's lymphoma?

19 A. Yes.

20 Q. In the 40 years that you've studied
21 non-Hodgkin's lymphoma, have you ever heard of genital
22 warts causing non-Hodgkin's lymphoma?

23 A. No.

24 Q. And you were shown some studies yesterday that
25 sort of indicate some sort of association between

1 genital warts and non-Hodgkin's lymphoma; do you
2 remember those?

3 A. Yes, there were two studies.

4 Q. And all right. It's previously been
5 published. This was I think shown to you by Monsanto's
6 attorney. It was a Danish study; do you remember?

7 A. Yes.

8 Q. And it's 50,000 patients. What they say, and
9 what I want to ask you about it, is we're not making any
10 value judgments, but what it tells us is -- what's
11 behavioral confounding?

12 A. Well, certain sexual practices increase the
13 risk for genital warts. Okay. So it's seen in a high
14 incidence in homosexuals who have a lot of sexual
15 partners, okay. And it's increased in general
16 population in those who have multiple sexual partners.
17 So it has to do with those -- those are things that
18 could confound it.

19 So in this data, this is the -- this is the
20 one I'm thinking of -- there was one paper that showed
21 an increased risk in men but not in women. I think that
22 was this one.

23 And in their male group they had some
24 homosexuals. And the question was: Did those
25 individuals actually drive up this increased risk

1 because homosexuals have an increased risk for genital
2 warts and they also have a markedly increased risk for
3 non-Hodgkin's lymphoma.

4 And so then the data wasn't consistent between
5 this paper and the other paper. So this paper shows
6 that the risk for NHL is increased in men but not women.
7 And the other paper showed it was increased in women but
8 not men.

9 So there are a lot of inconsistencies here,
10 and there's no biologic rationale why genital warts
11 would somehow cause increased non-Hodgkin's lymphoma.

12 Q. So as you look at the data and you look at Al
13 and Alberta's life, you see years exposure to Roundup,
14 you see that Al has genital warts. Which one stands out
15 to you as a cause of their non-Hodgkin's lymphoma?

16 A. Well, I don't believe genital warts cause or
17 increase risk for non-Hodgkin's lymphoma unless
18 you're -- unless you're gay and then you would have risk
19 for both. But it doesn't mean that one causes the
20 other.

21 Q. Right. Let's go to the next issue raised by
22 Monsanto's counsel, ulcerative colitis; do you remember
23 that line of questioning?

24 A. Yes.

25 Q. All right. Now that was an issue raised

1 regarding Al; right?

2 A. Yes.

3 Q. But not raised regarding Alberta?

4 A. Yes.

5 Q. What is ulcerative colitis? Just explain to
6 us what it is.

7 A. Ulcerative colitis is a chronic autoimmune
8 disease of the colon in which you get these ulcers in
9 your colon that severely complicates your life because
10 you have cramping and diarrhea. And so it's a very --
11 it's a very difficult disease to deal with.

12 And typically it's a chronic disease and it
13 continues for many years. Often people have to have
14 their colon taken out -- complete colon taken out to
15 actually be cured of the disease. It's the only way to
16 cure it if the therapy doesn't work.

17 So it's a chronic disease. It's a chronic
18 relapsing disease that's due to autoimmunity against the
19 cells in the colon.

20 And so I didn't believe that Al ever had this
21 because his history was so different. He had a period
22 of about one to two months where he was having cramping
23 and diarrhea. He was -- he was treated with an
24 antiinflammatory drug and he had some steroid
25 suppositories to treat it. And after two months the

1 disease went away and it never came back.

2 So whatever he had, he had some kind of
3 colitis. Probably it could have been due to an
4 infectious agent or some other cause, we don't know.
5 But I don't believe it was ulcerative colitis because
6 the story doesn't fit at all with ulcerative colitis.

7 Q. People who have genuine ulcerative colitis are
8 put on autoimmune therapy for that disease; is that
9 right, Doctor?

10 A. Yes. So, I mean, there are therapies that are
11 used. His physician started with a very, I'd say,
12 nonaggressive therapy.

13 Q. Was he ever placed on autoimmune therapy
14 for --

15 A. Well, he was never placed on chemotherapy
16 drugs or immunosuppressive drugs, no.

17 Q. Did any of his treating physicians ever tell
18 Al that ulcerative colitis causes non-Hodgkin's
19 lymphoma?

20 A. I don't believe so.

21 Q. Would a weakened immune system make one more
22 susceptible to the toxins in our environment?

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

24 **THE COURT:** Overruled. You can answer.

25 **THE WITNESS:** Well, I think they sometimes can

1 work together. So if you have genotoxic agents in the
2 environment and you have a weakened immune system, you
3 would be probably at a higher risk of developing
4 non-Hodgkin's lymphoma, yes.

5 **MR. MILLER:** Exhibit 3063, I believe it was
6 shown yesterday.

7 Your Honor, copies for the witness and the
8 Court.

9 (Pause in the proceedings.)

10 **MR. MILLER:** I was wrong. This was not shown
11 yesterday. I would like to show it.

12 **MR. ISMAIL:** No objection.

13 (Exhibit published.)

14 **BY MR. MILLER:**

15 **Q.** This is Mr. Al Pilliod's -- you tell us what
16 it is. We have a copy there and we can look at it
17 together. This is for Al Pilliod, 2010 pathology
18 report.

19 And what does it tell us?

20 **A.** Well, he had a colonoscopy, and they found a
21 polyp. And in the one biopsy, biopsy B, they found no
22 active or chronic colitis. In biopsy number C, they
23 found some lymphoid aggregate, so a lymphoid aggregate,
24 and commented that it could be positive mild quiescent,
25 which means not active, colitis. And then indeed they

1 found the genital warts.

2 So this really doesn't -- he didn't have any
3 active colitis at this time. It doesn't really prove
4 anything. It's a nonspecific finding. And it doesn't
5 really prove anything. Okay.

6 Q. So no active colitis, let alone ulcerative
7 colitis, a year before he's diagnosed with non-Hodgkin's
8 lymphoma?

9 A. Yes.

10 Q. As you weighed the evidence in this case and
11 looked at the years of Roundup use versus some
12 suggestion of two months of diarrhea and colitis, which
13 looked to you to be the most substantial cause of Al
14 Pilliod's?

15 A. Roundup.

16 Q. You were shown a drawing, a cartoon drawing,
17 by counsel yesterday. I'll put it back on the screen.

18 (Document published.)

19 **BY MR. MILLER:**

20 Q. Family history of cancer. Neither Mr. Pilliod
21 or Mrs. Pilliod have hemopoietic history in their
22 family?

23 A. That's correct.

24 Q. No blood cancer?

25 A. No blood cancer.

1 **Q.** We've talked about the prior history of skin
2 cancer. Did that in any way change your opinion that
3 Roundup was a substantial contributing factor?

4 **A.** No, I think it's a totally unrelated issue.

5 **Q.** We just talked about ulcerative colitis. We
6 saw that he didn't have colitis, let alone ulcerative
7 colitis. Do you think that's to be ruled out or not?

8 **A.** I don't think he ever had ulcerative colitis,
9 so I ruled it out.

10 **Q.** Let's talk about -- we talked about recurrent
11 genital warts. I mean, do you think that that causes
12 non-Hodgkin's lymphoma?

13 **A.** No, I don't think it's related.

14 **Q.** Okay. We haven't talked yet about recurrent
15 brain infections. Now, what are they?

16 **A.** Well, back, I think, in 1978 he had an episode
17 of severe encephalitis which he recovered from over time
18 but which resulted in him having a seizure disorder
19 because there was probably some damage to his brain and
20 scarring that then resulted in the seizure disorder
21 which he's had for his whole life. Okay.

22 And he also had this history of cold sores
23 that he would have -- experience every year, recurrent
24 cold sores.

25 And so the idea was that he had this chronic

1 latent infection with the herpes simplex virus that
2 probably reactivated and caused his encephalitis. Or
3 the possibility is he got his initial infection with the
4 virus and it caused the encephalitis and then later on
5 he developed the recurrent lip ulcers.

6 So however it happened, he has today a chronic
7 infection with the herpes simplex virus in his nerves,
8 in his trigeminal nerve which is the nerve that
9 innervates the face.

10 And the thought is when this infection recurs,
11 the virus will migrate down the nerve to the oral cavity
12 in the lips and reactivate, proliferate, and cause
13 ulcers. Okay. And that's the cold sores that he gets.

14 And then eventually his immune system will
15 fight it and make it go back, and he resolves his oral
16 lesions and the virus becomes latent in the nerve again.
17 But it can go the other direction too. It can also go
18 up into his central nervous system, because the nerves
19 are all connected, and could cause encephalitis or, in
20 his case, meningitis. Okay. And that happened at least
21 four times after he had his initial episode of
22 encephalitis.

23 And that's a well described phenomenon. It's
24 called Mollaret's meningitis. Another term for it is
25 benign aseptic meningitis. But we know today that

1 that's due to a reactivation of the herpes simplex virus
2 that migrates to the meninges, or the lining of the
3 brain, and causes sort of a mild kind of meningitis.
4 And it can do this over and over again. Just like it
5 causes the cold sores over and over again, it can cause
6 the meningitis over and over again. Okay.

7 And it's a well described phenomenon. It can
8 occur months to years after the initial infection. It
9 can occur -- it can happen anywhere up to 15 times. And
10 I believe that's what he had.

11 And in fact, in the last episode -- episode
12 that he had, one of the last episodes that he had, they
13 actually did a test of the cerebral spinal fluid, and
14 they found the virus there. So that was sort of the
15 laboratory evidence, convincing evidence that it was
16 this virus that was actually causing his recurrent cold
17 sores and his recurrent meningitis, viral-induced
18 meningitis.

19 And this is nothing to do with immune
20 deficiencies. Okay. Because this phenomenon occurs in
21 people who are immune competent like myself. I just --
22 I would just have -- like Al has this virus in his
23 system that sometimes reactivates. There are certain
24 triggers that reactivate it. So stress can reactivate
25 it, either mental stress or physical stress. In women,

1 menstruation can activate it. It can be activated by
2 trauma to the nerve. It can be activated by other
3 infections or fevers.

4 So there are a variety of triggers that can
5 actually activate the virus and result in either cold
6 sores or meningitis.

7 And so this is the disease he had. Okay.

8 Q. Let's go back to the summer of 2011. Al's
9 getting chemotherapy to fight the systemic non-Hodgkin's
10 lymphoma. Tell the jury what grand rounds are.

11 A. Grand rounds are a conference that physicians
12 have to talk about -- it's an educational conference to
13 talk about a specific disease usually, and you have an
14 expert come and talk.

15 Q. And then tell the jury what "making rounds"
16 means.

17 A. "Making rounds" means you just go as a group
18 around to see the patients. You have the patients in
19 the hospital and you go from room to room and see the
20 patients and talk to them and see how they're doing.

21 Q. Sometimes when you do rounds, residents come
22 so they can learn?

23 A. Yes.

24 Q. Okay. If you were the attending and I'm the
25 resident and we go into Al's room, 2011, look at the

1 chart, "Oh, Dr. Weisenburger, he had recurrent brain
2 infections. Do you think that caused the non-Hodgkin's
3 lymphoma?" What would you tell them?

4 **A.** Well, I would have to know more than that, but
5 if I knew all that I know today, I would say, no, that
6 was -- that was the disease that Al has that -- that's
7 been well described in the literature and is not
8 associated at all with immunosuppression. Okay.

9 **Q.** And to be clear, this brain infection, Alberta
10 never had a brain infection; right?

11 **A.** She's never had this, no.

12 **Q.** But they both got non-Hodgkin's lymphoma?

13 **A.** Yes.

14 **MR. ISMAIL:** Objection, Your Honor.

15 **THE COURT:** Overruled.

16 **BY MR. MILLER:**

17 **Q.** Can we then rule out recurrent brain
18 infections as a substantial contributing factor?

19 **A.** Yes.

20 **Q.** And whether it was or not, does it change your
21 opinion that the years of exposure and the frequency of
22 exposure of Roundup was a substantial contributing
23 factor?

24 **A.** No.

25 **Q.** One thing I don't see on here is the use of

1 the Roundup. Do both of them have it in their history?

2 A. Yes. They both were frequent users of
3 Roundup.

4 Q. And that's important in your consideration?

5 A. Yes, it is.

6 Q. And totally ignored in the chart shown by
7 counsel?

8 MR. ISMAIL: Objection, Your Honor. It's a
9 chart of the medical history. It's argumentative.

10 THE COURT: It is argumentative. Sustained.

11 MR. MILLER: Let me have Exhibit 1109.

12 May I approach, Your Honor?

13 THE COURT: Yes.

14 BY MR. MILLER:

15 Q. What's the American Cancer Society?

16 A. Yes. It must have come from their website,
17 huh?

18 Q. Are you a member of the American Cancer
19 Society?

20 A. Am I a member?

21 Q. Yeah.

22 A. I've been a board member.

23 Q. Okay.

24 MR. MILLER: Permission to publish?

25 MR. ISMAIL: Your Honor, you had some pretrial

1 rulings about whether website material can be published.
2 I don't know if counsel is now okay with that or not.

3 **MR. WISNER:** Completely unrelated, Your Honor.

4 **THE COURT:** Step to sidebar.

5 (Sidebar held but not reported.)

6 **BY MR. MILLER:**

7 **Q.** I just want to ask you a few questions about
8 the American Cancer Society, and we'll move on.

9 American Cancer Society shows pesticides as a
10 possible link to causing non-Hodgkin's lymphoma; right?

11 **A.** Yes.

12 **Q.** If you look at page 3, and I'm not going to
13 show it to the jury, but it talks about autoimmune
14 diseases. And I just want you to read these two
15 paragraphs the American Cancer Society puts out and tell
16 me if Al or Alberta have any of the autoimmune diseases
17 that are listed by the American Cancer Society?

18 **A.** No. But they just list the common ones. But
19 they didn't have any of the ones that are listed, no.

20 **Q.** Counsel for Monsanto talked to you about a
21 study called Hohenadel; do you remember that?

22 **A.** I remember it, yes.

23 **Q.** Some questions about whether or not we
24 included it in our analysis initially; generally do you
25 remember that line of questioning?

1 **A.** Yes.

2 **Q.** And I simply asked and pointed out because in
3 fact you've also reviewed the Chang meta-analysis;
4 right?

5 **A.** Yes.

6 **Q.** And in the -- that was the one that was funded
7 in 2016 by Monsanto?

8 **A.** Yes.

9 **MR. MILLER:** And it's been published. Or if
10 it hasn't, permission to publish Exhibit 2107, the Chang
11 analysis.

12 **MR. ISMAIL:** No objection, Your Honor.

13 **THE COURT:** I think it's already been
14 published.

15 **MR. MILLER:** I just wanted to make sure. I'm
16 going to put it on the board. It shouldn't take long.

17 (Exhibit published.)

18 **BY MR. MILLER:**

19 **Q.** This is from the Chang analysis funded by
20 Monsanto. And what they did, they included in one data
21 cut the actual study that he was referring to; right?
22 Hohenadel, et al., study number 4. Do you see that?

23 **A.** Yes.

24 **Q.** So when they include Hohenadel, Monsanto's
25 epidemiologist they used to analyze this, is that a

1 statistically significant risk of non-Hodgkin's
2 lymphoma? Or what did they find?

3 **A.** Can you move the table this way a little bit?

4 **Q.** I'm sorry. There you go. All right. Try
5 that. Is that better?

6 **A.** So I'm not sure why they included both papers
7 because the papers are largely the same cases. So it
8 doesn't make sense why they would include one or the
9 other.

10 Most of the studies that were reviewed by
11 regulatory bodies have all reviewed McDuffie and --
12 because that's the paper that's cited by everyone.
13 People don't cite this other paper. So...

14 **Q.** I understand. But when the epidemiologist
15 that Monsanto hired analyzed it, they included it in
16 models 3 and 4; is that right, or no?

17 **A.** Let's see.

18 **Q.** And when they included it, the study -- we're
19 talking about the Hohenadel, they still found what, sir?

20 **A.** Yeah, so in two of the models they used
21 McDuffie and in two of the models they used Hohenadel.
22 And in all of the analyses they found basically the same
23 thing, an increased odds ratio of 1.3 or 1.4 that was
24 borderline significant. So it didn't really matter
25 whether they used one or the other.

1 **Q.** All right. Thank you, sir.

2 All right. Now let me just kind of wrap up.
3 Everybody's been very patient. I appreciate it.

4 So you told us yesterday morning when we
5 started you thought that Roundup was a substantial
6 factor in causing Al Pilliod's non-Hodgkin's lymphoma.
7 Do you remember that?

8 **A.** Yes.

9 **Q.** A very good lawyer, my hat is off to him, he
10 examined you for an afternoon and part of this morning.
11 And anything that he showed you change your opinion that
12 Roundup was a substantial contributing factor in causing
13 Al's non-Hodgkin's lymphoma?

14 **A.** No.

15 **Q.** And I could run -- ulcerative colitis; no?

16 **A.** No.

17 **Q.** Brain infections, did that change your
18 opinion?

19 **A.** No.

20 **Q.** Did you know about the brain infections when
21 you first did your report in this case?

22 **A.** Yes.

23 **Q.** And you knew about the allegation of
24 ulcerative colitis; right?

25 **A.** Yes.

1 **Q.** And so the epilepsy, did that change your
2 opinion?

3 **A.** No.

4 **Q.** Genital warts, does that change your opinion?

5 **A.** No.

6 **Q.** Skin cancer, did you know about it all along?

7 **A.** Yes.

8 **Q.** Did it change your opinion?

9 **A.** No.

10 **Q.** Let's go to Alberta. Anything this very good
11 attorney showed you change your opinion that Alberta's
12 non-Hodgkin's lymphoma was substantially caused by her
13 years of exposure to Roundup?

14 **A.** No.

15 **Q.** Hashimoto's disease, did that change your
16 opinion?

17 **A.** No.

18 **Q.** You analyzed it and considered it when you
19 first did your opinions?

20 **A.** Yes.

21 **MR. MILLER:** All right. Thanks, folks.

22 **THE COURT:** Any recross?

23 **MR. ISMAIL:** Yes, Your Honor, if permitted.

24 **THE COURT:** Okay. Only on what was --

25 **MR. ISMAIL:** Yes, of course.

1 **THE COURT:** -- raised in redirect.

2 **MR. ISMAIL:** Do you want to take an hour now?

3 **THE COURT:** No, no. We're going to go till
4 noon.

5 **MR. ISMAIL:** Very good. Thank you,
6 Your Honor.

7 **RECROSS-EXAMINATION**

8 **BY MR. ISMAIL:**

9 **Q.** Okay. Good morning still, Doctor. We'll
10 finish up here before lunch.

11 I'm just going to address issues raised by
12 Mr. Miller this morning. I'm not looking to cover
13 ground that we did yesterday. Okay.

14 Now I want to begin, sir, with -- I'm just
15 going to work in the order that Mr. Miller did his
16 questions.

17 **MR. ISMAIL:** Mr. Miller, do you have the
18 first -- well, let me just do it this way.

19 **Q.** Do you remember towards the end of my
20 examination this morning we showed what the various
21 epidemiological studies were presenting with respect to
22 DLBCL?

23 **A.** Yes.

24 **Q.** And what Mr. Miller did this morning was he
25 took out a Sharpie and started crossing off studies;

1 right?

2 He asked you whether they were statistically
3 significant or not, and then he would cross them off if
4 you said no they were not significant.

5 A. I don't remember him doing that.

6 Q. Okay. Well, he -- we'll find his page here in
7 a minute. It's on his desk. He went to the ELMO, had a
8 printout here, and asked you whether it was
9 statistically significant and he crossed off the
10 studies. That doesn't ring a bell?

11 A. I wasn't watching what he was doing. I was
12 listening to him.

13 Q. Fair enough. So let me just ask it this way.

14 If you're doing an analysis of the
15 epidemiology and you find a result that shows no
16 significant increase, do you cross it off and throw it
17 out of your analysis or do you look at it as part of the
18 whole?

19 A. I look at it as part of the whole.

20 Q. Right. So Eriksson, Orsi, NAPP, Chang,
21 Andreotti, all showing no significant increases with
22 DLBCL, proper analysis would be to include them in your
23 assessment of the issue scientifically; correct?

24 A. Yes.

25 Q. And you would, of course, include Leon and its

1 borderline finding; true?

2 **A.** Yes.

3 **Q.** Now, with respect to the NAPP, Mr. Miller
4 asked you about a presentation and you pointed out that
5 it was unadjusted for other pesticide use; correct?

6 **A.** That's from reading through the abstract, I
7 think that's -- they for some reason we used unadjusted
8 data in the abstract. I don't know -- I don't remember
9 why that is.

10 **Q.** And you would certainly endorse the approach
11 of adjusting for known confounders like other
12 pesticides; correct?

13 **A.** Yes.

14 **Q.** And you told in response to one of your
15 questions on redirect examination that about the final
16 manuscript with respect to the NAPP; do you remember
17 that being asked of you?

18 **A.** Yes.

19 **Q.** And in fairness, sir, that's not been accepted
20 for publication; correct?

21 **A.** It has not.

22 **Q.** Okay. Now, with respect to Hashimoto's, do
23 you have the paper that Mr. Miller gave you first author
24 Morton, Exhibit 6062.

25 If you want to follow on the screen.

1 **A.** Oh, that one, I see.

2 **Q.** So we have here Hashimoto's. And this is the
3 paper that you were an author on, the InterLymph
4 Society?

5 **A.** Yes, uh-huh.

6 **Q.** And you report the relative risk by subtype;
7 correct?

8 **A.** Yes.

9 **Q.** And what was the increased relative risk
10 reported in your study?

11 **A.** For diffuse large B-cell lymphoma?

12 **Q.** Yes, sir. Thank you. DLBCL.

13 **A.** I can't see the top, but I think it is --
14 yeah. So it was a threefold increased risk that was
15 borderline significant.

16 **Q.** And you recall yesterday we looked at data
17 that also showed a threefold increased risk with
18 Hashimoto's thyroiditis and development of NHL?

19 **A.** Yes, but I think the risk is being driven by
20 the thyroid NHLs, not general NHL.

21 **Q.** So you've testified, sir. But in fairness,
22 when you did your analysis, you did not break out the
23 NHL by location in the body; correct? You just did
24 overall risk of NHL; true?

25 **A.** That's right. Yes.

1 **Q.** Now continuing on.

2 There was some discussion of smoking just now
3 by Mr. Miller, and he showed you in this paper the
4 analysis that you and your colleagues did with smoking
5 and non-Hodgkin's lymphoma. Do you recall that?

6 **A.** Yes.

7 **Q.** Now, the issue we discussed on
8 cross-examination is whether smoking is associated with
9 t(14;18) negative non-Hodgkin's lymphoma tumors;
10 correct?

11 **A.** Right.

12 **Q.** And that was your paper that you and I went
13 over with the jury; correct?

14 **A.** Right.

15 **Q.** The paper that Mr. Miller showed you this
16 morning does not break out NHL by that particular type
17 of non-Hodgkin's lymphoma tumor; true?

18 **A.** I'm sorry. Repeat the question.

19 **Q.** Yes. When the paper that you and I went over
20 yesterday --

21 **A.** Okay.

22 **Q.** -- on smoking risk and non-Hodgkin's lymphoma
23 found that there was a positive association, increased
24 risk that the individual has a t(14;18) negative tumor;
25 true?

1 A. Yes.

2 Q. Just like Mrs. Pilliod; correct?

3 A. Yes.

4 Q. In the smoking history that Mrs. Pilliod has;
5 correct?

6 A. Yes.

7 Q. The paper that Mr. Miller just showed you
8 about smoking and non-Hodgkin's lymphoma does not break
9 out the NHL by t(14;18) negative or positive; true?

10 A. I don't know which one he showed me.

11 Q. He showed you -- it's the same paper that we
12 were just looking at, the InterLymph paper.

13 A. Okay. I see. Okay.

14 Q. Do you have the question in mind, sir?

15 A. No, this paper didn't do that because that
16 was -- again, as I mentioned, it was a -- it was a novel
17 study that we decided to do to see whether there was a
18 different way to look at lymphoma. So other people
19 haven't done that and in this paper we didn't do it.

20 Q. Okay. So there was a lot there, but I just
21 want to make sure we're all clear.

22 The smoking paper that you referred to that
23 didn't show a correlation does not look at the t(14;18)
24 issue that you and I discussed yesterday; true?

25 A. It does not, no.

1 **Q.** Thank you.

2 Now, as to the t(14;18) tumor, Mr. Miller
3 brought it up this morning. And you -- when he asked
4 you whether it looked at all pesticides, do you recall
5 that question? It wasn't quite the same specific.

6 **A.** Right, it was really just specific to the
7 class of pesticides.

8 **Q.** It was the same Nebraska study that you relied
9 upon to give your opinions about glyphosate and NHL;
10 true? Same data set?

11 **A.** It was the same data set, yes, that was
12 contributed to De Roos and to NAPP.

13 **Q.** And what you found was there was not an
14 increased risk of t(14;18) negative tumors with extended
15 herbicide exposure; true?

16 **A.** Correct.

17 **Q.** And you called that "preliminary data" this
18 morning; right?

19 **A.** Yes.

20 **Q.** You -- the truth of the matter is just two
21 weeks ago you cited that exact same paper in a different
22 publication; right?

23 **A.** I don't remember that.

24 **Q.** It's in your malathion paper. We actually
25 looked at it yesterday.

1 **A.** Okay. You may be right.

2 **Q.** And when you approached this case and you
3 looked at the pathology reports, one of the things you
4 wanted to take note of is whether t(14;18) was assessed
5 by the pathologist who looked at the tumors for both
6 plaintiffs; right?

7 **A.** I wanted to but not really for this purpose.

8 **Q.** And in fact when you were in court yesterday
9 and I asked you, without even looking you remembered
10 Mrs. Pilliod's pathology report showed that she was
11 negative for that tumor type; correct?

12 **A.** Yeah. Because those tests are commonly done
13 in diffuse large B-cell lymphoma, okay, it's become
14 standard practice to do it.

15 **Q.** Now, the question of ulcerative colitis. Now,
16 when you first gave your opinions in this case on direct
17 examination, I think you were candid yesterday, you did
18 not take note in Mr. Pilliod's medical history that he
19 had a biopsy which was read as being consistent with
20 ulcerative colitis. You admitted that yesterday;
21 correct?

22 **A.** Yes.

23 **Q.** And in fact you thought there wasn't such a
24 biopsy in Mr. Pilliod's records; right?

25 **A.** Well, I didn't know there was.

1 Q. Right. And what Mr. Miller showed you -- and
2 I think you told us that ulcerative colitis is an
3 incurable disease; right?

4 A. By and large it's incurable, yes.

5 Q. So if you have it and it's diagnosed, it
6 doesn't go away even if it's successfully treated, the
7 symptoms; right?

8 A. It doesn't completely go away, no.

9 Q. So when we're talking about whether ulcerative
10 colitis is in active phase or not, doctors may use the
11 term "quiescent." That's a term that you used with
12 Mr. Miller this morning; right? That was on one of the
13 records he showed you?

14 A. Right.

15 Q. And what that means is in the waxing and
16 weaning of the disease, you're in a period of time where
17 the disease is quiet?

18 A. Correct.

19 Q. But it doesn't mean the patient doesn't have
20 it; correct?

21 A. Yes.

22 Q. And in fact, the very record Mr. Miller showed
23 you this morning, if you look under the clinical
24 information, continues to show that Mr. Pilliod carries
25 the diagnosis of ulcerative colitis; true?

1 **A.** I didn't see that, but I'll --

2 **Q.** It's Exhibit 3063. It's the one-page chart --
3 I'm sorry -- one-page medical record.

4 I can put it up on the camera, Doctor.

5 **A.** Yeah, if you could.

6 Oh, I found it. I don't know if I have it.

7 **Q.** Okay. Well, I'll just show you on the screen.

8 **THE COURT:** It's right here.

9 **THE WITNESS:** Oh, here it is. Thank you.

10 **BY MR. ISMAIL:**

11 **Q.** Clinical information. Colitis ulcerative;
12 correct?

13 **A.** Yes. And my opinion was that this is a
14 diagnosis that was carried in the medical record.
15 Because we have electronic medical records now, these
16 misdiagnoses or wrong diagnoses are carried forever in
17 the medical record.

18 **Q.** Now, the issue of smoking, if you were asked
19 whether there's any biological plausibility -- I'm
20 sorry, not smoking. Skin cancer.

21 You were asked whether there was any
22 biological plausibility to whether individuals who have
23 recurrent skin cancer are at an increased risk of other
24 forms of cancer.

25 Do you recall that question this morning?

1 **A.** Yes.

2 **Q.** Now, have you looked in the medical literature
3 to see if other researchers have spoken on this issue?

4 **A.** I've done some searches and I have not found
5 anything. So I don't -- I haven't found any evidence.

6 **MR. ISMAIL:** May I approach, Your Honor?

7 **Q.** Now, this is a paper, Exhibit 6502,
8 nonmelanoma skin cancer and the risk of second primary
9 cancers a systematic review.

10 **MR. ISMAIL:** May I publish?

11 **MR. MILLER:** No objection.

12 **THE COURT:** Yes, you may.

13 **MR. ISMAIL:** Thank you.

14 (Exhibit published.)

15 **BY MR. ISMAIL:**

16 **Q.** Now, Doctor, this particular analysis is a
17 meta-analysis; correct?

18 **A.** Yes.

19 **Q.** And you describe that method of investigation,
20 and it involved 21 studies, 15 of which report the
21 association between NMSC -- that's nonmelanoma skin
22 cancer; right?

23 **A.** Yes.

24 **Q.** -- and the risk of other cancers combined.
25 And then it describes some of the positive associations.

1 And I don't want to go through all the data in
2 here because you and I went over several papers
3 yesterday that talked about the statistical association
4 between skin cancer and non-Hodgkin's lymphoma. Okay?

5 But I do want to address this question of
6 biologic plausibility. So if you could turn to
7 page 1693, please.

8 Are you there?

9 Okay. So here's the sentence that begins,
10 "There are also several plausible biological
11 mechanisms."

12 That was the very phrase that was asked of you
13 this morning; correct? Plausible biological mechanism?

14 **A.** Correct.

15 **Q.** "That could explain the association between
16 nonmelanoma skin cancers and the risk of other cancers,
17 including immunosuppression, chronic inflammation, and
18 variation in DNA repair efficiency, all of which act
19 systemically and play a role in cutaneous" -- cutaneous,
20 that's skin; right?

21 **A.** Yes.

22 **Q.** -- "and internal carcinogenesis."

23 So both skin cancer and cancers inside the
24 body; correct?

25 **A.** Yes. It's a very general statement which I

1 don't agree with for non-Hodgkin's lymphoma.

2 Q. Thank you for that, Doctor.

3 But at least has been published in the
4 peer-review literature that there are several plausible
5 biological mechanisms including this issue that there is
6 something that connects the two, the immune system;
7 right?

8 A. I --

9 Q. I know you disagree.

10 A. I don't accept that. They say that, but
11 they -- these people are dermatologists and surgeons who
12 don't understand the biology of non-Hodgkin's lymphoma.
13 So they might make such a conclusion, but I don't
14 believe it's true.

15 Q. Now, on the issue of skin cancer, you've
16 indicated that you thought there was a surveillance
17 bias. I think that was the phrase you used.

18 A. Yes. And many of the papers actually raised
19 that as an issue. It isn't just me. It's actually many
20 of the papers do it.

21 Q. Mr. Pilliod's non-Hodgkin's lymphoma wasn't
22 detected by a dermatologist; correct?

23 A. No.

24 Q. Now, last questions here before lunch.

25 Now, you were asked several questions -- or

1 asked questions of Mr. Miller. He gave you a
2 hypothetical, if you were rounding with residents; do
3 you remember questions beginning like that?

4 A. Yes.

5 Q. And in fairness, you don't round in the
6 hospital; correct? You don't see patients?

7 A. I don't anymore, no.

8 Q. And he asked you about -- I think that
9 particular question was in the context of Mr. Pilliod's
10 recurrent brain infections. Do you recall that?

11 A. Yes.

12 Q. And what you said was, when describing this
13 herpes virus that Mr. Pilliod has and how it manifests
14 in his case, you said the immune system will try to
15 attack and keep that virus in check; right?

16 A. Right.

17 Q. Those were words that you used; correct?

18 A. Right.

19 Q. And in Mr. Pilliod's case -- and you said
20 commonly the immune system is able to keep that virus in
21 check and so that folks don't have any clinical problems
22 whatsoever from the prevalence of herpes in the
23 population; correct?

24 A. Say that again. I'm sorry.

25 Q. Yes. Herpes is a prevalent virus; right?

1 **A.** Yes.

2 **Q.** And in most people, their immune systems are
3 able to keep it in check so there's no clinical
4 manifestations of the virus; true?

5 **A.** Yeah, on about a quarter of the people. About
6 a quarter of the people they get recurrent cold sores.

7 **Q.** And for those people whose immune systems
8 can't fight off the virus all the time, it will manifest
9 in a quarter of those people as a cold sore; right?

10 **A.** Right.

11 **Q.** And rarely, very rarely, people who have the
12 herpes virus, their immune system can't fight it off and
13 they get an infection of the brain that puts them in the
14 intensive care for a week; right?

15 **A.** Correct.

16 **Q.** And in Mr. Pilliod's case, he actually has
17 been on heavy antiviral treatment daily for many years;
18 correct?

19 **A.** Yes. And that's prevented him from getting
20 these recurrent episodes.

21 **Q.** Because his immune system on its own is not
22 fighting the virus; correct?

23 **A.** Well, the immune system waxes and wanes just
24 like other things. And so if the immunity wanes, the
25 virus can reactivate and then the immune system

1 reactivates and puts the virus. So it's like a running
2 battle. Okay.

3 **Q.** Now last question, Doctor. You were asked
4 about whether you would tell medical students certain
5 things are associated with non-Hodgkin's lymphoma. Do
6 you recall a series of questions to that effect?

7 **A.** Yes.

8 **Q.** And as you previously testified, sir, you've
9 never told a medical student that Roundup causes
10 non-Hodgkin's lymphoma; true?

11 **A.** No, but I don't teach medical students
12 anymore.

13 **Q.** Thank you, sir. So the answer is you agree
14 with me, correct, you have not told that to a medical
15 student; true?

16 **A.** I haven't. I don't teach medical students.

17 **MR. ISMAIL:** Thank you, sir.

18 No further questions.

19 **MR. MILLER:** Only one question.

20 **FURTHER REDIRECT EXAMINATION**

21 **BY MR. MILLER:**

22 **Q.** This paper was just handed to us, and I want
23 to look at it with you, the skin cancer paper that
24 Mr. Ismail handed you.

25 Can we go to the last page here and look at

1 it.

2 In summary -- it's up on the screen too,
3 Doctor.

4 It says: In summary, this systemic review
5 revealed a strong evidence that -- that's skin cancer --
6 that skin cancer is associated with a 10 percent
7 increased risk of a subsequent primary cancer; right?

8 **A.** Yes.

9 **Q.** Okay. So when you look at a 10 percent
10 increased risk of getting a primary from skin cancer
11 versus a doubling of the risk from Roundup, what's more
12 significant to you?

13 **A.** Well, it would be the doubling of the risk or
14 greater, yes.

15 **MR. MILLER:** We appreciate your patience.
16 Have a safe trip down to Los Angeles.

17 **MR. ISMAIL:** Your Honor, if I may.

18 I intentionally didn't go over the
19 non-Hodgkin's lymphoma relative risk in this paper, just
20 to go to the plausibility part. In light of what
21 counsel just did. And I showed that NHL data and then
22 that's it.

23 **MR. MILLER:** I think we're done. We can go
24 round and round.

25 **MR. ISMAIL:** Last question.

1 **THE COURT:** One last question and one last
2 question. NHL data and NHL data.

3 **FURTHER RECROSS-EXAMINATION**

4 **BY MR. ISMAIL:**

5 **Q.** Okay. Counsel just read to you the overall
6 prevalence of the second cancer following skin cancer;
7 correct?

8 **A.** Yes.

9 **Q.** There's data here on non-Hodgkin's lymphoma?

10 **A.** Yes.

11 **Q.** For basal cell carcinoma, what's the relative
12 risk?

13 **A.** 1.39.

14 **Q.** For squamous cell carcinoma, what's the
15 relative risk?

16 **A.** 2.

17 **Q.** Mr. Pilliod had both?

18 **A.** He did.

19 **MR. ISMAIL:** Thank you.

20 **MR. MILLER:** No follow-up, Your Honor.

21 **THE COURT:** All done. It's time for lunch.

22 **THE WITNESS:** Hallelujah.

23 **THE COURT:** Dr. Weisenburger, thank you for
24 your time.

25 Ladies and gentlemen, we're going to come back

1 at 1:00 o'clock and resume with plaintiffs' case.

2 **MR. MILLER:** Thank you, Your Honor.

3 (Jury excused for lunch recess.)

4 (Proceedings continued out of the presence of
5 the jury:)

6 **THE COURT:** So we're all done. We'll come
7 back at 1:00 o'clock and we're going to do videos, I
8 think, at this point.

9 All right. Thank you.

10 (Luncheon recess was taken at 12:03 p.m.)

11 AFTERNOON SESSION

1:09 p.m.

12 (The following proceedings were heard in the
13 presence of the jury:)

14 We're going to be looking at a video, correct?

15 **MR. WISNER:** That's right. We're going to
16 continue the deposition of Dr. Mark Martens.

17 **THE COURT:** All right.

18 So we are going to continue with the video we
19 started the other day. Again, it's as if the doctor
20 were sitting here in the courtroom giving evidence.

21 (Video excerpts from the deposition testimony
22 of Mark Martens played in open court; not reported
23 herein.)

24 **MR. WISNER:** Your Honor, now we'll move on to
25 the other side's questioning. It's probably a good time

1 for a quick break.

2 **THE COURT:** Okay. It probably is. We're
3 going to take 15 minutes, ladies and gentlemen.

4 (Recess taken at 2:21 p.m.)

5 (Proceedings resumed at 2:44 p.m.)

6 **THE COURT:** We're going to resume the video.
7 We're going to end at 4:15 today, so we won't be taking
8 another break.

9 Okay, go ahead.

10 (Video excerpts from the deposition testimony
11 of Mark Martens resumes playing in open court; not
12 reported herein.)

13 **MR. WISNER:** One small portion, Your Honor.
14 There's a short redirect.

15 **THE COURT:** Go ahead.

16 (Video excerpts from the deposition testimony
17 of Mark Martens resumes playing in open court; not
18 reported herein.)

19 **MR. WISNER:** I think that was a dramatic end,
20 Your Honor.

21 **THE COURT:** All right. Sounds good. So we'll
22 just move on to the next.

23 Okay. There will be a deposition played of
24 another witness. Again, this is testimony as though he
25 were sitting here. We'll take a minute to transition.

1 **MR. WISNER:** And, Your Honor, we're going to
2 read a short admission before we begin the next one.

3 **THE COURT:** All right.

4 **MR. WISNER:** And this is Admission Number 23.
5 Request:

6 "Admit that Monsanto never submitted the
7 reports written by Dr. James Parry in 1999 on
8 behalf of Monsanto regarding the genotoxicity
9 again of glyphosate and glyphosate-containing
10 products to the U.S. EPA or any other
11 regulatory authority."

12 Response:

13 "To the extent that this request relates to
14 MONGLY101312093-104 and MONGLY01314233-83,
15 Monsanto admits that, after reasonable inquiry
16 into the information that is known or readily
17 obtainable, it has not identified any
18 documentary evidence that the referenced
19 reports were submitted to the U.S. EPA or any
20 other regulatory authority, but states further
21 that Monsanto had no duty to submit the
22 above-referenced reports to the EPA, and
23 states further that the original studies
24 referenced in these reports were submitted
25 and/or publicly available in the published

1 literature."

2 At this time, Your Honor, we're going to call,
3 by video deposition, Dr. William Reeves. It's a
4 deposition that lasts 3 hours and 3 minutes, so we won't
5 finish it today.

6 Of that, 2 hours and 20 minutes was designated
7 by us, 42 minutes was designated by the defendants. The
8 deposition was taken on January 23rd and 24th, and it is
9 a PMK deposition.

10 And I was hoping Your Honor would briefly
11 explain what that is to the jury.

12 **THE COURT:** Does he explain it at all in his
13 deposition? It's essentially a jury instruction, that I
14 don't want to -- unless I prepared something.

15 **MR. WISNER:** Fair enough, Your Honor. I think
16 it comes out in the depo, that's fine.

17 **THE COURT:** All right.

18 (Video excerpts from the deposition testimony
19 of William Reeves played in open court; not reported
20 herein.)

21 **MR. WISNER:** We'll stop there, Your Honor.

22 **THE COURT:** All right.

23 Ladies and gentlemen, we're done for the day.
24 We're going to start again tomorrow morning at 9:00.
25 Thank you for your time and attention today.

1 Please remember, don't discuss anything in the
2 courtroom, any evidence you heard. Invoke the juror
3 amnesia. Have a good evening, and I'll see you tomorrow
4 morning.

5 (The following proceedings were heard out of
6 the presence of the jury:)

7 **THE COURT:** So do you want to chat about
8 the --

9 **MR. BRADY:** Your Honor, this is a short
10 animation we plan to show tomorrow with Dr. Sawyer. We
11 removed the part that Mr. Ismail was upset about with
12 the spraying and the misting.

13 If we can show that and cue that up.

14 This is just regarding the absorption. And
15 this is just a short demonstrative aid to illustrate the
16 issue of absorption.

17 **THE COURT:** What I'm interested in is: How
18 does this correlate to his testimony?

19 **MR. BRADY:** He's going to testify, and it says
20 right on the label of the Roundup product, Your Honor,
21 that Roundup can become airborne, aerosolized.

22 And that's how it's absorbed, that is how it
23 gets into the skin. And this shows the model for how,
24 when it gets onto the skin, it actually is absorbed --
25 first, it pools in the skin because of the surfactant,

1 it spreads around, creates a reservoir.

2 This is the method of absorption, which is key
3 to understanding why this is a dangerous product and why
4 it is that we're claiming that they should have at least
5 warn, to let people to know to wear gloves or other
6 types of protective gear when they're doing this.

7 This is a bigger problem than --

8 **THE COURT:** Just to keep this really narrow.
9 When I'm talking about correlating to his testimony,
10 when this is playing -- is this an introduction? Is
11 this, at some point, when you're eliciting his
12 testimony?

13 Why, in other words, if he's going to testify,
14 why do we need also the commentary?

15 **MR. WISNER:** We can easily take off the words.
16 That's easy. That's ready to go.

17 **THE COURT:** Let's go back to the beginning.

18 **MR. MILLER:** Let's go back to the beginning.
19 So stop right here.

20 (Demonstrative video played.)

21 **MR. BRADY:** We changed it from blue to white.
22 And it just talks about his testimony. He's going to
23 explain this, how it becomes aerosolized, it says it on
24 the bottle, and how it is that this thing gets under the
25 skin and is absorbed.

1 **THE COURT:** So are you going to have it played
2 entirely? Are you going to have him talk about each
3 phase? Start and stop? What's the plan?

4 **MR. WISNER:** We're going to start playing it,
5 show about five seconds and stop it, I'm going to ask
6 him: What does that mean? How does it work?

7 And throughout this video, we will go back and
8 look at studies and come back to it. This will be a
9 process, and it will be played intermittently through
10 the whole demonstrative.

11 **THE COURT:** Okay.

12 (Demonstrative video played.)

13 **MR. BRADY:** You can see as it keeps going, it
14 mostly then becomes an illustration of the hand and
15 skin.

16 (Demonstrative video played.)

17 **MR. BRADY:** It's just a cross-section of the
18 dermal layer.

19 (Demonstrative video played.)

20 **MR. BRADY:** Just a demonstrative aid to
21 illustrate how he will claim that the process works,
22 whereby it reservoirs on the skin, and it creates
23 irritation and then draws more blood to the area where
24 the Roundup is on the skin and absorbed.

25 **MR. WISNER:** That's it.

1 **THE COURT:** Okay. Go back to the beginning.

2 **MR. WISNER:** Sure.

3 (Demonstrative video played.)

4 **THE COURT:** So start it -- take all the words
5 out, okay. Take all the words out. I think he can
6 testify and provide whatever explanation.

7 **MR. BRADY:** Okay. We can take out that first
8 section of words. The rest of it is just what it says
9 on the bottom.

10 **THE COURT:** Right. I got it.

11 **MR. BRADY:** They all acknowledge, their
12 experts, that the surfactant allows it to spread across
13 the leaves and plant matter, clean away dirt and oil so
14 the glyphosate can be absorbed by the plant. That's how
15 it works.

16 **THE COURT:** Right. I'm just looking at the
17 way it is on the skin.

18 **MR. BRADY:** We changed it from blue to white.

19 **THE COURT:** Right. Whatever is on the skin,
20 the dark blotches, that looks pretty ominous.

21 Why don't you lighten it considerably.

22 **MR. BRADY:** Okay. We'll lighten the blotches.

23 **THE COURT:** From that point on, I really don't
24 have a problem. I think that's a reasonable --

25 **MR. BRADY:** See, it gets into the follicles,

1 Your Honor. That's exactly how it works. And their
2 scientists acknowledge that too. That's why there's the
3 darker -- it's not meant to show some type of a
4 lesion --

5 **THE COURT:** Right. But it looks like a
6 lesion --

7 **MR. BRADY:** We'll tone it down.

8 **THE COURT:** So you're going to have to really
9 tone it down --

10 **MR. BRADY:** That's fine.

11 **THE COURT:** It does look like a lesion. I'm
12 not a gardener, I don't use Roundup, so what I'm
13 saying -- I don't know whether it's colored or clear or
14 what.

15 **MR. WISNER:** It's clear.

16 **MR. BRADY:** But you can't see it otherwise.

17 **THE COURT:** I've got it. I'm not trying to be
18 rude, but I have my own sense of what I think makes
19 sense. I'm just trying to communicate it to you.

20 From this point, I'm okay with the arrows.
21 I'll hear from defendants in a minute.

22 So if it doesn't look like he's got lesions
23 eating his skin. Similarly speaking -- him or her --

24 **MR. BRADY:** We'll fix that.

25 **THE COURT:** I think I'm okay with it.

1 Counsel?

2 **MR. EVANS:** So as I understand it, get rid of
3 all the words, the witness can testify as opposed to
4 being led with words.

5 Again, I have a problem with the -- I know
6 they changed it from blue to gray --

7 **THE COURT:** It's going to have to be lightened
8 up. I understand that you have to visualize that it's
9 touching the skin, I get that. It needs to be very,
10 very light so there's a sense something is touching the
11 skin, and then there will be an explanation.

12 After the point where it turns sideways, I'm
13 okay with it. Take out all the words, and we're good.

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

15 **THE COURT:** Anything else that you're
16 contemplating?

17 Keep in mind what we already talked about. Is
18 there anything else before I see it again? You can
19 understand what my concerns are.

20 **MR. WISNER:** Sure. I think with what you
21 said, we're good to go. It gives us some time to fix
22 it. If you want, we can take another look at it in the
23 morning.

24 **MR. BRADY:** We'll show it to counsel.

25 **MR. EVANS:** We would like to see it in the

1 morning.

2 **THE COURT:** Keep in mind, if there's something
3 touching -- the dark splotches are kind of ugly, and
4 it's suggestive. I don't want anything suggestive; I
5 just want it to reflect what he's going to say.

6 **MR. WISNER:** One other issue -- and I don't
7 have it here right now, but I anticipate it being an
8 issue tomorrow, so I'm just raising it now.

9 One of the things that we're going to do with
10 Dr. Sawyer tomorrow is go through protective gear and
11 how it affects absorption and, you know, what the
12 labeling says for Roundup relative to what their studies
13 show. There's a whole thing that we're doing.

14 Part of it, though, is we want to show an
15 advertisement of Roundup that the Pilliods will testify
16 that they saw when they were using it.

17 Because they haven't testified yet, the jury
18 hasn't seen it. And I want to show a picture from the
19 advertisement, a still from it, which demonstrates a
20 person using Roundup with no gloves, T-shirt, shorts,
21 which is exactly what Mrs. Pilliod did.

22 Because it goes to whether or not they had a
23 reasonable belief about whether or not that was
24 sufficient protective gear. And this will be consistent
25 with -- what the discussions of what they should wear on

1 the label.

2 **THE COURT:** So it's a still from the
3 advertisement?

4 **MR. WISNER:** That's correct.

5 **THE COURT:** Is that one of the ones that was
6 in the video? There was a video that had -- embedded in
7 the video was an advertisement that Roundup had run, at
8 some point, I don't know when.

9 **MR. WISNER:** That's exactly it. That video is
10 the very one that was in that clip before. We're not
11 using that video right now anyway, so it's not an issue.

12 But that video, they will, on direct, say this
13 is one of the advertisements I saw, and I believed
14 showed me I could spray it safely this way.

15 **THE COURT:** To head off -- let's hear what you
16 have to say now. There's no point waiting until
17 tomorrow.

18 **MR. EVANS:** Yeah, Your Honor.

19 I'm not sure this witness is the person that
20 talked about it. I haven't looked over the deposition.
21 I don't remember him being questioned about that.

22 But let me take a look -- if you'll just email
23 it over to me tonight, and we can take a look at it. We
24 can talk about it for a couple of minutes tomorrow
25 morning.

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. WISNER: Absolutely.

THE COURT: Okay. Thank you.

(Proceedings adjourned at 4:26 p.m.)

1 State of California)
2 County of Alameda)

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

We, Kelly L. Shainline and Lori Stokes, Court Reporters at the Superior Court of California, County of Alameda, do hereby certify:

That we were present at the time of the above proceedings;

That we took down in machine shorthand notes all proceedings had and testimony given;

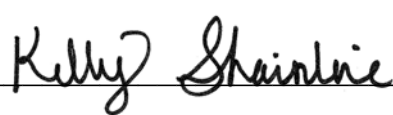
That we thereafter transcribed said shorthand notes with the aid of a computer;

That the above and foregoing is a full, true, and correct transcription of said shorthand notes, and a full, true and correct transcript of all proceedings had and testimony taken;

That we are not a party to the action or related to a party or counsel;

That we have no financial or other interest in the outcome of the action.

Dated: April 10, 2019



Kelly L. Shainline
CSR No. 13476, CRR



Lori Stokes
CSR No. 12732, RPR